

P199 Assessment Report Annex 4b-c: Impact Assessment Responses

- 1. Annex 4a – Transmission Company Analysis (separate attachment)**
- 2. Annex 4b - BSC Party and Party Agent impact assessment**
- 3. Annex 4c – BSC Agent assessment**

P199 – Party Impact Assessment Responses (CPC00566)

Detailed Level Impact Assessment of P199

'P199 - Quantification of Demand Control in the BSC as instructed under OC.6 (c),(d) & (e) of the Grid Code'

Carried out by	Comments
Metering Services Ltd	<p>1. Would the Proposed Modification, as outlined in the attached Requirements Specification, impact your organisation? No</p> <p>2. If yes, please provide a description of the impact, any costs incurred, and the implementation timescale required:</p> <p>3. Any other comments:</p>
Scottish Power UK plc, ScottishPower Energy Management Ltd, ScottishPower Generation Ltd, ScottishPower Energy Retail Ltd, SP Manweb plc, SP Transmission Ltd. SP Distribution Ltd	<p>1. Would the Proposed Modification, as outlined in the attached Requirements Specification, impact your organisation? Yes</p> <p>2. If yes, please provide a description of the impact, any costs incurred, and the implementation timescale required: P198 will impact ScottishPower's internal settlement. There may also be potentially some operational systems impact, which could involve some extensive integration and testing. ScottishPower estimate the potential costs could be in the region of £100,000. Estimated notice required to implement all stages in lifecycle including testing into implementation is minimum 6 months.</p> <p>3. Any other comments: the above include some manual workaround rather than fully automatic solution in view of infrequent occurrence of the event.</p>

EDF Energy	<p>1. Would the Proposed Modification, as outlined in the attached Requirements Specification, impact your organisation? Yes</p> <p>2. If yes, please provide a description of the impact, any costs incurred, and the implementation timescale required: At present we feel that impacts of this change will be negligible and would not require more than 10 days notice. This is based on current view that this change will not require any amendments to our settlements systems to deal with any demand control changes made.</p> <p>3. Any other comments:</p>
Western Power Distribution	<p>1. Would the Proposed Modification, as outlined in the attached Requirements Specification, impact your organisation? No</p> <p>2. If yes, please provide a description of the impact, any costs incurred, and the implementation timescale required:</p>
Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	<p>1. Would the Proposed Modification, as outlined in the attached Requirements Specification, impact your organisation? Yes</p> <p>2. If yes, please provide a description of the impact, any costs incurred, and the implementation timescale required: There is insufficient detail in the Requirements Specification so we can only provide a rough estimate but we believe we would need a minimum of 5 months notice for implementation. {Confidential information provided}</p> <p>3. Any other comments: No</p>
United Utilities I & C Solutions	No implications for NORW or UUNL MOP

NETA Change Form

Title		Version No.
P199 - Quantification of Demand Control in the BSC as instructed under OC.6 (c),(d) & (e) of the Grid Code		a. 0.1
		b. LogicaCMG Reference
		c. ICR737
ELEXON Reference	Date CP Received	Date IA Issued
d. P199	e. 05/04/2006	19/04/2006
f. LogicaCMG Contact Name	Baseline for Impact Assessment	
g. Martin Godden	P199 Requirement Specification 1.0_FINAL.pdf dated 04 April 2006	
Price Breakdown		
h. Item description	i. Remarks	j. Price (ex VAT)
k. Change Specific	Original Proposal : Option 1	£ 14,482
	Option 2	£ 14,482
	Alternative Proposal : P1	£ 29,611
	P2	£ 14,482
	P3	£ 19,551
	CF1 Option additional to any of the above	£ 10,760
l. Release Costs (If ordered with a release)	Original Proposal : Option 1	£ 21,632
	Option 2	£ 21,632
	Alternative Proposal : P1	£ 21,632
	P2	£ 21,632

	m. P3	£ 21,632
n. Release Costs (If ordered on its own)	Original Proposal : Option 1 Option 2 Alternative Proposal : P1 P2 o. P3	£ 64,217 £ 64,217 £ 64,217 £ 64,217 £ 64,217

Total Price (ex VAT) Within a release	Original Proposal : Option 1 Option 2 Alternative Proposal : P1 P2 P3	£ 36,474 All £ 36,474 plus CF1 £ 51,243 if £ 36,474 required Article II. £ 41,183
Total Price (ex VAT) Standalone	Original Proposal : Option 1 Option 2 Alternative Proposal : P1 P2 P3	£ 79,059 All £ 79,059 plus CF1 £ 93,828 if £ 79,059 required Article III. £ 83,768

Price Tolerance	0%
Justification for Price Tolerance	
N/A	

Project Duration Within a Release	Original Proposal : Option 1 Option 2 Alternative Proposal : P1 P2 P3	N/A Duration as Release
Project Duration Standalone	Original Proposal : Option 1 Option 2	10 weeks 10 weeks 10 weeks 10 weeks

	Alternative Proposal : P1 P2 P3	10 weeks
Cut Off Date for Inclusion in Specified Release (if applicable)		
Order by 1 st August 2006 for inclusion in Nov06 CVA release.		

Operational Price (per event) (ex VAT)	T&M Rates
Rationale	
a. Each occurrence will be different and so effort will be charged at T&M rates.	

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

Validity Constraints	
<ul style="list-style-type: none"> • 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 <p>The validity period for this assessment is 30 days and the offer is based on the following payment schedule:</p> <ul style="list-style-type: none"> • 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

P199 seeks to make provisions for the treatment of Demand Control within the Balancing and Settlement Code. In a Demand Control scenario P199 proposes to treat the demand impact for each Balancing Mechanism Unit (BMU) as an un-priced Offer Acceptance. In summary this would mean that:

- The Total Demand Control Volume would be included in the Energy Imbalance Price calculations and the volume would be un-priced;
- The Total Demand Control Volume would be apportioned to affected Parties and reflected in their Energy Imbalance Volume calculations
- No payment would be made to the affected Parties for the Offer Acceptance.

Two versions of this original proposal have been assessed; they differ on the use of a dummy BMU to assign the Demand Control Volume to Parties. These two versions are labelled Option 1 and Option 2.

Alternative Modifications have been identified with the following high level differences to the Proposed Modification:

- That the Offer volumes would be included in the Energy Imbalance Price calculations and the volume would be a priced volume
- Energy Imbalance Prices would be fixed for the duration of the Demand Control Period;
- The Price will either be fixed (P2) or Calculated (P3)

These are labelled P1, P2 and P3.

An optional extra is a price calculator (labelled CF1) that would allow derivation of the payment to be made to the affected BMUs for the associated Demand Control Volume.

LogicaCMG's Proposed Solution

LogicaCMG has identified the impact of each of the five options listed above and for each option priced it either as a standalone change or as part of a Release. The alternative designated CF1 can be added to any solution and so the additional cost has only been priced once. The additional appeal procedure A1 would not require any additional implementation costs however it would require the Demand Control process to be re-calculated and would therefore be subject to the relevant T&M charges – i.e. there are increased operational costs.

Article IV. Original Proposal: - Option 1

Process Description

The process will work out Demand Control per Supplier BMU for impacted GSP Group (either all BMUs or for an SO defined subset). Then amend the QAS file based on calculated Demand Control distribution and put Total Demand Control onto stack as an unpriced item by modifying the appropriate BSAD System Adjustment value.

Reporting Impact

All reporting on Demand Control by SAA will be delivered to BSCCo Ltd, who will pass relevant information onto Participants. This will be achieved via a new manual flow. The flow will hold Demand Control Supporting Information. It will include a breakdown of what Demand Control Volume has been allocated to which BMU, along with any other information appropriate to give sufficient detail of the actions carried out by SAA in response to Demand Control.

Documentation Updates

SAA URS:- Add a new function, add a note to Settlement Calculation, add new manual flows.

SAA MSS/OSM/LWIs: - Update to reflect new process

IDD Part 2:- Add new manual flows.

Implementation Work

Area of Work	Scope of Work
BMU Demand Control Volumes	Script & spreadsheet
Amend QAS	Spreadsheet / manual process
Place Demand Control Volume onto stack	Manual process
Reporting	Manual process

Article V. Original Proposal:- Option 2**Process Description**

This is the same as Option 1 except the Total Demand Control is placed onto the stack as an unpriced volume using a Dummy BMU. An acceptance will be entered for that BMU which has a duration less than CADL and consequently it will be included in the unpriced data.

Reporting Impact

As Option 1

Documentation Updates

As Option 1

Implementation Work

As Option 1

Article VI. Alternative P1**Process Description**

The new process will work out Demand Control per Supplier BMU for impacted GSP Group (either all BMUs or for an SO defined subset). Amend the QAS file based on calculated Demand Control distribution.

If the SO has not defined Demand Control to be a System action then the process will place the Total Demand Control onto the stack as a **priced** item by submitting an Acceptance for a Dummy BMU with a duration greater than CADL. The price of the item would be calculated by SAA. The calculation of the Price of the Demand Control Stack Item would be the Volume Weighted Average of up to 100 MWh of the most expensive Offers Accepted in the latest Settlement Period prior to Demand Control where Offers were accepted.

If the SO has defined Demand Control to be a System action then the Total Demand Control onto stack as an **unpriced** item by submitting an Acceptance for a Dummy BMU with a duration less than CADL.

If priced items were used then the process will adjust Cashflow reporting to FAA (SAA-I013: Issue Credit/Debit Reports) to remove the impact of these items.

Reporting Impact

All reporting on Demand Control by SAA will be delivered to BSCCo Ltd, who will pass relevant information onto Participants. This will be achieved via a new manual flow. The flow will hold Demand Control Supporting Information and will include a breakdown of what Demand Control Volume has been allocated to which BMU, along with any other information appropriate to give sufficient detail of the actions carried out by SAA in response to Demand Control.

Documentation Updates

SAA URS: - Add a new function, add a note to Settlement Calculation, add new manual flows.

SAA MSS/OSM/LWIs: - Update to reflect new process

IDD Part 2: - Add new manual flows

Implementation Work

Area of Work	Scope of Work
BMU Demand Control Volumes	Script & spreadsheet
Calculate price of Demand Control item in	Script & spreadsheet

stack	
Amend QAS	Spreadsheet / manual process
Place Demand Control Volume onto stack	Manual process
Adjust Cashflow	Script & spreadsheet
Reporting	Manual process

Article VII. Alternative P2

Process Description

The new process will work out Demand Control volume per Supplier BMU for impacted GSP Group (either all BMUs or for an SO defined subset). Amend the QAS file based on calculated Demand Control distribution and work out the necessary Price Adjustment (BPA/SPA) by running the Settlement Calculation. The process will modify the BSAD data and re-run the Settlement Calculation.

Reporting Impact

All reporting on Demand Control by SAA will be delivered to BSCCo Ltd, who will pass relevant information onto Participants. This will be achieved via a new manual flow. The new flow will hold Demand Control Supporting Information and will include a breakdown of what Demand Control Volume has been allocated to which BMU, along with any other information appropriate to give sufficient detail of the actions carried out by SAA in response to Demand Control.

Documentation Updates

SAA URS: - Add a new function, add a note to Settlement Calculation and add new manual flows.

SAA MSS/OSM/LWIs: - Update to reflect new process

IDD Part 2: - Add new manual flows.

Implementation Work

Area of Work	Scope of Work
BMU Demand Control Volumes	Script & spreadsheet
Amend QAS	Spreadsheet / manual process
Calculate Price Adjustment	Manual process
Modify BSAD	Manual process
Reporting	Manual process

Article VIII. Alternative P3**Process Description**

The new process will work out the Demand Control Volume per Supplier BMU for impacted GSP Group (either all BMUs or for an SO defined subset) and amend the QAS file based on calculated Demand Control distribution. The process will run the Settlement Calculation and calculate possible Main Price (Volume Weighted Average), then work out the necessary Price Adjustment (BPA/SPA). The process will also modify the BSAD data and re-run the Settlement Calculation.

Reporting Impact

All reporting on Demand Control by SAA will be delivered to BSCCo Ltd, who will pass relevant information onto Participants. This will be achieved via a new manual flow. The new flow will hold Demand Control Supporting Information and will include a breakdown of what Demand Control Volume has been allocated to which BMU, along with any other information appropriate to give sufficient detail of the actions carried out by SAA in response to Demand Control.

Documentation Updates

SAA URS: - Add a new function, add a note to Settlement Calculation and add new manual flows.

SAA MSS/OSM/LWIs: - Update to reflect new process

IDD Part 2: - Add new manual flows.

Implementation Work

Area of Work	Scope of Work
BMU Demand Control Volumes	Script & spreadsheet
Amend QAS	Spreadsheet / manual process
Calculate Volume Weighed Average Price	Script & spreadsheet
Calculate Price Adjustment	Manual process
Modify BSAD	Manual process
Reporting	Manual process

Article IX. Alternative CF1**Process Description**

Add a payment calculator to derive a payment from the demand control volume per BMU. The impact of adding this facility would be the same for all options. This calculator will amend

the SO131 Flow which goes to SAA.

Reporting Impact

No additional impact.

Documentation Updates

SAA URS: - Update with Payment Calculator Spreadsheet details.

SAA MSS/OSM/LWIs: - Update to reflect new process

Implementation Work

Area of Work	Scope of Work
Payment Calculator	Spreadsheet

Deviation from ELEXON's Solution / Requirements

None

Operational Solution and Impact

Impact as described in LogicaCMG's Proposed Solution section.

Testing Strategy

Unit	X	Change Specific	X	End to End	
Module	X	Operational Acceptance	X	Participant Testing	
System		Performance		Parallel Running	
Regression		Volume		Deployment/ Backout	

Other: The testing strategy is to walk the new processes through an OAT environment. Any other testing required by ELEXON will need to be assessed as further options.

Validated Assumptions

- For each Settlement Date impacted by Demand Control there will be a requirement to intervene in each Settlement Run carried out for that Settlement Date.
- Manual processes will be charged at contracted T&M rates.
- Demand Control Volume allocation to Parties will be calculated to as high a precision as practical, but it can not be guaranteed that the Total sum of Party DC Volumes will equal the Total DC Volume.
- Demand Control Payments, as determined by option CF1, will be incorporated into Parties Cashflow calculation, by SAA, for the impacted Settlement Date.
- Total Demand Control Volume will be defined to an accuracy no greater than 1 MWh (i.e. Whole MWh)
- SAA will perform the Volume Allocation across Suppliers
- BMRA Impact limited to publishing the new System Warnings (i.e. BMRA will not display recalculated prices under any option)

Outstanding Issues							
LogicaCMG have assumed that the SAA is responsible for the Volume Allocation Process.							
Changes to Service							
Services Impacted							
	BMRA	CDCA	CRA	ECVAA	SAA	TAA	Other
Software							
IDD Part 1 (Docs)							
IDD Part 1 (S'Sheet)							
IDD Part 2 (Docs)					X		
IDD Part 2 (S'Sheet)							
URS					X		
SS							
DS							
MSS					X		
OSM					X		
LWIs					X		
RTP	None						
Comms	None						
Other	None						
Nature of Documentation Changes							
As described in LogicaCMG's Proposed Solution Section above.							
Nature / Size of System Changes							
Scripts and manual process only.							
Deployment Issues, e.g. Outage Requirements:					None		
Impact on Service Levels:					None		
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 and during any invocation of the process following a							

demand control event.
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
None
i) Attachments
P199 Price Presentation v0.1.xls