

## ANNEX C – BSC AGENT IMPACT ASSESSMENTS

### C.1 SVAA Software Development Impact

Logica Ref	<b>LCRA191/4</b>	Type	<b>ELEXON Originated Change Request</b>		Component	SVAA
ELEXON Ref	<b>411SCL01 and Mod P62</b>					
Assessor Name	<b>Stephen Wilcock</b>	Assessor Location	Logica Project Team, Leatherhead	Date	<b>7/5/2002</b>	
<p><b>Title: P62 – Changes to facilitate Competitive Supply on the Networks of New Licensed Distributors</b></p> <p><b>Description</b></p> <p>The Utilities Act 2000 (which came into effect on 1st October 2001) creates a requirement for new licensed Distributors to be able to join the Balancing and Settlement Code (BSC) and the Master Registration Agreement (MRA), and comply with the Settlement Agreement for Scotland (SAS). In order to allow a new licensed Distributor to do this, changes will be required to all three agreements, and to associated Party and Agent systems and processes.</p> <p>Logica provided an initial assessment titled LCRA191 which identified the changes required to the ISRA/SVAA system to meet the requirements defined in ELEXON's document "Requirements Specification – New Licensed Distributors", reference 030AA3 version 0.3. LCRA191 did not include detailed costings for implementing the changes, but gave an indication of their complexity and the broad timescales required for these changes. This assessment, LCRA191/2, is a response to the updated set of requirements defined in version 1.0 of ELEXON's document "Modification Proposal P62 – Requirements Specification", reference 002MBR.</p>						
<p><b>Functional Response</b></p> <p><b>1) Database structure, to allow multiple Distributors for each GSP Group</b></p> <p>No change is required to the ISRA/SVAA Logical Data model to allow Multiple Distributors to be active in a GSP group, (although changes are required at the physical level and these are discussed in later sections of this document).</p> <p><b>2) Maintenance and View Screens to allow New Distributors to be registered for each GSP group</b></p> <p>In order to allow multiple distributors per GSP group to be maintained via the ISRA/SVAA Client it is necessary to remove the restrictive validation that is currently present in the "Specify GSP Groups for Distributors" screen. This validation will be modified so that an error message is only returned if the effective periods for the same Distributor in a single GSP Group overlap. The "Specify GSP Groups for Distributors" form will be modified to allow assignment of multiple Distributors to a single GSP Group. Additional validation will be added to ensure that multiple Distributors per GSP Group relationships cannot be created for any settlement days before the date from which this change is to be effective on the system. There will be no validation to check that a correct number of Distributors are active in a GSP group. There will however be validation that there is at least one Distributor active in a GSP Group on every settlement day – this is consistent with the present level of validation within this form.</p> <p>The corresponding "Browse Association of Market Participant with GSP Group" form will be amended to provide multiple rows rather than one single row to display the Distributors active in the specified GSP</p>						

Group. These two forms will now allow the user to create and maintain relationships for Multiple Distributors in a GSP Group.

The “Edit/Browse GSP Groups for Distributors” forms do not require changing since they list GSP Groups for a given Distributor, rather than vice versa.

### **3) Supplier Purchase Matrix load mechanism (D0041)**

The current D0041 load process assumes that the all the LLFCs in the D0041 must refer to those of the single Distributor that is active in the GSP Group for that Settlement day. The LLFCs present in a GSP Group may now belong to of any of the many Distributors active in a GSP Group on the given Settlement Day, and hence the load mechanism will be amended to cope with this.

### **4) SSR Runs**

We have confirmed that the Run SSR form does not require modification. The SSR Run process itself will need to be modified to handle Multiple Distributors in GSP Groups, and the process that produces the Settlement Run Equitability Report that is generated after SSR Runs will also need to be changed.

### **5) DUoS Report**

The DUoS report will require modification to handle multiple Distributors in GSP Groups.

#### **New Distributor version of the DUoS Report**

The first part of the report (profiled SPM data) will only process data that relates to the distributor receiving the report; it will only create those SUP, DIS, GP1, VMR, SPX and TOT records required to hold this processed data.

E.g. consider the case where Distributor ‘X’ and Supplier ‘Y’ are active in GSP Group ‘Z’, but for a particular SSR Run none of the SPM files used in the SSR run contain data for this Distributor/Supplier/GSP Group combination. Then in creating the DUoS report for Distributor ‘X’ for this SSR Run, the sequence of records

SUP ‘Y’

DIS ‘X’

GP1 ‘Z’

:

will not be created since there is no corresponding data to process and output.

Note that the second part of the Distributor DUoS report (GSP Group Correction Scaling Factor and GSP Group Correction Factor data) will contain data for all suppliers active in the GSP Groups used in the SSR run. For some of these Supplier/GSP Group combinations, the distributor receiving the report may not be an appointed distributor. This additional report data is not specific to a particular supplier and therefore the only commercial information contained will be the full list of suppliers operating in the GSP Group. Since this information is available elsewhere, Logica have taken the view that not altering the report will not breach any confidentiality rules. We have also assumed that this will not cause a problem to the Distributor’s system.

### **New Supplier version of the DUoS Report**

The first part of the report (profiled SPM data) will only process data that relates to the supplier receiving the report; it will only create those SUP, DIS, GPI, VMR, SPX and TOT records required to hold this processed data. The example above could equally well illustrate the DUoS report for Supplier 'Y'.

#### **6) LLFC load mechanism (D0265)**

No modification is required to cope with Multiple Distributors in GSP Groups for the loading of D265 files.

#### **7) Archiving.**

Archiving will be modified to correspond with the changes made to the database.

#### **8) DPP**

No changes are required to the Daily Profile Production Run.

#### **9) Performance issues**

Assuming that the data levels remained unchanged, the ISRA/SVAA processes will take slightly longer to run as a direct result of this software change, but it is expected that the impact of this will be small. However, as the volume of Line Loss Factor data that is held in the database increases, the SSR Run process may take longer to run. Similarly, loading of individual D0265 files would be expected to take longer, and there may be more of them to load as more Distributors come on line; this may pose problems in loading them within the operational window.

### **Risks**

This change has implications across a large proportion of the SVAA software, including the SSR run process, the generation of a variety of reports, database structure and the SVAA Client. The changes reflect the need to substitute the assumption of a one to one relationship between Distributor and GSP Group for a many to many relationship wherever it may occur.

This change represents a medium to high risk to SVAA primarily due to alterations made at the core of the SSR Run functionality.

### **Other comments**

Whilst the actual software changes are not anticipated to cause any significant performance issues, the new required data volumes may result in performance degradation. As the new volumes are not currently known, it is not possible to quantify this degradation.

### **Quotation Price**

The total price for this Logica Change Request Assessment is dependent upon the level of Regression Testing of SVAA that is deemed to be required by ELEXON.

#### **Quote 1 – Reduced Regression Testing**

This assumes a level of testing similar to that used in the past, where regression testing consists of running key data loads and performing an SSR Run and a DPP run. The total price in this case is **£77,458**.

**Quote 2 – Full Regression Testing**

This assumes a full set of regression tests, similar to that outlined in for example LCRA190, Unix 5.1 Upgrade to ISRA/SVAA. The total price in this case is **£86,012**.

**C.2 NHHDA Software Development Impact**

Logica Ref	<b>LCRA192/3</b>	Type	<b>ELEXON Originated Change Request</b>		Component	<b>NHHDA</b>
ELEXON Ref	Mod P62 <b>41SCL01</b>					
Assessor Name	<b>Richard Ascough</b>	Assessor Location	Logica Project Team, Leatherhead	Date	<b>07/05/2002</b>	

**Title: Changes to facilitate Competitive Supply on the Networks of New Licensed Distributors**

**Description**

The Utilities Act 2000 (which came into effect on 1st October 2001) creates a requirement for new licensed Distributors to be able to join the Balancing and Settlement Code (BSC) and the Master Registration Agreement (MRA), and comply with the Settlement Agreement for Scotland (SAS). In order to allow a new licensed Distributor to do this, changes will be required to all three agreements, and to associated Party and Agent systems and processes.

This assessment identifies the changes required to the NHHDA system to meet the requirements defined in ELEXON's document "Modification Proposal P62 – Requirement Specification" reference 002MBR version 1.0.

**Functional Response**

NHHDA consists of a number of key components. Each of the components and the impact of P62 is discussed below:

**Market Domain Data Loading**

Market Domain Data is entered into the NHHDA application by two methods: the D269 flow and the data entry via the front end client interface. At present the application only allows for a single distributor per GSP group for each settlement day. The database, data loading validation and data entry screens will be modified to allow for multiple distributors per GSP group for each settlement day. (NB. This was the preferred option in assessment LCRA192/1)

It should be noted that it will not be possible to check that the correct number of distributors are present for each GSP group on each settlement day because ISRA/SVAA has no information on what this number should be. However, it will validate that there is at least one distributor for each GSP group on each settlement day.

### **Instruction Processing**

Instruction processing checks that a metering system has the correct PRS agent and distributor relationship by taking the first two digits of the MPAN, looking up the corresponding distributor in standing data, and validating this against the distributor in the data source (D209 files). This logic does not need to change under P62.

### **Check Data Collector**

The Check Data Collector logic validates the data from PRS agents matches that from Data Collectors. There is no requirement to change any of this logic so this subsystem does not require to be changed.

### **Aggregation**

The format of the current Supplier Purchase Matrix (D41) already contains different entries for different distributors. The SPM is sent based on distributors for each supplier within a GSP group. This part of the software is already able to cope with multiple distributors and requires no change.

### **Reporting**

Report Distributor and Associated Items requires no change as it reports only LLF classes and PRS agent appointments. It does not report on GSP groups.

The GSP Group report will need updating to include an effective to settlement date.

### **Archiving**

No change is required to the archiving sub system.

### **Auditing**

No change is required to the auditing sub system.

### **Risks**

Logica consider this to be of low risk as the changes required are small and the system already works on the relationship between GSP group and distributor.

### **Other comments**

The changes required to the NHHDA application are fairly small and for this reason it is not envisaged that this modification will significantly affect the system performance.

### **Quotation Price**

The total price for this Logica Change Request Assessment (LCRA 192/2) is £27,914

## **C.3 EAC/AA Software Development Impact**

It has been confirmed that there are no software changes required to the EAC/AA Software

## C.4 SVAA and MDD Service

<b>MP No.</b>	<b>62</b>	<b>Title</b>	<b>Changes to Facilitate Competitive Supply On The Networks Of New Licensed Distributors</b>
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<b>BCA Name</b>	<b>Clive Mallinson</b>	<b>Assessor</b>	<b>SVA Agent</b>	<b>Date</b>	<b>16/05/02</b>
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### Costs

Estimated price for amending the Market Domain Data (MDD) application to enable many-to-many relationships between Distributors and GSP Groups - circa £15k.

Estimated price for amending the Logging and Pool applications to take account of many-to-many relationships between Distributors and GSP Groups in the PARMS extracts and Market Indicator Reports - circa £20k. More detailed information on the changes to the ISRA database will be required before an accurate estimate can be given.

Estimated price for amending the SVA Agent's operational procedures to accommodate the changes associated with MP62 - £500.

### Timescale implications

Estimated elapsed time to complete the development of the MDD, Pool and Logging applications is 3 months. It will be necessary to carry out integration testing in conjunction with ISRA, and overall project timescales will depend on the availability of the revised ISRA software.

### Risks

This change could have a significant impact on the performance of some ISRA processes, potentially putting service deadlines at risk (see comments below).

### Comments

#### Standing Data

A new process is required for Distributors to submit standing data to the SVA Agent to set up and amend the relationships between Distributors and GSP Groups. This will require amendments to BSCP507 and to the SVA Agent's procedures.

Consideration needs to be given to how the D0041 load process within ISRA will handle mismatches between the standing data held on the database defining Distributor/GSP Group relationships, and the content of the files. There are two possible solutions:-

- a) The load process could automatically amend the standing data to match the file contents, as currently happens with Supplier/Data Aggregator relationships. This would require an amendment to the ISRA software.
- b) Alternatively, the load could fail, requiring the SVA Agent to establish the correct course of action and either reject the file or manually amend the standing data. This option could become onerous, posing a threat to the Settlement timetable. No estimated costs have been included in this assessment for any additional work that might result from this solution.

#### Performance

It is likely that this change will have an affect on the performance of some ISRA processes, in particular SSR run times, D0265 loads and D0041 loads. The additional Line Loss Factors (LLFs) and Line Loss Factor Classes (LLFCs) are also likely to worsen the already poor performance of LLFC closures. Moreover, the additional data will impact backup and recovery times, which, in the event of a disaster, would further reduce the ability to recover essential services within target timescales. It is not possible to accurately assess the extent of any such performance impact at this stage.

The impact of MP62 on the performance of the ISRA software should be assessed during testing. Depending on the severity of any issues identified, these may need to be resolved prior to implementation. Following implementation, performance will be monitored and any significant adverse impact would need to be addressed as a matter of urgency.

It is essential that the outstanding performance issue with LLFC closures is resolved prior to the implementation of MP62.

#### Disk Capacity

The additional Line Loss Factor data, DUoS reports and DPP reports will require extra disk space. Based on the information currently available, it is not possible to assess the extent of this increase at this stage. Disk utilisation will be monitored following the implementation of MP62. If the increase is significant, it may be necessary to add more disk capacity to the production system. No allowance has been made in this assessment for the cost of additional disk space.

#### Testing

In addition to the standard SAT and OAT testing, it is recommended that full width testing be carried out to assess the impact of this change on the performance of the ISRA software. This will require a full width test environment to be built. An estimated elapsed time of six to eight weeks should be allowed for full width testing, at an estimated cost of circa £20k.

It is also recommended that end-to-end testing of the modified flows (D0030, D0041, D0082, D0265, D0269 and D0270) be included.

A more accurate estimate of the cost of testing will be provided when more information about Elexon's requirements is available.

#### Assumptions

This assessment is based on the following assumptions. Should any of these assumptions prove incorrect, it may be necessary for the SVA Agent to carry out a re-assessment.

- There will be a small number of new Licensed Distribution System Operators (LDSOs).
- The new LDSOs will be small in comparison to existing Public Distribution System Operators (PDSOs).
- There will be no changes to the definitions of any SVA data flows, although the content of some flows will change.
- All data flows to new LDSOs will be distributed via the Data Transfer Network.
- Each new LDSO will submit a single set of LLFCs and a single D0265 file for all GSP Groups.
- If an existing Distributor operates in more than one GSP Group, the existing Line Loss Factor data for that Distributor will apply to all GSP Groups within which it operates – i.e. there will be no requirement to load new Line Loss Factor Classes or D0265 files for that Distributor.
- The outstanding issue with the performance of Line Loss Factor Class closures will be resolved prior to the implementation of MP62.
- Elexon will define the overall testing requirements.
- A specification of the changes to the ISRA database will be available prior to the commencement of development to the Pool and Logging applications.

#### Exclusions

Costs of the following have been excluded from this assessment.

- Any additional effort that may be required as a result of Distributor/GSP Group mismatches between incoming Data Aggregation files and standing data.
- Extra disk capacity that may be required to accommodate the additional data.
- Additional work that may be required to resolve any performance issues.

<b>Recommendation</b> Not applicable.
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C.5 CVA Service

<b>NETA Change Form</b>	<b>MP/CP/TP No:</b> MP62
	<b>Logica reference:</b> ICR368
<b>Title:</b> Changes to Facilitate Competitive Supply On The Networks Of New Licensed Distributors	
<b>Identified by:</b> TXU UK Ltd.	<b>Date received:</b> 25-April-2002

<b>Statement of requirement</b>	
<b>Baseline affected:</b> NETA Service Definition Baseline (V1.0)	
<b>Assumed changes over baseline:</b> None	
<b>Description of Change:</b> See attached original MP62.	
<b>Proposed solution:</b> See attached original MP62.	
<b>Justification for Change:</b> See attached original MP62.	
<b>Proposed changes to Service Levels:</b> None.	
<b>Proposed changes to the Agreement:</b> None.	
<b>Attachments/references:</b> MP62	

<b>To be completed by Logica</b>			
	High Level Impact Assessment	Detailed Level Impact Assessment	Quotation
Tick which stage is being completed:		✓	
Signed by Logica Contract Manager:			
Date:		16-May-2002	
HLIA category: Small/Medium/Large/Other		Price for DLIA:	
If this is a Quotation, are consequential modifications needed to the DLIA? Yes/No.			

<b>Logica's proposal</b>		
<b>Logica's understanding of the requirement:</b> Modification P62 proposes to make changes to the BSC to recognise new licensed distributors, introduced by the Utilities Act 2000 (which came into effect on 1 <sup>st</sup> October 2001).		
As a result of P62, P70 was also raised to allow distributors to register any meter between two Distribution Systems in the same GSP Group for the purposes of the Duos billing between suppliers. P70 has been considered as a separate assessment.		
<b>Logica's proposed design solution:</b> Documentation updates (primarily CDCA System Specifications). IMServ: Review of BSCP and related documentation changes, internal changes and update of LWIs.		
<b>Consequential changes to Project Deliverables:</b> Documentation (primarily CDCA System Specification), LWIs.		
<b>Consequential impact on BSC Service Users or Other Service Providers:</b>		
<b>Testing strategy:</b> n/a		
<b>Management plan for developing the Change:</b>		
<b>Project plan for developing the Change:</b> The estimated time to complete the development of this change is 4 weeks.		
<b>Method of deployment:</b>		
Patch	Is a planned outage required? No	
<b>Price for Design and Build:</b>		
<b>Item description:</b>	<b>Price (ex VAT)</b>	<b>Type of price:</b>
Documentation, review and LWI updates.	£22 600	Fixed
<b>Price for Operate and Maintain:</b>		
<b>Item description:</b>	<b>Price</b>	<b>Type of price:</b>
Operate	£0	Fixed
Maintain	£0	Fixed
If this is a DLIA or Quotation, is a price breakdown in the agreed format attached? Yes/No		
<b>Terms attaching to the offer</b>		
<b>Validity period of offer:</b> 30 days	<b>Type of offer:</b>	
	Firm	
<b>Assumed start date:</b>		

<p><b>Payment milestones:</b>          Logica will invoice in full for this change on deployment, or within one month of the change being ready for deployment.</p>
<p><b>Document turnaround time:</b>          5 days</p>
<p><b>Impact on Service Levels:</b>          None</p>
<p><b>Impact on performance of the System:</b></p>
<p><b>Other terms:</b></p>
<p>If this is a Quotation, is a draft contract amendment attached? Yes/No</p>
<p><b>Responsibilities of ELEXON:</b></p> <ul style="list-style-type: none"> <li>For all formal documentation which is subject to review, Logica shall provide one draft issue and a maximum of 5 working days has been allowed for ELEXON to review and comment on the updates. No allowance is included for addressing comments from ELEXON and only one iteration of all reviewed documents has been included in the price.</li> <li>Within reasonable levels, ELEXON will make available appropriate staff to assist Logica during the development of this change.</li> </ul>
<p><b>Assumptions made by Logica:</b></p> <ul style="list-style-type: none"> <li>It is assumed that no software changes are required for this Modification Proposal.</li> <li>The registrant of a GSP Group is the Party with the DB role, and that Party is responsible for providing aggregation rules for the GSP Group.</li> <li>CDCA report will continue to be sent only to named distribution businesses in the case of the I012 or to the registrant of the GSP Group whose Aggregation Rule references the data (e.g. I030). In some cases empty reports would be generated, although these can be switched off using flexible reporting in the normal way.</li> <li>It is assumed that a single DB role will be used for both PDSOs and LDSOs, and Central Systems will not be required to distinguish between the two. Documents references to the PDSO will be changed to refer to Distribution Businesses (this reverses changes recently applied following ELEXON review of System Specifications).</li> <li>It is assumed that Logica and IMServ will be involved in a review of the amended BSCPs.</li> </ul>
<p><b>Options and alternatives:</b></p>

## C.6 Entry Processes

### Preparations

#### BSCP Changes

Change BSCP511 to:

- introduce the idea of a new SMRS and distribution business and that a distribution business and SMRS can operate in multiple GSP Groups;
- and to include the scripts which need to be run for each type of SMRS.

Change BSCP512 to:

- change the way a supplier hub is applied for ie by distributor rather than by GSP group;

- amend interface test requirements to cater for new distribution businesses
- introduce new scripts for suppliers and agents to demonstrate that they can handle the new LDSOs.

Estimated effort: 20 days @ £500 / day = £10,000

#### **Scripts and Expected results**

- To develop 6 new scripts for the SMRS/LDSO tests to be included in BSCP511
- To develop 4 new scripts to test the Supplier/Agent functionality for new LDSOs for BSCP512

Estimated effort at 10 days per script: 100 days @ £500 = £50,000

Total costs of EP preparation for P62: £60,000

#### **1<sup>st</sup> Year Executions**

Assuming 3 new SMRSs in the first year (at 20 days per SMRS) and 6 Suppliers or Agents wish to work with the new LDSO (at 10 days per participant)

Estimated effort:  $(3 \times 20) + (6 \times 10) = 120$  days @ £500 per day  
= £60,000 estimated 1st year costs

This gives a total impact of £120,000 including the preparations and the qualification of the expected number of initially interested participants.

Ongoing annual costs would be expected to be at a lower level.

Notes:

- All currently approved hubs in the market would have to be reclassified as valid for the PDSO, rather than for a specified GSP group. This would require additional participant testing and could be carried out as part of the normal Entry Process Agent responsibilities, with no additional cost.
- The preparation effort is fairly predictable and therefore the cost of £60,000 likely to be quite accurate.
- The first year costs are based on an assumption of participant intentions which may prove incorrect and as such the costs may prove less accurate.