



## **Policy Parameters 2017**

### **Decision Paper**

**SEM-16-059**

**3<sup>rd</sup> October 2016**

## Table of Contents

1. Introduction.....	3
2. Comments from Respondents.....	5
3. PCAP /PFLOOR.....	6
4. Uplift Parameters.....	7
5. Value of Lost Load.....	10
6. Decision on the Policy Parameters for 2017.....	11

# 1. Introduction

The SEM Trading and Settlement Code (the Code) sets out a number of policy parameters which are determined by the Regulatory Authorities (RAs) on an annual basis.

## ***VOLL/PCAP/PFLOOR***

In accordance with paragraph 4.12 and 4.95 of the Code, the Regulatory Authorities (RAs) are required to determine the following three administered prices:

- the Value of Lost Load (VOLL);
- the Market Price Cap (PCAP); and
- the Market Price Floor (PFLOOR).

Following consultation last year, the RAs decided (SEM-15-053) that for the period from 1st January 2016 to 31st December 2016:

- PCAP would remain unchanged at €1,000/MWh; and
- PFLOOR would remain unchanged at minus €100/MWh.

The recent consultation paper (SEM-16-034), published on 29<sup>th</sup> June 2016, undertook a review of the effectiveness of PCAP and PFLOOR with a view to setting their values for the period 1<sup>st</sup> January 2017 to 31<sup>st</sup> December 2017. The same values as have been used since the beginning of the market were proposed in the consultation paper. This decision paper provides a final decision on the matter, following receipt of respondents' comments.

The calculation of VOLL for 2017, using the methodology decided upon in 2007, is set out in this paper to meet the requirement in paragraph 4.95 of the Code.

## ***Uplift Parameters***

Under paragraphs 4.70 and 4.71 of the Code, the RAs are also required to determine three parameters used in the calculation of uplift<sup>1</sup>. These are:

- the Uplift Alpha value  $\alpha$ , which governs the importance of the Uplift Cost Objective, such that  $0 \leq \alpha \leq 1$ ;
- the Uplift Beta value  $\beta$ , which governs the importance of the Uplift Profile Objective, such that  $0 \leq \beta \leq 1$  and such that  $\alpha + \beta = 1$ ; and
- the Uplift Delta value  $\delta$ , to constrain the overall impact on revenue in each Trading Day  $t$  arising from the uplift calculation, such that  $\delta \geq 0$ .

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<sup>1</sup> For more on the background to the methodology and objectives of Uplift in the SEM see the following: Objectives of the Function to Include Start-Up and No-load Costs in SMP(AIP/SEM/92/06), SMP Uplift Objectives – Decision Paper (AIP/SEM/142/06), SMP Uplift Parameters Consultation (AIP/SEM/230/06), and SMP Uplift Methodology and Parameters – Decision Paper (AIP/SEM/51/07)

Following consultation, the SEM Committee last year decided (SEM-15-053) that for the period from 1<sup>st</sup> January 2016 to 31 December 2016:

- $\alpha$  should be set to a value of 0.1;
- $\beta$  should be set to a value of 0.9; and
- $\delta$  should be set to a value of 5.

The consultation paper (SEM-16-034), published on 29<sup>th</sup> June 2016, presented some analysis of the behaviour of uplift for the period May 2015 to April 2016 and proposed values for the three uplift values ( $\alpha$ ,  $\beta$  and  $\delta$ ) for the year 2017. The same values as those used in 2016 were proposed in the consultation paper. This decision paper provides a final decision on the matter, following receipt of respondents' comments.

## 2. Comments from Respondents

The SEM Committee received one response to the consultation paper (SEM-16-034) from the following party:

- SSE

The response received is published with this decision paper.

## **3. PCAP/PFLOOR**

### **3.1 Proposals presented in the consultation paper**

The SEM Committee proposed to leave PCAP and PFLOOR unchanged at €1,000/MWh and minus €100/MWh for 2017. The consultation paper (SEM-16-034) published on 29<sup>th</sup> June 2016 contained analysis of recent data which supported this proposal.

### **3.2 Respondent's Comments**

SSE stated that the observed data supports leaving PFLOOR and PCAP unchanged for 2017.

### **3.3 Final Decision**

The SEM Committee has therefore decided to leave PCAP and PFLOOR unchanged at €1,000/MWh and minus €100/MWh respectively for the year 1<sup>st</sup> January 2017 to 31<sup>st</sup> December 2017.

It should also be noted that the Trading and Settlement Code gives the SEM Committee the power to change the values of PCAP and PFLOOR which would be an option should the need arise.

## 4. Uplift Parameters

### 4.1 Proposals presented in the consultation paper

The uplift values calculated over the optimisation time horizon are optimised to meet two objective functions:

- 1) Minimising uplift revenues (the cost objective); and
- 2) Minimising Shadow Price distortion (the profile objective).

These functions are weighted within the optimisation by two uplift parameters,  $\alpha$  and  $\beta$ . In addition, a third uplift parameter,  $\delta$ , constrains the overall impact on revenue of the uplift calculations.

The Code defines that  $\alpha$  and  $\beta$  are complementary, such that  $0 \leq \alpha \leq 1$ ,  $0 \leq \beta \leq 1$  and  $\alpha + \beta = 1$ . Prior to 2015, the uplift parameters had been set to  $\alpha = 0$ ,  $\beta = 1$ ,  $\delta = 5$  every year. In 2013 and 2014 further analysis was carried out and following consultation the uplift parameters were set to  $\alpha = 0.1$ ,  $\beta = 0.9$ ,  $\delta = 5$  for 2015.

In considering the uplift parameter values for 2017, the RAs undertook statistical analysis to examine the performance of uplift which was included in the consultation paper (SEM-16-034) published on 29<sup>th</sup> June 2016. In that paper, the SEM Committee proposed that the values of the uplift parameters for the year 2017 should remain unchanged as follows:

- $\alpha$  should be set at 0.1;
- $\beta$  should be set at 0.9; and
- $\delta$  should be set at 5.

In the consultation paper the RAs did recognise that a significantly reduced correlation between the SMP and System Demand could lead to negative impacts in the market with regard to having correct price signals for generator and/or interconnector utilisation. The impact does not appear to be excessive at this stage, but the RAs stated that they will nonetheless continue to closely monitor this correlation along with other related indicators.

### 4.2 Respondent's Comments

SSE stated that the longer period of observed data for the parameters shows that SMP volatility has not increased with the change in parameters.

However, they expressed concern that the correlation between System Demand and SMP has decreased further. They stated a desire to see full year comparisons covering the calendar years 2013, 2015 and 2016 in the final decision paper to see how large the impact has been.

They pointed out that the consultation paper noted that “it had been expected in previous consultations that any changes would increase the volatility of the SMP and, as a result, suppliers’ risk. This appears not to be the case and hence consumers should benefit from the reduction in uplift rather than it being negated by any increased SMP volatility”. They then made the point that any decrease in interconnector efficiency has an impact on social (and potential consumer) welfare in SEM and that reductions in uplift that substantially distort trading behaviour could have a negative customer impact in both GB and IE bidding zones.

In summary SSE believed that the uplift parameters should be maintained at their existing settings for 2017 given that forward contracts have already been allocated for the period, but they thought that a more comprehensive look at the SMP/System Demand correlation and trading efficiency would be helpful to support the final decision.

### 4.3 SEM Committee Response and Final Decision

The SEM Committee welcomes the response received and the clear articulation of the concerns raised therein.

The SEM Committee notes the concerns regarding the reduction in the correlation between SMP and System Demand and has compared full years’ data for 2013, 2014 and 2015 and as much data as possible for 2016. The results are shown below.

Correlation of SMP and System Demand	
Data for full year	
2013	0.55
2014	0.50
2015	0.45

Correlation of SMP and System Demand	
Data up to end July	
2013	0.54
2014	0.49
2015	0.45
2016	0.42

The SEM Committee notes that there will inevitably be a reduction in correlation between System Demand and SMP given the reduction in weighting to the profile objective. The correlation has reduced further in 2016 so far compared to previous years but the SEM Committee does not consider the reduction to be excessive.

The change in uplift parameters did not take effect until 2015 yet the correlation dropped considerably from 2013 to 2014. Therefore it is not clear how much of the drop in correlation in the subsequent years is due to the change in uplift parameters and how much is due to other factors. For example, exports from SEM to GB have increased and this may also be having an impact on the correlation between System Demand and SMP.



The SEM Committee has decided to leave the uplift parameters unchanged for the period 1<sup>st</sup> January 2017 to 31<sup>st</sup> December 2017 and that these should be as follows:

- $\alpha$  should be set at 0.1;
- $\beta$  should be set at 0.9; and
- $\delta$  should be set at 5.

## 5. Value of Lost Load

### 5.1 Background

The RAs are required under the Code to set a value for the Value of Lost Load (VOLL) in €/MWh four months before the beginning of the calendar year to which it applies. In AIP-SEM-07-484, the RAs announced their decision, after due consideration of the responses to a consultation paper published in 2<sup>nd</sup> July 2007, that:

- For the period from 1<sup>st</sup> November 2007 to 31<sup>st</sup> December 2008, the VOLL would be set to €10,000/MWh; and
- Its value in subsequent calendar years would be determined by taking its values in the preceding year and up-rating it by applying the weighted average of the year-on-year increase in the Irish Harmonised Index of Consumer Prices (HICP) (using a weight of two-thirds) and the UK HICP (using a weighting of one-third) in the July of the preceding year by comparison with that a year earlier.

The sources for the data on HICPs were cited as the [Central Statistics Office](#) (CSO) in Ireland and the [Office for National Statistics in the UK](#).

### 5.2 Final Decision

The relevant data for the calculation of the 2017 value of VOLL using the specified methodology are as follows:

	Weight	July 2015	July 2016	% Change
Irish HICP (2015=100)	2/3	100.5	100.6	+0.1%
UK HICP (2015=100)	1/3	100.0	100.6	+0.6%
Weighted Average	1			+0.27%

On this basis, given that VOLL for 2016 was €11,017.98/MWh and using the specified methodology, VOLL for the calendar year 2017 will therefore be:

$$€11,017.98/\text{MWh} \times (+0.27\%) = 11,017.98 \times 1.0027 = \mathbf{€11,047.73/\text{MWh}}$$

## 6. Decision on the Policy Parameters for 2017

As detailed in this paper, the SEM Committee has decided to leave the values of the policy parameters for the period 1<sup>st</sup> January 2017 to 31<sup>st</sup> December 2017 unchanged as follows:

- PCAP at €1,000/MWh;
- PFLOOR at minus €100/MWh;
- Uplift Parameter  $\alpha$  to be set at 0.1;
- Uplift Parameter  $\beta$  to be set at 0.9; and
- Uplift Parameter  $\delta$  to be set at 5.

In addition, the VOLL for the year 2017 has been calculated as €11,047.73/MWh.