January 2004

Modification Proposal P140 Second Consultation Document

Modification Proposal P140 'Revised Credit Cover methodology for Interconnector BM Units'

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1 INTRODUCTION

This document provides background information on Modification Proposal 140 ("P140"), 'Revised Credit Cover methodology for Interconnector BM Units', and a consultation questionnaire. The information provided is as follows:

- History of the Proposal;
- Description of the Proposal;
- Initial Assessment by the SSMG and analysis of benefits;
- Initial Assessment by the Panel;
- Impact on accuracy of the calculation; and
- Implementation costs

Responses to the consultation proforma should be sent to modifications@elexon.co.uk by 12.00 on Tuesday 20 January 2004.

Please note that this is the second consultation relating to Modification Proposal P140. This document consciously avoids providing excessive detail on previous consideration of P140 in order to avoid unnecessary repetition in content. The 'Related Documents' detailed in Annex 1 of this document provide full background on consideration of P140 if the reader requires this detail.

2 HISTORY OF THE PROPOSAL

P140 was raised by EdF Trading Ltd on 21 August 2003 (reference 1). ELEXON presented an Initial Written Assessment (reference 2) to the Balancing & Settlement Code Panel ('the Panel') at its meeting on 11 September 2003. The Panel agreed with the recommendation in the IWA that P140 should be submitted to a three month Assessment Procedure to be carried out by the Settlement Standing Modification Group (SSMG).

The Assessment Report was presented at the Panel meeting on 11 December 2003 where the Panel requested that the Assessment Procedure be extended for a further two months in order that a second consultation take place. The rationale for this is explained in Section 5 of this document.

3 DESCRIPTION OF THE PROPOSAL

Under the BSC trading arrangements, payments to and from Parties in respect of Trading Charges arising on any particular Settlement Day are made, on average, twenty nine calendar days later. Thus, at any given time, Parties may have debts (or be due payments) in respect of Trading Charges[1] incurred, on average, over the previous twenty nine days. The purpose of Credit Cover is to ensure that, should a Party default on payments, sufficient collateral is available to pay these debts.

After Gate Closure for each Settlement Period the Energy Contract Volume Aggregation Agent (ECVAA) calculates the Credit Cover Percentage (CCP) for each Party. CCP reflects their Energy Indebtedness, which is an approximation of their expected Trading Charges

[1] Trading Charges are defined in Section T1.2 of the Code, and comprise: Daily Party BM Unit Cashflow; Daily Party Non-Delivery Charge; Daily Party Energy Imbalance Cashflow; Daily Party Information Imbalance Charge; and Daily Party Residual Settlement Cashflow.

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for the last 29 days, divided by the amount of Credit Cover they have lodged. Should this CCP exceed defined thresholds then the Credit Default provisions specified in Section M3 of the Balancing and Settlement Code ('the Code') will be triggered, in order to prevent the market from being exposed to unsecured liabilities.

The calculation of Energy Indebtedness is itself a composite of two sub-calculations – Actual Energy Indebtedness (AEI) and Credit Assessment Energy Indebtedness (CEI), with the latter used for that portion of the 29 day period for which Interim Information Settlement Run data is not available – normally approximately 8 days.

P140 proposes that the Credit Assessment Energy Indebtedness (CEI) calculation be modified such that Credit Assessment Credited Energy Volume (CAQCE) for Interconnector BM Units be based upon Period FPN (FPN_{ij}) rather than Credit Assessment Load Factor (CALF) and Generation and Demand Capacities (GC/DC).

4 INITIAL ASSESSMENT BY THE SSMG & ANALYSIS OF BENEFITS

The SSMG has reached a number of provisional findings in terms of the benefits of P140.

The SSMG agreed that Interconnector Users are disproportionately affected by inaccuracies in the CEI calculation due to a greater likelihood that historical performance measures will not accurately predict short term current performance for this BM Unit type, given the variable availability of capacity in auctions, price differentials between the Interconnected Systems and the lack of linkage between GC/DC declarations and physical assets for this BM Unit type.

The SSMG further agreed that FPN_{ij} is an accurate proxy for QM_{ij} for Interconnector Users due to its use as the basis for Deemed Metered Volumes for this BM Unit type, pursuant to Schedule 5 of the Interconnexion France-Angleterre User Guide (reference 8) and Appendix VII of the Access & Allocation Code for the Scotland-England Interconnector (reference 9).

The SSMG did not formally consider whether FPN_{ij} would provide a better proxy for QM_{ij} for other BM Unit types as this was not within the remit of P140.

The SSMG considered that P140 may facilitate more effective competition in the market upon several grounds:

Firstly, it would reduce the risk to the market of Interconnector Users accumulating unsecured liabilities in respect of Trading Charges by making the CEI calculation a closer approximation of their accruing Trading Charges. The current arrangements could, under certain circumstances, lead to circumstances where the CEI estimation of Trading Charges results in significant underestimation. This raises a potential window of risk whereby an Interconnector User could default on making payments of Trading Charges whilst having insufficient Credit Cover lodged. In the event that a Party defaulting on payments runs out of Credit Cover, the FAA would recover the outstanding amounts from all other Trading Parties on the basis of their Default Shares, pursuant to Section N9 of the BSC.

Secondly, it would reduce barriers to entry. Trading Parties who wish to avoid Credit Default need to lodge sufficient Credit Cover in order that their Credit Cover Percentage, which expresses their Energy Indebtedness divided by their Credit Cover, does not breach the thresholds specified in Section M of the BSC. The current calculation can create acute short term spikes in positive CEI that are unrelated to actual Trading Charges. This may be

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resulting in an over provision of Credit Cover for this BM Unit type that may disincentivise new market entrants. This also creates a distortion in that Interconnectors may be putting up more credit than others for the same level of indebtedness.

Thirdly, it provides for better accuracy in the calculation of EI for Interconnector BM Units. The current calculation can result in significant peaks and troughs in positive and negative CEI that are not representative of the likely actual Trading Charges of the Interconnector User. This may lead to an unnecessarily onerous requirement for EI monitoring, with associated costs, for Interconnector Users when compared to Lead Parties of other BM Unit types.

For the above reasons, the SSMG has initially concluded that P140 would better facilitate Applicable BSC Objective (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'.

In addition, the Modification Group considered that the decrease in BSCCo resourcing required for handling Interconnector CALF issues, such as seasonal calculation and appeals processes, may result in some better facilitation of Applicable BSC Objective (d) – 'Promoting efficiency in the implementation and administration of the balancing and settlement arrangements'.

5 INITIAL ASSESSMENT BY THE PANEL

The Panel considered the Assessment Report for P140 at its meeting on 11 December 2003. The Panel requested that the SSMG conduct further analysis on the cost-benefit of Modification Proposal P140 in order to further quantify the risks of the market being exposed to unsecured liabilities, during periods of under-estimation of Energy Indebtedness, and of the costs of over-provision of Credit Cover, during periods of over-estimation of Energy Indebtedness.

This second consultation sets out further detail on the extent of inaccuracies within the current and proposed calculation. These are presented in both MWh and financial terms. Parties are invited to provide indicative costs of lodging Credit Cover in confidence, in order that the costs of over-provision may be estimated, and also to re-assess the extent to which they believe Parties may be currently exposed to risk due to the perceived defect, in the context of whether P140 would better facilitate the Applicable BSC Objectives.

6 IMPACT ON ACCURACY OF THE CALCULATION

At SSMG's request, ELEXON has analysed the accuracy of both the current and the proposed methodology in predicting the BM Unit Metered Volumes (QM_{ij}) of Interconnector BM Units.

The SSMG considered that a key determinant of whether it would be more appropriate to utilise FPN_{ij} rather than CALF and GC/DC must be the extent to which it more accurately estimates BM Unit Metered Volumes. The Assessment Report for P140 (Reference 10) contains some analysis (in section 1.3.7) in respect of the accuracy of the current and the proposed methodology, and in summary:

- Excluding IEA BM Units, SSMG analysis indicated that the average per Settlement Period discrepancy between FPN_{ij} and QM_{ij} since NETA Go-live was 84.3 MWh. The

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average per Settlement Period discrepancy between CAQCE (based upon CALF and GC/DC) and QM_{ij} across the same period was 2,857.4 MWh. The use of CALF and GC/DC has therefore been approximately 34 times less accurate than use of FPN_{ij} would have been over this period; and

- Including IEA BM Units gives a modified average per Settlement Period discrepancy between FPN_{ij} and QM_{ij} since NETA Go-live of 98.5 MWh. The average per Settlement Period discrepancy between CAQCE (based upon CALF and GC/DC) and QM_{ij} across the same period was 2,871.6 MWh. The use of CALF and GC/DC has therefore been approximately 29 times less accurate than use of FPN_{ij} would have been over this period when IEA BM Units are included.

For the additional analysis requested by the Panel for this consultation, ELEXON used centrally held records of Settlement Data to conduct this analysis for the period since NETA Go-live in March 2001. For each Interconnector BM Unit, for each Settlement Period, on each Settlement Date, the discrepancy between FPN_{ij} and QM_{ij}, and between CAQCE (currently based upon CALF and GC/DC) and QM_{ij} was calculated[2]. This data was then aggregated to provide a daily indication of the absolute discrepancy between both methods of predicting QM_{ij}.

This analysis has been conducted in both MWh and financial terms, with MWh figures converted to £ terms through multiplication by the VAT inclusive Credit Assessment Price (CAP) prevalent at that time. The CAP effective was £29.38 including VAT from 27 March 2001 to 9 October 2003 inclusive, and £21.15 including VAT from 10 October 2003 to the present day.

Credit Assessment Energy Indebtedness most typically comprises 8/29ths of the 29 day window over which Energy Indebtedness is assessed. The analysis was therefore focused upon rolling eight day averages.

Headline figures from this analysis are shown in Table 1. In interpreting this table, it should be remembered that the CEI calculation treats a Party as though they were short (i.e. owing money) during those periods where positive CEI is calculated and as though they were long (i.e. owed money) during those periods where negative CEI is calculated.

The extent of the estimated imbalance is converted from a MWh value to a £ value using the CAP. A Party's overall Energy Indebtedness is comprised from a composite of their CEI and Actual Energy Indebtedness (AEI), with the provisions in Section M of the Code providing that the Party's Credit Cover Percentage, which is an expression of their EI divided by the amount of Credit Cover they have lodged, cannot exceed defined limits without sanction. This mechanism is intended to protect the market from being exposed to unsecured liabilities, but it is recognised that the CEI calculation is only a proxy for real Trading Charges so may not provide a representative estimation of these all the time.

[2] It should be noted that CEI is generated as CEI = -(CAQCE – QABC), with QABC constituting the Account Bilateral Contract Volume (ie net Volume Notification position). QABC is calculated on a Party Id basis, rather than a BM Unit Id basis. QMij has therefore been used as a QABC proxy, based upon an assumption that each Party will, on average, seek to adopt a contract position in line with their expected metered volumes.

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	Current methodology		Proposed methodology	
	In MWh (estimated imbalance)	In £ (estimated Trading Charges)	In MWh (estimated imbalance)	In £ (estimated Trading Charges)
Maximum under-estimation	-1,961,968	-£ 57,632,802	-86,312	-£ 2,535,429
Maximum over-estimation	215,273	£ 6,323,659	2,657	£ 78,060
Average estimation	-849,435	-£ 24,892,763	-25,291	-£ 730,590

Figure 1: Relative accuracies of the current and proposed methodologies in predicting Energy Imbalance for Interconnector BM Units since NETA Go-live, over rolling 8 day periods.

The analysis revealed that both the current and the proposed methodology would have, on average, under-estimated Interconnector BM Units Trading Charges since Go-live, but with the analysis indicating that the proposed mechanism offers a significantly more accurate estimation than the current mechanism. To add further context to the scale of the figures, aggregated Interconnector Capacity per Settlement Period at times of full availability is 1,600 MWh (based upon 2,000 MW and 1,200 MW links between the Total System and France and Scotland respectively). This totals to 614,400 MWh over an eight day period.

The peak negative CEI for Interconnector BM Units under the current methodology equated to over £57.6m. At this time, the Interconnector community could have had total outstanding Trading Charges of an equivalent or lesser magnitude without the need for having any Credit Cover lodged. The peak negative CEI for the proposed methodology was 23 times smaller with a magnitude of £2.5m.

The average CEI under the current methodology was a negative value equating to £24.9m. Under such conditions, the Interconnector community could have total outstanding Trading Charges of an equivalent or lesser magnitude without the need for having any Credit Cover lodged. The average negative CEI under the proposed methodology was 34 times smaller with a magnitude of approximately £0.7m.

The peak positive CEI under the current methodology equated to £6.3m. Under the proposed methodology this value was of 81 times lesser magnitude at under £0.1m. The reduction in the need for provision of Credit Cover against peak periods of positive CEI would therefore have been of the order of £6.2m.

The 8 day trend of aggregated under and over-estimation of Interconnector BM Units physical positions, taken as the deviation between the two methodologies and the BM Unit Metered Volumes (QMij), is shown in Figure 2, Annex 3.

These estimated physical imbalances, multiplied by the relevant effective CAP, are shown as £ amounts in Figure 3, Annex 3.

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7 IMPLEMENTATION COSTS

The development and implementation costs are briefly outlined below, with greater detail available in the Assessment Report (reference 10).

The development and implementation of P140 will incur costs of approximately £678,995. This encompasses BSC Central Service Agent development and implementation costs of £203,112, plus (standalone) release costs of £298,626. The annual maintenance cost for Proposed Modification P140 will be £21,996 p.a.

This includes additional BSCCo costs of:

- £50,174 (10% of the total NETA Central Service Agent cost for the BSC Auditor effort);
- £25,087 (5% of the total NETA Central Service Agent cost for any clarification to the solution during development); and
- £80,000 (fixed price for a BSCCo Release).

This excludes BSCCo effort of approximately 253 man days. There is an additional +/- 30% tolerance on the overall cost reflecting contingency against actual implementation resourcing deviating from that expected.

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II ANNEX 1 - DOCUMENT CONTROL

a Authorities

Version	Date	Author	Signature	Change Reference
0.1	28/10/03	Change Delivery		Initial Draft
0.2	29/10/03	Change Delivery		Updated for SSMG review
1.0	03/11/03	Change Delivery		Updated for Consultation
1.1	23/12/03	Change Delivery		Updated for internal review
1.2	24/12/03	Change Delivery		Updated for internal review
1.3	24/12/03	Change Delivery		Updated for SSMG review
1.4	6/01/04	Change Delivery		Change marked for SSMG Audit
2.0	6/01/04	Change Delivery		Updated for Consultation

Version	Date	Reviewer	Signature	Responsibility
0.1	29/10/03	Change Delivery		Peer review
0.2	29/10/03	SSMG		SSMG review
1.0	03/11/03	Industry		Consultation
1.1	23/12/03	Change Delivery		Peer review
1.2	24/12/03	Change Delivery		Peer review
1.3	24/12/03	SSMG		SSMG review
1.4	6/01/04	SSMG		For SSMG Information
2.0	6/01/04	Industry		Second Consultation

b Distribution

Name	Organisation
Each BSC Party	Various
Each BSC Agent	Various
The Gas and Electricity Markets Authority	Ofgem
Each BSC Panel Member	Various
energywatch	energywatch
Core Industry Document Owners	Various

c Related Documents

Ref.	Title	Owner	Issue date	Version
1	Modification Proposal P140	EdF Trading Ltd	21/08/03	1.0
2	P140 Initial Written Assessment (IWA P140)	ELEXON	05/09/03	1.0
3	Requirements Specification for Modification Proposal P140 'Revised Credit Cover methodology for Interconnector BM Units'	SSMG	29/09/03	1.0
4	Credit Assessment Load Factor Guidance (CG010)	BSC Panel / ISG	24/04/03	5.0
5	BSCP15 'BM Unit Registration'	ELEXON	29/09/03	6.0
6	ISG/24/267 'Suggested amendments to Credit Assessment Load Factor (CALF) treatment of Interconnector BM Units'	ELEXON	28/01/03	1.0
7	ISG/27/309 'Modelling of alternative Interconnector methodologies'	ELEXON	22/04/03	1.0
8	Interconnexion France-Angleterre IFA Access Rules	NGC / RTE	31/07/02	4.0
9	Access & Allocation Code for the Scotland-England Interconnector	Scottish Hydro-Electric		

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		Transmission Ltd / SP Transmission Limited		
10	Assessment Report for Modification Proposal P140 (P140AR)	SSMG	05/12/03	1.0
11	Modification Proposal P140 Consultation Document (P140AC10)	SSMG	03/11/03	1.0

d Intellectual Property Rights and Copyright

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III ANNEX 2 – MODIFICATION GROUP

The Panel agreed with the recommendation in the IWA that the Settlement Standing Modification Group (SSMG) be convened to progress P140, as the Modification's subject matter falls within the remit of its Terms of Reference. The table below indicates the membership of the SSMG that is considering P140:

MEMBER	ORGANISATION
Roger Salomone (Chairman)	ELEXON
Richard Hall (Lead Analyst)	ELEXON
Neil Cohen (Technical Support)	ELEXON
Steve Drummond (Proposer)	EDF Trading Ltd
Mark Manley	Centrica
Paul Jones	Powergen
Mark Pearce	National Grid Company
Joanne Ellis	Cornwall Consulting
Sharif Islam	Total Gas & Power Ltd
Jerome Williams	Ofgem

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IV ANNEX 3 – DATA CHARTS

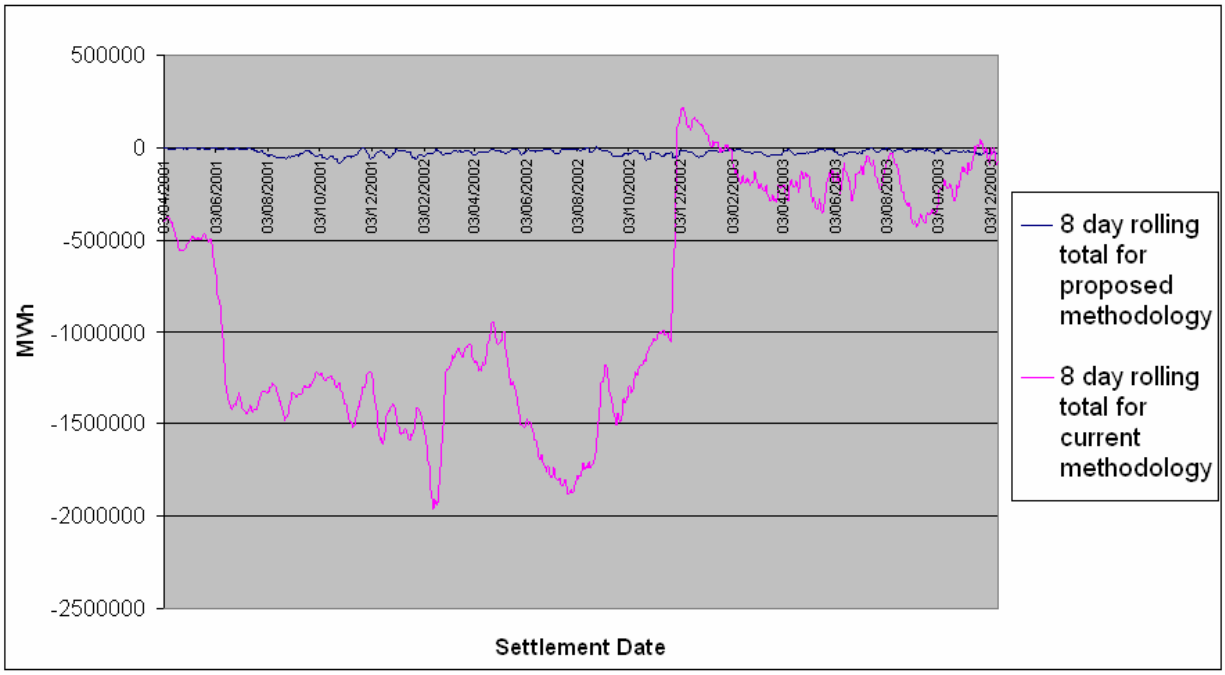

Figure 2: 8 day total MWh deviation between current and proposed methodologies and actual BM Unit Metered Volumes since NETA Go-live.

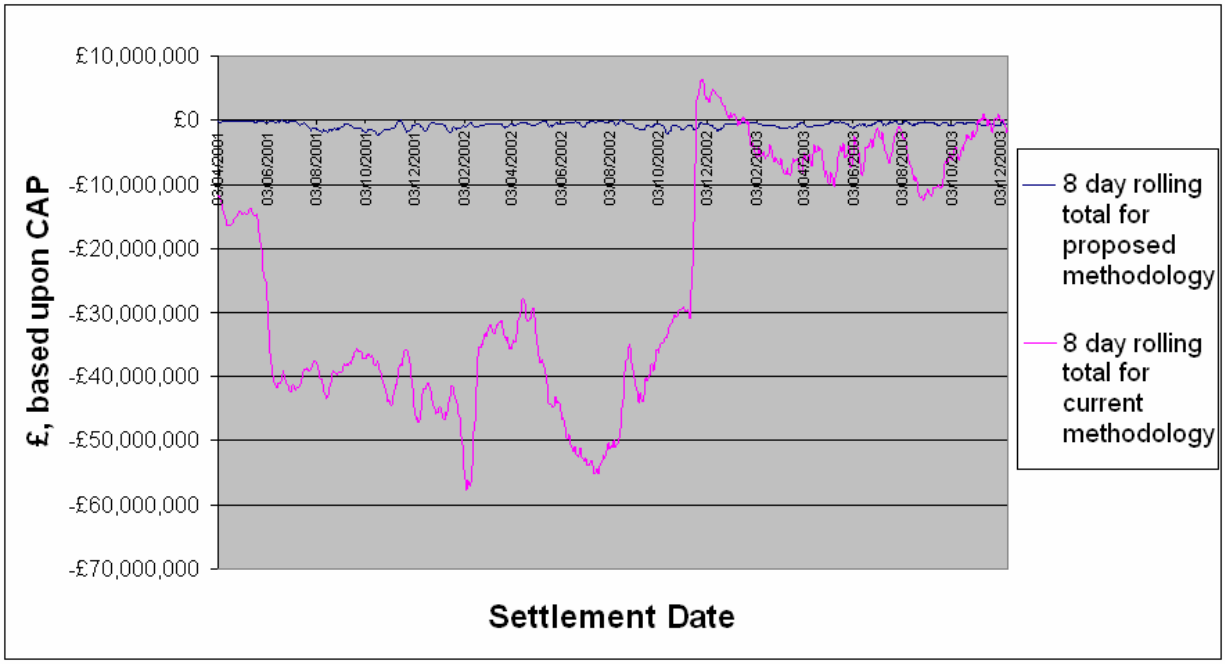

Figure 3: 8 day total estimated outstanding Trading Charges for Interconnector Users, based upon CEI estimated imbalance multiplied by the CAP, for both current and proposed methodologies since NETA Go-live.

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