

## Stage 03: Attachment A: Detailed Assessment for P286

### P286 'Revised treatment of RCRC for generation BM Units'

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 Attachment A to the P286 Assessment Consultation. It provides additional details of the Workgroup's analysis and discussions.

# 1 Workgroup's Detailed Analysis

## Introduction

Modification Proposal P286 will amend the allocation of the Residual Cashflow Reallocation Cashflow (RCRC) so that BM Units that are in delivering Trading Units would no longer be subject to RCRC. This analysis looks at recent data (for 2011), and models the impact that P286 would have on Parties' RCRC charges/payments.

Note that the results of this analysis is not confidential, since the data used for the analysis appears in the SAA-I014 Settlement reports which are available to all BSC Parties and other interested parties (and thus any Party could recreate the results if they wished).

## Redistribution of RCRC under P286

Under P286, Parties with BM Units in delivering Trading Units will see a reduction in their RCRC charges/payments, as they will no longer be subject to RCRC. Parties with BM Units in offtaking Trading Units will see an increase in their RCRC charges/payments, as the monies originally reallocated to the BM Units in delivering Trading Units will have been reallocated to them instead.

The table below contains each BSC Party's net RCRC payments for 2011 under the current baseline and under a P286 baseline, expressed both as the total amount of money and as a £/MWh value. For the avoidance of doubt, based on BSC Section T1.2.3(a)(ii), a positive number indicates a payment to the Party, while a negative number shows a charge against the Party. Each Party's change in RCRC allocation is also displayed, with a positive value indicating a net benefit to the Party (either through increased RCRC payments or decreased RCRC charges), while negative values indicate a net disbenefit (either through decreased RCRC payments or increased RCRC charges).

Please note that the net RCRC in 2011 was negative – i.e. a net charge across all Parties across the entire year. This can be considered abnormal, as RCRC has generally been positive (a net payment) in previous years. Therefore, it is likely that the Parties who would benefit in this analysis may actually disbenefit if RCRC was positive, and vice versa, although the absolute percentage by which their RCRC charges/payments change is likely to be the same in either direction (e.g. if a Party benefits by 50% if RCRC is negative, they are likely to disbenefit by 50% if RCRC was positive).



### Redistribution of RCRC

This analysis examines the data from 2011, and assumes that P286 had been in effect, but that everything else is unchanged.

Please note that the net RCRC was negative in 2011. If RCRC was positive, it is likely that Parties who are shown to benefit here would actually disbenefit, and vice versa. However, the approximate percentage by which their RCRC charges/payments change is likely to be roughly the same in either direction.

This analysis should therefore be taken only as an indication of the possible impact of P286 on individual Parties.

Net impact of P286 on individual BSC Parties (Jan 11 – Dec 11)

Party ID	Net RCRC (current)		Net RCRC (P286)		Change in RCRC	
ACCORD	-£3,182	-£0.13/MWh	-£1,378	-£0.06/MWh	£1,803	57%
AESIQPL	£10,942	£1.04/MWh	-£3	£0.00/MWh	-£10,946	-100%
AIRGEN	-£544	-£0.43/MWh	-£1,088	-£0.87/MWh	-£544	-100%
BAENERGY	-£8	£0.00/MWh	-£17	£0.00/MWh	-£8	-101%
BAGLAN	-£160,787	-£0.05/MWh	-£4,983	£0.00/MWh	£155,804	97%
BARCAP	£8,518	£0.01/MWh	£18,677	£0.03/MWh	£10,159	119%
BARKING	£35,446	£0.01/MWh	-£6,203	£0.00/MWh	-£41,648	-117%
BEDL001	-£35	-£1.33/MWh	-£67	-£2.55/MWh	-£32	-92%

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Net impact of P286 on individual BSC Parties (Jan 11 – Dec 11)						
Party ID	Net RCRC (current)		Net RCRC (P286)		Change in RCRC	
B EGL001	-£10	-£0.17/MWh	£0	£0.00/MWh	£10	97%
B KW	-£19,297	-£0.07/MWh	£6,884	£0.02/MWh	£26,180	136%
B PGAS	-£18,876	-£0.05/MWh	£14,835	£0.04/MWh	£33,711	179%
B RITGAS	-£1,732,118	-£0.03/MWh	-£1,487,260	-£0.02/MWh	£244,858	14%
B RITNED	-£119,818	-£0.06/MWh	£39,066	£0.02/MWh	£158,884	133%
C ECL	-£78,364	-£0.02/MWh	£2,597	£0.00/MWh	£80,961	103%
C ENBARRY	£793	£0.06/MWh	-£1	£0.00/MWh	-£794	-100%
C ENKIL	£31,687	£0.32/MWh	-£44	£0.00/MWh	-£31,731	-100%
C ENKL	£3,867	£0.12/MWh	£9	£0.00/MWh	-£3,857	-100%
C ENLANG	£9,454	£0.03/MWh	-£41,200	-£0.13/MWh	-£50,654	-536%
C ENPB	£18,508	£0.36/MWh	£0	£0.00/MWh	-£18,508	-100%
C ENRPS	£9,243	£0.40/MWh	-£4	£0.00/MWh	-£9,247	-100%
C HENERGY	-£8	£0.00/MWh	-£17	£0.00/MWh	-£8	-101%
C NRP	£6,947	£0.08/MWh	£1,553	£0.02/MWh	-£5,393	-78%
C ORBY	£13,328	£0.24/MWh	-£3	£0.00/MWh	-£13,331	-100%
C OTPOWER	£162,630	£0.30/MWh	-£14,543	-£0.03/MWh	-£177,172	-109%
C R2LTD	-£55	-£0.04/MWh	-£410	-£0.29/MWh	-£355	-642%
C UKL	-£432,100	-£0.06/MWh	-£1,031	£0.00/MWh	£431,069	100%
C WSL	£0	£0.00/MWh	-£1	£0.00/MWh	£0	-128%
D AMHEAD	£20,670	£0.28/MWh	-£3,417	-£0.05/MWh	-£24,087	-117%
D ANSKE	-£12,024	-£0.05/MWh	-£5,624	-£0.02/MWh	£6,401	53%
D B	-£7,846	-£0.03/MWh	-£80	£0.00/MWh	£7,766	99%
D COGEN	£10,185	£0.21/MWh	£0	£0.00/MWh	-£10,185	-100%
D EEM1000	-£270,904	-£0.07/MWh	£49,305	£0.01/MWh	£320,208	118%
D EESIDE	£22,686	£0.14/MWh	-£1,771	-£0.01/MWh	-£24,457	-108%
D ONG001	£85	£0.21/MWh	£170	£0.42/MWh	£85	101%
D ONG003	-£10	-£0.12/MWh	-£20	-£0.24/MWh	-£10	-92%
D ONG005	£0	£0.08/MWh	£0	£0.02/MWh	£0	-71%
D ONG006	£0	£0.08/MWh	£0	£0.02/MWh	£0	-69%
D ONGSVR	£6,813	£0.15/MWh	-£77	£0.00/MWh	-£6,890	-101%
D PDCOLTD	-£1,086,912	-£0.07/MWh	-£1,569,436	-£0.11/MWh	-£482,524	-44%
D RAX	-£1,213,246	-£0.05/MWh	£0	£0.00/MWh	£1,213,246	100%
D UALENER	-£8	£0.00/MWh	-£17	£0.00/MWh	-£9	-101%
E AGLE2	-£15,935	-£0.07/MWh	-£15,860	-£0.07/MWh	£75	0%
E BEA	£317	£0.00/MWh	£602	£0.01/MWh	£286	90%

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Net impact of P286 on individual BSC Parties (Jan 11 – Dec 11)						
Party ID	Net RCRC (current)		Net RCRC (P286)		Change in RCRC	
EDFETRNS	£13,759	£0.00/MWh	£309	£0.00/MWh	-£13,451	-98%
EDFT	£2,372	£0.00/MWh	£63,558	£0.07/MWh	£61,186	2,579%
ENDC	-£1,073	-£0.04/MWh	-£2,141	-£0.08/MWh	-£1,069	-100%
ENDE0773	-£6,636	-£0.07/MWh	-£11,740	-£0.12/MWh	-£5,104	-77%
ENERGIDK	£472	£0.02/MWh	£440	£0.02/MWh	-£32	-7%
ENTERGY	-£4,436	-£0.04/MWh	£4,070	£0.04/MWh	£8,507	192%
EONETRAD	-£310,981	-£0.01/MWh	-£30,863	£0.00/MWh	£280,118	90%
EPCO1	£14	£0.24/MWh	£0	£0.00/MWh	-£14	-101%
EPL001	£410,596	£0.08/MWh	-£29,253	-£0.01/MWh	-£439,848	-107%
ESBIENI	-£8,809	-£0.17/MWh	-£17,623	-£0.33/MWh	-£8,814	-100%
ESBIGT	£9,363	£0.04/MWh	-£5,799	-£0.02/MWh	-£15,163	-162%
FDUN1	-£1	£0.00/MWh	-£3	£0.00/MWh	-£1	-100%
FOUR	-£18,103	-£0.03/MWh	-£36,417	-£0.06/MWh	-£18,314	-101%
FRST01	-£6,568	-£0.02/MWh	-£13,239	-£0.03/MWh	-£6,671	-102%
FSTHYDRO	£70,441	£0.35/MWh	£2,324	£0.01/MWh	-£68,116	-97%
GAZPROM	-£27,327	-£0.02/MWh	-£18,631	-£0.01/MWh	£8,695	32%
GCHP	£0	£0.00/MWh	£0	£0.00/MWh	£0	-100%
GGOWL	-£1	-£0.13/MWh	-£1	-£0.07/MWh	£1	46%
GMTR	-£8	£0.00/MWh	-£16	£0.00/MWh	-£8	-101%
GOFPOWER	£1	£0.00/MWh	£1	£0.00/MWh	£1	110%
GREENERGY	£0	£0.00/MWh	£0	£0.00/MWh	£0	-100%
GRWL	-£9	-£0.19/MWh	-£21	-£0.44/MWh	-£12	-131%
HAVEN	-£76,690	-£0.02/MWh	-£154,422	-£0.04/MWh	-£77,733	-101%
HUMPOWER	£46,715	£0.08/MWh	-£28,858	-£0.05/MWh	-£75,573	-162%
IBERGEN	-£4,934	-£0.07/MWh	-£93	£0.00/MWh	£4,841	98%
ICHP LLP	£29,465	£0.30/MWh	£0	£0.00/MWh	-£29,465	-100%
ICICP	£119,944	£0.07/MWh	-£6,917	£0.00/MWh	-£126,861	-106%
INNOGY01	-£1,046,691	-£0.03/MWh	-£112,118	£0.00/MWh	£934,573	89%
JARON	-£7,005	-£0.12/MWh	-£3,580	-£0.06/MWh	£3,425	49%
JPMSL	-£7,748	-£0.02/MWh	£28,506	£0.08/MWh	£36,254	468%
KGL	£235,638	£0.20/MWh	-£74,834	-£0.06/MWh	-£310,472	-132%
KILBRAUR	-£494	-£0.09/MWh	-£1,447	-£0.27/MWh	-£952	-193%
LENCO	-£19	£0.00/MWh	-£39	£0.00/MWh	-£19	-101%
LINCSWFL	-£2	-£0.08/MWh	-£4	-£0.15/MWh	-£2	-100%
LONDELEC	-£6,037,119	-£0.05/MWh	-£4,202,884	-£0.04/MWh	£1,834,235	30%

Net impact of P286 on individual BSC Parties (Jan 11 – Dec 11)						
Party ID	Net RCRC (current)		Net RCRC (P286)		Change in RCRC	
MA200308	-£2,209	-£0.04/MWh	-£4,435	-£0.08/MWh	-£2,226	-101%
MAGNOX	-£482,296	-£0.07/MWh	-£2,777	£0.00/MWh	£479,519	99%
MAKUK	-£9,883	-£0.10/MWh	-£658	-£0.01/MWh	£9,224	93%
MEDWAY	£14,432	£0.33/MWh	£2	£0.00/MWh	-£14,430	-100%
MILLEN07	-£341	-£0.08/MWh	-£859	-£0.21/MWh	-£517	-152%
MPL	-£7,548	-£0.01/MWh	-£14,361	-£0.03/MWh	-£6,813	-90%
MSCGI	£1,038	£0.04/MWh	£2,963	£0.13/MWh	£1,924	185%
NEAS	-£2,824	-£0.04/MWh	£1,213	£0.02/MWh	£4,037	143%
NEEB	-£8	£0.00/MWh	-£17	£0.00/MWh	-£8	-101%
NGIFA	-£2,606	-£0.06/MWh	-£4,137	-£0.10/MWh	-£1,532	-59%
NITW001	-£8	£0.00/MWh	-£17	£0.00/MWh	-£8	-101%
NPOWER01	-£1,803,478	-£0.04/MWh	-£3,556,150	-£0.07/MWh	-£1,752,672	-97%
ORMONDE	£0	£0.00/MWh	£0	£0.00/MWh	£0	-114%
OVOE	£1,464	£0.01/MWh	£2,907	£0.02/MWh	£1,443	99%
OXFPOWER	-£28,377	-£0.01/MWh	-£57,435	-£0.03/MWh	-£29,058	-102%
PGENERGY	-£28	£0.00/MWh	-£56	£0.00/MWh	-£28	-101%
POWER4	-£57,390	-£0.04/MWh	-£115,196	-£0.09/MWh	-£57,807	-101%
POWERGEN	-£1,129,414	-£0.02/MWh	-£3,217,133	-£0.06/MWh	-£2,087,719	-185%
PURE	-£3	£0.00/MWh	-£7	£0.00/MWh	-£3	-99%
REGPOWER	£5,936	£0.82/MWh	-£2	£0.00/MWh	-£5,938	-100%
RENC	£2,726	£0.02/MWh	£5,441	£0.04/MWh	£2,714	100%
RPCL	-£295,425	-£0.06/MWh	-£422	£0.00/MWh	£295,003	100%
RWE	£0	£0.00/MWh	£0	£0.00/MWh	£0	201%
RWETDL	-£556,780	-£0.05/MWh	-£1,153,504	-£0.10/MWh	-£596,724	-107%
SALTEND	£31,928	£0.26/MWh	£0	£0.00/MWh	-£31,928	-100%
SCIRA	£0	£0.07/MWh	£0	£0.02/MWh	£0	-77%
SCPL	£4,723	£0.07/MWh	-£9,480	-£0.15/MWh	-£14,203	-301%
SEABANK	£65,725	£0.13/MWh	-£28,421	-£0.06/MWh	-£94,146	-143%
SEEBOARD	-£9	£0.00/MWh	-£17	£0.00/MWh	-£9	-101%
SMARTEST	£245,705	£0.09/MWh	£516,570	£0.19/MWh	£270,865	110%
SONILTD	-£1,045	-£0.09/MWh	-£2,107	-£0.19/MWh	-£1,062	-102%
SPAL	-£302,151	-£0.08/MWh	-£3,268	£0.00/MWh	£298,883	99%
SPARKNRG	£1,436	£0.04/MWh	£2,861	£0.08/MWh	£1,425	99%
SPCRE01	£1,029	£0.05/MWh	-£3,672	-£0.19/MWh	-£4,701	-457%
SPGEN01	£256,613	£0.23/MWh	-£37,414	-£0.03/MWh	-£294,027	-115%

Net impact of P286 on individual BSC Parties (Jan 11 – Dec 11)						
Party ID	Net RCRC (current)		Net RCRC (P286)		Change in RCRC	
SPOWER02	-£1,662,420	-£0.04/MWh	-£1,660,332	-£0.04/MWh	£2,088	0%
SPSUP01	-£16	£0.00/MWh	-£32	£0.00/MWh	-£16	-100%
SSE	-£3,893,190	-£0.04/MWh	-£3,852,405	-£0.04/MWh	£40,785	1%
SSEGEN	£120,233	£0.18/MWh	-£32,691	-£0.05/MWh	-£152,924	-127%
STATKRA1	-£18,378	-£0.02/MWh	£54,058	£0.04/MWh	£72,437	394%
STATPOW	£231	£0.02/MWh	£14	£0.00/MWh	-£217	-94%
SUTTBRGE	-£8,083	-£0.03/MWh	£0	£0.00/MWh	£8,083	100%
TEESSIDE	£4,011	£0.13/MWh	-£2,163	-£0.07/MWh	-£6,175	-154%
TFEGP	-£265,316	-£0.05/MWh	-£335,139	-£0.07/MWh	-£69,823	-26%
TOW	-£1	£0.00/MWh	£0	£0.00/MWh	£1	68%
TXURUGE	£40,734	£0.13/MWh	-£1,478	£0.00/MWh	-£42,212	-104%
TXUWBUR	£89,201	£0.24/MWh	-£1,859	-£0.01/MWh	-£91,060	-102%
USKMOUTH	£16,555	£0.14/MWh	-£410	£0.00/MWh	-£16,965	-102%
UTILITA	-£8	£0.00/MWh	-£17	£0.00/MWh	-£8	-101%
VESL	-£20,798	-£0.14/MWh	-£41,626	-£0.28/MWh	-£20,828	-100%
VITOLSA	-£29,783	-£0.11/MWh	£2,397	£0.01/MWh	£32,180	108%
VOLA	£1,624	£0.08/MWh	£3,275	£0.17/MWh	£1,651	102%
VTS	-£75,669	-£0.05/MWh	£44,614	£0.03/MWh	£120,283	159%
WBURTONB	£0	£0.00/MWh	£0	£0.00/MWh	£0	99%
YE	-£8	£0.00/MWh	-£16	£0.00/MWh	-£8	-101%

Based on the data above, the net volume of money that would be reallocated between Parties is around -£7.5m out of the total -£21.2m, or around 35% of the total RCRC monies. It should be noted that this is a net value – many Parties will hold some BM Units that are in delivering Trading Units and some that are in offtaking Trading Units in the same Settlement Periods (for example, a Party with both BM Units belonging to generation sites and Supplier BM Units). In this case, the Party would see both a reduction in RCRC charges/payments against their delivering BM Units and an increase in RCRC charges/payments against their offtaking BM Units, and these will offset each other to give a Party's net change in RCRC charges/payments.

The data can also be broken down to show how much of the RCRC is allocated to BM Units that are in delivering Trading Units. This shows that -£10.6m was allocated to these BM Units in 2011, out of the total -£21.2m, or around 50.15% of the total money. This is the gross amount of money that would be reallocated by P286.<sup>1</sup>

<sup>1</sup> This gross figure includes the money that would be redistributed back to the same Party ID due to them having both BM Units that are in delivering Trading Units and BM Units that are in offtaking Trading Units in the same Settlement Period.

## Impact in individual Settlement Periods

The above analysis shows each Party's net RCRC across a period of one year. However, the impacts on individual Parties will vary in individual Settlement Periods, depending on whether RCRC is positive (i.e. a net payment back to Parties) or negative (i.e. a net charge to Parties).

The RCRC is determined as the net money remaining after all imbalance charges have been paid or recovered in a given Settlement Period. In each Settlement Period, there are two components of RCRC. The first is determined by the Net Imbalance Volume (NIV) in the Settlement Period. If the System was short then this will be a positive amount of money, as the Parties causing the imbalance will have been charged for their shortfall at System Buy Price. Conversely, if the system was long, then the Parties causing the spill will have been paid for their excess energy at System Sell Price (SSP), so this portion of RCRC will be negative.

The second component arises from offsetting imbalance, caused by one Party being long while another is short. As SBP will always be greater than or equal to SSP, the Parties who are short will pay more at SBP than the Parties who are long will be paid at SSP, resulting in residual money. Therefore, this component of RCRC will always be positive.

In most cases, the total RCRC will be positive, resulting in a net payment back to Parties. However, if the system is long, then it is possible that the money paid to resolve the NIV will be larger than the money arising from offsetting imbalances, resulting in negative RCRC, which forms a net charge to all Parties.

In addition, it should be noted that a Party's Residual Cashflow Reallocation Proportion (RCRP) is determined by the net of the Credited Energy Volume in each of their Energy Accounts, as per Section T4.10.2 of the Code. However, if a BM Unit is operating in the opposite direction to its Trading Unit as a whole (i.e. a BM Unit is exporting but the Trading Unit that it belongs to is offtaking, or vice versa), then the Credited Energy Volumes will count negatively to this calculation. Therefore, it is possible for a Party to receive a negative share of RCRC, which means that they would be charged if RCRC is positive, but would be paid if RCRC is negative.

Allocation of RCRC		
	RCRC > 0	RCRC < 0
RCRP > 0	Party Paid RCRC	Party Charged RCRC
RCRP < 0	Party Charged RCRC	Party Paid RCRC



## 2 Combined Impact of P285 & P286

### Redistribution of RCRC under P285 and P286

Modification Proposal [P285 'Revised treatment of RCRC for Interconnector BM Units'](#) will also impact the allocation of RCRC between Parties, with P285 proposing to exclude all Interconnector BM Units from RCRC. The table below repeats the analysis done in Section 1, but assuming that both Modifications were in place.

This scenario could be a more accurate illustration of the impact of P286 as, subject to approval by the Authority, it is highly likely that P285 will already have been implemented when P286 goes live.



### Redistribution of RCRC

This analysis examines the data from 2011, and assumes that both P285 and P286 had been in effect, but that everything else is unchanged.

Please note that the net RCRC was negative in 2011. If RCRC was positive, it is likely that Parties who are shown to benefit here would actually disbenefit, and vice versa. However, the approximate percentage by which their RCRC charges/payments change is likely to be roughly the same in either direction.

This analysis should therefore be taken only as an indication of the possible combined impact of P285 and P286 on individual Parties.

Combined net impact of P285 & P286 on individual BSC Parties (Jan 11 – Dec 11)						
Party ID	Net RCRC (current)		Net RCRC (P285 & P286)		Change in RCRC	
ACCORD	-£3,182	-£0.13/MWh	£0	£0.00/MWh	£3,182	100%
AESIQPL	£10,942	£1.04/MWh	-£4	£0.00/MWh	-£10,946	-100%
AIRGEN	-£544	-£0.43/MWh	-£1,093	-£0.87/MWh	-£549	-101%
BAENERGY	-£8	£0.00/MWh	-£17	£0.00/MWh	-£9	-102%
BAGLAN	-£160,787	-£0.05/MWh	-£5,043	£0.00/MWh	£155,743	97%
BARCAP	£8,518	£0.01/MWh	£0	£0.00/MWh	-£8,518	-100%
BARKING	£35,446	£0.01/MWh	-£6,266	£0.00/MWh	-£41,712	-118%
BEDL001	-£35	-£1.33/MWh	-£68	-£2.58/MWh	-£33	-94%
BEGL001	-£10	-£0.17/MWh	£0	£0.00/MWh	£10	98%
BKW	-£19,297	-£0.07/MWh	£0	£0.00/MWh	£19,297	100%
BPGAS	-£18,876	-£0.05/MWh	£0	£0.00/MWh	£18,876	100%
BRITGAS	-£1,732,118	-£0.03/MWh	-£1,475,093	-£0.02/MWh	£257,025	15%
BRITNED	-£119,818	-£0.06/MWh	£0	£0.00/MWh	£119,818	100%
CECL	-£78,364	-£0.02/MWh	£2,628	£0.00/MWh	£80,992	103%
CENBARRY	£793	£0.06/MWh	-£1	£0.00/MWh	-£794	-100%
CENKIL	£31,687	£0.32/MWh	-£45	£0.00/MWh	-£31,732	-100%
CENKL	£3,867	£0.12/MWh	£10	£0.00/MWh	-£3,857	-100%
CENLANG	£9,454	£0.03/MWh	-£41,561	-£0.13/MWh	-£51,015	-540%
CENPB	£18,508	£0.36/MWh	£0	£0.00/MWh	-£18,508	-100%
CENRPS	£9,243	£0.40/MWh	-£4	£0.00/MWh	-£9,247	-100%
CHENERGY	-£8	£0.00/MWh	-£17	£0.00/MWh	-£9	-102%
CNRP	£6,947	£0.08/MWh	£0	£0.00/MWh	-£6,947	-100%
CORBY	£13,328	£0.24/MWh	-£3	£0.00/MWh	-£13,331	-100%
COTPOWER	£162,630	£0.30/MWh	-£14,618	-£0.03/MWh	-£177,248	-109%
CR2LTD	-£55	-£0.04/MWh	-£410	-£0.29/MWh	-£355	-642%

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Combined net impact of P285 & P286 on individual BSC Parties (Jan 11 – Dec 11)						
Party ID	Net RCRC (current)		Net RCRC (P285 & P286)		Change in RCRC	
CUKL	-£432,100	-£0.06/MWh	-£1,036	£0.00/MWh	£431,065	100%
CWSL	£0	£0.00/MWh	-£1	£0.00/MWh	£0	-131%
DAMHEAD	£20,670	£0.28/MWh	-£3,433	-£0.05/MWh	-£24,103	-117%
DANSKE	-£12,024	-£0.05/MWh	£0	£0.00/MWh	£12,024	100%
DB	-£7,846	-£0.03/MWh	£0	£0.00/MWh	£7,846	100%
DCOGEN	£10,185	£0.21/MWh	£0	£0.00/MWh	-£10,185	-100%
DEEM1000	-£270,904	-£0.07/MWh	£49,869	£0.01/MWh	£320,773	118%
DEESIDE	£22,686	£0.14/MWh	-£1,775	-£0.01/MWh	-£24,461	-108%
DONG001	£85	£0.21/MWh	£172	£0.42/MWh	£87	103%
DONG003	-£10	-£0.12/MWh	-£20	-£0.24/MWh	-£10	-93%
DONG005	£0	£0.08/MWh	£0	£0.02/MWh	£0	-71%
DONG006	£0	£0.08/MWh	£0	£0.02/MWh	£0	-69%
DONGSVR	£6,813	£0.15/MWh	-£78	£0.00/MWh	-£6,891	-101%
DPDCOLTD	-£1,086,912	-£0.07/MWh	-£1,586,133	-£0.11/MWh	-£499,222	-46%
DRAX	-£1,213,246	-£0.05/MWh	£0	£0.00/MWh	£1,213,246	100%
DUALENER	-£8	£0.00/MWh	-£17	£0.00/MWh	-£9	-102%
EAGLE2	-£15,935	-£0.07/MWh	-£15,997	-£0.07/MWh	-£62	0%
EBEA	£317	£0.00/MWh	£695	£0.01/MWh	£378	119%
EDFETRNS	£13,759	£0.00/MWh	£311	£0.00/MWh	-£13,448	-98%
EDFT	£2,372	£0.00/MWh	£0	£0.00/MWh	-£2,372	-100%
ENDC	-£1,073	-£0.04/MWh	-£2,183	-£0.09/MWh	-£1,110	-103%
ENDE0773	-£6,636	-£0.07/MWh	£0	£0.00/MWh	£6,636	100%
ENERGIDK	£472	£0.02/MWh	£0	£0.00/MWh	-£472	-100%
ENTERGY	-£4,436	-£0.04/MWh	£0	£0.00/MWh	£4,436	100%
EONETRAD	-£310,981	-£0.01/MWh	-£31,369	£0.00/MWh	£279,612	90%
EPCO1	£14	£0.24/MWh	£0	£0.00/MWh	-£14	-101%
EPL001	£410,596	£0.08/MWh	-£29,578	-£0.01/MWh	-£440,174	-107%
ESBIENI	-£8,809	-£0.17/MWh	£0	£0.00/MWh	£8,809	100%
ESBIGT	£9,363	£0.04/MWh	£3	£0.00/MWh	-£9,360	-100%
FDUN1	-£1	£0.00/MWh	-£3	£0.00/MWh	-£1	-102%
FOUR	-£18,103	-£0.03/MWh	-£36,218	-£0.05/MWh	-£18,115	-100%
FRST01	-£6,568	-£0.02/MWh	-£13,148	-£0.03/MWh	-£6,580	-100%
FSTHYDRO	£70,441	£0.35/MWh	£2,299	£0.01/MWh	-£68,142	-97%
GAZPROM	-£27,327	-£0.02/MWh	-£31,822	-£0.02/MWh	-£4,495	-16%
GCHP	£0	£0.00/MWh	£0	£0.00/MWh	£0	-100%

Combined net impact of P285 & P286 on individual BSC Parties (Jan 11 – Dec 11)						
Party ID	Net RCRC (current)		Net RCRC (P285 & P286)		Change in RCRC	
GGOWL	-£1	-£0.13/MWh	-£1	-£0.07/MWh	£1	45%
GMTR	-£8	£0.00/MWh	-£16	£0.00/MWh	-£8	-102%
GOFPOWER	£1	£0.00/MWh	£1	£0.00/MWh	£1	112%
GREENERGY	£0	£0.00/MWh	£0	£0.00/MWh	£0	-97%
GRWL	-£9	-£0.19/MWh	-£21	-£0.44/MWh	-£12	-131%
HAVEN	-£76,690	-£0.02/MWh	-£152,552	-£0.04/MWh	-£75,862	-99%
HUMPOWER	£46,715	£0.08/MWh	-£29,016	-£0.05/MWh	-£75,731	-162%
IBERGEN	-£4,934	-£0.07/MWh	£0	£0.00/MWh	£4,934	100%
ICHP LLP	£29,465	£0.30/MWh	£0	£0.00/MWh	-£29,465	-100%
ICICP	£119,944	£0.07/MWh	-£7,056	£0.00/MWh	-£127,001	-106%
INNOGY01	-£1,046,691	-£0.03/MWh	-£52,338	£0.00/MWh	£994,353	95%
JARON	-£7,005	-£0.12/MWh	£0	£0.00/MWh	£7,005	100%
JPMSL	-£7,748	-£0.02/MWh	£0	£0.00/MWh	£7,748	100%
KGL	£235,638	£0.20/MWh	-£74,921	-£0.06/MWh	-£310,558	-132%
KILBRAUR	-£494	-£0.09/MWh	-£1,448	-£0.27/MWh	-£954	-193%
LENCO	-£19	£0.00/MWh	-£39	£0.00/MWh	-£20	-102%
LINCSWFL	-£2	-£0.08/MWh	-£4	-£0.15/MWh	-£2	-100%
LONDELEC	-£6,037,119	-£0.05/MWh	-£4,215,346	-£0.04/MWh	£1,821,773	30%
MA200308	-£2,209	-£0.04/MWh	-£4,450	-£0.08/MWh	-£2,241	-101%
MAGNOX	-£482,296	-£0.07/MWh	-£2,835	£0.00/MWh	£479,462	99%
MAKUK	-£9,883	-£0.10/MWh	£0	£0.00/MWh	£9,883	100%
MEDWAY	£14,432	£0.33/MWh	£2	£0.00/MWh	-£14,430	-100%
MILLEN07	-£341	-£0.08/MWh	-£860	-£0.21/MWh	-£519	-152%
MPL	-£7,548	-£0.01/MWh	-£14,405	-£0.03/MWh	-£6,857	-91%
MSCGI	£1,038	£0.04/MWh	£0	£0.00/MWh	-£1,038	-100%
NEAS	-£2,824	-£0.04/MWh	£0	£0.00/MWh	£2,824	100%
NEEB	-£8	£0.00/MWh	-£17	£0.00/MWh	-£9	-102%
NGIFA	-£2,606	-£0.06/MWh	£0	£0.00/MWh	£2,606	100%
NITWO01	-£8	£0.00/MWh	-£17	£0.00/MWh	-£9	-102%
NPOWER01	-£1,803,478	-£0.04/MWh	-£3,562,262	-£0.07/MWh	-£1,758,784	-98%
ORMONDE	£0	£0.00/MWh	£0	£0.00/MWh	£0	-111%
OVOE	£1,464	£0.01/MWh	£3,065	£0.02/MWh	£1,601	109%
OXFPOWER	-£28,377	-£0.01/MWh	-£56,027	-£0.02/MWh	-£27,650	-97%
PGENERGY	-£28	£0.00/MWh	-£56	£0.00/MWh	-£28	-102%
POWER4	-£57,390	-£0.04/MWh	-£115,607	-£0.09/MWh	-£58,217	-101%

Combined net impact of P285 & P286 on individual BSC Parties (Jan 11 – Dec 11)						
Party ID	Net RCRC (current)		Net RCRC (P285 & P286)		Change in RCRC	
POWERGEN	-£1,129,414	-£0.02/MWh	-£3,251,150	-£0.06/MWh	-£2,121,737	-188%
PURE	-£3	£0.00/MWh	-£7	£0.00/MWh	-£3	-99%
REGPOWER	£5,936	£0.82/MWh	-£2	£0.00/MWh	-£5,938	-100%
RENC	£2,726	£0.02/MWh	£5,639	£0.04/MWh	£2,912	107%
RPCL	-£295,425	-£0.06/MWh	-£424	£0.00/MWh	£295,001	100%
RWE	£0	£0.00/MWh	£0	£0.00/MWh	£0	100%
RWETDL	-£556,780	-£0.05/MWh	-£1,158,195	-£0.10/MWh	-£601,415	-108%
SALTEND	£31,928	£0.26/MWh	£0	£0.00/MWh	-£31,928	-100%
SCIRA	£0	£0.07/MWh	£0	£0.02/MWh	£0	-76%
SCPL	£4,723	£0.07/MWh	-£9,548	-£0.15/MWh	-£14,271	-302%
SEABANK	£65,725	£0.13/MWh	-£28,467	-£0.06/MWh	-£94,193	-143%
SEEBBOARD	-£9	£0.00/MWh	-£17	£0.00/MWh	-£9	-102%
SMARTEST	£245,705	£0.09/MWh	£521,763	£0.19/MWh	£276,058	112%
SONILTD	-£1,045	-£0.09/MWh	£0	£0.00/MWh	£1,045	100%
SPAL	-£302,151	-£0.08/MWh	-£3,295	£0.00/MWh	£298,857	99%
SPARKNRG	£1,436	£0.04/MWh	£2,873	£0.08/MWh	£1,437	100%
SPCRE01	£1,029	£0.05/MWh	-£3,718	-£0.20/MWh	-£4,747	-461%
SPGEN01	£256,613	£0.23/MWh	-£37,814	-£0.03/MWh	-£294,427	-115%
SPOWER02	-£1,662,420	-£0.04/MWh	-£1,665,445	-£0.04/MWh	-£3,025	0%
SPSUP01	-£16	£0.00/MWh	-£32	£0.00/MWh	-£16	-102%
SSE	-£3,893,190	-£0.04/MWh	-£3,666,776	-£0.04/MWh	£226,414	6%
SSEGEN	£120,233	£0.18/MWh	-£33,228	-£0.05/MWh	-£153,461	-128%
STATKRA1	-£18,378	-£0.02/MWh	£45,202	£0.04/MWh	£63,580	346%
STATPOW	£231	£0.02/MWh	£15	£0.00/MWh	-£216	-93%
SUTTBGRGE	-£8,083	-£0.03/MWh	£0	£0.00/MWh	£8,083	100%
TEESSIDE	£4,011	£0.13/MWh	-£2,195	-£0.07/MWh	-£6,206	-155%
TFEGP	-£265,316	-£0.05/MWh	-£363,423	-£0.07/MWh	-£98,108	-37%
TOW	-£1	£0.00/MWh	£0	£0.00/MWh	£1	67%
TXURUGE	£40,734	£0.13/MWh	-£1,487	£0.00/MWh	-£42,222	-104%
TXUWBUR	£89,201	£0.24/MWh	-£1,863	-£0.01/MWh	-£91,064	-102%
USKMOUTH	£16,555	£0.14/MWh	-£415	£0.00/MWh	-£16,970	-103%
UTILITA	-£8	£0.00/MWh	-£17	£0.00/MWh	-£8	-102%
VESL	-£20,798	-£0.14/MWh	£0	£0.00/MWh	£20,798	100%
VITOLSA	-£29,783	-£0.11/MWh	£0	£0.00/MWh	£29,783	100%
VOLA	£1,624	£0.08/MWh	£3,344	£0.17/MWh	£1,719	106%

Combined net impact of P285 & P286 on individual BSC Parties (Jan 11 – Dec 11)						
Party ID	Net RCRC (current)		Net RCRC (P285 & P286)		Change in RCRC	
VTs	-£75,669	-£0.05/MWh	£0	£0.00/MWh	£75,669	100%
WBURTONB	£0	£0.00/MWh	£0	£0.00/MWh	£0	112%
YE	-£8	£0.00/MWh	-£16	£0.00/MWh	-£8	-103%

Based on the data above, the net volume of money that would be reallocated between Parties is around -£7.6m out of the total -£21.2m, or around 36% of the total RCRC monies. It should be noted that this is a net value – many Parties will hold some BM Units that are in delivering Trading Units and some that are in offtaking Trading Units in the same Settlement Periods (for example, a Party with both BM Units belonging to generation sites and Supplier BM Units) or some Interconnector BM Units and some non-Interconnector BM Units. In this case, the Party would see both a reduction in RCRC charges/payments against their delivering/Interconnector BM Units and an increase in RCRC charges/payments against their offtaking/non-Interconnector BM Units, and these will offset each other to give a Party's net change in RCRC charges/payments.



### Worked Example

This example is intended as a heavily-simplified example, designed only to give a basic high-level illustration of the relevant scenarios around P286.

## Worked example of the allocation of BSUoS and RCRC

This section provides a worked example designed to demonstrate the allocation of BSUoS and RCRC under the current baseline, and illustrate the revisions that would be made if CMP201 was approved.

Please note that this is a simplistic example, designed only to give a basic high-level illustration of the relevant scenarios. Similar examples have also been produced by the CMP201 Workgroup, and you can find these in the CMP201 Workgroup's report to the CUSC Panel.<sup>2</sup>

### Current arrangements

Consider the scenario where, in a given Settlement Period, a Supplier is short by 1,000MWh, while a generator is long by 200MWh.

In order to resolve this imbalance, the System Operator (SO) would purchase 800MWh through the Balancing Mechanism. In this case, it elects to accept an Offer from another generator to generate the extra 800MWh at £80/MWh, meaning that the SO would pay £64k (800MWh \* £80/MWh) to resolve this imbalance.

This price of £80/MWh would be used under the BSC to set the main imbalance price. As the market is short overall, it will be System Buy Price (SBP) that is the main price, and so SBP will be £80/MWh in this Settlement Period. The market price is £50/MWh in this Settlement Period, and is used to set the reverse price, which will be System Sell Price (SSP) in this scenario, so SSP will be £50/MWh.

Under the BSC, the Supplier who was short will pay £80k (1,000MWh \* £80/MWh) in imbalance charges for their shortfall. The generator who was long will receive £10k (200MWh \* £50/MWh) in payment for their excess energy. This will leave a residual cashflow of £70k.

In this Settlement Period, the total demand is 40GWh, meaning that the total metered energy supplied and delivered is 80GWh. This means that BSUoS and RCRC are as follows:

**BSUoS:** £64k / 80GWh = **£0.8/MWh**

*(based on the total money paid by the SO being recovered equally from all Parties in proportion with their Metered Volumes)*

**RCRC:** £70k / 80GWh = **£0.875/MWh**

*(based on the total residual money being reallocated to all Parties equally in proportion with their Metered Volumes)*

It should be noted that RCRC and BSUoS do not completely net off, due to the nature of the dual cash-out prices. However, if there had been a single imbalance price (i.e. SBP = SSP) then RCRC would equal £0.8/MWh in this scenario.

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<sup>2</sup> <http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/amendments/currentamendmentproposals/>

## Post-CMP201 arrangements

Now assume that CMP201 has been implemented, and the generators (for the sake of simplicity) are no longer liable for BSUoS. By working through the above example a second time, RCRC will remain unchanged at **£0.875/MWh**, which would be distributed across all BSC Parties.

However, as generators are not liable for BSUoS, their Metered Volumes would be excluded from the calculation of BSUoS, and so the calculation of the BSUoS charge becomes:

**BSUoS:**             $\text{£64k} / 40\text{GWh} = \text{£1.6/MWh}$

*(note only 40GWh, as the generators' Metered Volumes have been excluded from the calculation)*

In this case, Suppliers would be charged £1.6/MWh in BSUoS, while generators would not pay anything. However, all Parties would receive £0.875/MWh in RCRC payments.

Note that if P286 was also implemented, generators would no longer receive RCRC, and Suppliers would subsequently receive £1.75/MWh in RCRC.

### Proposed changes to the calculation of RCRP for P286

The following changes are proposed by P286 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.

### Combined proposed changes to the calculation of RCRP for P285 and P286

If both P285 and P286 are approved, then the equation for calculating RCRP in Section T4.10.2 of the Code would be amended 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 other than Interconnector BM Units 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 other than Interconnector BM Units 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.

Note that, if both P285 and P286 are approved, P285 is likely to be implemented at an earlier date than P286, and so the clause "other than Interconnector BM Units" would be inserted into the  $\sum_i^+$  summation on the P285 Implementation Date, before being removed along with the whole  $\sum_i^+$  summation on the P286 Implementation Date.





### Operational requirements

This section summarises the operational 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.

### Detailed Solution Requirements

For the full detailed solution requirements, please refer to the P286 Draft Solution to Identify Impacts Document which was issued for industry impact assessment and which is available on the [P286](#) page of the ELEXON website.

#### 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.**

The SAA shall amend its systems to exclude the  $QCE_{iaj}$  of BM Units that are in delivering Trading Units from the calculation of each Energy Account's RCRP, effective from the P286 Implementation Date.

Lead Parties of BM Units in delivering Trading Units who load values of RCRP from the SAA-I014 flow should not need to amend their systems, but may wish to amend their advance contracts to account these BM Units no longer being liable for RCRC.

#### Requirement 2

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

The SAA shall amend its systems to calculate RCRP as per the equation in Section 4, which is based on each Energy Account's  $QCE_{iaj}$  from BM Units in offtaking BM Units as a proportion of all  $QCE_{iaj}$  from BM Units in offtaking BM Units. This shall be effective from the P286 Implementation Date.

Lead Parties of BM Units in offtaking Trading Units who load values of RCRP from the SAA-I014 flow should not need to amend their systems, but may wish to amend their advance contracts to account these BM Units being liable for increased amounts of RCRC.

### Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P286 Terms of Reference

What changes are needed to BSC documents, systems and processes to support P286 (including any impacts on Parties' systems), and what are the related costs and lead times?

Should the BSC still allocate RCRC charges/payments to generation BM Units?

What is the appropriate Implementation Date for P286? Should it be aligned with the Implementation Date for CMP201?

What would be the impact on the distribution of RCRC between Parties if P286 was implemented?

What are the benefits to the Applicable BSC Objectives?

### Assessment Procedure timetable

P286 Assessment Timetable

Activity	Date
Panel submits P286 to Assessment Procedure	14 Jun 12
Workgroup Meeting 1	21 Jun 12
15WD Impact Assessment undertaken	06 Jul 12 – 27 Jul 12
Workgroup Meeting 2	08 Aug 12
15WD Industry Consultation undertaken	23 Aug 12 – 14 Sep 12
Workgroup Meeting 3	20 Sep 12
Panel considers Workgroup's Assessment Report	11 Oct 12

P286 has been progressed in parallel with P285 'Revised treatment of RCRC for Interconnector BM Units'.

## Workgroup membership and attendance

P286 Workgroup attendance			
Name	Organisation	Meeting 1 21/06/12	Meeting 2 08/08/12
Members			
Dean Riddell	ELEXON ( <i>Chair</i> )	✓	✓
David Kemp	ELEXON ( <i>Lead Analyst</i> )	✓	✓
Iain Pielage	National Grid Electricity Transmission plc ( <i>Proposer</i> )	✓	✓
Esther Sutton	E.ON	✓	✓
Cem Suleyman	Drax	✓	✓
Man Kwong Liu	IBM (ScottishPower Unit)	✓	✓
Bill Reed	RWE Supply & Trading	✗	✓
Sarah Owen	Centrica	✓	✓
Martin Mate	EDF	✗	✗
Attendees			
Zaahir Ghanty	ELEXON ( <i>Design Authority</i> )	✓	✓
Nick Brown	ELEXON ( <i>Legal</i> )	✗	✗
Emma Burns	Ofgem	✓	✓