

Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

P333 'Inclusion of DSBR volumes into the cashout price in time for publication after the end of the Settlement Period'

P333 contends that not including Demand Side Balancing Reserve (DSBR) volumes in cash-out until the Interim Information (II) Settlement Run could result in misleading signals to market participants. P333 would require the Transmission Company to provide its best estimate of DSBR volumes as part of its initial submission of Balancing Services Adjustment Data (BSAD).



The P333 Workgroup recommends **approval** of P333

This Modification is expected to impact:

- The Transmission Company
- ELEXON

253/10

P333
Assessment Report

2 Jun 16

Version 0.1

Page 1 of 18

© ELEXON Limited 2016

Contents

1	Summary	3
2	Why Change?	4
3	Solution	6
4	Impacts & Costs	8
5	Implementation	10
6	Workgroup's Discussions	11
7	Workgroup's Conclusions	13
8	Recommendations	15
	Appendix 1: Workgroup Details	16
	Appendix 2: Glossary & References	18



Contact

Jemma Williams

020 7380 4359

Jemma.Williams@elexon.co.uk



About This Document

This document is the P333 Workgroup's Assessment Report to the BSC Panel. ELEXON will present this report to the Panel at its meeting on 9 June 2016. The Panel will consider the Workgroup's recommendations, and will agree an initial view on whether this change should be made. It will then consult on this view before making its final recommendation to the Authority on 15 July 2016.

There are three parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, benefits/drawbacks and proposed implementation approach. It also summarises the Workgroup's key views on the areas set by the Panel in its Terms of Reference, and contains details of the Workgroup's membership and full Terms of Reference.
- Attachment A contains the draft redlined changes to the BSC for P333.
- Attachment B contains the full responses received to the Workgroup's Assessment Procedure Consultation.

253/10

P333
Assessment Report

2 Jun 16

Version 0.1

Page 2 of 18

© ELEXON Limited 2016

Why Change?

The Proposer notes that cash-out is meant to provide the principle incentive for demand and supply to balance in the short term. To provide this incentive, cash-out prices need to be accurate in the short term in order to form appropriate and timely market signals.

The Proposer believes that [P305 'Electricity Balancing Significant Code Review Developments'](#) introduced potentially 'explosive' cash-out and contends that this, coupled with DSBR being priced at the Value of Lost Load (VoLL) (£3000/MWh), means that the DSBR volume not being included in the cashout calculation until five Working Days after it has been utilised could lead to a very large positive change in the cash-out price in the II Run compared to that reported by the end of Settlement Period.

The Proposer also notes that the use of DSBR could also create an expectation that prices will rise to £3000/MWh which, because of the Net Imbalance Volume (NIV) tagging process, may not happen.

The Proposer contends that either scenario means the five day delay in including DSBR volumes in cash-out could result in misleading real-time signals being made to market participants, and that this could lead to sub-optimal trading decisions being made on days when scarcity is apparent.

Solution

P333 would place a specific requirement on the Transmission Company to provide its best estimate of DSBR volumes as part of its initial submission of BSAD by the end of the relevant Settlement Period.

Impacts

P333 will impact the Transmission Company and ELEXON.

Implementation

The Workgroup recommends an Implementation Date for P333 of:

- 3 November 2016 (as part of the November 2016 BSC Systems Release), if a decision is received on or before 3 August 2016; or
- Three calendar months after a decision, if received after 3 August 2016.

Recommendation

The Workgroup's initial majority view is that P333 **better** facilitates Applicable BSC Objective (b), (c) and (d) and therefore initially recommends that P333 should be **approved**.

2 Why Change?

Background

Balancing services are used by the Transmission Company in its role as System Operator to balance supply and demand in real time. These are also used in the calculation of imbalance prices (also known as cash-out prices).

Demand Side Balancing Reserve

In December 2013, Ofgem published its decision to accept an application by the Transmission Company to introduce the new balancing service DSBR.

The DSBR service is aimed at non-domestic consumers with the ability to reduce demand/load-shift or run small embedded/on-site generation for at least an hour during a winter evening peak period. At the highest level, this will enable the System Operator to ask large energy users to reduce their demand in exceptional circumstances, and would remunerate them for doing so.

Balancing Service Adjustment Data

The BSAD Methodology Statement sets out information on relevant balancing services that are taken outside of the Balancing Mechanism (BM) to balance the system and are taken into account under the BSC for the purposes of determining Imbalance Prices.

The BSC requires the Transmission Company to submit its best estimate of BSAD in relation to a Settlement Period as soon as reasonably practicable after Gate Closure for, and in any event not later than the end of, that Settlement Period. This is so BSAD can be used in the Balancing Mechanism Reporting Agent (BMRA)'s calculation of an indicative System Price within 15 minutes of the end of a Settlement Period.

The BSC also requires the Transmission Company to submit the actual BSAD the following day. This is known in the BSAD Methodology Statement as "post event re-submission". This post event re-submission ensures that the Settlement Administration Agent's (SAA) calculation of System Prices uses the actual volume(s) of BSAD when calculating a final System Price.

The BSAD Methodology Statement is owned by the Transmission Company, and may only be modified in accordance with the processes set out in [Standard Condition C16](#) of the Transmission Licence. The Transmission Company is required to annually consult on the C16 statements, which includes the BSAD Methodology Statement. As a result of discussions under [Issue 56 'Treatment of the new SBR and DSBR services in the imbalance price'](#), and as part of their annual consultation, the BSAD Methodology Statement was amended to include DSBR volumes in its determination of BSAD (this version went live on 5 November 2015).

Current Arrangements

Initial Cash-out price

The BMRA calculates and publishes an indicative cash-out price for every Settlement Period based on the data sent to it. This initial price is replaced by an improved cash-out

253/10

P333

Assessment Report

2 Jun 16

Version 0.1

Page 4 of 18

© ELEXON Limited 2016

price that contains more accurate volumes and data five Working Days later, as part of the II Run.

The initial estimate of BSAD from the Transmission Company (by the end of the Settlement Period) is used in the BMRA's calculation of the initial cash-out price. The BSAD Methodology Statement specifies that DSBR will not be included in the initial estimate (BSAD Methodology Statement v12, effective 5 November 2015, available on the [Transmission Licence C16 Statements page](#) of the Transmission Company website).

DSBR volumes are included in the post event re-submission BSAD issued the next day. Therefore the information in the revised BSAD is used in the II Run cash-out price five Working Days later.

Under implemented Modification [P323 'Enabling inclusion and treatment of SBR in the Imbalance Price'](#) it was argued that a forecast DSBR volume should be included in the initial estimate of BSAD. However, the inclusion of DSBR in the initial BSAD was not possible because of the risks associated with the only potentially feasible approach of making manual interventions to an existing automated process in short timescales (and potentially out of normal Working Hours).

What is the issue?

The Proposer notes that cash-out is meant to provide the principle incentive for demand and supply to balance in the short term. To provide this incentive, cash-out prices need to be accurate in the short term in order to form appropriate and timely market signals.

The Proposer believes that P305 introduced potentially explosive cash-out and contends that this, coupled with DSBR being priced at the VoLL (£3000/MWh), means that the DSBR volume not being included until five Working Days after it is utilised could lead to a very large positive change in the cash-out price in the II Run compared to that reported by the end of Settlement Period.

The Proposer also notes that the use of DSBR could also create an expectation that prices will rise to £3000/MWh which, because of the NIV tagging process, may not happen.

The Proposer contends that either scenario means the five Working Day delay in including DSBR volumes in cash-out could result in misleading real-time signals being made to market participants, and that this could lead to sub-optimal trading decisions being made on days when scarcity is apparent.

Proposed solution

P333 proposes that DSBR volumes be included in the indicative imbalance price calculation carried out by the BMRA (ten minutes after the end of the Settlement Period). DSBR is a balancing service that can only be called upon between 16:00 – 20:00 (Settlement Periods 33-40) on Working Days between November and February.

The Department for Energy and Climate Change (DECC) has indicated that it plans to bring forward the Capacity Market to 2017/18. Ofgem has published a letter stating that if the Capacity Market is brought forward, it would expect to amend the Transmission Company's licence so as to ensure that the DSBR cost recovery arrangements no longer apply for the 2017/18 winter. This would result in DSBR not being used after this coming winter (2016/17). Should DSBR be made redundant, then the solution to P333 will only ever be needed for four months (November 2016 – February 2017).

P333 seeks to be in place at the start of the winter months, aligning with the November 2016 BSC Systems Release. As there is not enough time to implement a systems change for the winter 2016/17 period, P333 proposes a manual work around.

Manual process solution

In order to ensure that P333 can be implemented in time for the November 2016 BSC Release, P333 proposes that a temporary manual process be implemented until such a time as either an automated system can be implemented or that DSBR is redundant, whichever is sooner.

In the proposed solution, the DSBR system would auto-trigger an email, with the DSBR Standard Dispatch data as an attachment in .csv format, to the Transmission Company Settlements team. The Gate Closure BSAD file (sent around 59 minutes ahead of the start of each Settlement Period) would be manually updated with DSBR data and uploaded in the Transmission Company's Information Provisioning system. The revised BSAD file would then send it to BSC Systems each Half Hour in time for the Indicative Price calculation.

A sequential break down of the P333 manual process relies on the following steps:

1. The Transmission Company updates the DSBR dispatch system to calculate and send Dispatch data for each applicable Settlement Period.
2. The Transmissions Company to send no later than [ten minutes after the end of the relevant Settlement Period], their estimate of DSBR as a Balancing Service Adjustment Action (BSAA).

The proposed solution depends on the manual process being able to allocate unique and sequential IDs for the DSBR actions.

Publication of DSBR Dispatch Data

In addition to the solution, an add-on solution is also proposed, to increase the visibility of DSBR Standard Dispatch for the impacted Settlement Periods. In the add-on solution, the Transmission Company would publish on an external website the DSBR Dispatch data, with contracted and requested DSBR capacity for respective Settlement Periods.

Legal text

Attachment A contains the proposed changes to the BSC. No changes are needed to Code
Subsidiary Documents.

253/10

P333
Assessment Report

2 Jun 16

Version 0.1

Page 7 of 18

© ELEXON Limited 2016

Estimated central implementation costs of P333

This Modification will be a document-only change to update one Section of the BSC. There are no system impacts and no impact on BSC Agents.

The central implementation costs will be approximately £240 (one ELEXON man day) to implement the relevant document changes.

Participant impacts and costs

This Modification is a Code-only change. It is only expected to impact the Transmission Company, which will need to provide its best estimate of DSBK volumes as part of its initial submission of BSAD by the end of the relevant Settlement Period.

A breakdown of the Transmission Company's indicative cost for the solution is provided in the table below:

Indicative Costs	
Particulars	Cost in £k
Implement P333 changes	93
Integration Testing and User Acceptance Testing	20
Governance and Analysis	30
Risk Margin	21
Total cost	164

The estimated cost of implementing the add-on solution of publishing DSBK Standard Dispatch data on a website would be an additional £70k.

P333 impacts

Impact on BSC Parties and Party Agents	
Party/Party Agent	Potential Impact
None identified at this time	

Impact on Transmission Company	
The Transmission Company will notify the BSC Agent when DSBK is dispatched.	

Impact on BSCCo	
Document changes will be implemented.	

Impact on Code	
Code Section	Impact
Section Q	Changes would be required to implement this Modification.

Recommended Implementation Date

The Workgroup recommends an Implementation Date for P333 of:

- 3 November 2016 (as part of the November 2016 BSC Systems Release), if a decision is received on or before 3 August 2016; or
- Three calendar months after a decision, if received after 3 August 2016.

The Workgroup noted that the Transmission Company would require a minimum lead time of three months to implement the solution.

The Workgroup agreed that the recommendation implementation date aligned with the BSC Systems release and would ensure that the solution be delivered in time for the start of the winter period.

Rationale for a Manual Solution

The Workgroup noted that an automated solution would not be feasible at this time, due to the following considerations:

- A solution is only required until DSBR is no longer a tool available to the System Operator to balance the system.
- Making the changes to BSC System as part of the November 2016 Release would likely have exposed that Release to a very high level of risk due to an already busy programme of work, the very short timescales to develop system changes and the limited availability of resources.
- Considering these factors, to ensure that a solution was implemented in time for winter 2016/17, a manual solution was considered a pragmatic way forward. However, it was noted that even if a manual solution was implemented initially, any change should be implemented in such a way to enable an enduring, automated solution that would produce timely imbalance prices to be activated at some point in the future.
- Any enduring solution involving BSC System changes would need to be progressed through a separate Modification if P333 is approved. This would be targeted at a later BSC Release.

Consideration of Risks

Potential Human Error

The proposed solution involves manual intervention and effort overhead for the Transmission Company as the BSAD file would have to be manually updated. Consequently, a business procedure would be required to mitigate the "human error" risk.

To alleviate the risks of human errors, the Transmission Company has proposed to set up a test environment between the Transmission Company and ELEXON. ELEXON have committed to assess the creation of a test environment with its Service Providers.

ID Allocation

The Workgroup cited some issues arising from the allocation of IDs. In the current process, the Transmission Company allocates a unique sequential ID for each BSAA. The Workgroup discussed the feasibility of using a generic DSBR identifier in place of an ID, to reduce the complexity of the process and minimise the risk of errors. The Workgroup noted that changes to IDs could have an impact on Parties with automated systems, which may be set up to accept only unique, sequential IDs. It was suggested that Parties be asked as part of the consultation, whether their systems would be impacted by changes to the IDs.

In response to the Assessment Procedure Consultation, the Transmission Company confirmed that the issue around BSAD IDs had been resolved. The IDs would be generated by the Transmission Company's Information Provisioning system, and a workaround solution had been identified to keep the IDs unique and sequential.

Visibility of DSBR Dispatch

In addition to the proposed solution, the Workgroup also requested that the Transmission Company increase the visibility of DSBR Standard Dispatch for the impacted Settlement Periods.

The Transmission Company indicated that it would be possible to publish the DSBR dispatch data with contracted and requested DSBR capacity for respective Settlement Periods. In order to implement this solution in a cost effective way, the DSBR Dispatch information would be published on an external webpage with a hyperlink provided on the Transmission Company website.

The estimated cost of implementing the add-on solution would be an additional £70k. The Transmission Company representative advised that this estimate is likely to be at the top end of the range of costs.

The Assessment Procedure Consultation confirmed support for the add-on solution to the modification, as it would facilitate market transparency.

An enduring solution

The intention of P333 is to provide a temporary solution until the DSBR provisions are removed from the C16 statements. The Workgroup acknowledged the appetite for an enduring solution that could be developed in conjunction with the manual work around.

The Workgroup noted that should DSBR continue beyond the winter 2016/17 period, an enduring solution would be necessary, as in practice the BMRA deliver the BSC requirements for calculating and publishing imbalance prices by using automated processes. Ideally any change to the calculation of imbalance prices should be incorporated with the existing systems and processes. This ensures integrity and simplicity.

Housekeeping Changes

The Workgroup noted that following the introduction of the Capacity Market, with the removal of SBR and DSBR from the C16 Methodology, a housekeeping change would be raised to remove the references made to the DSBR.

7 Workgroup's Conclusions

The majority of the Workgroup agreed that P333 would overall better facilitate the Applicable BSC Objectives compared with the existing baseline.

Due to the risk associated with the manual work around, one Workgroup member did not believe that the Applicable BSC Objectives were demonstrated. The member therefore wished to remain neutral.

The following table contains the Workgroup's final views against each of the Applicable BSC Objectives.

Does P333 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views ¹
(a)	<ul style="list-style-type: none"> Neutral – No Impact. 	<ul style="list-style-type: none"> Neutral (unanimous) – as Proposer.
(b)	<ul style="list-style-type: none"> Yes – as including DSBR in the cash-out price calculation ensures that correct market signals are being sent. 	<ul style="list-style-type: none"> Yes (majority) – As Proposer. Neutral (minority – one) – as there a number of risks associated with the implementation of the manual work around.
(c)	<ul style="list-style-type: none"> Yes – as the solution ensures that the whole market would have access to the same information. 	<ul style="list-style-type: none"> Yes (majority) – As Proposer. Neutral (minority – two) - as there a number of risks associated with the provision of information.
(d)	<ul style="list-style-type: none"> Yes – as the solution ensures the provision of timely information, this reducing the incident of cash-out price changes. 	<ul style="list-style-type: none"> Yes (majority) – as Proposer. Neutral (minority – two) – as the manual work around would be more complication to administer.
(e)	<ul style="list-style-type: none"> Neutral – No Impact. 	<ul style="list-style-type: none"> Neutral (unanimous) – as Proposer.
(f)	<ul style="list-style-type: none"> Neutral – No Impact. 	<ul style="list-style-type: none"> Neutral (unanimous) – as Proposer.

Assessment Consultation respondents views on the Applicable BSC Objectives

ELEXON received nine responses to the Assessment Consultation, of which seven agreed that P333 does better facilitate the Applicable BSC Objectives for the following reasons:

- Applicable BSC Objective (b): as P333 allows for better informed trading decisions and enabling optimal operation of the GB Transmission System.
- Applicable BSC Objective (c): as P333 ensures all market participants have access to the same information with regards to DSBR utilisation and the likely impact on cash-out pricing. This will particularly assist small parties who may have fewer resources to commit to the forecasting of DSBR utilisation.



What are the Applicable BSC Objectives?

(a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence

(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System

(c) Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity

(d) Promoting efficiency in the implementation of the balancing and settlement arrangements

(e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency [for the Co-operation of Energy Regulators]

(f) Implementing and administering the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation

253/10

P333
Assessment Report

2 Jun 16

Version 0.1

Page 13 of 18

© ELEXON Limited 2016

¹ Shows the different views expressed by the other Workgroup members – not all members necessarily agree with all of these views.

- Applicable BSC Objective (d): as P333 ensures the provision of more timely information, to enable the reduction of the incidence of cash-out repricing.

One respondent remained neutral on whether P333 would better facilitate the Applicable BSC Objectives. This respondent suggested that it is unclear whether P333 would have any impact on market participant behaviour or influence participant balancing strategies.

Another respondent noted that the benefits of P333 came with its corresponding risks.

8 Recommendations

The P333 Workgroup invites the Panel to:

- **AGREE** that P333:
 - **DOES** better facilitate Applicable BSC Objective (b);
 - **DOES** better facilitate Applicable BSC Objective (c); and
 - **DOES** better facilitate Applicable BSC Objective (d);
- **AGREE** an initial recommendation that P333 should be **approved**;
- **AGREE** an initial Implementation Date of:
 - 3 November 2016 if an Authority decision is received on or before 3 August 2016; or
 - Three calendar months after a decision, if received after 3 August 2016.
- **AGREE** the draft legal text;
- **AGREE** that P333 is submitted to the Report Phase; and
- **NOTE** that ELEXON will issue the P333 draft Modification Report (including the draft BSC legal text) for a 15 Working Day consultation and will present the results to the Panel at its meeting on 14 July 2016.

Appendix 1: Workgroup Details

Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P333 Terms of Reference

Is a BSC Modification the best way to achieve the aim of P333?

What is the impact of implementing P333?

What is the benefit of P333?

What changes are needed to BSC documents, systems and processes to support P333 and what are the related costs and lead times?

Are there any Alternative Modifications?

Does P333 better facilitate the Applicable BSC Objectives than the current baseline?

Assessment Procedure timetable

P333 Assessment Timetable

Event	Date
Panel submits P333 to Assessment Procedure	11 Feb 2016
Workgroup Meeting 1	23 Mar 16
Workgroup Meeting 2	18 Apr 16
Assessment Procedure Consultation	29 Apr – 23 May 16
Workgroup Meeting 3	25 May 16
Panel considers Workgroup's Assessment Report	9 Jun 16

253/10

P333
Assessment Report

2 Jun 16

Version 0.1

Page 16 of 18

© ELEXON Limited 2016

Workgroup membership and attendance

P333 Workgroup Attendance				
Members				
Simon Fox-Mella	ELEXON (<i>Chair</i>)	✓	✓	✓
Jemma Williams	ELEXON (<i>Lead Analyst</i>)	✓	✓	✓
Libby Glazebrook	ENGIE (<i>Proposer</i>)	✓	✓	✓
Lisa Waters	Waters Wye Associates	✓	✓	✓
James Anderson	Scottish Power	✓	✓	✓
Bill Read	RWE	✓	✓	✓
Jonathan Davison	Cornwall Energy	☎	✓	✗
Andy Colley	SSE	✓	✓	✓
Attendees				
John Lucas	ELEXON (<i>Design Authority</i>)	✓	✓	✓
Geoff Norman	ELEXON (<i>Lead Lawyer</i>)	✗	✓	✓
Emma Burns	ELEXON (<i>Market Analysis</i>)	✓	✓	✓
Jonathan Whiting	Ofgem	✓	✓	✓
Alex Haffner	National Grid	✓	✓	✗
Tony Bowes	National Grid	✓	✓	✗
Rituraj Saikia	National Grid	✓	✗	✓
Tariq Hakeem	National Grid	✓	✓	✓
John Mansi	National Grid	✗	✓	✗
Ajilesh Thayath	National Grid	✗	✓	✓
Aily Armour-Biggs	Global Energy Advisory	✗	✗	✓

Appendix 2: Glossary & References

Acronyms

Acronyms used in this document are listed in the table below.

Acronym	
Acronym	Definition
BM	Balancing Mechanism
BMRA	Balancing Mechanism Reporting Agent (<i>BSC Agent</i>)
BSAA	Balancing Service Adjustment Action
BSAD	Balancing Service Adjustment Data
BSC	Balancing and Settlement Code (<i>Industry Code</i>)
DECC	Department for Energy and Climate Change
DSBR	Demand Side Balancing Reserve
II	Interim Information Settlement Run
NIV	Net Imbalance Volume
SAA	Settlement Administration Agent (<i>BSC Agent</i>)
VoLL	Value of Lost Load

External links

A summary of all hyperlinks used in this document are listed in the table below.

All external documents and URL links listed are correct as of the date of this document.

External Links		
Page(s)	Description	URL
3	Modification P305 'Electricity Balancing Significant Code Review Developments' page of ELEXON website	https://www.elexon.co.uk/mod-proposal/p305/
4, 5	Transmission Licence C16 Statements page of the Transmission Company website	http://www2.nationalgrid.com/uk/industry-information/electricity-codes/balancing-framework/transmission-license-c16-statements/
4	Issue 56 'Treatment of the new SBR and DSBR services in the imbalance price' page of ELEXON website	https://www.elexon.co.uk/smg-issue/issue-56/
5	Modification P323 'Enabling inclusion and treatment of SBR in the Imbalance Price' page of ELEXON website	https://www.elexon.co.uk/mod-proposal/p323/

253/10

P333

Assessment Report

2 Jun 16

Version 0.1

Page 18 of 18

© ELEXON Limited 2016