NETA Change Form

Title		Version No.
P204 Scaled Zonal Transmission Losses		0.1
		LogicaCMG Reference
		ICR759
ELEXON Reference	**Date CP Received**	**Date IA Issued**
P204	11 Aug 2006	22 Aug 2006
LogicaCMG Contact Name	**Baseline for Impact Assessment**	
Martin Godden	P204 Requirement Specification_v1.0.doc dated 11 Aug 2006	

Price Breakdown		
Item description	**Remarks**	**Price (ex VAT)**
Change Specific	Option 1a and 1c: Option 1b and 1d: Option 2:	£ 26,568 £ 197,118 £ 248,072
Release Costs	Option 1a and 1c: Option 1b and 1d: Option 2:	£ 17,923 £ 202,079 £ 219,542

Total Price (ex VAT)	**Option 1a and 1c:** **Option 1b and 1d:** **Option 2:**	**£ 44,491** **£ 399,197** **£ 467,615**

Price Tolerance	**Option 1a,1b,1c and 1d:** **Option 2:**	0% 15%
Justification for Price Tolerance		
Option 2 carries a 15% Tolerance due to the limit time available to assess a complicated change.		

Project Duration	**Option 1a and 1c:** **Option 1b and 1d:** **Option 2:**	8 weeks 25 weeks 26 weeks
Cut Off Date for Inclusion in Specified Release (if applicable)		
N/A		

Operational Price (e.g. per annum or event) (ex VAT)	£0
Rationale	
See attached Price Breakdown or 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

P204 seeks to introduce a zonal scheme for the allocation of the variable element of transmission losses, whereby annual zonal Transmission Loss Factors (TLFs) would be calculated for each BSC Year on an ex-ante (forecast) basis for each GSP Group ('TLF Zone') using a Load Flow Model based on the solution for P198. P204 seeks to ensure that no BM Units are credited with energy through the TLM. P204 scaling factor(s) to be calculated so that on average, for all but the most favourable location, only energy debits due to losses would be sought.

P204 proposes two options, an ex-ante and an ex-post solution, with a total of five variants which propose combinations of annual or seasonal TLF values, with optional separate TLF values for Delivery and Off-take BM Units. The options are explained in the table below:-

Option	Zonal TLF	Scaling Factor Option	Separate values for Delivery and Off-take
1a	Annual	Ex-ante Annual	No
1b	Annual	Ex-ante Annual	Yes
1c	Seasonal	Ex-ante Seasonal	No
1d	Seasonal	Ex-ante Seasonal	Yes
2	Seasonal	Ex-post Settlement Period	Yes

The solutions for these options simplify to three (1a and 1c are the same effort, as are 1b and 1d). These are detailed in the Proposed Solution.

LogicaCMG's Proposed Solution

Option 1a and 1c: Ex-ante Annual or Seasonal Scaling Factors

A scripted approach for the entry of TLFs (which carries the same cost for both options 1a and 1c) has been assessed and this would require the following tasks:

- Design and develop scripts to validate, load and verify the TLF data, and to log errors/warnings where found.
- Perform Unit Tests for the new loading process.

Document Changes

- IDD Part 2 CRA-I029 manual interface - specify the CSV data format of the manual flow.
- CRA OSM to reflect the script loading process.

The scripted option would not incur any operational costs for TLF input, whilst adding increased validation and removing the possibility of manual input errors.

Option 1b and 1d: Ex-ante Annual or Seasonal Scaling Factors with separate values for delivery and take-off

A scripted approach for the entry of TLFs (which carries the same cost for both options 1b and 1d) has been assessed for loading the TLF+/- data. Changes are required to cater for the change in the structure of the TLF data and the scripted approach. This would require

the following tasks:

- Database changes to accommodate the new TLF values
- Changes to SAA to retrieve and use the new TLF+/- values.
- Changes to BMRA to retrieve and use the new TLF+/- values
- Changes to the CRA-I015 and CRA-I014 to accommodate the new TLF data.
- Changes to the Maintain BM Unit Screen to accommodate the new TLF data.
- Changes to the ECVAA and BMRA loaders for CRA-I015.
- Design and develop scripts to validate, load and verify the TLF data, and to log errors/warnings where found.
- Perform Unit Tests for the new processes.
- Perform Integration Testing for BMRA, ECVAA, SAA and CRA for the new processes.

Document Changes

- Changes to IDD and URS documentation to cater for the TLF+/- values and processes.
- IDD Part 2 CRA-I029 manual interface - specify the CSV data format of the manual flow.
- Changes to the System Specification documentation.
- Changes to the Design Specification documentation.
- CRA OSM to reflect the script loading process.

Given the scripted approach to data loading, there is no material development effort difference between option 1b and option 1d.

Option 2: Ex-post Settlement Period based Scaling Factors

A scripted approach has been assessed for loading the TLF+/- data. Further changes are required to cater for the change in the structure of the TLF data and the Ex-post calculation for scaling factors. This would require the tasks:

- Database changes to accommodate the new TLF values
- Create three new dated parameters to EB+, EB- and FLP.
- Changes to SAA to retrieve and use the new TLF+/- values and to perform the calculation and application of scaling factors.
- Changes to BMRA to retrieve and use the new TLF+/- values and to perform application of estimated scaling factors.
- Changes to the CRA-I015 and CRA-I014 to accommodate the new TLF data.
- Changes to the Maintain BM Unit Screen to accommodate the new TLF data.
- Changes to the ECVAA and BMRA loaders for CRA-I015.
- Changes to SAA-I014 to include the calculated scaling factors.
- Design and develop scripts to validate, load and verify the TLF data, and to log errors/warnings where found.
- Perform Unit Tests for the new processes.
- Perform Integration Testing for BMRA, ECVAA, SAA and CRA for the new processes.

Document Changes

- Changes to IDD and URS documentation to cater for the TLF+/- processes and the scaling calculations.
- IDD Part 2 CRA-I029 manual interface - specify the CSV data format of the manual flow.
- Changes to the System Specification documentation.
- Changes to the Design Specification documentation.
- CRA OSM to reflect the script loading process.

There is no material development effort between a monthly FLP and an annual one.

Deviation from ELEXON's Solution / Requirements
None

Operational Solution and Impact
None

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

Validated Assumptions
None

Outstanding Issues
None

Changes to Service

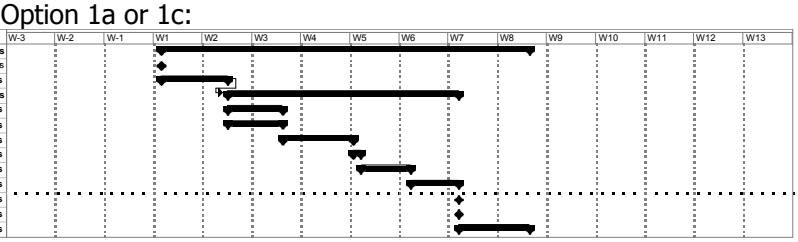
Services Impacted

	BMRA	CDCA	CRA	ECVAA	SAA	TAA	Other
Software	X		X	X	X		
IDD Part 1 (Docs)							
IDD Part 1 (S'Sheet)							
IDD Part 2 (Docs)			X				
IDD Part 2 (S'Sheet)			X				
URS							
SS							
DS							
MSS							
OSM			X				
LWIs							
RTP	None						
Comms	None						
Other	None						

Nature of Documentation Changes	
As detailed in the LogicaCMG's Proposed Solution section of this document.	
Nature / Size of System Changes	
Medium to Large	
Deployment Issues, e.g. Outage Requirements:	Outage required for BMRA/ECVAA
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.	
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	
These assessments do not include the effort associated with changes required to the load flow model identified separately for the P198 change (assessed 31/07/06). However the load flow model changes equally apply to P204. Option 2 has been assessed for separate TLF values for delivery and off-take in line with the information contained in the table in section 3.1 of version 1.0 of the ELEXON requirement specification for P204. The calculations in section 2.3.1 of that document contain reference to TLF_{ij} without a + or – sign. This omission is assumed to be an error and not to indicate a single TLF value. It is assumed that where impacted by the change from the existing single TLF value to the two TLF+/- values that all reports and forms incorporating TLF values will be changed to accommodate both values. In line with the assumption stated in section 3.3.3 of version 1.0 of the ELEXON requirement specification for P204, these assessments have been made on the understanding that Estimated Scaling Factors will be provided for use by BMRA. It is assumed that the Fixed Losses Parameter (FLP) will be a single value that is applied to all settlement periods for all BM Units for a minimum period of month, therefore there will be a maximum of twelve FLP values valid for any given twelve month period. Scaling Factors calculated in option 2 and applied by the SAA may change between run types for the same settlement day as a result of further input data becoming available to the SAA. Participants will therefore not know the final scaling factors applicable to a particular settlement period until the RF run is complete.	

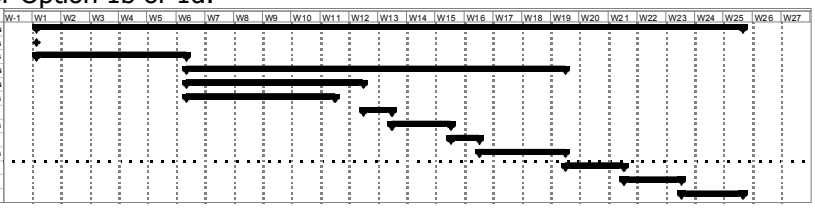
Indicative Project Plan for Option 1a or 1c:

ID	Task Name	Work
1	**Project Plan Template**	**27 days**
2	Project Start	0 days
3	**Design**	**3 days**
8	**Design Support**	**24 days**
9	**Development**	**9 days**
11	**Test Specificaton**	**7 days**
14	**Build #1 Creation and Installation**	**0 days**
16	**Dry Run Testing**	**4 days**
18	**Build #2 Creation and Installation**	**0 days**
20	**Main RunTesting**	**4 days**
23	**Participant Testing**	**0 days**
25	**OperationalAcceptance Testing**	**0 days**
27	**Deployment**	**0 days**



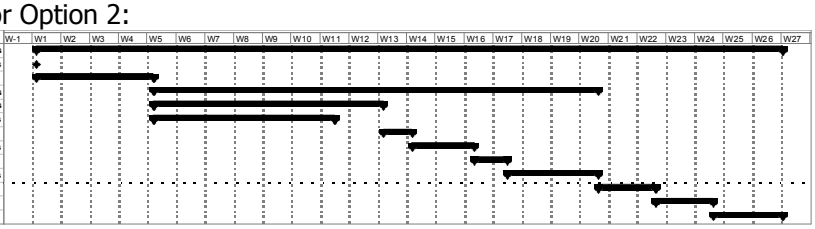
Indicative Project Plan for Option 1b or 1d:

ID	Task Name	Work
1	**Project Plan Template**	**211 days**
2	Project Start	0 days
3	**Design**	**23 days**
8	**Design Support**	**188 days**
9	**Development**	**100 days**
11	**Test Specification**	**34 days**
14	**Build #1 Creation and Installation**	**0 days**
16	**Dry Run Testing**	**27 days**
18	**Build #2 Creation and Installation**	**0 days**
20	**Main Run Testing**	**27 days**
23	**Participant Testing**	**0 days**
25	**Operational Acceptance Testing**	**0 days**
27	**Deployment**	**0 days**



Indicative Project Plan for Option 2:

ID	Task Name	Work
1	**Project Plan Template**	**242 days**
2	Project Start	0 days
3	**Design**	**6 days**
8	**Design Support**	**236 days**
9	**Development**	**131 days**
11	**Test Specification**	**45 days**
14	**Build #1 Creation and Installation**	**0 days**
16	**Dry Run Testing**	**30 days**
18	**Build #2 Creation and Installation**	**0 days**
20	**Main Run Testing**	**30 days**
23	**Participant Testing**	**0 days**
25	**Operational Acceptance Testing**	**0 days**
27	**Deployment**	**0 days**



Attachments

P204 Price Presentation v0.1.xls