Issue 74 'Increased utilisation of non-BM STOR'

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About This Document

This document is the Issue 74 Group's Report to the BSC Panel. ELEXON will table this report at the Panel's meeting on 9 May 2019.

There are two parts to this document:

- This is the main document. It provides details of the Issue Group's discussions and proposed solutions to the highlighted issue and contains details of the Workgroup's membership.
- Attachment A contains the Issue 74 proposal form.

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1 Summary

Conclusions

The Issue 74 Group unanimously agreed that increased visibility of non-Balancing Mechanism (BM) Short Term Operating Reserve (STOR) would improve Parties' ability to make informed decisions on whether to bid in to the stack for STOR services. The group highlighted this data would provide clear visibility of when non-Balancing Mechanism (BM) STOR was being utilised for system balancing by National Grid Electricity System Operator (ESO).

The Issue Group agreed that the ESO should develop an interim solution, to publish data on its website to provide transparency of STOR instructions. The Issue Group members agreed an enduring solution to place data on the Balancing Mechanism Reporting Service (BMRS) should be explored bilaterally between ELEXON and National Grid ESO.

The Issue Group concluded that it was not practicable to develop a proxy for spill ahead of the implementation of BSC Modification P354 'Use of ABSVD for non-BM Balancing Services at the metered (MPAN) level' in April 2020. Instead, members requested that the ESO provides industry with further guidance on how it takes decisions on which assets to dispatch for the STOR balancing product, to improve transparency of how STOR is utilised.

Background

National Grid ESO raised Issue 74 'Increased utilisation of non-BM STOR' on 25 October 2018.

Issue 74 sought to define potential solutions and identify whether there was a firm need or ability to implement a solution that would create a positive market impact while taking into account the upcoming implementation of P354 on 1 April 2020.

The Issue Group determined that the Issue had two parts:

- How non-BM STOR is procured; and
- Transparency of how STOR is utilised.

The Workgroup noted that the implementation of P354 would address the issue of non-BM STOR providers receiving an imbalance benefit when they were dispatched, and so considered whether any interim solution could be developed to realise benefit ahead of the P354 Implementation Date.

What is STOR?

Short Term Operating Reserve (STOR) is a balancing service procured by National Grid ESO to help balance the Transmission System during certain time windows. It can be provided by BM participants (BM STOR) or outside of the BM (non-BM STOR).

Overview of P354

BSC Modification P354 will require the ESO to provide Applicable Balancing Services Volume Data (ABSVD) for non-BM Balancing Services providers to BSC Central Systems for allocation to the appropriate Supplier BM Unit to correct their Energy Imbalance position. This will address the issue of 'spill', where by Suppliers who provide non-BM STOR services will have their Imbalance position adjusted to account for the energy delivered under this. This in turn will limit the possibility for providers to use the 'spill' payments to gain a competitive advantage in procuring services. P354 will not require any additional data to be published in real time and so will not address any issues around transparency of services being used by ESO.

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2 Background

What's the Issue?

STOR provides the ESO with additional power when actual demand on the National Electricity Transmission Network is greater than forecast and/or there is unforeseen generation unavailability. STOR can be provided by both BM and non-BM market participants. Further details of how Parties interact with STOR can be found on the ESO Website.

The ESO has contracted significant volumes of non-BM STOR, as the utilisation costs are generally low compared to other services. These low costs are primarily driven by Suppliers, who are responsible for the metered unit delivering the service, receiving an imbalance benefit when that unit provides balancing services.

The ESO believe that this benefit, referred to as 'spill', may be passed through from the Supplier to the balancing services provider. This means the provider could tender in lower service availability and utilisation prices. Ofgem has indicated this situation is unsustainable and has directed that BSC Modification P354 'Use of ABSVD for non-BM Balancing Services at the metered (MPAN) level' and associated changes in the Applicable Balancing Services Volume Data methodology (ABSVD) are implemented to correct this from April 2020 onwards.

Until that time, it is anticipated that non-BM STOR prices will remain depressed and so BM STOR providers will be at a disadvantage.

There are two broad areas of concern arising from this:

- **Service visibility:** Reduced visibility of non-BM STOR actions, compared to other actions taken in the market, making it harder for Parties to react to signals in relation to non-BM STOR utilisation; and
- **Cash-out impacts:** Low non-BM STOR prices mean they are often cheaper than some Bids ESO has accepted, so these actions are arbitraged (taken out of the imbalance price stack) in the Settlement calculation, which has an impact on the imbalance price. There have been times when all accepted Offers in a short market are arbitraged, leaving no prices with which to generate the imbalance price. When this happens, the imbalance price methodology reverts to using the Market Index Price (MIP).

What is ABSVD?

BM Unit ABSVD is provided by the ESO to BSC Systems for use in the calculation of Period BM Unit Balancing Services Volume, which is the volume of all energy associated with Balancing Services used in the determination of imbalance.

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3 Issue Group's Discussions

Background

The Proposer noted that non-BM STOR prices would remain artificially depressed unless an interim solution was implemented ahead of the P354 Implementation Date. A Workgroup member commented that non-BM STOR actions were not published, so the market had no visibility of when non-BM STOR was dispatched, and that it would be difficult to predict when non-BM STOR would be dispatched.

The Workgroup noted that utilised volumes had increased through 2018 but had returned to previously seen volumes and asked whether this was a result of ESO action. The ESO confirmed it has taken pre-emptive action to reduce the level of STOR being utilised. It clarified that STOR is procured as a reserve product. The ESO noted that the progression of P354 had raised industry awareness and Ofgem had considered the licensing intent for economic balancing. The ESO confirmed it was trying to follow this exact guidance and was trying to ensure that non-BM STOR was used in a proportionate way.

The Workgroup noted that STOR products were supposed to be limited to two-hour utilisation, but that this restriction may be relaxed. A Workgroup member believed the ESO should be utilising non-BM STOR rather than reducing the dispatched volumes. The ESO commented that the true price of non-BM STOR was not as reflective as may first be perceived, and the eventual cost to consumers was not yet clear.

The Workgroup commented that, while non-BM STOR could initially appear a cheap alternative, the added cost of imbalance might in fact skew the numbers to make it more expensive. It noted that the lack of visibility makes it difficult to forecast when non-BM STOR is being dispatched. The Workgroup asked if visibility could be provided to the market to increase transparency of when non-BM STOR was being dispatched.

Three questions were posed to the Workgroup for discussions:

Question 1: How much operational impact does a lack of visibility of non –BM STOR actions cause in real time?

The Workgroup believed that the lack of visibility had a significant impact to Parties, noting that Suppliers use complex algorithms to calculate forecast volumes and that all available dispatch instructions for BM were publically available. For non-BM STOR no visibility is available so in effect the market is blind to these volumes. The Workgroup concluded that this could limit the ability of Parties to react to market signals.

Question 2: How are market participants impacted by the increased use of the Market Index Price?

The Workgroup questioned how many times the MIP had been used in the Imbalance Price calculation as a result of non-BM STOR actions. A Workgroup member believed that although the MIP was used rarely, the calculation should still incorporate the impact of non-BM STOR. A member expressed concern that MIP could set the Imbalance Price for a larger number of Settlement Periods than expected as a result of the increased usage of non-BM STOR.

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Question 3: Which of the two issues is having the bigger impact on the market?

The Workgroup commented that non-BM STOR should be reflected in the cash out price otherwise there would be a risk that the Net Imbalance Volume (NIV) would not be reflective of the market length. ESO commented that the implementation of its Platform for Ancillary Services (PAS) would expand the data available to industry and that it was working with ELEXON to get the data required into relevant systems and asked the Workgroup if they believed there was any benefit to implementing a solution ahead of this.

A Workgroup member noted that changes would be needed to the cashout calculation and reporting, but this would need to be designed as part of the enduring solution to publish data on BMRS, which would need a Modification to implement. In the interim changes to Balancing Services Adjustment Data (BSAD) to show the dispatch of non-BM STOR would be beneficial as it would not be possible to implement an enduring solution before the P354 Implementation Date.

Potential solutions

The Proposer (National Grid ESO) sought Workgroup comments on three potential solutions for Issue 74:

Potential solution 1 – Implement P354 sooner

The Workgroup noted the rationale for Ofgem's decision for the April 2020 implementation of P354 and that due to system development timescales, it would be challenging to bring the P354 Implementation Date forward, even if this were to be recommended in contrast to Ofgem's previous implementation decision.

The Workgroup discussed the impacts of true prices not being reflected in the price calculation. One member suggested the MIP might be the best proxy to use cash-out pricing. A Workgroup member stated that this would result in the non-BM STOR provider being paid against cash out as well as the spill payment they would receive. A Workgroup member suggested that a buy price adjuster could be applied to non-BM STOR, which could be added to the cash out price methodology.

The Workgroup considered how the control room decides what plant to dispatch and whether commercial decisions were factored into the process, meaning that STOR would be dispatched unequally. The ESO advised that STOR was used as reserve and so was being dispatched less than it had been previously at the point this Issue 74 was first raised.

The Workgroup agreed that any interim solution would need to be implemented quickly to provide benefit to the market in advance of the Implementation Date of P354.

Potential solution 2 – Assume a proxy for spill in pricing calculations

The Workgroup discussed purchase prices for non-BM STOR and noted that it would expect the control room to use the price procured in dispatch. A Workgroup member asked how this would be reflected in cash out and commented that P354 would address the issue of spill, but not transparency.

The Workgroup commented that it was hard to predict when non-BM STOR was being dispatched and so was hard to forecast with no deterministic variables available. The

What is BSAD?

BSAD comprises a number of Balancing Services Adjustment Actions and the Buy Price Price Adjustment and Sell Price Price Adjustment.
The BSC Systems calculate the Balancing Services Adjustment Price for each Settlement Period for each Balancing Services Adjustment Action by dividing the Balancing Services Adjustment Cost by the Balancing Services Adjustment Volume for each respective Settlement Period.

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Workgroup discussed that there was a risk that non-BM STOR actions were priced lower than the true cost, giving providers a competitive advantage.

A Workgroup member noted that knowing the volumes and prices of non-BM STOR would help market participants to forecast the NIV. A Workgroup member commented that it would be beneficial for BMRS to provide an aggregated view ahead of the current fifteen minute delay for data entering Settlement calculations.

The Workgroup decided not to progress this option for the reasons provided in the conclusions below.

Potential Solution 3 – earlier publication of non-BM STOR data

A Workgroup member stated it would be helpful to get visibility as early as possible to allow the market to take appropriate action. They commented that it would be helpful for data to be provided showing when non-BM STOR was being turned on or off, noting that this would provide useful visibility. A Workgroup member questioned whether availability for daily dispatch could be provided to the market to help it plan ahead.

The Workgroup discussed the merits of visibility by Grid Supply Point (GSP) Group showing the non-BM STOR being dispatched by BM units similar to the way Bid-Offer acceptance and considered that this could constrain plant by GSP area. The ESO noted that current systems would not deliver this level of detail, but may be available with the implementation of PAS.

Conclusions

A Workgroup member commented on the reduction in utilisation of non-BM STOR by the ESO, and expressed concern that this action had been taken without any prior engagement or consultation with industry. The member sought greater transparency on how dispatch decisions were taken so that the industry could respond to actions more effectively. The ESO noted that discussions around this had started and invited interested parties to contact Grahame Neale (Grahame.Neale@nationalgrideso.com, +44 (0)7787 261 242).

The Proposer informed the Workgroup that the ESO could implement a temporary solution to enhance the transparency of dispatched non-BM STOR, subject to approval by its change board. This would take the form of a webpage on its website to provide near real time information on non-BM STOR instructions. The Proposer noted that the development of this system would be subject to internal business approval, and commented the new PAS would need to have been implemented to enable this, but that this was expected to be in place for July 2019.

The Workgroup commented that this interim solution was a positive move, but that it would be desirable for the information to be published on the BMRS along with other industry data as an enduring solution. A Workgroup member commented that to maximise the benefit, any data published would need to be made available in a timely manner for the industry to respond to. One Workgroup member commented that the default position should be for the ESO to make all balancing data available, rather than by exception. ELEXON agreed to work with the ESO to devise a suitable proposal to amend the BMRS to publish such information upon guidance from Issue 74 group members.

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The Workgroup considered whether a suitable proxy for spill could be incorporated ahead of the P354 implementation. The Workgroup considered three options for a proxy for spill:

- A fixed amount;
- A figure based on the utilisation price; and
- A figure based on historic data.

The Workgroup decided that the eventual choice would need to be based on rigorous analysis with a publicly available methodology. The Workgroup decided that, since proxy for spill in the Imbalance Price calculation would require a Modification and system changes, it did not believe there could be any benefit realised before the implementation of P354. It also noted that including a proxy for spill in the calculations had the potential to exacerbate the situation if it was not completely accurate.

The Workgroup considered whether a proxy for spill could be used to inform dispatch options without feeding into the Imbalance calculations. The Workgroup concluded that differing opinions meant that it was unlikely that industry would be able to reach any consensus on how a spill proxy should be applied to STOR actions, and thought that additional clarity on how dispatch decisions were made would add clarity and assurance for the industry.

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Appendix 1: Issue Group Membership

Issue Group membership and attendance

Issue 74 Group Attendance			
Name	Organisation	26 Nov 18	15 Apr 19
Elliott Harper	ELEXON *(Chair)*	✓	✓
Steve Bradford	ELEXON *(Lead Analyst)*	✓	✗
Matthew Woolliscroft	EELXON *(Lead Analyst)*	✗	✓
Colin Berry	ELEXON *(Design Authority)*	✓	✓
Adelle Wainwright	National Grid ESO *(Proposer)*	✓	✗
Grahame Neale	National Grid ESO *(Proposer)*	✓	✓
Alastair Martin	Flexitricity	✗	☎
Alessandra De Zottis	UKPR	✗	✓
Andrew Russell	Engie	✓	✓
Andy Colley	SSE	☎	☎
Bill Reed	RWE	✓	✗
David Mylinski	Outlook Energy Services	✓	✓
Graham Dawson	NPower	✓	✗
Graz Macdonald	Green Frog Power	✓	✗
James Anderson	Scottish Power	✓	✗
James Jackson	UK Power Reserve	✓	✗
Lisa Waters	Waters Wye	✓	✓
Matthew Tucker	Welsh Power	✓	✓
Matthew Hopkins	National Grid ESO	✗	☎
Oliver Xing	Orsted	✓	✗
Rick Parfett	The ADE	✓	✗
Saskia Barker	Flexitricity	☎	✗
Simon Noble	Smartest Energy	✓	✗
Tom Webb	UK Power Reserve	✗	✗

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Appendix 2: Glossary & References

Acronyms

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

Acronyms	
Acronym	Definition
ABSVD	Applicable Balancing Service Volume Data
BM	Balancing Mechanism
BMRS	Balancing Mechanism Reporting Service
ESO	Electricity System Operator
GSP	Grid Supply Point
MIP	Market Index Price
NGESO	National Grid Electricity System Operator
NIV	Net Imbalance Volume
PAS	Platform for Ancillary Services
STOR	Short Term Operating Reserve

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
2, 3, 5	P354 page of the BSCCo Website	https://www.elexon.co.uk/mod-proposal/p354/
2	Issue 74 page of the BSCCo Website	https://www.elexon.co.uk/smg-issue/issue-74/
3	Overview of STOR on the ESO website	https://www.nationalgrideso.com/balancing-services/reserve-services/short-term-operating-reserve-stor?overview

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