

Stage 03: Draft Solution to Identify Impacts

P286 'Revised treatment of RCRC for generation BM Units'

CUSC Modification Proposal (CMP) 201 is seeking to remove Balancing Services Use of System (BSUoS) charges/payments from generation BM Units.

The BSC's Residual Cashflow Reallocation Cashflow (RCRC) can be considered as a related and opposite cashflow to BSUoS, and currently all Parties are exposed to both. P286 therefore proposes that generation BM Units should no longer be subject to RCRC charges/payments.

This Impact Assessment for P286 closes:

5pm on Friday 27 July 2012

The Workgroup may not be able to consider late responses.



High Impact:

- Generators
- Settlement Administrator Agent (SAA)



Medium Impact:

- Other BSC Trading Parties



Low Impact:

- ELEXON

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 document is the Draft Solution to Identify Impacts for P286. It summarises the proposed P286 solution requirements and the changes – to the extent that the P286 Workgroup has been able to identify them – that will be required to participants' systems, BSC Central Systems, Code Subsidiary Documents and Configurable Items to implement the proposed P286 solution.

We are issuing this document for impact assessment by ELEXON, BSC Agents (AM/Dev service provider and BPO/Host service provider), the Transmission Company, BSC Parties and Party Agents in order to establish the impacts, costs and lead times of P286 (including any impacts which are not identified in this document).

Please provide your response using the attached response form (Attachment A). The P286 Workgroup will consider your response at its next meeting. At this stage the Workgroup is not seeking your views on the pros or cons of P286, as these will be the subject of a subsequent industry consultation.

You can find more details on the scope of this impact assessment in Section 2.

Further Information

You can find further documentation and information on P286 on the [P286 page](#) of the ELEXON website.



Any questions?

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What is RCRC?

For each Settlement Period, each BSC Trading Party is charged or paid for any imbalance in each of their Energy Accounts. If they are short in an Energy Account (they sold/consumed more energy than they brought/generated), then they are charged for that shortfall at the System Buy Price (SBP). If they are long in an Energy Account (they brought/generated more energy than they sold/consumed), then they are paid for that excess energy at the System Sell Price (SSP).

The total amount of money paid to Trading Parties who are long in a given Settlement Period will not usually equal the total amount of money recovered from Trading Parties who are short in that Settlement Period, due to the dual imbalance cashout prices under the BSC. However, it is a requirement that the net costs arising from Trading Charges is zero. Consequently, the net of these charges must be recovered from or redistributed to all Trading Parties in order to ensure that the total charges in that Settlement Period net to zero. This recovery or redistribution is settled through the Residual Cashflow Reallocation Cashflow (RCRC).

In order to allocate these net charges, a Residual Cashflow Reallocation Proportion (RCRP) is calculated for each Energy Account in each Settlement Period. This proportion is calculated as the Energy Account's Credited Energy Volumes (QCE_{iaj}) as a proportion of the total Credited Energy Volume across the market in that Settlement Period. Each Party's RCRC payment/charge for that Settlement Period will then be the proportion of the residual cashflow equivalent to the sum of the RCRP of both their Energy Accounts.

It should be noted that RCRC represents the net money after the settlement of all Trading Charges – energy imbalances, the Balancing Mechanism payments and the System Operator BM Charge. However, the Balancing Mechanism payments and the System Operator BM Charge will always cancel each other out in a given Settlement Period. As a result, RCRC is generally formed only from the net of the imbalance charges in that Settlement Period.

How do RCRC and BSUoS interact?

The Balancing Services Use of System (BSUoS) charge is used to recover the costs incurred by the System Operator in balancing the system. These costs are generally formed from energy balancing costs, which are incurred through resolving the imbalances created by Parties failing to balance their positions, and system balancing costs, which are incurred through other activities such as managing transmission constraints. Like RCRC, these costs are recovered from or redistributed to Parties in proportion with their Credited Energy Volumes.

Both RCRC and BSUoS charges/payments arise from the need to resolve any imbalances that occur on the system. Consequently, there is a relationship between these two charges.

Consider the scenario where the market is short overall. In order to resolve this net imbalance, the System Operator will have needed to buy extra energy through Offers made by Parties. The cost of buying this extra energy is recovered from Parties through BSUoS. At the same time, the Parties who were short, and thus contributed to the market being short overall, will have been charged for their shortfall at SBP. These payments are redistributed to Parties through RCRC.

What is...

The issue?

A CUSC Modification Proposal is seeking to remove BSUoS charges from generation BM Units. If approved, this would result in a potentially anomalous situation where Parties are liable for RCRC charges/payments but are not liable for BSUoS charges/payments.

The proposed solution?

P286 proposes to exclude generation BM Units from RCRC charges/payments.

P286

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As the main imbalance price (SBP in this case)¹ is largely calculated from the costs incurred by the System Operator in accepting Bids and Offers, the amount of money recovered from Parties as part of the BSUoS charge for addressing imbalance and the amount of money redistributed to Parties through RCRC should be similar. However, they will not be equal as the main imbalance price will not equal the average price of balancing actions (due to the flagging of system balancing actions, the tagging of arbitrage and de minimis trades and Price Average Referencing (PAR) tagging carried out as part of the calculation of the main imbalance price). It should be noted that other System Operator costs are also recovered through BSUoS, and there is a second component to RCRC (see below). Nevertheless, BSUoS and RCRC can be considered related and opposite cashflows, and Parties are usually only exposed to the net of these charges.

If, in the scenario above, the system was long overall, then the reverse situation would exist. The System Operator would accept Bids to resolve the imbalance, and the payments (or costs) from these would be passed back to Parties through BSUoS. Consequently, SSP will be the main price, and the Parties who were long will be paid for their imbalance, the costs of which would be recovered from Parties through RCRC.

There is a second component of RCRC, which arises from offsetting any opposing imbalances that exist, for example when one Party is long and another Party is short by an equal amount. In this case, the System Operator will not have needed to take any action, as the two imbalances cancel each other out, and so there will be no resulting contribution to the BSUoS charge. However, as SBP will always be greater than or equal to SSP, the amount recovered in imbalance charges from the Party who was short will be more than the amount paid to the Party who was long. This means that there will be some additional residual cash left over that is redistributed to Parties through RCRC.

As the distribution of BSUoS and RCRC is based on Credited Energy Volumes, the Party that is liable for BSUoS charges/payments and the Party liable for RCRC charges/payments will often be the same, and they will usually pick up the same proportion of each. An exception will occur though if the relevant BM Unit is the subject of a Metered Volume Reallocation Notification (MVRN). If an MVRN is in place, then it will be the Subsidiary Party that will be charged/paid RCRC against the relevant Credited Energy Volumes. However, it will be the Lead Party that continues to be charged/paid BSUoS against those Credited Energy Volumes.

What problem does P286 identify with the current arrangements?

[CUSC Modification Proposal \(CMP\) 201](#) is seeking to remove BSUoS charges from generation BM Units. This proposal was raised in response to CMP202, which seeks to remove BSUoS charges from Interconnector BM Units. The proposer of CMP202 believes that by also removing BSUoS from generation BM Units, GB generation would be able to compete on an equitable basis with imports over Interconnectors, and thus with other generation in a single European electricity market.

If CMP201 is approved, then a potentially anomalous situation could occur where Parties are liable for RCRC charges/payments but are not liable for BSUoS charges/payments. This could give rise to the potential for windfall gains or losses by those Parties who would no longer be liable for BSUoS, due to the relationship between BSUoS and RCRC.

¹ In each Settlement Period, one of SBP and SSP will be the 'main' price, which is calculated based on the Bids and Offers accepted by National Grid. The other price is the 'reverse' price, and is calculated using data on short-term trades obtained from the power exchanges. If the system is short, SBP is the main price and SSP is the reverse price. The reverse is true if the system is long.

What is the proposed solution?

P286 proposes to also exclude generation BM Units from RCRC. To achieve this, the Credited Energy Volumes from generation BM Units would be excluded from the calculation of each Party's RCRP. This will mean that generation BM Unit volumes would not be included in a Party's RCRP, and the share of the RCRC that would have been allocated to these generation volumes will instead be reallocated across BSC Parties in proportion with their non-generation Credited Energy Volumes.

Under CMP201, a generation BM Unit has been defined as any BM Unit that belongs to a 'delivering' (i.e. exporting) Trading Unit in a given Settlement Period. It is proposed that the same definition is used for P286, to ensure consistency.

2 Summary of Impact Assessment Requirements

Scope of Impact Assessment

The Workgroup is currently only considering one solution for P286, which is the Proposer's preferred solution (see Section 1). The detailed requirements of this solution are listed in Section 3.

The solution will impact the following participants in the BSC arrangements:

- The Lead Parties of BM Units in delivering Trading Units, who would no longer be liable for RCRC charges/payments against those BM Units;
- The Lead Parties of BM Units in offtaking Trading Units, who would be allocated the proportion of RCRC no longer allocated to BM Units in delivering Trading Units;
- ELEXON, who would need to amend the relevant BSC documentation and manage the implementation of P286; and
- BSC Agents (specifically the Settlement Administration Agent (SAA)). We anticipate that the main SAA impacts will be on the BSC Application Management and Development (AM/Dev) service provider, who will need to amend the calculation of RCRP and hence the allocation of RCRC within the SAA systems. We expect the impact on the Business Process Outsourcing/Host (BPO/Host) service provider to be limited to document changes and testing. However, we seek confirmation of this through this impact assessment.

This impact assessment seeks to identify the full impacts of the P286 solution on affected participants, including the following:

- The changes which participants would need to make to systems, documents and/or processes to implement the requirements of P286 (including any not identified in this document);
- The implementation effort/costs which participants would incur in making these changes; and
- The lead times (from the point of Ofgem approving P286) that participants would need to make these changes.

The proposed solution will require changes to the BSC (particularly Section T), and will require changes to SAA System Documentation. For the purposes of this impact assessment, you should assume that the changes to the BSC will be drafted by the Workgroup, consulted on and agreed by the Panel as part of the P286 progression process before the Modification is sent to Ofgem for decision. Any other impacted documents will be amended following Ofgem's approval of P286.

You can find a full list of the likely impacts in Section 4. Please highlight in your response if you believe there are any additional impacts not identified in this Draft Solution.

Interaction with P285

We are also simultaneously issuing related Modification Proposal [P285 'Revised treatment of RCRC for Interconnector BM Units'](#) for industry impact assessment. The changes proposed by P285 are very similar to those proposed by P286, with P285 proposing to exclude Interconnector BM Units from RCRC charges/payments.²

² For more information on the proposed solution to P285, please see the separate P285 Impact Assessment document.

P285 has been raised in response to CMP202, which, subject to approval by Ofgem, will be implemented in September 2012. Consequently, we would seek to implement P285 in the earliest viable BSC Systems Release, with the June 2013 Release being the most feasible at present. P286 has been raised in response to CMP201, which, if approved, is unlikely to be implemented before 2015. Consequently, we would seek to implement P286 with the same Implementation Date as CMP201.

We anticipate that the system changes required to implement the proposed solutions for P285 and P286 to be very similar, with the only difference being the type of BM Unit that each Modification seeks to exclude from RCRC charges/payments. We would therefore anticipate that cost-savings could be achieved if the system changes for P285 and P286 were implemented at the same time. However, as noted above, the likely Implementation Dates for P285 and P286 do not align.

We are therefore seeking confirmation from the AM/Dev service provider as to whether the central system changes required for P286 could be deployed in parallel with those required for P285, but for the P286-specific changes to be left dormant until the P286 Implementation Date. Once the P286 Implementation Date is reached, the P286-specific changes could then be made live. If this is possible then we ask the service providers to include the costs and lead time required for such a combined solution alongside their impact assessments of the separate solutions.

The approach to central system changes should not affect the impacts on industry participants. For the purposes of this impact assessment, industry participants should consider P285 and P286 as separate changes. However, if industry participants could realise cost-savings from the combined solution noted above, we invite them to include this in their response.

3 Detailed Solution Requirements

Requirements for proposed solution

The Workgroup has identified the following solution requirements for P286.

The P286 solution is not intended to impact any reporting flows. For example, the SAA-I014 will still report each Energy Account's RCRP and each Party's RCRC in the same way as currently.

Requirement 1

The QCE_{iaj} of BM Units that are in delivering Trading Units will be excluded from the calculation of each Energy Account's RCRP.

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|-----|---|
| 1.1 | The SAA (AM/Dev service provider) shall amend its systems so that QCE_{iaj} from BM Units that are in delivering Trading Units in the relevant Settlement Period is no longer considered in the calculation of each Energy Account's RCRP. |
| 1.2 | The SAA shall exclude the QCE_{iaj} from BM Units in delivering Trading Units from the calculation of RCRP on a Settlement Date basis effective from the first Settlement Period of the P286 Implementation Date. |
| 1.3 | Lead Parties of BM Units in delivering Trading Units who load their values of RCRP from the SAA-I014 flow into their systems should not need to amend their systems. However, they may wish to amend their advance contracts to take into account their no longer receiving or paying RCRC against these volumes. |



Equation for RCRP

The proposed changes to the equation in Section T4.10.2 of the Code which calculates each Energy Account's RCRP can be found in Appendix 1.

Requirement 2

The RCRC previously allocated to BM Units in delivering Trading Units will be redistributed across all other BM Units.

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| 2.1 | The SAA (AM/Dev service provider) shall amend the calculation of RCRP within its systems to deliver the revised equation given in Appendix 1. This revised equation will allocate RCRP to each Energy Account based on its proportion of QCE_{iaj} from BM Units in offtaking Trading Units as a proportion of all QCE_{iaj} from BM Units in offtaking Trading Units. This will exclude QCE_{iaj} from BM Units that are in delivering Trading Units from the calculation of RCRP entirely. |
| 2.2 | For the avoidance of doubt, the revised equation for the calculation of RCRP will continue to exclude the TC (Non-IEA) Energy Accounts that are held by the Transmission Company, as currently. |
| 2.3 | The SAA shall apply this revised equation on a Settlement Date basis effective from the first Settlement Period of the P286 Implementation Date. |
| 2.4 | Lead Parties of BM Units in offtaking Trading Units who load their values of RCRP from the SAA-I014 flow into their systems should not need to amend their systems. However, they may wish to amend their advance contracts to take into account their receiving or paying increased amounts of RCRC against these volumes. |

4 Likely Impacts

Impact on BSC Systems and process

BSC System/Process	Potential impact
SAA	Changes will be required to the calculation of RCRP and RCRC.

Impact on BSC Parties and Party Agents

The Lead Parties of BM Units that are in delivering Trading Units will no longer be charged or paid RCRC on the Credited Energy Volumes from those BM Units.

The RCRC payments/charges of all other BSC Trading Parties will increase in order to still allocate the total residual cashflow among all applicable Parties.

Impact on Transmission Company

None identified.

Impact on ELEXON

Area of ELEXON	Potential impact
Release Management	ELEXON will manage the implementation project.

Impact on Code

Code Section	Potential impact
Section T	Changes will be required to implement the solution.

Impact on Code Subsidiary Documents

CSD	Potential impact
SAA Service Description	Changes will be required to implement the solution.

Impact on other Configurable Items

Configurable Item	Potential impact
SAA System Documents	Impacts to be confirmed during the Assessment Procedure.

Other Impacts

Item impacted	Potential impact
ELEXON Guidance Documents	Updates will be required to the 'Calculation of RCRC' Guidance Document. Other guidance documents may also be impacted.

Proposed changes to the calculation of RCRP

The following changes are proposed to the current equation for calculating RCRP, which is given in Section T4.10.2 of the Code, as follows:

$$RCRP_{aj} = \{ \cancel{\sum_i^+ (QCE_{iaj})} + \sum_i^- (-QCE_{iaj}) \} / \{ \sum_a \{ \cancel{\sum_i^+ (QCE_{iaj})} + \sum_i^- (-QCE_{iaj}) \} \}$$

where:

~~\sum_i^+ is, for each Energy Account a in Settlement Period j, the sum over all BM Units i that are in delivering Trading Units;~~

\sum_i^- is, for each Energy Account a in Settlement Period j, the sum over all BM Units i that are in offtaking Trading Units; and

\sum_a represents the sum over all Energy Accounts a, other than the TC (Non-IEA) Energy Account held by the Transmission Company.