

NETA Change Form

Title		Version No.
P211 - Main imbalance price based on ex-post unconstrained schedule		0.1
		LogicaCMG Reference
		ICR826
ELEXON Reference	Date CP Received	Date IA Issued
P211	18 th June 2007	2 nd July 2007
LogicaCMG Contact Name	Baseline for Impact Assessment	
	P211AS10.pdf v1.0 dated 6 th June 2006	
Price Breakdown		
Item description	Remarks	Price (ex VAT)
Change Costs	Settlement Calculation (by LogicaCMG) with SAA Reporting	£ 46,150
	Settlement Calculation (by Other) with SAA Reporting	£ 35,500
	BMRA Reporting (Optional must be ordered with either of the above)	£ 15,000
Testing (Specification and Running)	Settlement Calculation (by LogicaCMG) with SAA Reporting	£ 64,250
	Settlement Calculation (by Other) with SAA Reporting	£ 41,250
	BMRA Reporting (Optional must be ordered with either of the above)	£ 8,250
Release Costs	Settlement Calculation (by LogicaCMG) with SAA Reporting	£ 50,600
	Settlement Calculation (by Other) with SAA Reporting	£ 49,250
	BMRA Reporting (Optional must be ordered with either of the above)	£ 1,250

Total Price (ex VAT)	Settlement Calculation (by LogicaCMG) with SAA Reporting	£ 161,000
	Settlement Calculation (by Other) with SAA Reporting	£ 126,000
	BMRA Reporting (Optional must be ordered with either of the above)	£ 24,500

Price Tolerance	0%
Justification for Price Tolerance	
**NOTE See “Any Other Information” section for details of additional porting costs **	

Project Duration	26 weeks
Cut Off Date for Inclusion in Specified Release (if applicable)	
All prices assume Nov'08 Release is the target for this change.	

Operational Price (e.g. per annum or event) (ex VAT)	£0
Rationale	
N/A	

Annual Maintenance Price (ex VAT)	£0
Rationale	
The Annual Maintenance Price is zero under the agreement commencing on 1 January 2005.	

Validity Constraints	
- Price and duration assume that this change is developed in isolation and the effects of other changes are excluded. - No allowance is included for the final solution being different from the baseline. - No allowance is included for supporting Release Audit activities. Any effort will be charged at contracted T&M rates - No allowance is included for supporting ELEXON assurance activities. Any effort will be charged at contracted T&M rates - No allowance is included for End to End/Participant Testing activities. Any effort will be charged at contracted T&M rates - No allowance is included for Walkthrough activities. Any effort will be charged at contracted T&M rates - No allowance is included to support ELEXON in parallel run testing activities The validity period for this assessment is 30 days and is based on the following payment schedule: - LogicaCMG will invoice 30% on receipt of Purchase Order or authorised start of work, 30% on completion of first build phase, 30% on live implementation and 10% on successful completion of the Success Criteria or one month after live implementation, whichever is sooner.	
Authorised Signature	Date Signed

Requirements and Solution

Brief Summary of Change

Under P211, the mechanism for calculating Energy Imbalance has been altered:

- Use Deemed Available Offer Volumes (DAOV) and Deemed Available Bid Volumes (DABV) for each price band for each BM Unit which submits bid-offer volumes;
- DABV and DAOV values in each period are determined from the weighted average Final Physical Notification (FPN) and the levels of submitted bid-offer bands capped by time weighted average Maximum Import Limit (MIL) and time weighted average Maximum Export Limit (MEL) where relevant;
- The MIL and MEL used will be the latest available at the end of the relevant Settlement Period;
- For each BMU:
 - o The total time weighted average DABV cannot exceed the difference between the time weighted average MIL less the time weighted average FPN;
 - o The total time weighted average DAOV cannot exceed the difference between the time weighted average MEL less the time weighted average FPN; and
 - o Any volumes between time weighted average MEL and time weighted average FPN plus the sum of all positive numbered offer volume intervals for that BMU or between time weighted average MIL and time weighted average FPN less the sum of all negatively numbered bid volume intervals for that BMU shall be deemed to be 'unpriced' and will not enter the EPUS stack.
- the prices of actual acceptances making up NIV would not be used for the Main Imbalance Price calculation it should be noted that the existing process can be simplified;
- A new stack will be built from collating the available Bids (DABV) and Offers (DAOV) plus Energy BSAD⁵. This stack will form the Ex-Post Unconstrained Schedule (EPUS);
- De Minimis and Emergency Instruction tagging will not apply to the EPUS stack;
- EPUS Arbitrage tagging will apply to the EPUS stack to remove any DAOV that are priced less than or equal to DABV;
- EPUS NIV tagging will be applied to the EPUS stack (after the EPUS Arbitrage tagging) to exclude the DABV, DAOV and BSAD that will not be required for determining the main Energy Imbalance Price such that:
 - o When NIV is positive, starting from the least expensive, only priced buy volumes up to the volume of NIV are included; and
 - o When NIV is negative, starting from the least expensive, only priced sell volumes up to the volume of NIV are included.
- PAR tagging will be applied such that a volume weighted average of the PAR volume portion of the most expensive⁷ priced un-(EPUS)-tagged volumes will set the main price;
- The PAR volume will not change from the existing value of 500MWh; and
- The method for calculating the reverse price will not change;
- With regard to Manifest Errors, for the purposes of the EPUS, only the original price submitted for Bid-Offer Pairs should be used.

LogicaCMG's Proposed Solution

This modification impacts the Settlement Calculation (SAA/BMRA), BMRA Settlement Reporting (Web) and the SAA Settlement Report (SAA-I014).

Settlement Calculation (LogicaCMG)**Overview**

The BMRA and SAA Settlement Calculation is modified so the calculation of the Main Price is derived using the Ex-Post Unconstrained Schedule (EPUS).

Required Work

- Expand BMRA and SAA Settlement data checking functions to include MIL/MEL data.
- Define a new database table to hold DAOV and DABV data.
- Modify the F009 functionality to include P211 functionality for P211 effective Settlement Dates.

Settlement Calculation (Transmission Company)**Overview**

The calculation of the Main Price is carried out by the Transmission Company and the results of this, including various associated generated data items, are passed to BMRA and SAA for reporting. The calculation of the Reverse Price remains with BMRA and SAA.

Required Work

- Define a new database table to hold DAOV and DABV data.
- Create a loader process to handle the new electronic flow from the Transmission Company.
- Modify the F009 functionality as to only calculate the Reverse Price for P211 effective Settlement Dates.

SAA Settlement Reporting (I014)**Overview**

A new DTC version of the SAA-I014 flow will be defined. The SAA-I014 module will be modified so that for P211 effective Settlement Dates additional data reporting will be included in the report. Where a Bid-Offer Pair has associated DAOV or DABV data defined by the Settlement Calculation Process then this data will be reported against the Bid-Offer Pair. Some existing fields will not be reported for post-P211 dates as they will no longer be relevant.

Required Work

- Modify the SAA-I014 report module.

BMRA Settlement Reporting (optional)**Overview**

The Derived Data web page will be modified on the BMRS to include an additional table that reports DAOV and DABV for a given BM Unit on a given Settlement Period. This will be done for both the Latest (both High Grade and Low Grade) and the Historical pages. The associated CSV and Tibco functions will also be updated to reflect this change.

Required Work

Modify the Derived Data web page and associated functions.

Deviation from ELEXON's Solution / Requirements					
None					
Operational Solution and Impact					
None identified					
Testing Strategy					
Unit	X	Change Specific	X	End to End	
Module	X	Operational Acceptance	X	Participant Testing	
System	X	Performance		Parallel Running	
Regression	X	Volume		Deployment/ Backout	X
Other:					
Validated Assumptions					
The following assumptions have been made for this assessment: - Where insufficient MIL/MEL data is present then the Settlement Calculation will terminate early with an error. Details of the missing data will be reported by the process so that an action can be carried out to try and resolve the situation. In the case of BMRA then that Settlement Period's Indicative Calculation may be postponed as per current operational procedures for an NGC System Outage. - For the Modification Option where the Transmission Company calculates the Main Price it is assumed that the TC will supply the calculated data along with all associated generated data in an electronic file to BMRA/SAA – i.e. values such as NIV, NIV Tagged Energy BSAD, PAR Tagged Energy BSAD, DAOV and DABV will be supplied to BMRA and SAA by the Transmission Company. - The optional BMRS reporting will only consist of those DAOV and DABV values the Settlement Calculation process calculated in order to determine the Main Price; i.e. a subset rather than the whole set. The BMRS will not report those DAOV and DABV values not required by the Settlement Calculation process to determine the Main Price, nor will it report the calculated tagged or untagged volumes of any of the DAOV and DABV values. - It is assumed that MIL/MEL publishing on the BMRS will continue unchanged. This data will be published as it is received. The prices for this change are based on a target release of Nov'08 on Tru-64 and Oracle 9i (Also this would mean the CVA Port and Migrate coding phase had completed before this change starts).					
Outstanding Issues					
None					

Changes to Service							
Services Impacted							
	BMRA	CDCA	CRA	ECVAA	SAA	TAA	Other
Software	X				X		
IDD Part 1 (Docs)	X				X		
IDD Part 1 (S'Sheet)					X		
IDD Part 2 (Docs)					X		
IDD Part 2 (S'Sheet)					X		
URS	X				X		
SS	X				X		
DS	X				X		
MSS							
OSM							
LWIs							
RTP	None						
Comms	None						
Other	None						
Nature of Documentation Changes							
The following Documentation changes will be necessary for this assessment: <u>Settlement Calculation (LogicaCMG)</u> BMRA – System Specification, Design Specification. SAA – URS, System Specification, Design Specification. <u>Settlement Calculation (Transmission Company)</u> BMRA – URS (new flow), System Specification, Design Specification. SAA – URS, System Specification, Design Specification. IDD Part 2 – Document and Spreadsheet. <u>SAA Settlement Reporting (I014)</u> SAA – URS, System Specification, Design Specification. IDD Part 1 – Document and Spreadsheet. IDD Part 2 – Document and Spreadsheet. <u>BMRA Settlement Reporting (optional)</u> BMRA – URS (new flow), System Specification, Design Specification. IDD Part 1 – Document.							
Nature / Size of System Changes							
N/A							

Deployment Issues, e.g. Outage Requirements:	None
Impact on Service Levels:	SLA would need review if NGC is calculating any System Prices.
Impact on System Performance:	None
Responsibilities of ELEXON	
Within reasonable levels, ELEXON will make available appropriate staff to assist LogicaCMG during the development of this change.	
Acceptance Criteria	
This is covered by the acceptance criterion 2 in the "CVA Program – Release Acceptance Criteria" document for the Feb03 Release.	
Any Other Information	
We have assumed a November 2008 target release for these costings. This means delivery under the current hardware baseline (Tru-64 and Oracle 9i) and thus would require an additional activity to port. Migrate and test the changes on the new hardware baseline (HP-UX and Oracle 10g). The additional port and migrate activities required for HP-UX will be discussed at a meeting with ELEXON on Wednesday 4th July. The Testing for a HP-UX and Oracle 10g environment would be a repeat run of the testing scope quoted in this assessment. The release costs (including OAT, Deployment Testing and deployment) are non-determinable at this time as no decisions have been made about the Operate and Host supplier for this period (and their relative responsibilities for a release onto the live environment). If LogicaCMG were the Operate and Host supplier we would be able to reduce the release costs from those quoted above due to documentation similarities.	
Attachments	
None	