



VIRIDIAN

Power & Energy

**Response by Viridian Power & Energy to
SEM Consultation Paper SEM-10-075**

***Harmonised Ancillary Service Arrangements
and the Bidding Code of Practice***

20 December 2010

1. Introduction

Viridian Power and Energy (VPE) would like to take this opportunity to respond to the SEM Committee consultation paper on treatment of certain elements of Harmonised Ancillary Services (HAS) revenue in generators' commercial offer data, as interpreted under the Bidding Code of Practice (BCoP). Generators have sought clarity from the Market Monitoring Unit (MMU) on the treatment of certain revenue streams from the new HAS arrangements that, "can be argued to be avoidable on a short-term basis,...and as such may need to be included in the formation of Short-Run Marginal Cost (SRMC) and the subsequent construction of Generator Unit Commercial Offer Data (COD)."

Having considered the issue as presented, the policy options forwarded, and the RAs arguments in relation to each option, we are concerned by the RAs understanding of the issue and its interaction with other aspects of the SEM design. At a high level, Ancillary Services (AS) are not paid for through the energy market and therefore changes to the AS arrangements should not affect the energy market. In relation to the options being considered, we are in agreement with the RAs on the preferred option (Option 2), albeit for somewhat different reasons.

The remainder of this response is structured as follows; firstly we briefly review the structure and design of the SEM and comment on SEM Committee precedent; we then move to consider the policy options forwarded and in light of the stated objectives, provide a critique of some of the arguments forwarded; and finally, our basis for supporting Option 2 is reviewed.

2. SEM Design and regulatory precedent

The High Level Design (HLD) of the SEM introduced an all-island market for electricity with three component parts;

- Energy market – a gross mandatory pool wherein generators bids reflect their SRMC of generation and defined in the Licence (Condition 15) and the BCoP.
- Capacity Payments Mechanism (CPM) – in compliment to the energy market, capacity payments ensure generators' costs are recovered in full and that incentive deficits, particularly in medium- to long-term decision making, arising from bidding SRMC are addressed.
- Ancillary Services (AS) – required for the safe, stable and secure operation of the system. These services are procured bilaterally by the TSOs with generators, where possible and appropriate, where they are required to provide such services under licence conditions.

Therefore, the energy market and CPM ensure generators in a gross mandatory pool with centralised dispatch bidding SRMC recover their costs and have an economic incentive to participate in the market. The need for a CPM within this design was agreed by the SEM Committee as part of the HLD process and contained in the HLD

Decision paper (AIP-SEM-42-05). The role of the CPM, as recognised by the SEM Committee, is to bring greater stability to the market and therefore customers, than would otherwise be the case in an energy-only market reliant on significant price spike in a small number of hours to ensure full recovery of costs. AS are external to this, they relate to operational issues and concerns and are needed for the secure operation of the system. Simplistically one could conclude that the energy-only market and CPM ensure load is met with generation (at least cost). AS ensure that the outcome of the energy market can be delivered.

In relation to AS, the RAs have acknowledged that these services are not paid for in the energy market (SEM-08-063). The TSOs have described the tools available to them to ensure adequate AS are available as being; 1) enforcement of the Grid Code, and; 2) the payment for service (SEM-08-063). Therefore, one can conclude that payment is the economic means of ensuring the provision of an adequate level of AS (Grid Code compliance being a compliance/legal incentive) and that these payments are external to the energy market.

Furthermore, discussion of the CPM and the current treatment of AS revenue in the calculation of the BNE should not be used to try and further complicate the thinking in relation to this. Notwithstanding VPE's continued opposition to the BNE calculation methodology and assumptions underlying it in relation to the deduction of AS revenue and IMR, this methodology is designed to identify the real cost of a BNE peaker. The RAs arguments for netting off the revenues assumed to accrue to a BNE peaker are not the same as those that apply herein with respect to the formulation of generators COD. Project cost for new peaking capacity investment is far more encompassing a cost base than is a generator's SRMC. The latter is specific to the energy-only market, (where energy is required to serve load absent AS, for example reserves), and as such should reflect only the relevant costs (and benefits) of which variable and fixed AS revenues are not relevant for inclusion in generators' COD.

The HLD of the SEM complimented an energy-only market design with a CPM to ensure greater stability and incentives the market's continued development. The same design continued the AS practices of the pre-SEM regimes with a view to harmonisation. The provision of AS is not incentivised through the energy market (incl. CPM), it is not paid for through the energy market and can therefore be seen to wholly external to the other design features. AS are required for the operational stability of the system. The interrelationship between the constituent elements of the design have previously been commented on by both the RAs and the TSOs. As part of the Harmonised All-Island Ancillary Services Policy Decision Paper (SEM-08-013), the SEM Committee determined that;

“Reserve payments serve the purpose of ensuring that sufficient plants are available in the right locations, capable of providing the response required by the TSO. The issues relating to the design of the CPM (including how it interacts with the provision of AS) were consulted on previously by the RAs during the development of the CPM. The CPM does not, and was not designed to ensure that generators offer sufficient

reserve within certain geographical boundaries or to particular technical specifications.

It has been suggested that generators will be unable to respond to the short-term signals provided by the CPM but the RAs have already expressed its disagreement with this view (AIP-SEM-231-06)."

Furthermore, within the Harmonised All-Island Implementation Arrangements for Ancillary Services and Other Payments and Charges Decision Paper (SEM-09-003), the TSOs addressed AS within the context of the SEM design;

"The TSOs do not consider that payment for AS represents double counting to generators in the energy market given that for operating margin, speed of generator response is important and not simply capacity provision. The TSOs also point out that the double counting issue between the energy and AS market has been considered and that co-optimising AS with the SEM is an undertaking considered for the future, after harmonisation is implemented and enough experience about the performance of the arrangements is obtained."

Therefore, consistent with the SEM design, and the views of the RAs and of the TSOs, AS are;

- Paid for and provided outside of the energy-only market;
- Incentivised through compliance (legal) and economic means;
- Serving a greater purpose than simply capacity provision and are not double counted in either the energy-only market or CPM; and,
- Capable of being combined with the energy-only market design as part of a co-optimisation approach.

None of these features are altered by interpreting all or part of AS revenue as being either fixed or variable.

The precedents referred to by the RAs in the current consultation paper, (TLAFs, Gas Transportation Capacity and Purchase Risk), importantly all relate to factors that have a bearing on SRMC in the energy market. As such it is appropriate to consider their role in the formation of generators' COD. An attempt to try and argue that because certain AS revenues may now be variable under the new HAS arrangements, that these should be considered benefits in the formulation of generators COD is to confuse the issue with flawed logic and erroneous comparisons. AS are not paid for through the energy market and therefore changes to the AS arrangements should not affect the energy market. The fact that certain AS revenues may now be variable has no bearing on a generator's SRMC in a centrally dispatched energy-only market or in the generators market scheduled quantity.

3. Policy options

The RAs forward three policy options in the consultation paper for dealing with AS revenue under the new HAS arrangements. The options outline the proposed treatment of variable and fixed AS revenues in the formulation of SRMC and generators' COD, as well as in the CPM. The three options forwarded for consideration are for the SEM Committee to issue clarification to generators to;

1. Treat variable AS benefits as variable in the formulation of SRMC and generators' COD (deduct benefit) and for only fixed AS revenue to be deducted by the RAs when calculating the cost of BNE for the CPM pot;
2. Treat all AS revenue as fixed such that SRMC and generators' COD is unaffected and for the RAs to continue to deduct all AS revenue from the calculation of BNE cost;
3. Factor in variable revenues as they see fit into their COD. This is considered to be a 'do nothing' option as, "*the SEM Committee would elect not to clarify the interpretation of the BCoP with regard to variable AS payments.*"

For a multitude of reasons, some of which have been discussed already and others to be advanced herein, we consider Option 3 to be counter-productive to the transparent operation of the SEM and price formation in the market, thus adversely affecting the MMUs ability to monitor the market and apply the SEM's stated market power mitigation strategy. For this and other reasons we shall not consider this option any further and concur with many of the conclusions stated by the RAs in the consultation paper around this option.

The remainder of this section shall consider the relative merits of the remaining two options and how these align with the RAs stated policy objectives in relation to the treatment of the new HAS arrangements.

Policy Objectives

Within this consultation paper the RAs have indicated that it is the objective of the MMU to ensure that the SEM Committee develops a policy for the treatment of HAS benefits in the BCoP and a complimentary policy in relation to the CPM so that;

- Customers do not pay twice for any AS element;
- The energy and capacity signals of the SEM are not distorted (unnecessarily);
- The benefits of the new, more efficient arrangements for AS are passed properly through to customers.

In relation to the options forwarded, the RAs (MMU) found that Option 1 was preferable to Option 2 in achieving the first two policy objectives. However, Option 1 is found to perform badly in relation to an additional objective of simplicity/transparency. Of the two options, only Option 1 was found to ensure customers enjoyed the economic efficiency brought about by the new AS arrangements. The paper also states that the SEM Committee accepts that Option 1

is superior from an economic perspective but that Option 2 is probably the most favourable.

Before considering these findings in more detail, it is first important to summarise some of the salient points from the discussion herein on the SEM HLD and regulatory precedents, as well as in relation to AS arrangements in the SEM;

- AS are paid for and provided outside of the energy-only market;
- AS are incentivised through compliance (legal) and economic means;
- AS serving a greater purpose than simply capacity provision and are considered by the RAs to not be double counted in either the energy-only market or CPM;
- AS are capable of being combined with the energy-only market design as part of a co-optimisation approach; and furthermore,
- AS are charged to TUoS and as such are typically passed through to customers.

Once again it is worth reiterating that none of these features are altered by an interpretation of AS revenues as being either fixed or variable.

Consideration of Options 1 & 2

Through Option 1 the RAs are proposing to issue a clarification stating that variable AS revenue must be deducted in the build up of SRMC and in COD. It is state that such an approach would; prevent double payment of any AS element; ensure correct energy and capacity price formation; and, ensure consumers enjoy economic efficiency brought about by the new HAS arrangements. It is VPE's considered view that each and every one of these statements are fundamentally flawed as a result of confused and inconsistent arguments and an apparent misunderstanding of the SEM HLD and the economic principles underlying it.

Firstly, AS are paid for through TUoS charges and are procured by the TSOs. They are in no way paid for through the energy market or provided therein. Therefore, to attempt to include AS revenues (fixed or variable) in the formulation of SRMC and/or in generators' COD is to include in the energy-only market costs/revenues that are unrelated to the energy-only market. Adopting Option 1 would erroneously introduce an additional external constraint to the optimisation of the energy-only market with the result that the outcome **must** be less efficient than an energy-only market optimisation. Such an approach would provide incorrect and inefficient signals in an energy-only market.

Option 2 maintains the current approach to the formulation of SRMC and generators' COD and as such ensures the correct signals in energy for an energy-only market.

In relation to the CPM, it is VPE's longstanding view that AS revenue should not be deducted from the calculation of the BNE but for as long as this is the case, the signal provided by the CPM will be considered incorrect. However, this has nothing

to do with the classification of AS revenue as fixed or variable for reasons already outlined.

Addressing the issue of the double payment of variable AS, AS are procured and paid for by the TSO outside of the energy-only market. Therefore both Fixed and Variable AS are not paid for in the energy market and the RAs have previously concluded that AS revenue is not double counted in the CPM. As such it must be the case introducing Variable AS revenues into the formulation of SRMC and generators' COD in an energy-only market must prevent generators from complying with their Licence condition of cost-reflective bidding as it is clearly not cost reflective to allow for the inclusion of costs/revenues from external markets.

Option 2 proposes maintaining the separation of AS and the energy-only market and as such this ensures there is no double-payment of any element of AS.

Furthermore, given Option 1 would bring about inefficient market outcomes and bidding in a centrally dispatched gross mandatory pool that is not cost-reflective, it is not possible to confer the advantages of economic efficiency on customers from the new AS arrangements under such an approach.

Option 2 ensures economically efficient outcomes in the energy-only market and given all AS are procured and provided outside the energy-only market but rather paid for through TUoS charging, the efficiencies brought about by the new AS arrangements will directly pass through to customers in the form of savings in TUoS if the new arrangements are well designed and deliver the expected efficiencies. Reverting to Option 1 one should now clearly see that this option proposes customers benefit from the new arrangements directly (reduced TUoS) and that such benefits be doubled through inclusion in the formulation of SRMC and generator's COD.

All in all it is impossible to concur with the SEM Committee in their acceptance of Option 1 as the economically superior option as it;

1. Ensures an inefficient outcome in the energy-only market by considering costs/revenues that are outside the market and the formulation of SRMC and generators' COD;
2. Prevents generators from complying with their Licence condition of cost-reflective bidding and misinterprets the BCoP to include costs/revenues that are outside of the energy-only market;
3. Provides inefficient and incorrect signals in the energy market; and,
4. Proposes to double count the benefits of the new HAS arrangements for customers;

We do however acknowledge and agree with the RAs that by reducing the deduction from the calculation of the BNE in the CPM, this would improve the capacity price formation/signals. However, it is clear that this would be improved further by removing such a deduction from the calculation altogether, the rationale for which has nothing to do with the AS revenue being fixed or variable.

In summary, we agree with the assessment of the RAs that Option 2 is superior in terms of satisfying the objectives of simplicity and transparency, and regulatory certainty. However, by adhering to the SEM HLD and acknowledging the characteristics of the respective elements of the SEM, Option 2 is also clearly superior to Option 1 when assessed alongside the objective criteria set out by the RAs (MMU) in relation to this policy matter, namely it ensures;

- Customers do not pay twice for any AS element (it also ensures customers are not doubly compensated)
- The energy and capacity signals of the SEM are not distorted (unnecessarily)
- The benefit of the new, more efficient arrangements for AS are passed properly through to customers.

Finally, it is important to note that much of the discussion of these issues in the consultation paper was unnecessary but arose out of the RAs failure to acknowledge the separation of the AS arrangements from the energy market and CPM. This represents a contradiction with their previously stated decisions on such matters. It also appears to signify a significant misunderstanding of the SEM and of the economic principles underlying it and although the RAs consider the importance of regulatory certainty in the consultation paper, this consideration is undermined by such misunderstandings. The fact that a cost/revenue in the SEM is variable may be a necessary condition but it is certainly not a sufficient condition for inclusion of that cost/revenue in the formulation of SRMC or generators' COD. If this was a sufficient condition as is seemingly being proposed in the consultation paper by the RAs, wherein would this practice stop of including variable costs/revenues unrelated to the cost-reflective SRMC bidding required in our (centrally dispatched gross mandatory pool) energy-only market? Irrespective of the answer, the outcome would certainly be inefficient.

4. Conclusions

First and foremost VPE supports the RAs preferred option (Option 2). However it is also our considered view that this is the only relevant policy option in relation to the treatment of new HAS arrangements in the BCoP. HAS arrangements (costs/benefits) have no role in the energy market and it is concerning that the RAs (MMU) have both consulted on this issue with options that contradict this position and found the inclusion of AS revenues in generators' COD to be the most economically efficient approach. Only complexity and practicality appear to have prevented the RA from favouring Option 1.

AS are procured and paid for outside the energy market. Co-optimisation of these two markets is a possibility but is not something considered within this paper and therefore they remain separate. Regulatory precedent referred to in the consultation paper relates to matters that directly affect costs to serve the energy-only market. Just as AS are not paid for in the energy market, AS revenues should similarly

remain outside the market as to include them would; create inefficient pricing signals, compensate customers twice for benefits realised under the new HAS regime and have a negative impact on regulatory certainty by directing generators to follow such a policy that is clearly inconsistent with previous SEM Committee decisions and views of the TSO. Simply because a revenue/cost is classified as variable does not automatically require it to be included in the formulation of generators' COD under the BCoP. It is somewhat surprising that the RAs have not recognised in this consultation paper the need for generators to only reflect costs/revenues in the formulation of their COD and SRMC that are relevant to the energy-only market.

Finally, in relation to the CPM it is clear from the SEM HLD and subsequent opinions of both the RAs and TSOs that the CPM was not designed to ensure provision of reserve and as such one can conclude that there can be no double payment for AS in the CPM. This remains true irrespective of whether the AS revenues are fixed or variable as they are outside both the energy-only market and CPM. Furthermore, we reiterate our objection to the RAs continued deduction of AS revenue from the calculation of the BNE peaker cost in the CPM formulation.