Single Electricity Market Committee

Trading & Settlement Code

Annual Operational Parameters

for 2012

Decision Paper

SEM-11-099

22nd November 2011

Introduction

The SEM Trading and Settlement Code (the Code) specifies that the Market Operator (SEMO) and the System Operators (TSOs) shall make reports to the Regulatory Authorities proposing values for five groups of parameters used in the settlement systems for each Year at least four months before the start of that Year. The groups of parameters concerned are:

1. Parameters for the determination of Required Credit Cover[1] (SEMO);
2. MSP Software Penalty Cost Parameters[2] (SEMO);
3. Annual Capacity Exchange Rate[3] (SEMO);
4. Parameters used in the calculation of Uninstructed Imbalances[4] (TSOs); and
5. Flattening Power Factor[5] (TSOs).

In accordance with the Code, these reports were provided to the RAs by the TSOs and SEMO on 31st August 2011. Subsequently, on 6th September 2011, the RAs published the reports, in addition to a Consultation Paper[6] summarising the reports on these parameters and seeking views on the TSO's and SEMO's proposals.

Comments were received from Endesa Ireland, NIE PPB and Synergen.

Endesa Ireland and Synergen agreed with the proposals put forward in the Consultation Paper. Synergen raised a number of issues, mainly in relation to credit cover. The Synergen response was shared with SEMO. All responses have been published along with this Decision Paper.

The remainder of this paper contains the details of the proposals set out in the consultation paper, the three sets of comments received, SEMO's response to these comments and the SEM Committee decision and revised proposal on the parameters to apply for 2011.

[1] See paragraph 6.174 of the Code
[2] See paragraph N.25 of the Code
[3] See paragraph 4.96 of the Code
[4] See paragraph 4.142 of the Code
[5] See paragraph M.30 of the Code
[6] SEM-11-074 http://www.allislandproject.org/en/TS_Current_Consultations.aspx?article=356d0517-01b2-4ac0-b677-7749962cfe99

1. Parameters for the determination of Required Credit Cover

SEMO's report addressed the values that should apply for the following parameters in 2012:

- the Fixed Credit Requirement for Generator Units and for Supplier Units –
- the Historical Assessment Period for the Billing Period –
- the Historical Assessment Period for the Capacity Period -
- the Analysis Percentile Parameter -
- the Credit Cover Adjustment Trigger -
- the level of the Warning Limit –

The values of these parameters in 2011 and those proposed by SEMO for 2012 are shown in the table below:

Credit Cover Parameter	2011 value	2012 proposed
Fixed Credit Requirement for Generator Units	€5,000	€5,000
Fixed Credit Requirement for Netting Generator Units	€5,000	**€1,000**
Fixed Credit Requirement for Supplier Units (based on a rate of €8.77/MWh of average daily demand subject to a minimum value of €1,000 and a maximum of €15,000)	€10,000	**Min of €1,000 with max. of €15,000**
Historical Assessment Period for Billing Period	100 days	100 days
Historical Assessment Period for Capacity Period	90 days	90 days
Analysis Percentile Parameter	1.96	1.96
Credit Cover Adjustment Trigger	30%	30%

Comment Received

Both Endesa Ireland and NIE PPB agreed with all the proposed values. In their consultation response, Synergen expressed the following views:

Fixed Credit Requirement for Netting Generator Units

"The historic analysis set out by the SEMO in SEM-11-074a (2012 SEM Parameters for the Determination of Required Credit Cover) suggests that a €1,000 Fixed Credit Requirement for Netting Generators would cover any historic exposure levels to date, it is not clear to Synergen that given the nature of, and scale of, new generation entry that historic observed exposure levels are necessarily a robust indicator of future exposures. On this basis Synergen suggests that the existing values are retained".

Having reviewed the Synergen comment SEMO responded as follows:

With regard to the Fixed Credit Cover for Netting Generators Units, SEMO believes that the analysis has shown a level of exposure that is substantially lower compared to regular Generators not only in terms of the amounts, but also in terms of number of occurrences. The scale of new generation that has applied to register in the SEM would not affect the findings. Generator units that are currently applying through the Registration process in the SEM, are not dissimilar in nature or size to the current portfolio. Any potential increase in the total Market exposure is balanced by the increase in the total Fixed Credit Cover in place.

Based on these considerations SEMO believes that the historic analysis is a reliable indicator of future outcomes and that lowering the Fixed Credit Cover for Netting Generators from€5,000 to €1,000 would still be appropriate.

Fixed Credit Requirement for Supplier Units

Synergen supports the principle of a range of Fixed Credit requirements. However, its over-riding objective is that the Credit Cover in place should be at the 95th percentile level. The SEMO assessment of Fixed Credit Requirement for Supplier Units notes that, while resettlement may increase or decrease a participant's level of monies owing to the market and that over a period of time this variance may be broadly neutral, "the risk of a supplier exiting the Market with such large resettlement pending is high"2. In essence, the SEMO sees supplier default as a significant risk, or even likely. As generators are obliged to sell into the gross pool and thus sell to counterparties not necessarily of their choosing, the markets counterbalancing obligation is to ensure that credit cover arrangements are robust. Synergen believes that there are two possible approaches to achieve this:

1. *The Fixed Credit Requirement for Supplier Units should be increased from €10,000 to €15,000. This represents the fixed charge level that delivers the 95th percentile level of cover the level beyond which "…higher values would not significantly improve the cover for re-settlement".3 Synergen considers that Credit Cover is there to provide, if not fully for an absolute worst-case scenario, something high e.g. the 95th percentile principle generally applied, and based on the SEMO data provided, this level of fixed charge would meet that objective.*
2. *The sliding scale approach should be adopted, but the €/MWh should be reviewed to deliver Credit Cover at the 95th Percentile level. In SEM-11-074a the SEMO recommends that a figure of 8.77€/MWh is adopted – this figure reflecting the average of the re-settlement rates over the 16 week period studied by the SEMO. However, it is not clear from the analysis presented what the interaction is between this €/MWh rate, and the Fixed Payment in delivering Credit Cover at the 95th percentile level. Synergen believes that such an assessment should be undertaken.*

On balance, Synergen would be comfortable with the variable range of Fixed Credit Requirement for Supplier Units subject to a demonstration that 8.77 €/MWh is consistent with the 95th percentile principle, OR otherwise adopt an alternative €/MWh figure that achieves this level of Credit Cover.

Having reviewed the Synergen comment SEMO responded as follows:

With regard to the Fixed Credit Cover requirements for Suppliers, SEMO has looked at the alternative solutions proposed by Synergen and has arrived at the following conclusions:

1. *Proposed increase for Supplier Units Fixed Credit Cover Requirements from €10,000 to €15,000: SEMO believes that this would be unduly burdening on very small Suppliers: 90% of the suppliers analyzed had a total average daily demand of less than 1000MWh; of these 62% were below 20MWh and over half of those were less than 1MWh.*
   As the analysis demonstrated that the smaller the demand of a Supplier unit, the smaller is the exposure to the Market, SEMO still maintains that a sliding scale is applied to Supplier units in the SEM.
2. *Review of the sliding scale to deliver Credit Cover at the 95th Percentile level: SEMO is not opposed in principle to this approach; The Undefined Exposure calculation is based on average values of Settlement with the 95th percentile applied. Appling a similar principle to the FCC (using average Resettlement values) indicates that 93% of the Suppliers would be fully covered using a the proposed rate of 8.77€/MWh and a €15,000 ceiling. For the remaining Suppliers, FCC amounts would need to be between €180,000 and €780,000. SEMO considers such requirements for FCC barriers to entry.*

SEMO still believes that the proposed rate of 8.77€/MWh ensures the correct balance between avoiding barriers to entry while ensuring the Market default exposure is mitigated as much as possible in a manner fair to all Participants.

3. *SEMO would like to clarify the point raised with regard to "the risk of a Supplier exiting the Market with such large Resettlement pending is high": this was not meant to imply that SEMO believes Suppliers are a greater risk of exiting the Market, but merely that their exposure is seasonal and therefore concentrated in certain periods of the year. When calculating the exposure over a 16 week period it is possible that, depending on the time of the year, Suppliers' exposure could add up to being a large positive amount, while Generators would have a mix of positive and negative giving them a likelihood of lower net exposure at all times over the year.*

SEM Committee Decision

With regard to Netting Generator Units, SEMO's analysis had, for the first time investigated the effect of resettlement on a unit by unit basis. This analysis for Netting Generator Units showed that the largest resettlement amount over the whole period for such Units was €250. On this basis, the SEM Committee agrees with SEMO's proposal that a Fixed Credit Cover of €1,000 for Netting Generator Units apply.

In relation to the Fixed Credit Requirement for Supplier Units, the SEM Committee notes the comment from Synergen but sees merit in the sliding scale put forward by SEMO. This will reduce the financial burden of market participation for very small suppliers of which there are many according to the SEMO analysis.

Having considered the Synergen comments and the SEMO responses, the SEM Committee has decided that the values for the Credit Cover Parameters for 2012 shall be as set out below (as proposed by SEMO):

Credit Cover Parameter	2012 value
Fixed Credit Requirement for Generator Units	€5,000
Fixed Credit Requirement for Netting Generator Units	**€1,000**
Fixed Credit Requirement for Supplier Units (based on a rate of €8.77/MWh of average daily demand subject to a minimum value of €1,000 and a maximum of €15,000)	**Min of €1,000 with max. of €15,000**
Historical Assessment Period for Billing Period	100 days
Historical Assessment Period for Capacity Period	90 days
Analysis Percentile Parameter	1.96
Credit Cover Adjustment Trigger	30%

2. MSP Software Penalty Cost Parameters

The core algorithm of the MSP Software attempts to optimise for a non-linear mixed integer constrained objective with non-linear constraints. On occasions the mathematical problem posed may be infeasible (i.e. there will be no solution which will satisfy every constraint). In these cases, rather than return no answer, it is customary in numerical solutions to produce an answer where one or more of the constraints has been breached slightly. To enable this "slack variables" are introduced with suitably chosen coefficients to ensure that these constraints are only breached in the case of infeasibility. The MSP Penalty Cost Parameters relate to:

- the Over-Generation MSP Constraint Cost -
- the Under-Generation MSP Constraint Cost -
- the Aggregate Interconnector Ramp rate MSP Constraint Cost -
- the Energy Limit MSP Constraint Cost -
- the Tie-Breaking Adder -

SEMO proposed that the values of these parameters in 2012 should be the same as in 2011.

Comments Received

All respondents supported maintaining the parameters for 2012 at the same level as 2011.

SEM Committee Decision

Based upon the above, the SEM Committee has decided that the values for the MSP Software Penalty Cost Parameters for 2012 shall be unchanged from those in 2011 as set out below:

MSP Software Penalty Cost Parameters	2012 value
Over-Generation MSP Constraint Cost	73
Under-Generation MSP Constraint Cost	73
Aggregate Interconnector Ramp rate MSP Constraint Cost	292
Energy Limit MSP Constraint Cost	38
Tie-Breaking Adder	0.001

3. Annual Capacity Exchange Rate

As per the SEM Committee Decision in 2010 (SEM-10-077), the Annual Capacity Exchange Rate will be proposed to the RAs by SEMO in early December and will be published soon after that.

4. Parameters used in the calculation of Uninstructed Imbalances

The TSOs' report addressed the values that should apply for the following parameters in 2012:

- the Tolerance band around the Dispatch Quantity:
- the System per Unit Regulation, UREG -
- the Discount for Over Generation -
- the Premium for Under Generation -

The values of these parameters proposed by the TSOs for 2012 are shown in the table below and are identical to those for 2011.

Uninstructed Imbalance Parameters	2011 value	2012 proposed
Engineering Tolerance	0.01	0.01
MW Tolerance	1	1
System per Unit Regulation	0.04	0.04
Discount for Over Generation	0.20	0.20
Premium for Under Generation	0.20	0.20

Comments Received

All respondents supported maintaining the parameters for 2012 at the same level as 2011.

SEM Committee Decision

Based upon the above, the SEM Committee has decided that the values for the Uninstructed Imbalance Parameters for 2012 shall be the same as for 2011, as set out below:

Uninstructed Imbalance Parameters	2012 value
Engineering Tolerance	0.01
MW Tolerance	1
System per Unit Regulation	0.04
Discount for Over Generation	0.20
Premium for Under Generation	0.20

5. Flattening Power Factor

The TSOs' report addressed the value that should apply for the Flattening Power Factor in 2011. The Flattening Power Factor in the Loss of Load Probability Table calculation has the objective of reducing the volatility in the Capacity Payments mechanism. The TSOs proposed the same value (0.35) for the Flattening Power Factor in 2012 as in 2011.

Comments Received

Synergen reiterated its position put forward in previous operational Parameter Consultation responses that the Flattening Power Factor should be reduced. However, in light of the consultation on the Capacity Payment Mechanism Medium Term Review, Synergen stated its belief that the existing factors should be maintained for 2012. Both Endesa Ireland and NIE PPB supported maintain the same value in 2012 as in 2011.

SEM Committee Decision

Based upon the above, the SEM Committee has decided that the value for the Flattening Power Factor for 2012 shall remain at the same value as in 2011; that is, 0.35.