

Post-Implementation Review of Modification P253

Meeting Name	BSC Panel
Meeting Date	14 June 2012
Purpose of paper	For Information
Summary	Modification Proposal P253 ('Improving the accuracy of the credit calculation for SVA participants') was implemented on 3 November 2011, and had the effect of including Supplier Volume Allocation (SVA) processes in the Interim Information ('II') run for the first time. This paper reports on the extent to which Supplier Agents have succeeded in providing actual Half Hourly metered data in time for the II run, and the extent to which the accuracy of credit checking has increased as a result.

1. Background

- 1.1 Modification Proposal P253 ('Improving the accuracy of the credit calculation for SVA participants') was implemented in the BSC Release on 3 November 2011. This Modification makes actual SVA Half Hourly data available to the II run, and was intended to improve the accuracy of credit checking for Suppliers.
- 1.2 The success criteria for the November 2011 Release required us to report to the BSC Panel in May 2012 (six months after implementation) on whether the required HH data was being provided to settlement, and whether this had indeed increased the accuracy of credit checking.
- 1.3 As the ISG is tasked with supporting the BSC Panel in relation to CVA systems and processes (including credit checking) we are providing this report to the ISG. We will then include a summary of our analysis and of ISG's views in our report to the BSC Panel.

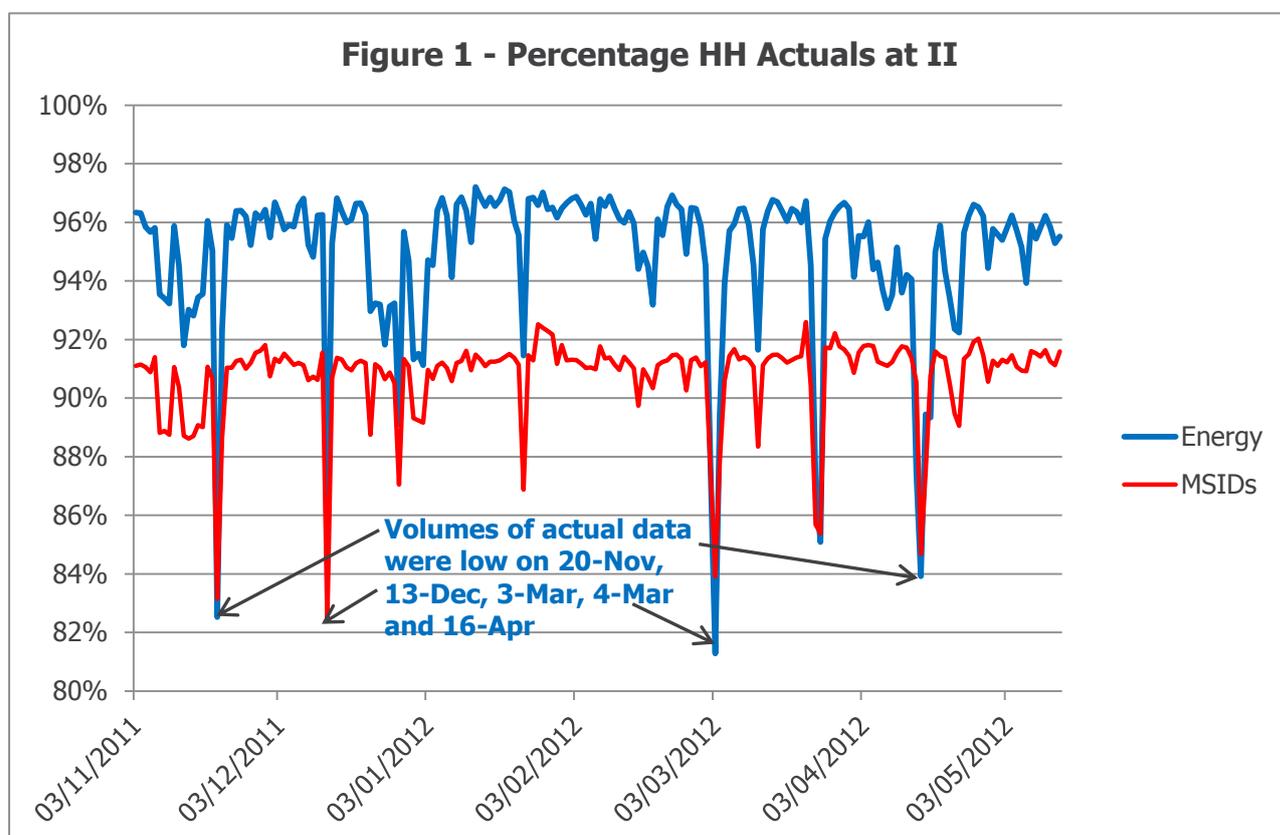
2. Percentage of Actual Data Provided at II

- 2.1 As part of the Assessment Procedure, the P253 Modification Group consulted Supplier Agents on what percentage of actual Half Hourly data they expected to be able to provide in time for the II run. The majority of respondents stated that they would not be able to achieve 95% actual data, but would be able to achieve 90%. The Modification Group therefore expected that the volume of actual Half Hourly data in the II run would be between 90% and 95%.
- 2.2 The P253 solution did not include formal monitoring (through a Performance Serial) of the level of actual data provided to the II run. But we did update some of our existing monitoring processes to include II data, to allow us to report on whether the expected level of 90% to 95% actual Half Hourly data was being achieved.

2.3 The data from these monitoring processes shows that since 3 November 2011¹ the percentage of actual Half Hourly data in II has been:

- **95.0% of energy;** and
- **90.7% of Metering Systems.**

2.4 This suggests that Supplier Agents have succeeded in providing the volume of actual data expected by the P253 Modification Group. However, it should be noted that the percentage of actual data varies significantly from day to day, as shown in the following graph:



2.5 This variation from day to day may reflect the tight timescales for Supplier Agents to deliver data for II, which leave little time for corrective action in the event of unexpected problems.

2.6 The Modification Group anticipated that Non Half Hourly Settlement would be based almost entirely on Estimated Annual Consumptions (EACs), as there would be insufficient time to process meter readings into Annualised Advances (AAs) prior to II. This is borne out by the data, which shows that AAs accounted for only 0.005% of energy and 0.006% of Metering Systems at II.

¹ The analysis covered the period 3 November 2011 to 14 May 2012 inclusive. The figures are based on raw consumption (excluding line losses), so actual energy equates to Consumption Component Classes 1 and 23, while estimated energy equates to Consumption Component Classes 9 and 28.

3. Effect of P253 on Accuracy of Credit Checking

3.1 The purpose of P253 was to make better estimates of SVA Metered Volumes available to credit checking at II. Prior to P253, credit checking had to use estimates produced by an algorithm in the Settlement Administration Agent (SAA) system, which apportioned the GSP Group Take between Suppliers in proportion to Metered Volumes on a recent previous Settlement Day. P253 replaces these estimates with actual data for most Half Hourly Metering Systems and profiled EACs for Non Half Hourly Metering Systems.

3.2 To establish whether this change has improved the accuracy of estimated Metered Volumes, we compared the six months following implementation of P253 with the equivalent period a year before.² The metric we used to measure the accuracy of the estimates was the total absolute error in the II estimates of Metered Volume for Supplier BM Units:

$$\text{Total Absolute II Error for Suppliers} = \sum_{ij} | QM_{ij}^{SF} - QM_{ij}^{II} |$$

where:

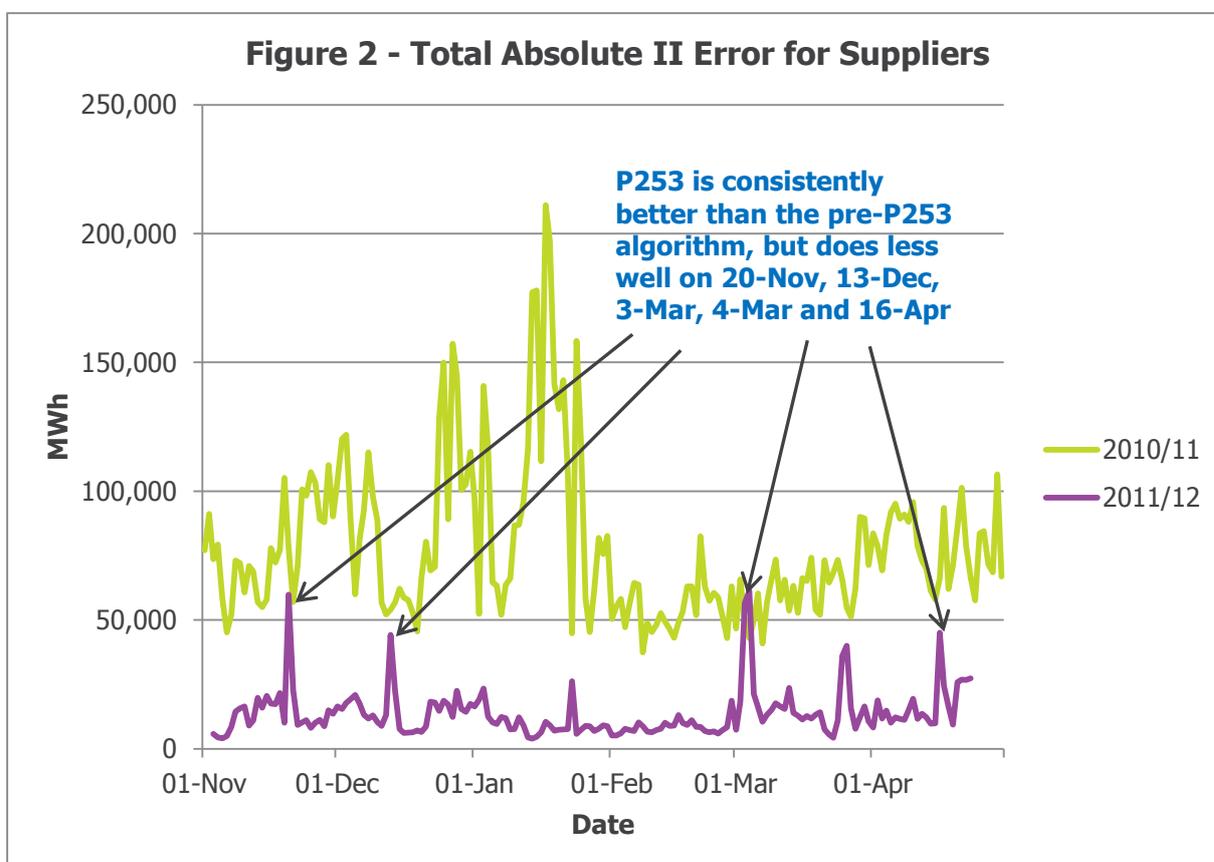
- \sum_{ij} represents summation over all Supplier BM Units 'i' and Settlement Periods 'j';
- QM_{ij}^{SF} and QM_{ij}^{II} are the BM Unit Metered Volume (QM_{ij}) in the SF and II runs respectively; and
- The vertical bars || represent the absolute value (i.e. ignoring sign, so that all errors are treated as positive regardless of whether the II value is an over-estimate or an under-estimate).

3.3 Figure 2 overleaf shows the total daily absolute error for the six months following implementation of P253, compared to the corresponding period in the previous year. It can be seen that the error in 2011/12 (following implementation of P253) is significantly and consistently lower than that in 2010/11 (using the pre-P253 defaulting rules).

3.4 Although the P253 errors are consistently lower than the pre-P253 errors, Figure 2 does show peak days on which P253 errors were higher than usual: 20 November 2011, 13 December 2011, 3 March 2012, 4 March 2012 and 16 April 2012. These are precisely the same days for which Figure 1 shows a below-average quantity of actual data in the II run, strongly suggesting that estimated HH data is a major cause of residual inaccuracy in the SVA Metered Volumes used in credit checking.³

² Our post-P253 data covered the period from 3 November 2011 to 22 April 2012. This was slightly less than six months, because (at the time of writing) SF data is only available to 22 April. The pre-P253 period we used for comparison purposes was the six months from 1 November 2010 to 30 April 2011.

³ The correlation coefficient between the percentage of estimated data entering II each day (figure 1) and the total absolute error in Metered Volumes (figure 2) is 0.802. This is a very high correlation, again suggesting that the small amount of estimated Half Hourly data remaining at II is responsible for a significant amount of the remaining error in credit checking. Of course some of this correlation is caused by the five coinciding peaks (20 November, 13 December, 3-4 March and 16 April); but even with these five days removed the correlation coefficient is still 0.644.



4. Further Possible Improvements to Supplier Credit Checking

- 4.1 The above analysis indicates that the 5% to 10% of energy settled on estimates rather than actuals is a major cause of residual inaccuracy in Supplier Metered Volumes at II. This suggests that there is scope for further improvements in the accuracy of credit checking if Suppliers work with their Agents to increase the quantity of actual data submitted to the II run.
- 4.2 It should also be remembered that the credit checking process only has access to II data for approximately 21 of the 29 days in the credit window, with Credit Assessment Load Factor (CALF) and Demand Capacity (DC) used to estimate Metered Volumes for the remaining 8 days. P253 did not improve the accuracy of this part of the credit calculation, and we suspect that errors in the CALF/DC part of the methodology now outweigh those arising from the II run.
- 4.3 A change to the credit arrangements that removed the need for CALF and DC data could potentially deliver further improvements to the accuracy of Supplier credit checking, as well as efficiency savings from removing the need to calculate CALF values and removing or reducing the need for Suppliers to submit DC values. We are currently looking into the business case for such a change, and intend to bring a proposal to ISG and the BSC Panel (although currently this is on hold due to higher priority work such as Modification Proposals).

5. Conclusions

5.1 In summary, the above analysis shows that:

- The level of actual Half Hourly data entering settlement at II is as expected by the P253 Modification Group (i.e. 90% to 95%);
- The level of error in the Metered Volumes used in credit checking for Supplier BM Units has fallen significantly as a result of the implementation of P253; and
- The 5% to 10% of estimated Half Hourly data being used at II is a major cause of the residual error, so if Suppliers remain concerned at the accuracy of credit checking they could address this by arranging for their Agents to provide more actual data at II.

6. Recommendations

6.1 We invite you to **NOTE** the results of our post-implementation review of Modification Proposal P253, as summarised in paragraph 5.1 above.

Attachments:

None

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