

Single Electricity Market Committee

Determination of Uplift Parameters 2015

Decision Paper

SEM-14-056

30 June 2014

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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.

Under paragraphs 4.70 and 4.71 of the current version of the Code, the RAs are required, on an annual basis, to determine three parameters used in the calculation of Uplift¹. These are:

- The Uplift Alpha value α , which governs the importance of the Uplift Cost Objective, such that $0 \leq \alpha \leq 1$;
- The Uplift Beta value β , 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 δ , to constrain the overall impact on revenue in each Trading Day t arising from the Uplift calculation, such that $\delta \geq 0$.

In a final decision (SEM-13-089) published on 12 December 2013, the SEM Committee (SEMC) decided for the period from 1 January 2014 to 31 December 2014 that:

- α should be set to a value of 0;
- β should be set to a value of 1; and,
- δ should be set to a value of 5.

In previous consultations, the RAs stated their intention to monitor the effectiveness of the proposed Uplift methodology. In particular the SEMC was minded to change the Uplift parameters for 2014 based on an assessment of data provided by SEMO.

In the end the SEMC decision was not to amend the parameters for the period starting 1 January 2014. In making this decision the SEMC was guided by the fact that an issue was identified with respect to the derivation of the data submitted by SEMO.

In making the decision the SEMC stated the following:

The Regulatory Authorities will engage further with SEMO with the intention of receiving a revised set of data in early 2014, which will be published when it becomes available. Following analysis of the corrected data, the position of the SEM Committee will be reviewed. If a decision to change the parameters is made, the Regulatory Authorities would seek to do this at the earliest opportunity so as to benefit, or protect consumers. A four months' notice period will be provided prior to implementation.

In parallel, the RAs raised a Modification to the Trading and Settlement Code to allow the Uplift parameters to be changed from time to time as opposed to on an annual basis. This Modification (Mod) 04_14 (Change in Uplift Parameters Determination Timeline) has been

¹ 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 Paper (AIP/SEM/230/06), and SMP Uplift Methodology and Parameters Decision Paper (AIP/SEM/51/07)

withdrawn and therefore any proposed change to the Uplift parameters would apply from January 2015.

Consultation Paper SEM-14-022, published on 31 March 2014, presented analysis of the behaviour of SMP when the Uplift parameter values are changed to $\alpha = 0.1$, $\beta = 0.9$, and $\delta = 5$ for four months, namely January 2013, April 2013, July 2013 and October 2013. Following receipt of submissions from Market Participants, this paper now presents the SEM Committee's decision on the Uplift parameters to apply from 1 January 2015.

2. Consultation Paper SEM-14-022

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, α and β . In addition, a third Uplift parameter, δ , constrains the overall impact on revenue of the Uplift calculations.

The Code defines that α and β are complementary, such that $0 \leq \alpha \leq 1$, $0 \leq \beta \leq 1$ and $\alpha + \beta = 1$. In considering the Uplift Parameter values for 2014, the RAs undertook statistical analysis to examine the performance of Uplift over four individual months, January 2013, April 2013, July 2013 and October 2013 using the values $\alpha = 0.1$; $\beta = 0.9$; and, $\delta = 5$. The first month of each quarter was chosen so as to give a representative sample of months over the year and market reruns were carried out by SEMO.

Having considered this statistical analysis, the SEM Committee published a Consultation Paper (SEM-14-022), outlining the analysed data as well as detailing the methodology used by SEMO to derive the data. Consultation Paper SEM-14-22 indicated that the SEM Committee was minded to change the Uplift Parameters to the following values: $\alpha = 0.1$, $\beta = 0.9$; and $\delta = 5$ and invited comments from Market Participants.

3. Respondents' Consultation Comments

The SEM Committee received seven non-confidential responses to the Consultation Paper (SEM-14-022) from the following parties and one confidential response:

- Bord na Mona
- Electricity Association of Ireland (EAI)
- Energia
- ESB Generation and Wholesale Markets
- Irish Wind Energy Association (IWEA)
- Power NI Energy Limited Power Procurement Business (PPB)
- SSE

Bord na Mona stated that proposed changes to Uplift Parameters must be sufficiently assessed and based on a robust and thorough analysis to avoid unintended negative impacts on consumers and participants. It further stated that it is apparent that the decision to modify the Uplift Parameters would benefit from additional studies which examine not just selected months retrospectively but prospective market outturns where the future impact of increased intermittent penetration is also modelled. Bord na Mona also commented that the decoupling of SMP and Shadow Price was worrisome.

Electricity Association of Ireland (EAI) is of the view that assessing the first month of each quarter of 2013 is insufficient to enable informed decisions to be made on this issue. EAI believes that a 12-month historical analysis is preferable to the 4 month analysis presented for 2013 and that a forward-looking assessment of market activity for 2015 is also necessary. Members of the EAI are of the view that this analysis should include an assessment of different scenarios such as low/high wind/ demand days. The EAI also states that the RAs' analysis does not take into account the daily volatility in SMP or pay sufficient regard to the deviation between SMP and Shadow Price. EAI opines that the move away from cost-reflectivity also impacts the objective of capacity payments. If SMP no longer follows demand to the extent that it instinctively should, EAI state that the signals for capacity availability will begin to appear more in periods of lower demand than scarcity periods. EAI also comments on the potential impact that the change to Uplift parameters will have on CfDs and hedges that parties have already entered into for future trading periods. EAI call for monthly historical analysis for 2013 as well as monthly forward-looking analysis for at least 2015, but preferably also 2016.

Energia states that the consequences of potentially changing the Uplift parameters need to be very carefully considered, recognising that the damaging effect of increasing the volatility of SMP, (increasing supplier risk, reducing liquidity and reducing the efficiency of interconnector trades) could more than outweigh any potential benefits of reducing the overall cost of Uplift.

ESB Generation and Wholesale Markets (ESB GWM) was of the view that four month analysis that underpins the recommendation is not sufficiently robust; nor does it take into account the growing impact of intermittent renewable generation on the level of starts in the SEM and hence the impact on Uplift. ESB GWM is of the view that a change in values will lead to uncertainty in the market and will give additional cause to revert to potentially the existing values, thus creating uncertainty in the market. It also stated that change of the Uplift parameters was not envisaged in the Trading and Settlement Code.

ESB GWM also states that its own analysis shows that a significant negative impact on SMP volatility in the future should the new Uplift parameters be introduced. It states that any possible benefit to consumers in terms of reduced SMP might not be passed on to customers as market participants must price this volatility into contracts. It also states that a significant portion of contracting for 2015 has already taken place.

ESB GWM also stated that the consultation has ignored the negative impact of the change in Uplift Parameters to generators. Furthermore, it stated that many CCGT are fully dependent on Uplift revenues as without this they earn no margin. ESB GWM analysis has shown a decrease in spark spreads of 11% should the new parameters be introduced. It also alludes to a negative impact on renewable revenues causing an increase in the PSO.

In addition, it was stated by ESB GWM in its submission that Uplift as a percentage of SMP has grown significantly since the beginning of the SEM. It was stated that “tweaks” or adjustments by the SEM Committee (SEMC) to uplift parameters could have such a substantial impact on generator profitability.

The **Irish Wind Energy Association (IWEA)** noted that no forward analysis has been carried out and that the analysis does not look at hedging contracts, IC flows and REFIT payments. IWEA further notes that the analysis was carried out for months which were not particularly windy and requests that a full 12 month analysis be carried out and that the analysis be stress-tested for high and increasing wind scenarios. In this regard, IWEA state that historical and forward-looking analysis is necessary.

Power NI Energy (PPB) is disappointed that the proposed change in the Uplift parameters is based on analysis of only four months’ of data. In addition, it states that good regulatory practice would require that the Uplift parameters should only be modified following robust analysis and consideration of any proposed change. As participants are already determining their risk management strategy and conducting hedging for 2015, PPB opined that it is imperative that the decision on Uplift parameters for 2015 be made immediately regardless that the Trading and Settlement Code allows for this decision to be taken as late as 31 August 2014. PPB is of the view that as it considers the analysis to be insufficiently robust, that the current values of $\alpha = 0$, $\beta = 1$ and $\delta = 5$ should be confirmed for 2015.

With reference to Decision AIP-SEM-60-06, **SSE** noted that the market data used to establish the current parameter values of $\alpha = 0$, $\beta = 1$ and $\delta = 5$, constituted one year’s sample market data from Plexos, with multiple parameters and which was assessed. SSE noted that in its view the analysis carried out on the market data for the purpose of this Consultation was ‘limited.’ SSE also questioned as to whether the change in Uplift parameters would bring about a ‘significant’ benefit to consumers.

4. SEM Committee Rationale in SEM-14-022

In SEM 14-022, the SEM Committee set out a number of reasons why it was minded to change the Uplift Parameters to $\alpha=0.1$, $\beta=0.9$, $\delta=5$.

In particular it was stated that:

- Making this decision should result in benefits to consumers, namely a reduction in wholesale electricity costs.
- The data analysis carried out is robust for the decision at hand and taking the first month of each quarter is representative of the whole year. Had the data analysis shown significant swings, dramatically higher peaks or the increased application of PCAP there may have been an argument for a further data set but this was not the case.
- There are impacts on the overall profile of SMP of amending the Uplift parameters. However, the impacts do not appear to be excessive with both profiles (existing and amended) generally following each other.
- The likely impacts of making this change are not excessive or overly significant for market participants and do not present a disproportionate impact for any set of stakeholders. However, while the impacts are not excessive for the functioning of the market as a whole, a reduction in SMP of over 1% is not insignificant for consumers and therefore must be considered.
- The SEMC does not believe that making the change will negatively impact on forward liquidity in the SEM. The SEMC is only too aware of the importance of effective liquidity in the forwards timeframe and would not seek to negatively impact upon it. However, contracting is in general carried out on a more granular basis than previously with Directed Contracts now sold on a quarterly basis. Therefore the impacts of making changes to the Uplift parameters should not significantly impact on participants buying or selling contracts in the SEM.
- The SEMC does not believe that making this change is contrary to the stated objective of Uplift in 2007. In particular the SEMC has given the data set significant consideration to ensure that any change does not excessively impact the profile objective.

5. Arguments For and Against Change

The SEMC consulted in 2013 on the potential for making changes to the Uplift parameters. In particular the SEM Committee made the following arguments for making an intervention:

- The SEM Committee must balance its statutory duties related to the protection of consumers and the proper functioning of the market and is of the view that making the change is not a disproportionate response given the potential against or consumers and the expected minimum change to the market outcomes.
- The SEM Committee was of the view that a reduction in SMP of over 1% represents a benefit to consumers and if that saving could be made without undue distortion of the Profile Objective, then it is in the interests of the consumer that this option should be pursued.

However, counterarguments were made by interested parties against making any intervention to change the Uplift parameters:

- In particular some participants argued that Uplift has met and continues to meet its stated objectives from the beginning of the SEM in 2007 and that any change could hinder the balanced achievement of Uplift objectives and impact SMP stability.
- In general all participants asserted that any change should be made based on a robust data analysis and that an untimely intervention by the SEMC could damage the market.
- A number of participants set out their view that any changes must not impact on forward liquidity in the SEM given that amended parameters will feed into forward SMP forecasting.

6. SEM Committee’s Response to Submissions

Paragraphs 4.70 and 4.71 of the Trading and Settlement Code provide that the RAs are required to determine on an annual basis the three parameters used in the calculation of Uplift. Furthermore, the RAs have annually consulted on the values for these parameters as a matter of good regulatory practice. The RAs do not accept that it was not envisaged in the Code that the Uplift parameters never be changed. Had that been the case, then the parameters could have been set in the legal drafting of the Code. Rather, it was left open to the RAs to determine the values for the Uplift parameters on an annual basis while noting that values for the Uplift parameters should be published four months’ in advance of the Year which they would apply and that a change in Uplift parameters should not occur more frequently than once in any Year.

The SEM Committee is of the view that the data used to support its decision is based on robust analysis. The decision to carry out detailed analysis was based on preliminary Plexos modelling. The 2014 Consultation Paper analysed four months’ actual market data using the Uplift parameters $\alpha = 0.1$; $\beta = 0.9$; $\delta = 5$.

We note that SSE makes specific reference to the analysis that formed the basis of the determination of the current Uplift parameters in AIP-SEM-60-06, specifically that “a year’s sample market data from Plexos was used as an input.” It is considered that in this case actual market data is superior to Plexos market data, the former being used to ground this decision; the latter being used to ground the initial decision (AIP-SEM-60-06). Therefore the SEM Committee is of the view that the analysis provided is robust.

The SEM Committee is of the view that the analysis carried out by SEMO covering the first month in every quarter is representative of the whole year. Although it has been stated by IWEA that the dates chosen are not representative of windy days, April 2013 recorded a significant amount of wind as can be seen from the table below, April 2013 encountered the second highest monthly average wind for 2013.

Table 1: Monthly Average Wind 2013

Month	Average Wind (MW)	Sum of Wind Generation (MWh)	Month	Average Wind (MW)	Sum of Wind Generation (MWh)
January	636	472,971	July	196	145,611
February	612	411,097	August	362	269,614
March	613	454,576	September	449	323,152
April	640	460,920	October	557	414,313
May	603	448,830	November	474	341,058
June	365	262,765	December	896	666,332

It is very important to note that the data analysis does not show dramatically higher peaks, significant swings or the increased application of PCAP. A number of Participants allude to ‘distortion’ of the SMP Profile for a number of days in April 2013. April 26 is given as an example and on this date it should be noted that the 0.1, 0.9 SMP is lower for almost all

trading periods on this date, the Shadow Price remains the same, while the 0.1, 0.9 SMP profile broadly mirrors that of the market SMP profile.

A number of participants have raised the issue of forward liquidity in the SEM indicating that Participants have already put in place contracts for 2015 for a portion of their volumes and would be exposed to contracting risk and losses through a technical and regulated parameter that was not 'effectively flagged in advance'. However, the SEMC indicated to Participants that it was minded to consider changing the Uplift parameters in August 2013 (SEM-13-053) and as such participants were on notice from Q3 2013 that a change in the parameters may be coming down the line.

Furthermore, the SEMC does not believe that making the change will negatively impact on forward liquidity in the SEM. The SEMC is only too aware of the importance of effective liquidity in the forwards timeframe and would not seek to negatively impact upon it. However, contracting is in general carried out on a more granular basis than previously with Directed Contracts now sold on a quarterly basis. Therefore the impacts of making changes to the Uplift parameters should not significantly impact on participants buying or selling contracts in the SEM.

IWEA has stated that the effect of the proposed decision on Interconnector flows and exports in particular should also be considered in formulating a decision on this issue. However, the SEM Committee is of the view that the data analysed does not show an undue distortion of the objective profile. Also, to the extent that there is any impact, this should be addressed through TSO countertrading which currently takes place.

A number of Participants have alluded to the decrease in correlation between SMP and Shadow price using the parameters: $\alpha = 0.1$, $\beta = 0.9$ and $\delta = 5$. It should be noted that there are impacts on the overall profile of SMP of amending the Uplift parameters. However, the impacts do not appear to be excessive with both profiles (existing and amended) generally following each other.

The change to the Uplift parameters is a small change taking the alpha value from 0 to 0.1 and the beta value from 1 to 0.9. The RAs have not proposed to dramatically alter the Uplift parameters but rather to change the weightings of the cost and profile objectives marginally, without unduly affecting the profile and in the best interests of consumers.

The likely impacts of making this change are not excessive for Market Participants and do not present a disproportionate impact for any set of stakeholders. However, while the impacts are not excessive for the functioning of the market as a whole, a reduction in SMP of over 1% is not insignificant for consumers and therefore must be considered.

The SEM Committee must balance its statutory duties related to the protection of consumers and the proper functioning of the market and is of the view that making the change is not a disproportionate response given the potential gains for consumers and the expected minimum change to the market outcomes.

7. Confirmation of SEM Committee Decision

The SEM Committee hereby decides on the values of the Uplift Parameters for the period 1 January to 31 December 2015 as follows:

- α should be set to a value of 0.1
- β should be set to a value of 0.9
- δ should be set to a value of 5