

# Single Electricity Market Committee

**SMP Uplift Parameters 2010**

**Decision Paper**

**SEM-09-095**

**1 September 2009**

## 1. Introduction

The Regulatory Authorities are required to determine three parameters used in the calculation of Uplift<sup>1</sup> under the SEM Trading and Settlement Code (the Code).<sup>2</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  $\delta \geq 0$ .

Following consultation, the Regulatory Authorities last year decided for the period from 1<sup>st</sup> January 2009 to 31 December 2009 that:<sup>3</sup>

- $\alpha$  should be set to a value of zero;
- $\beta$  should be set to a value of 1;
- $\delta$  should be set to a value of 5; and that
- these values would remain valid for the period to end 2009.

The Regulatory Authorities have stated in previous consultations that they intended to monitor the effectiveness of the proposed Uplift Methodology, including the parameter values set out in that document.

On 17<sup>th</sup> June 2009, the Single Electricity Market Committee<sup>4</sup> issued the paper “SMP Uplift Parameters 2009, Consultation Paper” (SEM-09-066) (the Consultation Paper), a consultation paper on the values for the SMP Uplift Parameters which should apply for 2009. The paper presented some analysis of the behaviour of uplift since 1<sup>st</sup> November 2007 and the paper considered the performance of uplift as measured against price stability and the stated SMP Objectives that:

- the System Marginal Price should reflect the marginal costs of producing or consuming electricity during the Optimisation Time Horizon
- energy prices should be reflective of underlying market dynamics; consequently the recovery of Start Up Costs and No Load Costs through SMP should not deviate significantly from the Shadow Prices (Uplift Profile Objective)

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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)

<sup>2</sup> See paragraph 4.70 of the Code

<sup>3</sup> See SMP Uplift Parameters, Decision Paper, 1<sup>st</sup> September 2008, (SEM-08-089)

<sup>4</sup> The SEM Committee is established in Ireland and Northern Ireland by virtue of section 8A of the Electricity Regulation Act 1999 as inserted by section 4 of the Electricity Regulation (Amendment) Act 2007, and Article 6 (1) of the Electricity (Single Wholesale Market) (Northern Ireland) Order 2007 respectively. The SEM Committee is a Committee of both CER and NIAUR (together the Regulatory Authorities) that, on behalf of the Regulatory Authorities, takes any decision as to the exercise of a relevant function of CER or NIAUR in relation to a SEM matter.

- the revenue paid through Uplift revenues should be minimised (the Uplift Cost Objective)<sup>5</sup>

The paper proposed that the same values should apply in 2010 as for the period up to December 2009; that is, zero for  $\alpha$ , 1 for  $\beta$  and 5 for  $\delta$ .

Six respondents provided comments. The respondents were Bord Gáis Energy Supply (BGE), Endesa Ireland, ESB Power Generation (ESB PG), NIE Energy Supply (NIEES), NIE Power Procurement Business (PPB) and Viridian Power and Energy (VPE). Key comments from the respondents are considered in the next Section.

This paper considers the comments received and concludes that the values for the Uplift Parameters that should apply for 2010 should be the same as apply to the end of 2008: that is; zero for  $\alpha$ , 1 for  $\beta$  and 5 for  $\delta$ .

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<sup>5</sup> See TSC Paragraph 4.68

## 2. Respondent's Comments

**BGE**, whilst acknowledging that the present uplift parameter settings 'lead to an appropriate balance of cost and volatility', made several observations:

- It would be useful if the RAs were to conduct an analysis of the Uplift values that would occur with parameters settings of  $\alpha = 1$  and  $\beta = 0$ , indicating that these values correspond to the Initial Uplift Values as set out in N.76 of the TSC.
- Rather than a standard deviation of Uplift over the series of uplift values examined, it would be more appropriate a measure of volatility to use the average daily standard deviation
- The units pertaining to the costs objective and the profile objective are non consistent and therefore it is not clear whether there is any meaning in values for  $\alpha$  and  $\beta$  that are other than zero and 1.
- Consideration should be given to a more explicit separation of the two elements in the uplift objective function into a 'pure revenue and profile component allowing for a more transparent discussion of the costs/stability trade-off. Bord Gais suggest a method of achieving this along with associated changes to the uplift algebra in the TSC.

**Endesa Ireland** indicated their agreement with the RAs proposal to maintain the current uplift parameters in the interests of ensuring regulatory certainty and market stability.

**ESBPG** confirmed their support for the proposals set out in the consultation paper.

**PPB** confirmed their support for the proposals set out in the consultation paper.

In their response **VPE** stated that they see merit in the RAs recommendation to keep the existing uplift parameter values which in their view 'provide minimal distortion against underlying shadow prices'.

**NIEES** noted that the analysis carried out in the consultation paper shows that the current uplift parameters 'have been effective in achieving their objectives'. NIEES added that they would welcome an analysis to illustrate the impact of increasing the Uplift Cost Objective with regards to the total overall cost of Uplift and on SMP volatility.

## 3. RAs Response

The SEM Committee welcomes the responses from participants and responds as follows:

### 3.1 Cost and Profile Objectives

The RAs observations in the consultation paper give an indication of the degree to which the stated TSC uplift objectives are met by employing the existing parameter values over the period without undertaking a review of the entire uplift algorithm. The costs of conducting a substantial review of the uplift methodology are judged at the point to outweigh the benefits of such given the analysis conducted to date. The key findings of the consultation paper on the performance of uplift to date were that:

- the correlation coefficient between SMP and Uplift increased slightly from 0.538 to 0.578, and continues to show that Uplift has not had a significant destabilising effect on prices;
- the standard deviation of €31.53/MWh for shadow prices (and €37.96/MWh for SMP) indicates that market prices are determined primarily by the shadow price and hence the short run marginal costs of plant, thus reflecting underlying market dynamics.
- the correlation coefficient between Shadow Prices and SMP which remains at 0.91 illustrates that the current methodology has performed well in meeting the Uplift Profile Objective.
- whilst the Uplift Cost Objective was not prioritised by the uplift parameter values since the start of the market ( $\alpha$  has been set to 0 since Go-Live), the mean values of €70.85/MWh and €63.24/MWh for SMP and Shadow respectively would indicate that Uplift has not been a significant proportion of overall market revenue.

Accordingly, as was stated last year, the RAs see no reason to depart from the value of  $\alpha=0$  and  $\beta=1$  as these values continue to perform well when examined using several key metrics as indicated. Specifically, the correlation between shadow price and uplift, the correlation between shadow price and SMP show that Uplift has not had a significant destabilising effect on prices. The composite nature of the Uplift Profile (i.e. that it in itself ensures minimisation of Uplift revenue by profiling uplift across the day) ensures that the SMP objectives as set out in the TSC and referred to previously are met<sup>6</sup>.

In their response, BGE raised several points on the Uplift methodology and the analysis conducted by the RAs in the consultation paper. The RAs have considered these points and have concluded that a more in-depth review of the uplift parameters would be required to address these points. The RAs will consider undertaking such a review for the setting of the 2011 Uplift parameters and in the meantime make the following points:

- There may be some merit in using the Optimised Initial Uplift values as per N.76 of the Code, however these values are only of use when comparing the binary 1/0 settings of  $\alpha$  and  $\beta$ .
- On the issue of the relevance of the Standard Deviation analysis conducted by the RAs in the consultation paper, BGE make the point that the average of daily standard deviations would be a better measure of how uplift has performed given the lack of relationship between uplift from one trading day to the next. It is worth noting that the Carried Forward Costs Recovery calculation (TSC paragraph N.66 to N.73) means that the start costs that are recovered for each generator as part of the calculation for the final uplift values are adjusted for start costs recovered in the previous and following days of a contiguous period of operation. However, the RAs acknowledge the merits of this measure and will consider measuring the average of daily standard deviations as part of the 2011 Uplift parameter settings.

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<sup>6</sup> See TSC Paragraph 4.68

- The RAs appreciate that a complete separation of the costs and profile objective functions may be beneficial for transparency purposes. However, allowing for uplift parameters settings that did not balance the objectives of the MSP Software when calculating uplift that energy price must be reflective of the underlying market dynamics and that the revenue paid through uplift should be minimised would be inconsistent with the TSC.

The RAs intend to look more comprehensively at performance of the current Uplift parameter settings vis-à-vis alternative weightings as part of the consultation process for the 2011 values.

### **3.4 RAs conclusions**

The SEM Committee is grateful to the parties who submitted comments and is of the view that no new evidence has been brought to its attention which suggests that change in the uplift parameter values is necessary at this stage. In light of the performance of the current uplift parameters when considered through the paradigm of SEM price stability and the stated SMP objectives, the SEM Committee sees no reason to depart from the value of  $\alpha=0$ ,  $\beta=1$ . Furthermore, the RAs consider that the setting for  $\delta$ , which at its current value contributes to the emphasis on the Profile Objective, should be maintained at  $\delta=5$ .

Over the course of the coming year and for next year's review of uplift parameters, the RAs will examine the best means of keeping the Uplift methodology and parameters under review and measure how to best ensure that they meet the stated objectives of the SMP as set out in the TSC and ensure stability of SEM prices. In doing so, the RAs will keep in mind points raised during this consultation.

## **4. Decision**

Based upon the above considerations, the SEM Committee has concluded that the values of the Uplift Parameters for the year 2010 should remain unchanged at:

- $\alpha$  should be set at zero;
- $\beta$  should be set at 1; and
- $\delta$  should be set at 5.