



SEM Committee

Market Monitoring Unit

Harmonised Ancillary Service Arrangements and the Bidding Code of Practice

Consultation Paper

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1. Introduction

The Market Monitoring Unit (MMU) has been alerted to an overlap in the new Harmonised Ancillary Services (HAS)¹ which went 'live' on the 1st February 2010 and the generator Bidding Code of Practice (BCOP). This overlap has been explored by a number of participants who have sought clarification from the Unit regarding the interpretation of the BCOP in relation to certain elements of HAS revenue.

Specifically, the HAS feature some payments such as primary reserve that are paid as a function of the running pattern of the plant². This is an important distinction because the revenues (referred to as economic benefits from here on) can be argued to be avoidable on a short-term basis, as they are received only if the plant is called to generate MW quantities. This criteria typically qualifies the benefits as Variable and as such the benefits may need to be included in the formulation of Short-Run Marginal Cost and the subsequent construction of Generator Unit Commercial Offer Data³.

This paper explores the issue, offers some potential Policy options as well as a preferred option, and seeks views from interested parties.

2. Headline Issue

Economic costs and benefits faced by Generators in the SEM have, since the early market design been categorised in policy into one of two categories; Fixed or Variable. This delineation has arisen naturally as a result of the formation of the explicit Capacity Payment Mechanism coupled with the concept of SRMC bidding in the market design.

Variable costs are elements that **should** go in to the build up of Generator Commercial Offer Data. Fixed costs are elements that **should not** be included in the build up of Generator Commercial Offer Data.

Under the old Ancillary Services (AS) arrangements, all AS revenues were under policy considered Fixed for the purpose of the Bidding Code of Practice and in the Capacity Payments Mechanism (CPM). This means such revenues are not included presently in Commercial Offer Data, but as a complementary effect, the total revenues earned by the Best New Entrant (BNE) from Ancillary Services were deducted from the annual fixed costs faced by the rational investor in the calculation of the CPM Annual Capacity Payment Sum.

¹ See AIP-SEM-10-001 'Harmonised All-Island Ancillary Services Rates and Other System Charges'

² The ability for the Unit to provide the Service is dependent on its short-term commitment status (e.g. for a primary reserve payment to be made, the unit must be synchronised and generating).

³ See AIP-SEM-07-430 'The Bidding Code of Practice'

The new HAS arrangements feature payments that are probably categorically Variable in nature; i.e. the payments are not available unless the unit is called to generate. These include some types of reserve and (potentially) reactive power. The question thus arises:

“How, if at all, should the Variable benefit of HAS payments be factored in to bidding?”

3. Background and Considered Factors

3.1. Precedent

The SEM Committee have been asked to consider several specific cases and make judgments as to whether certain costs are Fixed or Variable for the purposes of formulating SRMC in Commercial Offer Data:

- TLAFs. The SEMC decided in 2008 that transmission losses caused by the generator were avoidable and hence should be treated as Variable.
- Gas transportation capacity. In 2007 the SEM Committee noted the development in short-term trading of gas capacity in the Republic, but decided that on an all island basis these costs should be treated as Fixed until the conditions become more demonstrably liquid.
- Purchase risk. The BCOP was written to permit generators to treat as Variable the effect of short-term variability in the price of cost-items available from generally accessible, liquid markets.

These decisions translate directly into the formulations participants make in calculating and submitting their Commercial Offer Data.

3.2. CPM Complement

The sample of decisions in the last section directly, and ‘in complement’, impact the treatment of the BNE in calculating the Annual Capacity Payment Sum (Capacity Pot). This is because the BNE element of the Capacity Pot is based purely on annualised Fixed costs and benefits.

An example is the treatment of gas transportation capacity. As these are Fixed under the SEMC’s policy, the annualised fixed costs of a gas-fired peaker appear relatively high in the BNE assessment. This has an upward effect on the size of the Capacity Pot because it makes

gas-fired options less tenable to the 'rational investor' when measured against other fuel options.

4. Policy Objectives

The objective of the MMU in developing this issue is to ensure that the SEM Committee develops a policy for the treatment of HAS benefits in the BCOP and complementary policy on the CPM so that:

- Consumers do not pay twice for any AS element
- 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 consumers

Treating a (truly) Variable cost/benefit element as Fixed in policy (or vice versa) can have the effect of denying the correct formation of prices and schedules in the SEM. There are however, compelling reasons why the SEM Committee might want to do this anyway, such as promoting simplicity and maintaining regulatory certainty.

5. Policy Options

Three Options have been formulated:

5.1. Option 1 - Treat as Variable

Under this Option, the SEM Committee would issue a Clarification stating that Variable AS benefits **must** be deducted in the build-up of Short-Run Marginal Cost (SRMC) and in Commercial Offer Data (COD). In compliment, the BNE will have only its Fixed AS revenue deducted in the formation of the pot (Variable AS revenue will be ignored).

This Option is very good at meeting the objectives of:

- o Preventing double-payment of any AS element
- o Ensuring correct energy and capacity price formation / signals

- Ensuring customers enjoy economic efficiency brought about by new AS arrangements

The Option is not very good at meeting the following considerations:

- Simplicity

This option would certainly cause an increased level of complexity in what the Bidding Principles actually are. The formulation of the deduction of AS Revenues from the Commercial Offer Data is not trivial (see Appendix A).

- Monitoring and Transparency

This option makes the MMU's task more difficult as additional variables will now need to be monitored for in the build-up of Commercial Offer Data.

5.2. Option 2 - Treat as Fixed

Under this Option, the SEM Committee would issue a Clarification stating that AS benefits **must not** be deducted or referred to in the build-up of Commercial Offer Data. In compliment, the BNE will have its total AS revenue, including aspects that vary with output (i.e. Variable elements), deducted from the annual pot size.

This Option is good at meeting the objectives of:

- Simplicity and transparency

The Bidding Principles will not change so there will be no more complication for new entrants (or existing players) to understand what the MMU expects of them in formulating their Commercial Offer Data

- Regulatory certainty

- Preventing double-payment

Variable AS will feature as a deduction to the BNE so will not notionally be being 'paid twice'. It is recognised that in practice the quantum of the BNE deduction will not match the quantum of the reduction in SMP that would result from Option 1, though the relative magnitudes are not known.

The Option is not as good as Option 1 at meeting the following considerations:

- Ensuring correct energy and capacity price formation / signals
- Ensuring customers enjoy economic efficiency brought about by the new AS arrangements

5.3. Option 3 – Do Nothing

In this Option the SEM Committee would elect not to clarify the interpretation of the BCOP with regard to variable AS payments. Generators would be free to factor in these revenues to their COD as they see fit.

This Option has some appealing features, such as the effective ‘relaxation’ that generators would enjoy to innovate and compete in the market.

The MMU is of the view that this Option is not particularly appealing as in the long term it may create opportunities for gaming, double payment of AS and reduce transparency around energy price formation. The Option would also somewhat hamper the Unit’s ability to effectively enforce an even playing field for competing generators against the Bidding Principles (i.e. there simply is no Principle).

This Option also raises the difficult question of how the CPM team calculates the BNE in the absence of a Policy on the issue. It is thus likely a Policy would be required at the point the Capacity Pot is required to be set for 2012.

5.4. Options Summary

The MMU sees the favourability of the three options as summarised below:

	No double-payment of Variable AS	Correct Signals in Energy and Capacity	Simplicity / Transparency
Option 1			
Option 2			
Option 3			

Green indicates a good performance, red a bad performance. Views are invited regarding the favourability of each Option. Respondents are encouraged to suggest any variants or other options of their own devising.

6. Preferred Option

The SEM Committee believe that Option 2 is probably the most favourable. While the Committee accepts that economically, Option 1 is superior, this benefit is probably outweighed by the significant increase in complexity regarding what the Bidding Principles would effectively mean for generators.

Given the relative magnitude of monies in HAS relative to the monies implied in energy and capacity, the impact of intentionally allocating what are probably Variable HAS benefits in reality to Fixed revenue mechanisms would probably not introduce a material distortion to the signals presented by the SMP and by the CPM. The SEM Committee believes the impact of this Policy would thus not present material harm to consumers.

7. Provisional Policy

The MMU offered the following provisional policy which has been commended by the SEM Committee:

Generator participants may interpret any variable or short-run elements of their Ancillary Service revenues prudently in the formulation of Short-Run Marginal Cost (SRMC) and Commercial Offer Data, with clear and demonstrable reference to the Bidding Code of Practice. Participants should be prepared to defend their methodology for factoring Ancillary Service revenues into the formulation of SRMC should the MMU choose to question it.

For the avoidance of doubt, the above policy is intended to be replaced / updated following the outcome of this Consultation.

8. Views Invited

Respondents are invited to comment on any of the topics and / or proposals put forward in this paper and to submit their responses via email to Colin Broomfield at colin.broomfield@uregni.gov.uk and Clive Bowers at cbowers@cer.ie by no later than **5:00pm on Monday the 20th of December 2010.**

9. Appendix A – How would Generators factor AS in COD?

The MMU drafted the following advice regarding how Option 1 might be implemented in Commercial Offers. The views in this Appendix are not 'minded to' decisions but are presented to offer a potential starting point for respondents' analyses.

7.1. Reserve

The short-run avoidable benefit of Reserve Payments is generally a 'no-load' type benefit which is enjoyed so long as the unit is running somewhere above MinGen. So at a high level, the MMU would expect Generators to deduct their Reserve payments from the No-Load cost. But there are complexities:

- If the unit is running at MaxGen, there is no capability to provide reserve so the Reserve Payments are zero. This means there is in fact an incremental relationship as the generator approaches MaxGen that has to be factored into P/Q pairs.
- Sometimes a unit cannot provide Reserve even if it is in the right 'region' of dispatch (e.g. MinGen). An example is a unit with a high Dwell Time which is brought on for a single half-hour. The unit cannot provide reserve in this case as it must dwell at MinGen.
- Layering. The treatment of the various aspects of reserve has to be 'layered' into the No-Load / P/Q pairs. While not a problem mathematically this does make the algorithm quite complex.

7.2. Reactive Power

This probably would have similar characteristics to Reserve – i.e. 'deduct it from the No-Load' but again there are complications as the unit approaches MaxGen. Often, units can provide less reactive power at MaxGen (i.e. maximum active power). Mapping this to COD presents the same algebraic problem as for Reserve (i.e. mainly put the adjustment in No-Load but then account for the incremental effect near MaxGen in P/Q pairs).

Synchronous Compensation complicates matters as this can be provided regardless of whether the unit is dispatched or scheduled to generate active power. As such this element would probably not be considered Variable.

7.3. Black Start (and similar)

It is envisaged that Black Start can be considered Fixed, as the benefit does not vary with short-term unit output.