Final Modification Report

P304 'Reduction in PAR from 500MWh to 250MWh'

This Modification has been raised to progress changes to the Price Average Reference value following the Electricity Balancing Significant Code Review, and proposes to reduce the PAR value from 500MWh to 250MWh ahead of winter 2014/15.

The BSC Panel recommends **rejection** of P304

This Modification is expected to impact:

- ELEXON
- BSC Parties

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What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

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About This Document

This is the P304 Final Modification Report, which ELEXON has submitted to the Authority on behalf of the BSC Panel. It includes a summary of the Workgroup's assessment, the Panel's full views and the responses to both the Workgroup's Assessment Consultation and the Panel's Report Phase Consultation. The Authority will consider this report and will decide whether to approve or reject P304.

There are seven 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 approved redlined changes to the BSC for P304.
- Attachment B contains the full responses received to the Workgroup's Assessment Procedure Consultation.
- Attachment C contains the full confidential responses received to the Panel's Report Phase Consultation.
- Attachment D contains the Workgroup's analysis on a PAR value of 100MWh.
- Attachment E contains the Workgroup's analysis on a PAR value of 250MWh.
- Attachment F contains the Workgroup's analysis on a PAR value of 350MWh.

Any questions?

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1 Summary

Why Change?

The existing imbalance arrangements have the effect of dampening imbalance price signals, meaning that they do not provide sufficient indication to the market of the value of flexible capacity when margins are tight. A leading cause of this price dampening is the level of PAR, which is currently set at 500MWh. Deriving a weighted average from a volume of 500MWh creates an imbalance price which does not reflect the marginal cost of balancing energy for a given Settlement Period.

Solution

This Modification proposes a reduction in the PAR volume from 500MWh to 250MWh. This will improve the strength of imbalance price signals during winter 2014/15.

Impacts & Costs

There are no direct impacts on BSC Parties anticipated due to the implementation of P304. BSC Parties may be indirectly impacted by the effects of the reduced PAR value on imbalance prices.

Implementation

The Panel recommends an Implementation Date for P304 of:

- **31 October 2014** if an Authority decision is received on or before 17 October 2014; or
- **10 Working Days** following an Authority decision, if it is received after 17 October 2014.

Recommendation

The **majority** view of the Panel is that P304 does better facilitate Objective (b) but does not better facilitate Objectives (c) and (d) and should therefore be **rejected.**

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2 Why Change?

What are imbalance prices?

Imbalance prices, which are known as 'cash-out' prices, are a key part of the wholesale electricity trading arrangements in Great Britain.

Under the current arrangements, market participants that require electricity for their customers (Suppliers) enter into contracts with organisations that produce electricity (generators). However, contracts between these participants are not always exactly delivered in real time causing an imbalance between energy generation and demand on the Transmission System. This can cause problems as electricity cannot easily be stored economically in large quantities and generation must always match consumer demand in real time if a stable system is to be maintained.

For any given Settlement Period (each half hour), Parties may trade with each other up to Gate Closure, which occurs one hour prior to the start of that Settlement Period. Parties aim to balance their position for a given Settlement Period by Gate Closure to ensure that the amount of energy generated and bought matches the amount of energy consumed and sold. However, there are circumstances where this does not happen. For example, if a generator experiences an unexpected outage that does not allow them to generate their projected amount of energy, or if a Supplier over or under estimates the amount of energy their customers actually use. This leaves the Party in an imbalanced position for that Settlement Period.

To balance energy on the Transmission System the Transmission Company, acting as System Operator (SO), assesses the amount of generation and the amount of demand expected for each Settlement Period. If required, the SO will take balancing actions[1] to balance the system so that the total amount generated matches the total amount consumed. The SO does this by issuing Bids and Offers via the Balancing Mechanism or Balancing Service Adjustment Actions (BSAA)[2] to participants (usually generators) to increase or decrease the amount of energy they need to produce (or consume) to ensure the system is balanced. The SO will do this prior to and throughout the Settlement Period to ensure the system is balanced at all times.

Following the end of a Settlement Period, ELEXON (using the BSC Systems) will compare the amount of energy each Party contracted with its metered volumes for the Settlement Period, accounting for any accepted Bids and Offers and other applicable balancing service volumes. Any surplus or shortfall that the Party has is called the imbalance volume and is paid for using the relevant imbalance price:

- If the Party is **short** (it consumed more energy than it had bought or sold more energy than it had generated) then it pays for its shortfall at the **System Buy Price** (SBP).
- If the Party is **long** (it generated more energy than it had sold or bought more energy than it had consumed) then it is paid for its surplus at the **System Sell Price** (SSP).

[1] A balancing action is an instruction to a Party, in accordance with agreed rules, to either increase or decrease generation, or increase or decrease demand. Parties must also submit details of their contracts to the BSC Systems.

[2] Balancing Service Adjustment Actions (BSAA) are the technical services that the System Operator purchases outside the Balancing Mechanism. This is described in Balancing Services Adjustment Data (BSAD) Methodology Statement.

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There are two methods for calculating the imbalance price:

- The **Main Price** is based on the costs of energy balancing actions incurred to the Transmission Company for that Settlement Period.
- The **Reverse Price** is based on the short term market price of wholesale electricity traded on the power exchanges for that Settlement Period.

The method (Main Price or Reverse Price) which is to be applied to an imbalance price (SBP or SSP) for each Settlement Period is determined by whether the system as a whole was long (Net Imbalance Volume (NIV) is zero or negative) or short (NIV is positive) for that Settlement Period:

- If the system is long, the SSP will be the Main Price and the SBP will be the Reverse Price.
- If the system is short, the SBP will be the Main Price and the SSP will be the Reverse Price.

As a result, the Main Price is applied to any Party whose imbalance was in the same direction to, and is considered to have contributed to the overall system imbalance. These Parties will therefore face the costs of the balancing actions accepted by the SO to resolve energy imbalance on the system. Conversely, the Reverse Price is applied to any Party whose imbalance was in the opposite direction to the net imbalance, and is considered to have helped to reduce the overall system imbalance. Therefore, these Parties might face the costs they would have incurred had they traded out their imbalance position on the power exchanges near Gate Closure.

Further information on imbalance prices can be found on the imbalance pricing page of our website.

What is the Price Average Reference volume?

The Price Average Reference (PAR) volume is used in the Main Price calculation. It is a volume of actions in the dominant direction from which a weighted average is calculated.

PAR captures the most expensive actions remaining after a series of "tagging" operations have been conducted by the SO. The tagging process eliminates the most expensive actions in the dominant direction that have a matching volume to any in the reverse direction. The PAR volume (MWh) for the most expensive energy balancing actions remaining is the volume used to set the Main Price.

Originally under the current arrangements, imbalance prices were calculated as an average of all actions taken by the SO to balance the system. This was subsequently changed to the most expensive 500MWh of actions under P205 'Increase in PAR level from 100MWh to 500MWh' in November 2006. This level of 500MWh has since been maintained.

Further information on PAR can be found on the imbalance pricing page of our website.

What is the Electricity Balancing Significant Code Review?

In August 2012, Ofgem launched the Electricity Balancing Significant Code Review (EBSCR) to address long-standing concerns on electricity balancing arrangements raised in its 2010 Project Discovery Report. In particular, Ofgem expressed concerns that imbalance

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prices are not creating the correct signals to allow the market to balance, leading to increased risks to future security of supply.

Ofgem completed its review of the electricity balancing arrangements and published its Final Policy Decision on 15 May 2014. The final decision document lays out Ofgem's conclusions and builds on the extensive analysis and stakeholder engagement conducted during the EBSCR.

What is Ofgem's rationale for reform?

In its Final Policy Decision, Ofgem lays out its rationale for why reform of imbalance prices is needed. In it, it notes that the actions of the Transmission Company in balancing the system in real time is the basis for the calculation of imbalance prices, and considers that a number of factors currently dampen these prices:

- Prices are calculated using an average of the most expensive (to the Transmission Company) 500MWh of Bids or Offers taken to balance the system, rather than the most marginal action;
- Prices do not include the costs to consumers of involuntary demand disconnections (blackouts) and voltage reductions (brownouts); and
- The way reserve capacity is currently priced does not allow imbalance prices to rise to reflect tight margins.

Additionally, the current dual imbalance price system creates unnecessary balancing costs, disadvantaging in particular smaller Parties.

Ofgem considers that the shortcomings with the current arrangements mean that the market does not sufficiently (compared with an efficient, cost-reflective counterfactual) value flexibility - the ability to ramp generation or demand up or down quickly in response to changing market conditions). As a consequence, market participants have insufficient incentives to provide flexible capacity (such as flexible generation, demand response services and storage) to meet demand in particular during system stress. Shortcomings may also make it more likely that Interconnectors export at times of system stress or import less than under more efficient arrangements. As the share of intermittent generation grows, flexibility will only become more important for security supply.

Ofgem believes that imbalance price arrangements and the government's planned Capacity Market (CM) have distinct but complementary roles in seeking to ensure electricity security of supply. The CM is intended to address longer term capacity adequacy by providing capacity providers with a secure revenue stream for their investment. Reform of imbalance prices complements this by providing efficient signals of the value of flexibility, influencing the type of capacity coming forward. In addition, imbalance prices have the potential to reduce the cost of procuring capacity in the CM auction.

Significant Code Review Modifications

BSC Section F 5.3 states that:

- The Authority may direct the Transmission Company to raise an SCR Modification Proposal; and
- that the Authority's SCR Conclusions (if any) or direction in respect of the SCR Modification Proposal **shall not** fetter the views of the relevant Workgroup, the voting rights of the Panel or the recommendation of the Modification Report in respect of such an SCR Modification Proposal.

What is the issue?

Ofgem considers that the existing imbalance arrangements have the effect of dampening imbalance price signals, meaning that they do not provide sufficient indication to the market of the value of flexible capacity when margins are tight. As a result, imbalance price signals have failed to create appropriate incentives for investment in flexible capacity (such as flexible generation, Demand Side Response (DSR) services and storage).

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A leading cause of this price dampening is the level of PAR, which is currently set at 500MWh. Deriving a weighted average from a volume of 500MWh creates an imbalance price which does not reflect the marginal cost of balancing energy for a given Settlement Period. This is especially true at times of system stress when differences between the costs of accepted balancing actions are greatest.

Ofgem's EBSCR Final Policy Decision sets out a package of reforms to the existing imbalance arrangements designed to improve the efficiency of imbalance price signals to the market. Most of these reforms have been targeted for implementation by winter 2015/16 and are captured in BSC Modification P305 'Electricity Balancing Significant Code Review Developments'.

In order to improve the strength of the imbalance price signals for the intervening period, in particular winter 2014/15, and to help Parties to transition to more marginal pricing, P304 proposes to reduce the PAR volume to 250MWh by November 2014. A PAR volume of 250MWh will reduce the extent to which the cost of the marginal action is diluted by averaging and will provide a relatively stronger price signal that may help counteract potential tightening of margins ahead of the package of EBSCR reforms anticipated for winter 2015/16.

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3 Solution

Proposed solution

National Grid raised P304 'Reduction in PAR from 500MWh to 250MWh' on 30 May 2014. This Modification proposes to introduce a reduction in the PAR volume.

Reducing the PAR volume will improve the strength of imbalance price signals during winter 2014/15. This will in turn reduce the extent to which the cost of the marginal action is diluted.

Under the P304 proposed solution, a central system parameter change will be made as part of business-as-usual operations to reduce the PAR volume from 500MWh to 250MWh. Therefore, central costs and effort would relate only to the necessary Code changes required to implement this solution, requiring minimal costs and lead time to implement.

We do not anticipate mandatory system impacts on participants to implement this Modification as the imbalance prices, in which PAR is used, are calculated centrally. Participants systems will only be impacted if they have elected to store or use the value of PAR within their systems (e.g. to calculate the system prices themselves) which they would do voluntarily.

Proposed draft legal text changes

This Modification proposes changes to BSC Section T 'Settlement and Trading Charges' to introduce a reduction in the PAR volume from 500MWh to 250MWh, as shown in Attachment A.

Potential alternative PAR values considered by the Workgroup

The Workgroup considered whether a PAR value of 250MWh is the most appropriate value under P304. In order to make a fully informed decision on this Modification, the Workgroup requested extensive analysis on the following PAR values:

- 100MWh
- 250MWh
- 350MWh

The Workgroup has agreed not to propose an alternative PAR value for P304. Full details of the analysis conducted by ELEXON can be found in Attachment C (PAR100), Attachment D (PAR250) and Attachment E (PAR350).

Other related changes

Ofgem published its Final Policy Decision on the EBSCR on 15 May 2014 and directed National Grid (as the Transmission Company) to raise the relevant Modifications to put the package of reforms in place.

Alongside P304, National Grid raised P305 'Electricity Balancing Significant Code Review Developments'. This Modification has been raised to progress a package of changes that have come out of the EBSCR, as follows:

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- Further reduction in the PAR value following P304 (50MWh from winter 2015/16, then 1MWh from winter 2018/19) and changes to the Replacement PAR (RPAR) volume which is currently set at 100MWh;
- A single imbalance price, calculated using the main price calculation;
- The introduction of Reserve Scarcity Pricing (RSP); and
- The introduction of Value of Lost Load (VoLL) pricing for Demand Control actions.

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4 Impacts & Costs

Estimated central implementation costs of P304

The estimated central implementation costs associated with P304 are minimal. It will take approximately one ELEXON man day (equating to £240) to implement changes to the BSC and to change a central system parameter as part of business-as-usual operations to reduce the PAR value.

Industry costs to implement P304

No direct impacts on BSC Parties or Party Agents are anticipated. However, some respondents to the Assessment Consultation, who store or use the value of PAR in their systems or processes, have indicated that there may be some costs associated with changing the value but do not believe it to be significant. Other respondents to the Assessment Consultation indicated no additional costs or minimal business process costs.

P304 impacts

Impact on BSC Parties and Party Agents
No direct impacts on participants are anticipated as the imbalance prices, in which PAR is used, are calculated centrally. Participants' systems will only be impacted if they have elected to store or use the value of PAR within their systems (e.g. to calculate the system prices themselves) which they would do voluntarily. Participants may be indirectly impacted by the effects of the reduced PAR value on imbalance prices, as detailed in Section 6 of this document and in the Workgroup's analysis results in Attachments D, E and F.

Impact on Transmission Company
We do not anticipate there to be an impact on National Grid (as the Transmission Company). National Grid have indicated that, if there are changes to the behaviour of market participants in response to a stronger imbalance price signal, fewer energy balancing actions may be required to balance the system.

Impact on BSC Agent/service provider	
BSC Agent/service provider contract	Potential Impact
SAA	The SAA will set the value of PAR within central systems to 250MWh effective from the P304 Implementation Date. This value will apply to all Settlement Days from this date onwards.

Impact on Code	
Code Section	Potential Impact
Section T	Changes will be required to implement this Modification, as detailed in Section 3.

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5 Implementation

Recommended Implementation Date

The Panel recommends an Implementation Date for P304 of:

- **31 October 2014**, if the Authority's decision is received on or before 17 October 2014; or
- **10 Working Days** following an Authority decision if the decision is received after 17 October 2014.

The Workgroup considered that the ELEXON effort to implement P304 will be minimal and has also noted Ofgem's recommended implementation approach in its EBSCR Final Policy Decision.

ELEXON received 16 responses to the Assessment Consultation, of which 11 did not agree with the proposed Implementation Date. This is due to potential indirect impacts to industry participants because of higher imbalance prices as a result of a reduced PAR value. However, the Workgroup believe that the above implementation approach is appropriate given the minimal time it will take ELEXON and the industry to implement P304.

The Panel unanimously support the above implementation approach. Details of the Panel's discussions can be found in Sections 8 & 10.

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6 Workgroup's Discussions

What analysis is required?

Analysis conducted by the Workgroup

As part of its assessment of P304, the Workgroup requested the following:

- Historical analysis using data going back to 2010 (post P217 'Revised Tagging Process and Calculation of Cash Out Prices' implementation);
- All analysis completed with PAR values of 100MWh, 250MWh and 350MWh;
- Look at the effects of the above PAR values on different types of industry participant by running analysis on individual Parties and then grouping appropriately;
- Look at scarcity in the market and the effects the above PAR values will have during times of scarcity; and
- Provide a breakdown of different price signal changes for different participants for these specific periods of scarcity.

The above analysis has been completed by ELEXON and considered by the Workgroup. Full details of the analysis results can be found in Attachment C (PAR100), Attachment D (PAR250) and Attachment E (PAR350).

What time period was used for the Workgroup's analysis?

The Workgroup considered ELEXON's initial analysis on PAR250, using data going back to 2012. A member noted that this period in the market was relatively benign and asked whether ELEXON considered running analysis going back to 2005/06. They believe that any analysis conducted should consider periods of market volatility where possible.

ELEXON did not perform analysis using data going back to 2005/06 as there were fundamental differences in the imbalance calculations before P217 was implemented in November 2009. ELEXON ran further analysis using data going back to February 2010, the earliest period for which data was easily available. A member believed that expanding the period back to 2010 may not be enough to show volatile market conditions.

An Ofgem representative on the P304 Workgroup noted that, in their experience, it is quite difficult to conduct analysis using data from before P217 was implemented. Furthermore, the further back you go the less representative the period of analysis. This is because it is difficult to assume what tagging would have occurred at the time. Using post-P217 data would provide more transparent analysis results and would limit the risk of large numbers of assumptions being made.

The Workgroup agreed that ELEXON should run additional analysis on the reduction of PAR using data going back to 2010. This will limit the risk of additional assumptions having to be made and will allow for more transparent results. The Workgroup also urged ELEXON to draw out any analysis results at known times of system stress over this period.

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What analysis is required to show the difference in price signals during times of peak demand?

A Workgroup member noted that there should be analysis to show the effects of a lower PAR value at different times of day. This would enable the industry to gauge the level of change during peak demand for a given day. ELEXON was asked to break down its analysis for each Settlement Period over the course of a day where the system was tight.

Another member agreed with this view and requested that ELEXON provide the daily £ impact data to the industry so that further analysis can be run by individual Parties so they can understand the effects of a lower PAR value on imbalance prices individually. ELEXON has since published the raw data used for its analysis on the P304 page of the ELEXON website. To ensure confidentiality of the data, ELEXON has given each Party its own four digit identification number. Parties can contact ELEXON (elexon.change@elexon.co.uk) and request their own identification number.

What analysis has been done by Ofgem as part of its EBSCR?

A Workgroup member noted that Ofgem's Impact Assessment published in July 2013 had only assessed the effects of PAR values of 1MWh and 50MWh. The member added that this analysis was also based on all the EBSCR changes proposed in Ofgem's final policy decision being implemented. Therefore, there was no clear analysis on PAR250 under the current arrangements.

The Ofgem representative confirmed that its updated modelling for the EBSCR Final Decision Impact Assessment included all aspects of the EBSCR final policy decision. They noted that this did not include analysis on PAR250 alone or any reduced PAR values in a dual priced market.

A Workgroup member asked whether Ofgem would, at any point, need to issue a regulatory impact assessment. Ofgem is required to conduct an impact assessment when there is a significant impact on consumers. At this point Ofgem does not see this impact being sufficient enough to encourage a regulatory impact assessment.

A Workgroup member asked why Ofgem chose a value of 250MWh as proposed under P304. Ofgem responded that the industry requested a phased approach to the reduction of PAR to 1MWh. Therefore, Ofgem saw PAR250 as an appropriate step change to help the industry get used to a more marginal price.

Should any additional analysis take into account EMR?

There are a number of other significant changes under consideration or in implementation affecting the electricity market, including the introduction of the Electricity Market Reform (EMR) arrangements. The Workgroup discussed whether a reduction in PAR under the current market arrangements was appropriate given that future market arrangements sought to improve security of supply by other means.

A member noted that the Workgroup need to assess P304 in its own right and against the current baseline. The member believes there is a risk in assuming what could happen in 2-3 years' time. Other members of the Workgroup agreed with this view and decided not to include future changes to the market in its analysis.

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What are the impacts of reducing the PAR value across different types of industry participant?

The Workgroup agreed that the impact of reducing the PAR value needs to be assessed across different types of industry participant.

A member noted that participants are doing everything they can to ensure they are as balanced as possible. Therefore, they do not think a large impact on Suppliers' incentive or ability to balance would arise from the implementation of P304. This is because Suppliers will want to hedge based on their forecast data. Another member added that ELEXON needs to be careful not to overestimate the scope of behavioural changes in its analysis. Others noted that historical analysis is likely to overestimate price impacts. Furthermore, even if some parties are not able to respond, others will, thus tempering price impacts and imbalance charge impacts.

A Workgroup member asked whether Ofgem's analysis looked at differential impacts on different types of participant. Ofgem advised that its historic analysis did not take into account behavioural changes but did look at the type of player based on their imbalance and portfolio size. Another member noted that the Workgroup needs to do a more detailed impact assessment and make sure that there are no gaps in the analysis already done on the reduction of PAR. They noted that a lot of ground work has been done but the Workgroup need to review this work and make sure that everything is covered.

It was questioned whether there may be a way to work out the £/MWh cost to participants by comparing the difference in energy imbalance charges (i.e. difference in the charges at PAR500 and PAR250) assuming the Market Index Price does not change. A member advised that it would be worth considering changes in the size of the Residual Cashflow Reallocation Cashflow (RCRC) pot. Another member advised that this was essentially the same per MWh for all participants, so had little or no distributional effect per MWh. They added that imbalance charges and RCRC will sum to zero overall.

ELEXON completed analysis on an individual participant level to show the potential distributional effects of reducing PAR to 100MWh, 250MWh or 350MWh. ELEXON has run the requested analysis and studied the relative impacts on particular industry participants.

The Workgroup noted that the analysis indicates PAR250 would have given higher imbalance charge payments for all BSC Parties, especially during Quarter 4 (Q4) of 2010 and Q1 of 2013 when SBP increased more significantly. This would effectively increase the total RCRC given. The Reverse Price remains unchanged and would benefit Parties with large Credited Energy Volumes[3]. There would be more impact to Parties with small Credited Energy Volumes as their receivable RCRC does not sufficiently cover the additional imbalance cost arising from sharpened imbalance prices.

Full details of the analysis results can be found in Attachment C (PAR100), Attachment D (PAR250) and Attachment E (PAR350).

What is RCRC?

Any excess or shortfall in cashflow after all BSC Parties have paid their Imbalance Charges is redistributed amongst BSC Parties on a scale proportional to their volume of non-interconnector Credited Energy. This redistribution is paid as Residual Cashflow Reallocation Cashflow (RCRC). RCRC data is presented on a £/MWh basis.

Further information on RCRC can be found on Trading Charges page of our website.

Impacts on vertically integrated Parties

ELEXON provided analysis showing the average impact on Trading Charges for vertically integrated Parties[4] as a result of **PAR250**. There were negative impacts on Trading

[3] RCRC is net imbalance charge payment to be redistributed back to Parties which amount is proportional to the amount of Credited Energy in BSC Parties' trading accounts. Large Trading Parties would therefore receive more money from RCRC because they have more Credited Energy Volumes.

[4] Each individual vertically integrated Party included both its Supplier and generator businesses.

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Charges in Q1 of 2010 and Q1 of 2011 and positive impacts on Trading Charges in the remaining periods. The higher imbalance charge due to sharpened imbalance prices paid by vertically integrated Parties was netted off by higher RCRC payments. This has resulted in a net gain for vertically integrated Parties in the majority of historic analysis periods. The average net impact of Credited Energy is £0.00/MWh for vertically integrated Parties due to the large amount of energy that is traded by them.

ELEXON has also applied the PAR100 and PAR350 imbalance prices to BSC Parties' historical Imbalance Volumes. In comparison to PAR250, the overall net gain for **PAR100** was larger due to higher RCRC payments as a result of the higher Main Price/Reverse Price spread. In comparison to PAR250, the overall net gain for **PAR350** was less due to lower RCRC payments arising from a smaller Main Price/Reverse Price spread.

Impacts on independent Suppliers (small Suppliers)

ELEXON provided analysis showing the average impact on Trading Charges for independent Suppliers as a result of **PAR250**. Unlike the other types of Parties, the receivable RCRC for independent Suppliers does not outweigh the additional imbalance charges incurred due to sharpened imbalance prices.

Independent Suppliers are more likely to be exposed to imbalance charges than generators as it is harder for them to predict the consumption of customers. Independent Suppliers also had less Credited Energy Volumes in their trading accounts compared to vertically integrated players and big generators and hence would receive less RCRC. The net impact of Credit Energy for independent Suppliers is more volatile and ranges from -£0.02/MWh to -£0.06/MWh across the different seasons in the year.

ELEXON has also applied **PAR100** and **PAR350** imbalance prices to BSC Parties' historical Imbalance Volumes. For PAR values of 100MWh and 350MWh the findings were similar to that of the PAR250 analysis, such that independent Suppliers were more likely to be impacted by higher imbalance prices.

Whilst considering the analysis results a Workgroup member noted that the impacts on independent Suppliers was bigger than they thought it was going to be, and that the results indicate there is a significant distributional effect at times of scarcity. Other members noted that the impacts were modest.

It was questioned how one could translate the results to show a quantitative impact over a longer period. If these periods of scarcity are representative of what the market can expect during winter 2014/15 one can multiply the effects over the course of a week or a month to see what would happen during a long period of system scarcity. It was noted that previous scarcity events in the scope of the historical analysis have lasted a handful of settlement periods.

ELEXON confirmed that the periods of scarcity showing the effects of a reduced PAR value at times of system stress were more likely to be independent Settlement Periods. One of the Workgroup members noted that market participant behaviour is likely to change very quickly over periods of sustained scarcity and therefore it would not be appropriate to simply multiply the effects by the number of Settlement Periods since the impact would diminish as the party adjusted their contracted positions. A member noted that if you have periods of sustained scarcity there would be an impact based on the analysis results, potentially not as big but it is there. It's quite clear that there will be more significant winners and losers in the market.

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Impacts on independent thermal generators

ELEXON provided analysis showing the average impact on Trading Charges for independent thermal generators as a result of **PAR250**. The largest impacts on imbalance charges occurred in Q4 of 2010 and Q1 of 2013 but were compensated by RCRC. Overall, independent thermal generators would gain in the majority of periods. This is due to a combination of better energy balancing from more predictable station exports and higher receivable RCRC based on large Credited Energy Volumes. The average net impact of Credited Energy was £0.01/MWh for the majority of periods for independent thermal generators.

ELEXON has also applied **PAR100** and **PAR350**. For both PAR values independent thermal generators would gain in the majority of periods for the same reasons given above (under PAR250).

Impacts on independent wind generators

ELEXON provided analysis showing the average impact on Trading Charges for independent wind generators as a result of **PAR250**.

PAR250 has minimal impact on independent wind generators. This is because they would normally reallocate output to other larger Trading Parties via the Metered Volume Reallocation Notification Agent (MVRN). These Trading Parties are normally vertically integrated Parties or Suppliers who are responsible for trading these volumes and for energy balancing. The average net impact of Credited Energy was limited to -£0.02/MWh across the majority of periods for wind generators.

Please note that the impact on independent wind generators is not shown in the **PAR100** or **PAR350** analysis as the impact is minimal, except for quarter 3 of 2013 which was due to the abnormal charge for a particular Party.

Are there potential impacts on the current credit arrangements under the BSC?

The Workgroup considered what would happen if price signals get sharper and whether this would have a knock on impact on the amount of Credit Cover a Party may need.

A member noted that the larger the imbalance price the more Credit Cover a Party may need. They believe that if price signals in the market end up being very spiky there may be a need for disproportionally large amounts of Credit Cover lodged.

The Workgroup agreed that there may be unintended consequences on the credit arrangements under the BSC. Therefore, the Workgroup wished to obtain the industry's views on this.

ELEXON received 16 responses to the P304 Assessment Consultation. Of these respondents, 11 noted that there would be an impact on the current Credit arrangements if the value of PAR were to be reduced. The majority of these 11 respondents noted that by reducing the value of PAR you would increase imbalance prices which would result in industry participants having to put up more Credit Cover.

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Whilst considering these responses, one Workgroup member noted that the current Credit arrangements can be a barrier to entry as it can be quite difficult for some smaller Parties to lodge sufficient credit. It was also noted that those who are able to lodge credit may tend to lodge a bit more than needed to ensure imbalance charges are covered. The Workgroup considered that these issues could potentially be exacerbated if Parties have to start lodging more Credit.

Alternative solutions considered by the Workgroup

A reduction in PAR with introduction of a single price

A number of respondents to the P304 Assessment Consultation noted that a reduction in the PAR value should only be made once a single price is introduced.

A Workgroup member agreed with respondents' views and noted that there may be a number of issues with using a more marginal price under a dual pricing system. The member believes that the Workgroup should consider lowering the PAR value and moving the market to a single price. Another member agreed with this view noting that a lower PAR value will have a greater adverse impact in a dual priced market rather than a single priced market.

ELEXON advised the Workgroup that such a change would be out of scope for P304 as the defect identified is that the value of PAR needs to be reduced. Therefore, moving the market to a single price would need to be covered under a separate Modification (as is currently being considered under P305).

A reduction in PAR to 100MWh instead of 250MWh

A respondent to the Assessment Consultation preferred that a move to a fully marginal price be made sooner rather than later to ensure that flexibility and risk are properly reflected into the Transmission System. Of the options analysis by the Workgroup the respondent preferred a move to PAR100 rather than PAR250 as it would provide a better incentive to realise the balancing and investment benefits.

A Workgroup member agreed with this view and supported a move to PAR100 rather than PAR250 for the same reasons. A majority of the Workgroup disagreed with introducing PAR100 as an alternative solution to introducing PAR250.

A reduction in PAR to 375MWh with a sunset clause

A Workgroup member noted that they did not fully agree with a reduction in PAR at all. However, they did feel that a reduction in PAR to 375MWh would be a more appropriate step. The member was concerned that, if there was a delay to the implementation of P305 the industry could be stuck with the PAR value introduced by P304.

The Workgroup member suggested reducing the PAR value to 375MWh with a clause in the BSC stating that this value would remain until November 2015 and would then revert back to a value of 500MWh. This means that, unless a Modification (P305 or otherwise) was introduced to change this clause before November 2015 the PAR value introduced under P304 would revert back to 500MWh.

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The Workgroup member also suggested a revised Implementation Date for this potential alternative of 2 January 2015 to give the industry more time to consider the impact of a reduced PAR value on their organization.

A majority of Workgroup members disagreed with taking this alternative solution forward as they were not comfortable with a clause in the BSC saying that the PAR value introduced by this Modification could revert back to 500MWh. One member noted that this could raise uncertainties with market participants as it would not be clear whether the P304 PAR value would revert back or be overwritten prior to November 2015. The workgroup also did not support a reduction in PAR to 375MWh as an alternative solution to P304. Therefore, this potential alternative solution was not taken forward.

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Summary of views against the Applicable BSC Objectives

The **majority** Workgroup view is that P304 does better facilitate Objectives (b) and (c) and therefore recommends that P304 is **approved**.

The following table summarises the Workgroup and the Proposer's views against the Applicable BSC Objectives:

Does P304 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views[5]
(a)	• Neutral	• Neutral
(b)	• **Yes** - making the main imbalance price signal more cost reflective, strengthening the incentive on market participants to balance their positions ahead of Gate Closure. This should reduce the balancing actions required to be taken by the System Operator.	• **Yes** *(majority, 3 out of 5)* – agreed with the proposer. • **No** *(minority)* – the extent to which P304 benefits Objective (b) is questionable. There is also the incentive for market participants to move towards longer positions at Gate Closure to ensure they are not impacted by the higher imbalance prices. • **No** *(minority)* – as a majority of the Assessment Consultation respondents were not in favour of P304.
(c)	• **Yes** - strengthening the energy imbalance price signal should incentivise market participants to trade in order to balance their positions ahead of Gate Closure. This will increase liquidity in the forward market and benefit competition by encouraging investment in flexible capacity (flexible generation, demand participation and other technologies).	• **Yes** *(majority, 3 out of 5)* – agreed with the proposer. • **No** *(minority)* – under the current arrangements there would be distributional effects on different types of industry participant. There was also the view that there was not sufficient time to allow ELEXON and the industry to determine the full extent of these effects. • **No** *(minority)* – as a majority of the Assessment Consultation respondents were not in favour of P304.
(d)	• Neutral	• Neutral
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral

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 administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation

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

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Assessment Consultation respondent's views on P304 against the Applicable BSC Objectives

ELEXON received 16 responses to the P304 Assessment Consultation. However, three of the consultation responses could not be considered by the Workgroup as they were not submitted in time for the final Workgroup meeting. Please note that all 16 responses are included in Attachment B and will be considered by the Panel and the Authority.

A **majority** of respondents believe that P304 **would not** better facilitate the Objectives better than the current baseline, for the following reasons:

- **Applicable BSC Objective (b):** it was not clear to some respondents that a reduction in PAR to 250MWh would result in a more efficiently run market. It was also noted by respondents that reducing the PAR value under the current arrangements (i.e. dual priced market) may lead to further risk to industry participants and potentially further inefficiencies.
- **Applicable BSC Objective (c)**: P304 may become a barrier to entry as there are believed to be negative impacts on smaller Parties due to higher imbalance prices and a greater amount of Credit Cover being required which is detrimental to competition.

A **minority** of respondents believe that P304 **would** better facilitate the Objectives for the following reasons:

- **Applicable BSC Objective (b):** some respondents believed that P304 would give Parties incentive to balance their positions better due to sharper imbalance prices. This would also mean that the value of flexible capacity would be more accurately reflected.
- **Applicable BSC Objective (c)**: P304 would align incentives of taking balancing actions closer to the value provided by consumers. It would also promote further trade and investment in the industry.

All responses to the P304 Assessment Consultation can be found in Attachment B.

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Impacts across different types of industry participant

The Panel discussed the potential differential impacts on BSC Parties, in particular the impacts on small Suppliers.

A Panel Member noted that, based on the Assessment Consultation responses and the analysis completed by the P304 Workgroup, there would definitely be large adverse impact on small Suppliers. Some Panel Members agreed with this view, with one Member noting that two large Parties raised concerns in their responses around the impacts on smaller Parties. Furthermore, these larger Parties also indicated that they would benefit from the implementation of P304. Therefore, the Member was concerned that even larger players in the market were concerned that P304 may result in winners and losers.

It was noted that small Suppliers do their best to balance their positions. However, unlike other types of Party (e.g. generators), they do not always have foresight of where their portfolio is going to take them. Therefore, they are not the best in the market at balancing positions. This means that they will likely be hit harder than other types of Party due to potential spikes in the imbalance price, higher imbalance charges and additional required Credit Cover.

A Panel Member noted that they would have preferred to see more details of potential impacts on intermittent generators. They added that such impacts are quite difficult to assess through analysis and they expected more from the Assessment Consultation respondents on the matter. They asked that ELEXON seek views on the potential impacts on intermittent generators. ELEXON agreed to attempt to facilitate contact with such Parties and to include a specific question in the Report Phase Consultation seeking respondents' views on potential impacts on intermittent generators.

A Panel Member noted that, during the P304 Workgroup meetings, an Ofgem representative was asked whether or not Ofgem may conduct a regulatory impact assessment to further assess the industry impacts of reducing PAR. The representative responded that Ofgem would only issue such an impact assessment if it felt there may be a significant impact to the industry. The Panel Member asked whether Ofgem had any additional views on this. The Ofgem Representative responded noting Ofgem's current position is that a regulatory impact assessment will not be required as there does not seem to be a significant impact to the industry. The Ofgem Represented added that it considered the analysis and assessment undertake by the P304 Workgroup and under the EBSCR is sufficient.

A Panel Member was concerned about the knock on impacts a reduction in PAR would have on the credit arrangements. It was noted in the Assessment Consultation responses that the larger the imbalance price the more Credit Cover a Party may need. The Member added that Credit Cover can be an issue for smaller Parties and that they were concerned that this issue may be exacerbated by a reduction in PAR in a dual priced market (as Parties may lodge additional Credit Cover to account for a potential spike in imbalance charges).

EBSCR, balancing services and Modification timescales

A concern was raised by a Panel Member regarding the role of Ofgem and National Grid in the EBSCR Modifications. They noted that Ofgem conducted its work on the EBSCR and set out its views and findings in its Final Policy Decision. Ofgem then directed National Grid to

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raise the required Modification to implement the solutions it recommended. These Modifications (P304 and P305) were then put through the BSC Modification processes where a final decision will be made by Ofgem on whether or not to approve them. The Member believed that this is quite an odd position for everyone to be in and recommended that Ofgem and National Grid consider looking into this as part of future SCRs.

Another Panel Member noted that both Ofgem and National Grid seem to have contradicted each other recently. Ofgem's EBSCR Final Policy Decision determines that there is a need for a lower PAR value to further sharpen imbalance price signals to show scarcity in the market. However, National Grid has put in place two new balancing services, Demand Side Balancing Reserve (DSBR) and Supplemental Balancing Reserve (SBR), which if used will not be reflected in the imbalance price. This has the risk of further dampening the imbalance price, which goes against Ofgem's EBSCR conclusions. The Panel Member recommended that Ofgem and National Grid consider looking into this and ensure that the intentions of each are taken into account.

It was noted that, due to the potential use of DSBR and SBR over winter 2014/15, there is an even greater need for an accurate signal of scarcity in the market to ensure that there is an incentive to invest in flexible capacity. For example, if we have a very cold winter with little wind it's important for there to be a signal to the market that there is a need for flexible generation.

A Panel Member observed that the analysis conducted by Ofgem and the P304 Workgroup did not indicate how the effects of a lower PAR value would result in additional market capacity. The Member asked the Transmission Company Representative if they had any views on this. The Representative responded that an increased signal of scarcity in the market should incentivise Parties to seek further contracts. They added that this is more of an expectation rather than a quantifiable industry response.

The Panel asked whether or not the analysis completed under P304 took into account behavioural changes as a result of a lower PAR value. ELEXON advised that the Workgroup discussed this and agreed that any analysis would not take into account behavioural changes due to concerns about additional assumptions making the analysis results less transparent.

Some Panel Members raised concerns around the timescales in which P304 was progressed and that P304 was raised quite late into the SCR process. Other Members added that the expedited timetable for P304 meant that there was not enough time for industry participants to fully assess the effects of a reduced PAR value or for the Workgroup to suitably consider all alternative solutions put forward by members.

A Panel Member believed that Ofgem did the admirable thing by trying to accommodate a step change in the reduction of PAR, as requested by the industry. They added that a move to a more marginal price is a step in the right direction. However, it appears there would be adverse impacts under a dual priced market and that a reduction in PAR under a single priced market may have been the more pragmatic approach. Furthermore, the intended benefits that Ofgem seek (as per its EBSCR) would only really be realised if everything was implemented as a package of reforms (which would include a reduction in PAR under a single priced market). The Member therefore believes that P305 should be prioritised over P304. They also added that they believe there is a marginal detrimental impact against Applicable BSC Objective (d) due to the progression of a temporary solution to the reduction of PAR being progressed under P304, i.e. because P305 would further reduce PAR.

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Workgroup voting

A Panel Member raised concerns over the number of voting members in attendance at the final P304 meeting. They highlighted that there is currently no alternate voting rights for Workgroup members and that this would be worth looking into as part of ELEXON's review of Workgroup terms of reference.

ELEXON advised the Panel that, since the final P304 meeting, it has contacted all of the members who were not able to attend to confirm their views on the P304 proposed solution. Taking into account Ofgem's EBSCR Final Policy Decision, impacts on small Suppliers and the Assessment Consultation responses a majority of all Workgroup members (i.e. those who did and did not attend the final meeting) agreed that P304 should be approved. Therefore, even though there was a reduced number of voting members at the final meeting, the end result would most likely have been the same if all members had been in attendance.

Panel's initial views against the Applicable BSC Objectives

Having considered the Modification and the Workgroup's views on P304 the **majority** view of the Panel is that P304 should be **rejected**.

The Panel expressed the following views against the Applicable BSC Objectives:

Applicable BSC Objective (b)

A **majority** of Panel Members agreed that P304 **would** better facilitate the achievement of Applicable BSC Objective (b) for the reasons given by the Workgroup, as it:

- makes the main imbalance price signal more cost reflective;
- strengthens incentive to balance positions ahead of Gate Closure; and
- Reduces the number of balancing actions required.

A **minority** of Panel Members agreed that P304 **would not** better facilitate the achievement of Applicable BSC Objective (b) for the reasons given by the Workgroup, as:

- there is a questionable benefit that P304 will make the main imbalance price more cost reflective; and
- there could be an increased incentive to move towards longer positions at Gate Closure.

Applicable BSC Objective (c)

A **minority** of Panel Members agreed that P304 **would** better facilitate the achievement of Objective (c) for the reasons given by the Workgroup, as:

- strengthening the imbalance price signal should incentivise market participants to trade in order to balance positions;
- it benefits competition by encouraging investment in flexible capacity; and
- it increases liquidity in the forward market.

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A **majority** of Panel Members agreed that P304 **would not** better facilitate the achievement of Objective (c) for the reasons given by the Workgroup, as:

- under the current dual priced market there would disproportionate impacts on small Suppliers as a result of a reduced PAR value; and
- there has not been sufficient time to allow ELEXON and the industry to determine the full extent of these effects.

This majority of Panel Member's indicated that the detrimental impacts against this objective would outweigh any benefits against Objective (b).

Applicable BSC Objective (d)

A **majority** of Panel Members agreed that P304 **would not** better facilitate the achievement of Applicable BSC Objective (d) as:

- It is not efficient to progress a Modification to implement a temporary solution with little benefit to the industry.

This majority of Panel Member's indicated that the detrimental impacts against this objective would outweigh any benefits against Objective (b).

A **minority** of Panel Members had a neutral view against Applicable BSC Objective (d).

Panel's initial views on draft legal text

The Panel **unanimously** agrees with the Workgroup's view that the proposed changes to the BSC in Attachment A deliver the intention of P304

Panel's initial views on the proposed Implementation Date

The Panel **unanimously** agrees with the Implementation Date proposed by the Workgroup, as detailed in Section 5.

A Panel Member noted that, if Ofgem does not meet its 17 October 2014 deadline for P304 to be implemented on 31 October 2014, a fall back Implementation Date of 10 Working Days will apply. The Member indicated that there needs to be consideration given to what date a 10 Working Day Implementation Date would fall on. For example, if this 10 Working Day Implementation Date falls over the winter holidays or during a CM Auction a revised Implementation Date may need to be put forward.

ELEXON advised the Panel that BSC Section F2.11.8 states that the Panel can apply to the Authority for an extension to the Implementation Date if it becomes aware of any circumstance which is likely to cause a delay in the implementation of an Approved Modification. Therefore, in the event that there is an issue with the P304 Implementation Date of 10 Working Days, there is a provision in the BSC to allow the Panel to apply for an extension.

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9 Report Phase Consultation Responses

This section summarises the responses to the Panel's Report Phase Consultation on its initial recommendations. You can find the full responses in Attachment C.

Summary of P304 Report Phase Consultation Responses				
Question	Yes	No	Neutral/ No Comment	Other
Do you agree with the Panel's initial majority view that P304 should be rejected?	11	9	0	0
Do you agree with the Panel that the draft legal text changes deliver the intention of P304?	15	0	5	0
Do you agree with the Panel's recommended Implementation Date?	12	8	0	0
Do you believe that commercial terms offered to intermittent generators, under power purchase agreements, will be impacted by any reassessment of balancing risks which may arise following a reduction in PAR to 250MWh?	11	3	6	0

Comments on the Panel's initial majority view that P304 should be rejected

ELEXON received 20 responses to the P304 Report Phase Consultation, of which a **majority** of 11 **agreed** with the Panel's view that the Modification should be **rejected**.

A **minority** of nine respondents **did not agree** and believe that P304 should be **approved.**

Comments made by all respondents were broadly in line with comments previously made by the Workgroup, the Panel and Assessment Consultation respondents.

Arguments for rejection

Some respondents believe that P304 will incentivise over-contracting to avoid exposure to the more marginal price, resulting in participants going for a 'longer' position at Gate Closure, increasing the number of balancing actions required to be taken by the SO.

Some respondents referenced the potential adverse impacts on different types of industry participant. They noted that the P304 Workgroup's analysis shows that independent Suppliers are disadvantaged compared to vertically integrated Parties as they are more likely to be impacted by the sharpened imbalance prices. It was also noted that there is not sufficient time to update systems, processes and hedging strategies following a reduction in PAR.

A number of respondents believe that there should not be a reduction in the PAR value under the current arrangements, and that it should only be done in line with (or following) the introduction of a single priced market regime.

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Arguments for approve

Some respondents believe that P304 will make the main imbalance price signal more cost-reflective, providing added incentive for BSC Parties to balance ahead of Gate Closure and thereby reducing the number of balancing actions required to be taken by the SO.

Some respondents believe that P304 supports competition by providing sufficient indication to the market of the value of flexible capacity when margins are tight.

It was also noted that P304 is an adequate first step towards a fully marginal PAR value which will allow market participants to gradually transition to a single imbalance price whilst also beginning to realise the benefits of sharpened imbalance prices earlier.

One respondent did not agree with the majority Panel view that the benefits under Applicable BSC Objective (b) would be outweighed by detrimental impacts to Objective (c) and that the principal purpose of this Modification is to take the first step towards improving the efficiency with which imbalance price signals capture the value of flexible capacity to the system. Another respondent noted that, on balance, P304 would still better deliver the Applicable BSC Objectives compared to the current baseline.

Will commercial terms offered to intermittent generators be impacted by reducing PAR to 250MWh?

11 respondents believe that commercial terms offered to intermittent generators **will be impacted** by a reduction in the PAR value to 250MWh.

One respondent noted that for generators that have already signed Power Purchase Agreements (PPAs) with offtakers, additional costs due to a change in the value of PAR will have to be absorbed by those offtakers under the terms of those deals. However, new generators seeking to sign PPAs will be directly affected by this change as offtakers will seek to modify the terms offered to reflect the reduction in PAR. This is especially problematic at this time as many variable generators are either seeking to sign deals in order to meet the deadline of the closure of the Renewables Obligation, or will be looking to find PPAs that dovetail with the new Contracts for Difference (CfD).

It was also noted that making a change to PAR now will make the task of creating new PPAs relevant to the CfD harder at a time of high uncertainty in the commercial value of the instrument itself.

One respondent stated that the introduction of this (or any future change to the imbalance arrangements) may trigger a change of law clauses under a PPA. This would mean that at least partially intermittent generators would be exposed to the increased costs presented by any such change.

Three respondents believe that commercial terms offered to intermittent generators **will not be impacted**.

One respondent believes that intermittent generators will face an increase in their imbalance discounts in PPAs regardless of the outcome of the EBSCR, as a result of the forecast increase in intermittent generation coming onto the system in the coming years. It was also noted by another respondent that P304 would not create sufficient risk to warrant a change to PPAs.

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One respondent believes that this should not form part of the discussion relating to P304 and that the majority of PPAs should already take into account regulatory change risk as part of their documentation.

Six respondents had a **neutral** view or were **unable to comment** given their operating capacity.

Legal text changes

Of the 20 respondents to the P304 Report Phase Consultation, a **majority** of 15 **agreed** that the draft legal text delivers the intention of the Modification.

A **minority** of five respondents had a **neutral** view with only one respondent providing rationale in that they did not have any specific views on the legal text.

Implementation Date

A **majority** of 12 respondents **agreed** with the proposed Implementation Date. Some of these respondents noted that a change to PAR should be implemented as soon as practicable to allow the benefits to be achieved and to allow industry participants to adapt ahead of winter 2014/15, when margins are anticipated to be most tight. It was also noted by some respondents that the changes required to central systems and Parties' systems are minimal and that it should be implemented as quickly as possible.

A **minority** of eight respondents **did not agree** with the proposed Implementation Date. Some respondents argued that there is insufficient time to incentivise meaningful changes in behaviour as trading has already taken place for winter 2014/15.

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10 Panel's Final Discussions

The Panel discussed P304 and P314, 'Reduction in PAR from 500MWh to 350MWh', together due to their similarity. Panel Members that had been present to give their initial views on P304 confirmed that their views had not changed. The Panel considered that the views, whether in favour or against, applied to both P304 and P314. The Panel views varied only in the degree to which they applied to each of the three solutions (P304, P314 Proposed and P314 Alternative), reflecting the magnitude of the reduction and how quickly it would be implemented. That is:

- panel Members that did not support an increase in PAR felt that the larger the reduction, and the sooner it was made, the greater the disadvantages would be.
- conversely, Panel Members that support a reduction in PAR felt that a larger, earlier reduction would deliver greater benefits sooner (i.e. before winter 2014).

Recommendation

The BSC Panel recommends that P304 be rejected.

Panel discussions

A Panel Member considered that the analysis completed by the P304 Workgroup on a reduction in PAR clearly shows that there may be significant adverse impacts on some BSC Parties, with independent Suppliers being the most impacted. The Member believed that the market was working, that scarcity signals appeared adequate and that new generation and supply participants were entering the market. The Member therefore did not believe that a case had been made for reducing PAR before winter 2014. They did not see how the approval of a Modification that may adversely impact smaller participants would be better for the industry and noted that it is important to ensure that new generation is safeguarded. Another Member supported this view and believed that in practice the advantages of reducing PAR would be outweighed by the disadvantages to smaller Parties.

Another Member added that the industry needs to encourage generation given the expected system scarcity and plant outages and that a reduced PAR value would provide signals to the market to encourage flexible capacity. The Member believes that a reduction in PAR to 250MWh (or 350MWh, as proposed under Modification P314) would benefit the industry. However, they consider this benefit to be marginal compared to that of smaller values (for example, 50MWh). The Member noted that this is a market for both generation and supply and whilst distributional effects are important, so is security of supply and ensuring that there is an accurate signal of scarcity. However, another Member argued that there is no evidence showing that a reduction in PAR will help security of supply in practice.

Reduction in PAR with a single price

A Member advised the Panel that they did not see case proven for a reduction in PAR under the current arrangements. However, there is a clear appetite for a reduction in PAR under a single price market. Other Panel Members agreed with this view.

A Member believed that there is justification to encourage flexible generation but noted that some respondents (who operate on the generation side of the market) did not believe that a reduction in PAR at this point in time would allow the intended benefits to be realised.

A Member added that consumers will be putting their faith in the Transmission Company and other BSC Parties to get their forecast right in order to ensure security of supply. They

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believed that a reduction in PAR would be preferable under a single price market, to mitigate the risk to the industry, but support the move to a more marginal imbalance price to promote security of supply.

A Member noted that they did not accept the argument, expressed in some consultation responses, that Parties will take longer trading positions and that this will be inefficient. The Member considered that on the contrary an efficient market should have representative price signals. While accepting that improving price signals will affect Parties in different ways, the Member considered that such distributional effects are a separate issue to efficiency.

Impacts on intermittent generators

The Panel considered the Report Phase Consultation responses submitted regarding whether a reduction in PAR would impact the terms offered by intermittent generators.

A Panel Member noted that some respondents to the Report Phase Consultation, who are intermittent generators (and have no supply business), indicated that there would be adverse impacts on PPA's due to a reduction in PAR. Therefore, the Member urged Panel Members to also consider this impact when assessing P304 against the Applicable BSC Objectives.

Another Panel Member noted that new generation stakeholders that would look to enter the market are not represented in the consultation, and considered that the Panel should consider such stakeholders in looking to provide a balanced view.

Ability of Parties to react to a reduction in PAR

The Panel noted that some respondents to the Report Phase Consultation indicated that they have already hedged for winter 2014/15 and would therefore not be able to react and effectively adjust their hedging strategies if a reduction in PAR was introduced for this winter.

A Panel Member agreed noting that Parties will have already prepared for this winter and will not be able to effectively react to a reduction in PAR at this point in time. They added that the economic theory may indicate that a reduction in PAR should be able to cause a reaction as a result of strengthened signals, even if notice of the reduction is relatively short, but in reality industry participants do not have time to react and make behavioural changes based on a reduced PAR value this winter. Other Panel Members agreed with this view.

The Transmission Company Representative noted the arguments for and against P304 but cautioned against giving too much weight to analysis that is based on the application of different PAR values to historic data with no account taken of potential behavioural changes. They also questioned whether the ability of Parties to respond to price signals was being understated.

Panel's initial views against the Applicable BSC Objectives

Having considered the Modification and the Workgroup and industry views on P304 the **majority** view of the Panel is that P304 should be **rejected**.

The Panel expressed the views below against the Applicable BSC Objectives:

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Applicable BSC Objective (b)

A **majority** of Panel Members agreed that P304 **would** better facilitate the achievement of Applicable BSC Objective (b) for the reasons given by the Workgroup, as it:

- makes the main imbalance price signal more cost reflective;
- strengthens incentive to balance positions ahead of Gate Closure; and
- reduces the number of balancing actions required.

A **minority** of Panel Members agreed that P304 **would not** better facilitate the achievement of Applicable BSC Objective (b) for the reasons given by the Workgroup, as:

- there is a questionable benefit that P304 will make the main imbalance price more cost reflective; and
- there could be an increased incentive to move towards longer positions at Gate Closure.

Applicable BSC Objective (c)

A **majority** of Panel Members agreed that P304 **would not** better facilitate the achievement of Objective (c) for the reasons given by the Workgroup, as:

- under the current dual priced market there would disproportionate impacts on small Suppliers as a result of a reduced PAR value; and
- there has not been sufficient time to allow ELEXON and the industry to determine the full extent of these effects.

This majority of Panel Members indicated that the detrimental impacts against this objective would outweigh any benefits against Objective (b).

A **minority** of Panel Members agreed that P304 **would** better facilitate the achievement of Objective (c) for the reasons given by the Workgroup, as:

- strengthening the imbalance price signal should incentivise market participants to trade in order to balance positions;
- it benefits competition by encouraging investment in flexible capacity; and
- it increases liquidity in the forward market.

Applicable BSC Objective (d)

A **majority** of Panel Members agreed that P304 **would not** better facilitate the achievement of Applicable BSC Objective (d) as:

- it is not efficient to progress a Modification to implement a temporary solution with little benefit to the industry.

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This majority of Panel Members indicated that the detrimental impacts against this objective would outweigh any benefits against Objective (b).

A **minority** of Panel Members had a neutral view against Applicable BSC Objective (d).

Panel's final views on draft legal text

The Panel **unanimously** agrees that the proposed changes to the BSC in Attachment A deliver the intention of P304.

Panel's final views on the proposed Implementation Date

The Panel **unanimously** agrees with the proposed Implementation Date for P304.

Panel's final recommendation

The Panel by **majority** recommends that:

- P304 does not better facilitate the Applicable BSC Objectives compared with the current baseline, and should therefore be **rejected**.

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11 Recommendations

The BSC Panel recommends to the Authority:

- That P304 should be **rejected**;
- An Implementation Date for P304 of:
  - 31 October 2014 if an Authority decision is received on or before 17 October 2014; or
  - 10 Working Days if an Authority decision is received after 17 October 2014;
- The BSC legal text for P304.

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Appendix 1: Workgroup Details

Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P304 Terms of Reference
Is the proposed solution the most appropriate way to implement the EBSCR conclusions in relation to the PAR value?
Will a PAR value of 250MWh improve the strength of imbalance price signals during winter 2014/15, as outlined in Ofgem's EBSCR Final Policy Decision?
What impact will a PAR value of 250MWh have on imbalance prices in practice?
Will a move towards a more marginal price reflect a more marginal cost?
What impact will P304 have across different types of industry participant, for example small Suppliers, intermittent generators and non-portfolio generators.
What views and arguments have been expressed under previous Modifications relating to the imbalance prices and do they apply to P304?
What impact may P304 have on Parties' behaviour and their likely positions following implementation of the changes, and what issues may this cause?
What is the most appropriate Implementation Date for P304?
What changes are needed to BSC documents, systems and processes to support P304 and what are the related costs and lead times?
Are there any Alternative Modifications?
Does P304 better facilitate the Applicable BSC Objectives than the current baseline?

Workgroup membership and attendance

P304 Workgroup Attendance				
Name	Organisation	20 Jun 14	17 Jul 14	21 Aug 14
Members				
David Kemp	ELEXON *(Chair)*	✓	✓	✓
Talia Addy	ELEXON *(Lead Analyst)*	✓	✓	✓
Sally Lewis	National Grid *(Proposer)*	✓	✓	✓
Bill Reed	RWE	✓	✗	✗
Esther Sutton	E.ON	✓	✓	✗
Lisa Waters	Waters Wye Associates	✓	✗	✗
Olaf Islei	APX Commodities	☎	✓	✗
Sarah Owen	British Gas	☎	✓	✓
Tom Edwards	Cornwall Energy	✓	✓	✗
Andrew Colley	SSE	✓	✓	✗
Libby Glazebrook	GDF SUEZ	✓	✗	✗
Alex Bastable	Smartest Energy	✓	✓	✗
Martin Mate	EDF Energy	✓	✓	✓

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P304 Workgroup Attendance				
Name	Organisation	20 Jun 14	17 Jul 14	21 Aug 14
Keith Munday	First Utility	✓	✓	✓
Christine Hough	Haven Power	✓	✗	✗
Attendees				
Oliver Xing	ELEXON *(Design Authority)*	✓	✓	✓
Tina Wirth	ELEXON *(Lead Lawyer)*	✗	✓	✓
Mari Toda	EDF Energy	✓	✗	✓
Jeremy Guard	Energy UK	✓	✓	✓
Peter Bolitho	Waters Wye Associates	✗	✓	✓
Christopher Steele	Energy UK	✓	✗	✓
Cem Suleyman	Drax	✗	✗	✓
Dominic Scott	Ofgem	✓	✗	✓
Dipali Raniga	Ofgem	✓	✓	✓
David Beaumont	Ofgem	✗	✓	✗
James Soundraraju	Ofgem	✗	✗	✓

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Appendix 2: Estimated Progression Effort

The following tables contain the estimated effort in progressing P304:

Assessment Effort	
Participant	Effort (man days)
ELEXON	52
Workgroup members	58
Total	**110**

Consultation Response Effort	
Consultation	No. of responses
Assessment Procedure Consultation	16
Report Phase Consultation	20
Total	**36**

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Appendix 3: Glossary & References

Glossary of defined terms

Acronyms and other defined terms used in this document are listed in the table below.

Glossary of Defined Terms	
Acronym	Definition
BSAA	Balancing Services Adjustment Actions
BSAD	Balancing Services Adjustment Data
CM	Capacity Market
DSBR	Demand Side Balancing Reserve
DSR	Demand Side Response
EBSCR	Electricity Balancing Signification Code Review
EMR	Electricity Market Reform
MVRN	Metered Volume Reallocation Notification Agent
NIV	Net Imbalance Volume
PAR	Price Average Reference
PPA	Power Purchase Agreements
RCRC	Residual Cashflow Reallocation Cashflow
RPAR	Replacement Price Average Reference
RSP	Reverse Scarcity Price
SAA	Settlement Administration Agent
SBP	System Buy Price
SBR	Supplementary Balancing Reserve
SO	System Operator
SSP	System Sell Price
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
4	BSAD Methodology Statement	http://www2.nationalgrid.com/UK/Industry-information/Electricity-transmission-operational-data/Codes-principles-methodologies/Methodologies/
5	Imbalance Pricing information website	http://www.elexon.co.uk/reference/credit-pricing/imbalance-pricing/

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External Links		
Page(s)	Description	URL
5	P194 webpage	http://www.elexon.co.uk/mod-proposal/p194-revised-derivation-of-the-main-energy-imbalance-price/
5	P205 webpage	http://www.elexon.co.uk/mod-proposal/p205-increase-in-par-level-from-100mwh-to-500mwh/
5	EBSCR webpage	https://www.ofgem.gov.uk/electricity/wholesale-market/market-efficiency-review-and-reform/electricity-balancing-significant-code-review
5	Ofgem's Final EBSCR Policy Decision	https://www.ofgem.gov.uk/publications-and-updates/electricity-balancing-significant-code-review-final-policy-decision
7	P305 webpage	http://www.elexon.co.uk/mod-proposal/p305/
8	P304 webpage	http://www.elexon.co.uk/mod-proposal/p304/
8	BSC Section T	http://www.elexon.co.uk/wp-content/uploads/2014/03/Section_T_v23.0.pdf
13	P217 webpage	http://www.elexon.co.uk/mod-proposal/p217-revised-tagging-process-and-calculation-of-cash-out-prices/

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