

# NEW PROPOSED GSP GROUP CORRECTION SCALING WEIGHTS FOR 2014

**MEETING NAME** BSC Panel Meeting

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**Paper number** 226/07

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**Purpose of paper** Decision

**Classification** Public

**Summary** This paper sets out the discussions on the calculation of Scaling Weights since December 2013 and looks for the BSC Panel to agree with the SVG's recommendation to revise the Scaling Weights from 20 August 2014.

## 1. Introduction and December 2013 BSC Panel decisions

1.1 In December 2013, following a 2013 review, the BSC Panel approved a set of new GSP Group Correction Scaling Weight values for implementation in Settlement from 1 April 2014<sup>1</sup>. This included applying Scaling Weights to HH consumption for the first time. The table below shows the Scaling Weights approved by the Panel, which have been effective in Settlement since 1 April 2014.

Consumption type	Scaling Weight	Consumption type	Scaling Weight
Import		Export	
NHH Import Metered Volumes	1.0	NHH Export Metered Volumes	0.0
NHH Import line losses	2.25	NHH Export line losses	0.0
HH Import line losses	0.94	HH Export line losses	0.0
HH Import Metered Volumes	0.10	HH Export Metered Volumes	0.0

1.2 During its 2013 discussions, the Panel identified an issue with the 'competing correction' of Import and Export volumes in the BSC equations which has the effect of 'cross-cancelling' the corrections. This issue had already occurred in the NHH market, although the NHH Export volumes were small compared to the NHH Import volumes (meaning the impact was minimal). Due to the higher volume of HH Export, applying non-zero Scaling Weights to both Import and Export HH Metered Volumes would increase this 'competing correction' effect such that there is the potential for perverse outcomes.

1.3 On the SVG's unanimous recommendation, the Panel agreed that the Scaling Weights for both NHH and HH Export Metered Volumes and losses should be set to zero from 1 April 2014. ELEXON established an Issue Group (55) to consider a potential change to the BSC to resolve this issue.

<sup>1</sup> See [Panel 219/10](#) and [SVG154/05](#).

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- 1.4 The SVG and the Panel also noted in December that EDF Energy had provided ELEXON with its own analysis (shortly before their December meetings). From this, EDF had drawn the conclusion that the proposed Scaling Weight of 0.10 for HH Import Metered Volumes was too high, but had not reached a view on what an appropriate replacement value would be. The SVG and the Panel noted that there was not time to undertake substantial further analysis and change the value for an April 2014 implementation. During their discussions, they therefore considered whether to retain or revise the existing Import Scaling Weights from 1 April 2014.
- 1.5 The Panel agreed with the SVG's majority recommendation and approved the revised Import Scaling Weight values (in particular setting the value of 0.1 for Import Metered Volumes) for use in Settlement from 1 April 2014.

## 2. Issue Group 55 review and recommendations

- 2.1 Since the Panel's decision in December 2013, the Issue Group (Issue 55 - Review of the approach to the calculation and application of GSP Group Correction Scaling Weights) has:
- Reviewed the impact of different Scaling Weights for HH consumption on the accuracy of Settlement;
  - Considered an equation for calculating optimal Scaling Weights, which it recommends is adopted for future Scaling Weight reviews;
  - Reviewed (using this equation) whether the existing Scaling Weight values are optimum and, having concluded that they are not, recommends a revised set of Scaling Weights for approval; and
  - Considered the issue of 'competing correction' and concluded that this can be addressed through the equation, in which case a change to the BSC is not required.
- 2.2 ELEXON presented the Issue Group's full report and recommendations to the Panel at its meeting on 8 May 2014 ([Panel 224/08](#)). This paper primarily covers the Issue Group's recommendations b) and c) above which recommend changing the approach to future reviews (which requires the SVG's approval) and the existing Scaling Weight values (which requires an SVG recommendation to the Panel).
- 2.3 The Issue 55 Group discussed a model built and presented by ELEXON which showed the impact of varying HH consumption Scaling Weights on the Mean Absolute Percentage Error (MAPE) for the HH and NHH Consumption Component Classes. The model suggested that there was an optimum Scaling Weight for HH consumption of 0.003 and any higher value would make Settlements less accurate. The results from the model are shown in the graphs in Appendix 1.
- 2.4 A Member of the group presented the output from a similar model they had run which suggested that there was an optimal value of 0.007. Both of these models suggested that the Scaling Weight for HH consumption should be far less than the proposed 0.10 and closer to zero.
- 2.5 A member of the Issue Group presented some mathematical theory on the Standard Error Allocation Fraction ([Panel 224/08a](#)). This suggests that you can derive the optimum Scaling Weight using a mathematical equation ('the Standard Error Allocation Fraction equation') which they had adapted to be relevant for calculating Scaling Weights. The member subsequently ran this calculation and, following its discussion of the results, the Issue Group recommended by majority that this calculation is adopted as the basis for all future Scaling Weight reviews.
- 2.6 The calculation was then used to calculate Scaling Weights for the relevant groups of Consumption Component Classes (CCCs). With the value for HH Import Metered Volumes being 0.007 close to 0, the Issue Group recommended a value of 0.

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- 2.7 This value of 0.007 and the previous value of 0.003 were calculated based on the theory that HH error was correlated, similar to NHH error. In fact the Issue Group determined that HH error is largely uncorrelated which means that if the inputs to the equation were revised this would further decrease the value of this
- 2.8 proposed Scaling Weight further towards 0. This further justified the decision to recommend the Scaling
- 2.9 Weight to 0. The material impact of having a very small Scaling Weight versus zero would be negligible.
- 2.10 All the groups of CCCs were recalculated following the derivation of the equation. All the Scaling Weights were revised in relation to the NHH Import Metered Volumes to generate new values which would ultimately deliver the minimum Settlement Error given the input values observed during ELEXON's 2013 analysis.
- 2.11 Specifically in relation to the NHH import Line Losses this value has roughly halved (from 2.25 to 1.2). This is due to the latest analysis indicating that the value of 1.2 will deliver less Settlement error compared to 2.25.
- 2.12 The table below shows the revised proposed Scaling Weights which have been calculated using the equation, and which the Issue Group recommended by majority. For comparison, the current and past Scaling Weight values are also shown (bold text indicates a change of value).

Consumption type	Scaling Weights			
	Pre April 2013	1 April 2013-31 March 2014	1 April 2014 – now	Proposed Weights (Effective From Settlement Date 20 August 2014, MDD v219 <sup>1</sup> )
NHH Import Metered Volumes	1.0	1.0	1.0	1.0
NHH Import line losses	1.0	<b>2.3</b>	<b>2.25</b>	<b>1.20</b>
HH Import Metered Volumes	0.0	0.0	<b>0.10</b>	<b>0.0</b>
HH Import line losses	0.0	<b>1.0</b>	<b>0.94</b>	<b>0.0</b>
NHH Export Metered Volumes	1.0	1.0	<b>0.0</b>	0.0
NHH Export line losses	1.0	<b>2.3</b>	<b>0.0</b>	0.0
HH Export Metered Volumes	0.0	0.0	0.0	0.0
HH Export line losses	0.0	0.0	0.0	0.0

- 2.13 It was recommended by the Issue Group for the new values to Effective From Settlement Date 20 August 2014. This was the earliest that was achievable given the approval process and also aligns with the MDD go-live date.

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## 3. Applying retrospective Scaling Weights

3.1 Due to the nature of the change and the fact that an element of the proposal was reversing the 0.1 Scaling Weight applied for HH Import Metered Volumes the Issue Group recommended applying the Scaling Weights retrospectively to be effective from the settlement date of 01 April 2014.

3.2 We note that Ofgem has published criteria on the grounds in which retrospective rule changes may be justified. Although these are intended to be used for assessing the case for urgency or retrospection in Modification Proposals, the general principles may also be applicable here. In its criteria, Ofgem states that:

- In general, retrospective rule changes damage confidence in, and the efficiency of, the market; and
- Parties prefer the assurance/certainty of rules that are unlikely to change retrospectively, and there is a general legal principle that rule changes should not change past transactions completed on the basis of the then existing rules.

Despite this, retrospection may occasionally be justified where:

- The fault or error occasioning the loss was directly attributable to central arrangements;
- There were combinations of circumstances that could not have reasonably been foreseen; or
- The possibility of a retrospective action had been clearly flagged to participants in advance, allowing the detail and process of the change to be finalised with retrospective effect
- The loss sustained, or consequence of the problem, would need to be material.

3.3 We agree in principle, with the Issue Group Members and the respondents of the consultation in favour of retrospection, that it would maximise Settlement accuracy. However, given the concerns of some respondents that Suppliers have struck contracts and made trading/ forecasting decisions on the basis of the current Scaling Weights, we are unconvinced that this justifies retrospection.

3.4 We believe that the circumstances do not appear to meet Ofgem's criteria, since:

- The previous Scaling Weights review followed due process and as such there is no central fault or error in the process followed – just new information;
- The SVG and Panel were aware of EDF's original December analysis, and the possibility that further Scaling Weight revisions might be needed in the future, at the time the current values were approved – therefore the combination of circumstances could have been reasonably foreseen; and
- The SVG and Panel did not discuss the possibility of any future Scaling Weight changes being retrospective (although this possibility was highlighted through ELEXON's consultation following Issue 55).

## 4. Consultation summary

4.1 ELEXON subsequently consulted on the Issue Group's majority recommendations, we received seven responses. You can find the consultation document [here](#) and the full consolidated responses in Attachment A.

4.2 Six out of the seven respondents agreed with the new proposed Scaling Weights and use of the equation. The other respondent noted the proposed Scaling Weights and supported the improvement to the accuracy of Settlement but felt that it is not correct to only apply GSP Group Correction to the NHH Market - given there are errors in the HH Market.

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## 5. SVG Recommendations

- 5.1 The SVG unanimously agreed with the recommendation of using the proposed equation to calculate Scaling Weights, though two Members remained uncomfortable about whether the input data to the equation captured all HH error. ELEXON noted that this was calculated from the best available data. ELEXON noted that it will document the equation and review approach for future reviews by ELEXON.
- 5.2 The SVG agreed by majority (11 to two) with the recommended Scaling Weight values. Both Members who disagreed believed that it was inappropriate to set HH Import Metered Volumes and HH Import line losses to zero and that the existing Scaling Weight values should be retained, these two members felt it sent an inappropriate message that there is no error in the HH Market. The SVG also noted that whilst the majority are supporting a change to zero Scaling Weight for HH import Metered Volumes and Line Losses this does not imply that there is no HH error in the market, it simply means that the error is not material in comparison to the level of NHH error.
- 5.3 The SVG agreed by majority (12 to one) that the Scaling Weight values should be applied prospectively, with one disagreeing and supporting a retrospective implementation. There were no new arguments on retrospection compared to those outlined earlier in the paper from the SVG.
- 5.4 The SVG agreed unanimously that a review of Scaling Weights should be undertaken in 2015 for implementation on 1 April 2016. The timetable for further reviews should then be discussed during the 2015 review when further information should be known of key Modifications and changes affecting the HH/NHH mix of energy.
- 5.5 A link to the minutes from the SVG meeting can be found here. (to be hyperlinked when minutes are approved)

## 6. Recommendations

- 6.1 We invite you to:
  - a) **NOTE** the SVG's unanimous decision of using the proposed equation for calculating Scaling Weights in the future.
  - b) **AGREE** with SVG's majority recommendation that the revised Scaling Weights should be applied to Import and Export as follows:
    - 1.0 for NHH Import Metered Volumes
    - 1.2 for NHH Import line losses
    - 0.0 for HH Import line losses
    - 0.0 for HH Export Metered Volumes
    - 0.0 for NHH Export Metered Volumes
    - 0.0 for NHH Export line losses
    - 0.0 for HH Export line losses
    - 0.0 for HH Export Metered Volumes
  - c) **AGREE** with the SVG's majority recommendation that these Scaling Weights should be prospective with an Effective From Settlement Date 20 August 2014.
  - d) **AGREE** with the SVG's unanimous recommendation that a review should take place in 2015 for new Scaling Weights to go live from 1 April 2016 and that further reviews should be decided during 2015.

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## Appendices

Appendix 1 – HH Scaling Weights vs Settlement Error

## Attachments

Attachment A – Consultation Responses

### **For more information, please contact:**

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## Appendix 1 – HH Scaling Weights vs Settlement Error

MAPE stands for Mean Absolute Percentage Error

### MAPE vs HH Scaling Weight



### MAPE v HH Scaling Weight

