ISRA Technical Specification

Version Number 28.20

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Prepared by: Cognizant

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Approved by (Cognizant): Project Manager

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1 Introduction

1.1 Purpose

This document [ITSPEC] is the Technical Specification of the Initial Settlements and Reconciliation Agency (ISRA) System.

Its purpose is to provide a specification of how the ISRA Logical Design [ILDATA, ICONMOD, IFUNDEF] is mapped onto the physical platform specified in the Technical Systems Architecture [TSYSARC].

It also specifies how the non-functional requirements in the ISRA User Requirements Specification [ISRAURS] are met.

1.2 Scope

This document forms the deliverable output of the Physical Design stage. The contents are based on the Physical Design Technical Specification Product Description [PDTSPD].

Where there are areas of commonality between the ISRA and NHHDA (Non Half Hourly Data Aggregation) System, these are generally described in the Common Technical Specification [CTSPEC] which applies to both systems.

1.3 Structure of Document

The document is split into four volumes, of which this is the first. The content of each volume is as follows:

Volume 1 (overview and interfaces):

1. Introduction
2. High Level Design
3. Interfaces

Volume 2 (database):

4. Database Specification

Volume 3 (client)

5. The client application and data maintenance (ISY)

Volume 4 (server)

6. Data Loaders (IDL)
7. Profile Production (IDP)
8. Settlement and Reconciliation (IRS)
9. Report Generation (IRP)
10. Archive (IAR)
11. Cross Reference

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1.4 Amendment History

Version	Details
0.100	First draft for internal review.
0.101	Second draft for internal review.
0.990	This document, based on v1.000 of the ISRA Logical Design plus the change requests and clarifications listed below: 22 (LCR017), 33 (LCR013), 38 (LCR018), 49 (LCR013), 51 (LCR001), 52 (LCR011), 58 (LCR002), 59 (LCR003), 63 (LCR012), 76 (LCR006), 88 (LCR014), 94 (LCR024) Clarifications: 4, 5, 12, 17, 19, 20, 21, 23, 24, 28, 29, 31, 32, 33, 34, 37, 39, 40, 41, 42, 45, 51, 52, 53
1.000	Updated to reflect the review comments raised by the Pool (Pool Ref 110PZT), and Logica's response (LOG/EPL/198) This version also includes Clarification 58, 60
1.000a	Unissued. A version of 1.000 restructured into 4 volumes as a precursor to v1.1. No changes made to the content – just re-ordering some sections. The main change was to move all interface definition into Chapter 3.
1.100	Incorporates Change Request: CR371 (LCR047) CR346 (LCR049) Clarifications: 64, 70, 83, 88, 89, 90, 91, 95, 97, 99, 102, 108 Defects: 13, 15, 19, 21, 36, 46, 52, 88, 108, 119, 120, 121, 124, 125, 151, 154, 159, 168, 172, 173, 413, 461, 492, 616, 619, 746, 764, 833 Factory Acceptance Observations: IFAT2/18, 25, 31, 36, 38, 47, 92, 119, 137, 160, 161 IFAT3/24
1.200	Unissued internal draft.
2.000	Incorporates Change Requests: CR344 (LCR056) CR382 (LCR056) CR386 (LCR053) CR402v2 (LCR066) CR427 (LCR058) Defects: 87, 473, 583, 661, 696, 791, 849, 1018, 1065, 1067, 1068, 1071, 1102, 1112, 1113, 1153, 1169, 1177, 1191, 1198, 1253
2.001	Incorporating Change Requests: CR451 (LCR074) CR507 (LCR090) Ors: OR2209; OR2244; OR2314; OR2316; OR2341; OR2383; OR2402 Defects: D764 (OR2367) D1400 (OR2281); D1409 (OR2325) This version is consistent with Release 1.2 of the ISRA software.
2.500	Incorporates comments from v2.001 internal review.
2.901	ISRA release 2 Package 1 for internal review
2.990	Incorporation of internal review comments

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Version	Details
2.991	Incorporates release 2 package 2 Change Requests: CR180 part 1 CR256
2.992	Incorporation of internal review comments and amendments to reflect changes in logical design for Release 2 ISRA Package 2
2.993	Incorporates all comments on release 2 package 1. Consistent with CR290v4.
2.994	Incorporates Pool review comments on Release 2 Package 2 (version 2.992)
2.995	Incorporates changes for Observation Reports: OR 2461, OR 2462 OR 2464 OR 2458 OR 2513 (R2 OR FAT/3) (Pool defect 1512) OR 2512 (R2 OR FAT/2) Incorporates changes for LCR086 and initial LCR097 design
2.996-2.998	Not produced
2.999	Incorporates LCR077 for internal review
3.000	Interim version. Incorporates all R2 changes, as a merger of the separate designs for LCR077 and LCR086. This version does not include the majority of documentation defects raised since the acceptance of the R2 designs. These defects will be included in the next version which will also include a merger with R1.3 changes made in version 5.000. Change bars show amendments since version 2.994.
4.000	Incorporates comments from v2.500 external review. This version is consistent with Release 1.3 of the ISRA software.
4.990	Incorporates Release 2 changes (copied from interim version 3.000) OR 2514 (R2 OR FAT/6) (Pool defect 1514) OR 2527 (R2 OR FAT/4) (Pool defect 1513) OR 2529 (R2 OR FAT/17) (Pool defect 1629) OR 2551 (R2 OR FAT/18) (Pool defect 1630) OR 2588 (Pool defect 1538) OR 2605 (Pool defect 1550) OR 2619 (LCR077 OR FAT/2) OR 2620 (LCR077 OR FAT/4) (Pool defect 1555) OR 2621 (LCR077 OR FAT/14) (Pool defects 1556 & 1574) OR 2627 (Pool defect 1568) OR 2637 (Pool defect 1590) Change bars show amendments since v4.000.
5.000	Incorporates comments from v4.990 external review. This version is consistent with Release 2.0 of the ISRA software.
5.100	Incorporates changes for Observation Reports: OR 2307 OR 2572 OR 2705 OR 2711Change bars show amendments since v5.000.
5.101	Incorporates changes for OR 2703 OR 2740 OR 2746 LCR099 plus Clarifications (028AAW) Incorporating Pool Review Comments
5.102	Incorporates changes for OR 2780: 9.6.26.4 – DuoS Reporting Incorporating changes for OR2775/OR2634 (Vol4, 9.6.1.6)
5.990	Issued version for Pool review incorporating TA2000 Changes: Package 1:

Version	Details
	LCR113 (SIR R577) LCR125 (SIR R669) LCR131, LCR131/3 (SIR R918) and Clarification: 001ldr30 (v3.0). Package 2: LCR85/2 (SIR R293) LCR88/2 (SIR R574) LCR104 (SIR R294) LCR111/2 (SIR R887) LCR137 (SIR R887) LCR124/2 (SIR R295) LCR126 (SIR R728) and Clarification: 002ldr50. Package 2 (MDD) LCR128/1, LCR128/3 (SIR R1116) and Clarifications: LCR136, letter ref. 294SCL01, 002ldr50 OR 2855 (Pool defect 144), OR 2868 (Corrections to TA2000 Logical and Physical Design documentation)
5.991	Incorporating Pool review comments and OR2880 Updated the Project and Line Managers
6.000	Authorised version consistent with release 5.0.0 of the ISRA software. Updated URS Baseline in line with CCN095.
6.001	Incorporating: OR2882 – Defect 186, validation of Tele-switch Register Rule missing from file load. OR2934 – Defect 357, adjusting error message for D0269 loads. OR2911 – Audit tables named ‘insert’ not ‘create’. (PMR 4160). OR2891 – Defect 222 Maintain Profile Classes processing correctly detailed. OR2894 – Files are processed when there are additional fields. LCR108 (SIR R1724) – AFYC Recalculation Report.
6.990	Issued to the Pool for review.
6.999	Incorporating Pool review comments.
7.000	Authorised version consistent with release 5.1.0 of the ISRA software.
7.100	Incorporating LCR150, LCR151 and LCR155 (SIR R2215).
7.990	Incorporating internal review comments. Issued to Pool for review.
7.991	Incorporating Pool review comments. OR 2969 (SIR R1724) to correct typing errors.
7.992	Incorporating Pool review comments.
7.993	Added new exception error for RGGT load in volume 4.
7.994	Incorporating Pool review comments.
7.995	Added screen shots to Vol 3 & 4 for SIR R2215. Updated BUSTEV Human Readable report. Corrected TuoS report structure diagram (which had been overwritten).
7.996	Incorporating Pool review comments.
8.000	Authorised version consistent with release 6.0.0 of the ISRA software.
8.001	Incorporating OR2989 (exception messages for LCR150 inconsistent between software and design).
8.100	Incorporating LCR159, LCR164 and LCR 165 (SIR R2327): Multiple BM Unit support for ISRA/SVAA.
8.990	Issued to the Pool for review.
8.991	Incorporating Pool review comments.
8.992	Incorporating Pool review comments.
8.993	Incorporating OR3003 – Various minor documentation corrections.
8.999	Added screen shots and example reports, updated System Parameters and added Effective to Date on Non-Half BM Unit Allocation form. Includes OR2992 (D0286 & D0269 missing from Volume 4 Appendix A1).

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Version	Details
8.999b	Incorporating Pool review comments. Updated copyright notice.
9.000	Authorised version.
9.990	Incorporating LCR166 – Additional changes for SIR R2327 and OR3016.
9.991	Incorporating Pool review comments.
9.992	Clarified that the BM Unit Registration file may only contain an MDD record to be ignored by ISRA.
10.000	Authorised version.
10.001	Incorporating LCR171/2 – Additional changes for SIR R2327 and OR3025.
10.002	Incorporating LCR162/5 & LCR172 (SIR R2180) and OR3039.
10.003	Incorporating Pool review comments.
10.004	Incorporating OR3062.
10.005	Change to Office 2000.
10.006	Incorporating LCR174.
10.007	Incorporating internal review comments on LCR174 and OR3118.
10.008	Incorporating ELEXON review comments.
10.009	Incorporating LCR197, LCR198 & LCR199
10.010	Incorporating internal review comments for LCR197, LCR198 & LCR199
10.011	Incorporating LCR201 and OR3222 (missing button and extra poplist on Specify SSA Run / Data Aggregation Files form)
10.990	Issued to ELEXON for review
10.991	Incorporating LCR190/2 and changes for OR3224
10.992	Incorporating ELEXON review comments
10.993	Updated document template
10.994	Incorporating LCR191/5
10.995	Incorporating LCR202 (P91) – TuoS Report changes Incorporating updates from internal review. Incorporating Ors 3247, 3250, 3251, 3260 and 3261.
10.996	Incorporating OR3341 Incorporating LCR215/3 Incorporating OR3303
10.997	Issued to ELEXON for review
10.998	Updated post ELEXON review Incorporating Ors 3339 and 3345
11.000	Authorised version
11.001	Updated for LCR189
12.000	Authorised version
12.001	Updated for LCR203/7 (P81) Incorporating D0278002 flow change SCI -> SCE
12.002	Incorporating Ors 3372 and 3373.
12.003	Updated from ELEXON's review, incorporating OR 3392.
13.000	Authorised version
13.001	Updated for BETTA Incorporating OR3401
13.002	Updated following internal review
13.990	Issued to ELEXON for review
13.991	Updated from ELEXON's review
13.992	Incorporating OR3442
14.000	Authorised version

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Version	Details
15.000	Updated document references.
15.990	Updated for LCR235 (Disable the ability for a P0214 file to be loaded into SVAA)
16.000	Authorised version
16.001	Updated for Changes CP850, CP892 and CP947.
16.002	All References to pre-NETA HHDA Performance report removed D0298, D0040 and L0022 File Types updated for latest versions. Issued to ELEXON for review.
16.003	Updated to include feedback from ELEXON. Issued to ELEXON for review.
17.000	Authorised version
17.990	Updated for NGC name change to NGET – P192
18.000	Incorporating changes for: CP929 Removal of performance reports from SVAA; CP1001 Improvements to facilitate reporting and improve usability; CP1093 Failure of suppliers to submit valid standing data relationships.
18.990	Incorporating changes for: CP1116 Upgrade of SVAA to Oracle 10g
18.991	Updated to re-introduce print button details
18.992	Updated from internal review
19.000	Authorised version
19.001	Remove sections made redundant by CP929 which were not originally applied to version 18.000.
19.990	Feb 08 Release draft version: no changes from v19.001
20.000	Authorised version
20.990	Incorporating changes for: CP1209 Inclusion of MSID Counts on the GSP Group Consumption Totals Report CP1227 AFYC Recalculation documentation defect
21.000	Authorised version
21.990	Incorporating changes for ISIS enhancement release
22.000	Authorised version
22.010	Updated document classification
22.011	Include corrections to volume 4 identified in INC000000474166.
23.0	Definitive version.
23.1	P253 – Nov 11 Changes
23.2	Updated with Comments from Review.
23.5	Reapplied 23.2 actions.
23.6	Updates made for Technology Upgrade 2011 Project
23.7	Further updates made for Technology Upgrade 2011 Project
24.0	P253: Final version
24.1	Updated for Technology Upgrade 2012
24.2	Updated with ELEXON review comments for TU 2012
25.0	Baselined after Technology Upgrade 2012 release
26.0	Baselined after Oracle database Upgrade from 11.2.0.2 to 11.2.0.4 (June 14 release phase 1)
27.0	Baselined after June 2014 Release – EMR[1]
28.0	Baselined after Feb 2015 release – CP1418 – Updated for the additional validation when loading the SPM data files
28.1	P305 & P300 - Updated for November 2015 Release changes

[1] EMR changes were directed by the Secretary of State on 1 August 2014

Version	Details
28.2	Incorporated the ELEXON review comments

1.5 Summary of Changes

Changes as indicated in the amendment history.

1.6 References

Mnemonic	Information	Details
[CTSPEC]	Title: Author:	Common Technical Specification Cognizant
[DIS]	Title: Author:	SVA Data Catalogue Volume 1: Data Interfaces ELEXON
[ILDATA]	Title: Author:	ISRA Logical Data Design Cognizant
[ICONMOD]	Title: Author:	ISRA Conceptual Process Model Cognizant
[IFUNDEF]	Title: Author:	ISRA Functional Definition and User Catalogue Cognizant
[ITSPEC]	Title: Author:	This document Cognizant
[ISRAURS]	Title: Author:	SVAA User Requirements Specification ELEXON
[PDTSPD]	Title: Author:	Physical Design Technical Specification Product Description Cognizant
[TAP]	Title: Author:	Technical Architecture Policy Cognizant
[TSYSARC]	Title: Author:	Technical System Architecture Cognizant

1.7 Abbreviations

ASCII	American Standard Code for Information Interchange
BETTA	British Electricity Trading and Transmission Arrangements
BNF	Backus-Naur Form
CR	Change request
DBA	Database Administrator
DPP	Daily Profile Production
DPM	Development Project Manager
EAC/AA	Estimation of Annual Consumption/Annualised Advance

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ERD	Entity Relationship Diagram
FTP	File Transfer Protocol
GSP	Grid Supply Point
ISRA	Initial Settlement and Reconciliation Agency
LAN	Local Area Network
LCR	Logica Change Request
LLF	Line Loss Factor
LOV	List of Values
MDI	Multiple Document Interface
NHHDA	Non Half Hourly Data Aggregation
PC	IBM compatible Personal Computer
PL/SQL	Procedural Language extension of SQL
POSIX	Portable Operating System Interface
RAID	Redundant Array of Inexpensive Disks
SSC	Standard Settlement Configuration
SSR	Standard Settlement and Reconciliation
SVAA	Supplier Volume and Allocation Agent
TCP/IP	Transmission Connection Protocol/Internet Protocol
TPR	Time Pattern Regime
URS	User Requirement Specification
WORM	Write-Once Read Many

1.8 Intellectual Property Rights and Copyright

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2 High level design specification

2.1 System Overview

For settlement dates before the P253 implementation date, the ISRA system is responsible for carrying out the calculations for the Final Initial settlement (SF) between Suppliers and Generators and subsequent reconciliations between Suppliers as meter data becomes available to replace the estimates used in the earlier settlement runs

For settlement dates on and after the P253 implementation, the ISRA system is responsible for carrying out the calculations for the Intial Interim (II) settlement, Final Initial Settlement (SF) between Suppliers and Generators and subsequent reconciliations between Suppliers as meter data becomes available to replace the estimates used in the earlier settlement runs

For Settlement Days from the start of the New Electricity Trading Arrangements (NETA), the ISRA system acts as the Supplier Volume Allocation Agent. The primary difference between the ISR Agent and the SVA Agent is that for Settlement Days from the start of the NETA, the energy volumes allocated by the system are by Balancing Mechanism Unit (BM Unit) rather than by Supplier. A system parameter (the NETA Date) is used to determine whether the software is acting as the ISRA or the SVAA.

There are two main processing activities for the ISRA System, one is the *Standard Settlement and Reconciliation (SSR) Run* which carries out the calculations for settlement and reconciliation. The other is *Profile Production Run*, this generates profiles of consumption for use in the SSR Run and also for use by Data Collectors.

The ISRA System is primarily a file processing system. Almost all input data is received through data files, and all output is through data files and reports. Internally data is split between data files and an Oracle Relational Database. An Oracle Forms user interface is provided for maintaining standing data, and controlling the system.

2.2 System Architecture

ISRA conforms to the System Architecture which is fully specified in section 2.2 of [CTSPEC]. In summary this is:

Server Tier Hosted on a server with a POSIX compliant Operating System, with an Oracle 11g database, and applications written in C and Shell scripts.

Middle Tier Hosted on a separate physical server which may be running the same UNIX as the Server Tier or else Microsoft Windows. The Middle Tier runs two components of Oracle Application Server Forms Services: the Forms Listener Servlet and the Forms Runtime Process. (Other non-ISRA applications may also be using the Middle Tier server).

Client Tier A PC running the Client component of Oracle Application Server Forms Services (but this is downloaded automatically from the Middle Tier to the client and does not need to be installed). The Operating System and Web Browser may be any that are supported by Oracle for use with Oracle Application Server.

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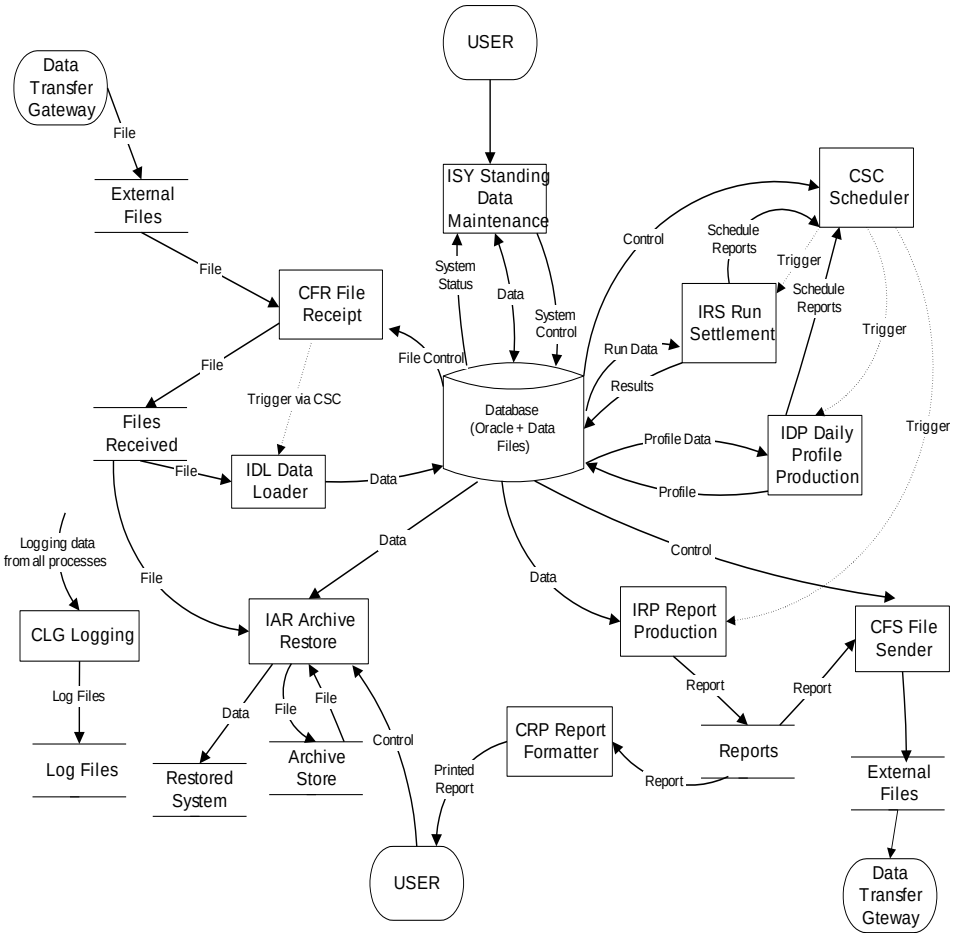
As ISRA is primarily a file based batch processing system, the number of active clients is expected to be relatively small, typically no more than 5, although the software does not impose a limit.

All communications with external systems are via file transfer. ISRA reads files from specified directories, and writes to other directories. It assumes that other systems will be provided to perform the actual transmission of these files.

2.3 System structure

The subsystem structure for ISRA is shown in the diagram below:



Each of the subsystems which make up the ISRA System is shown as a rectangle. These are all given three letter acronyms, those beginning with 'I' are ISRA specific, and those beginning with 'C' are common and specified in [CTSPEC].

Principal data flows are shown to set the subsystems in context.

In addition to the subsystems shown, there are a number of underlying libraries which provide services to the main subsystems. These are:

CSL Server Library

CPH Process Harness

CFM Form Template

CNP Non-POSIX compliant operating system services

2.3.1 IDL Data Loader

This subsystem is responsible for loading the data from received data files into the ISRA database. The initial file receipt is handled by CFR File Receipt which then initiates the relevant ISRA data file loading process via the scheduler (CSC Schedule).

There is a separate file loading process for each type of data file. The data from the file is loaded into either the ISRA database or, in some cases into internal data files.

The receipt and loading of a file is recorded through the operator log via CLG Logger and the contents of the Settlement Configuration Data file is recorded in the audit log using CLG Logger.

2.3.2 ISY Standing Data Maintenance

This subsystem consists of a suite of Oracle screen forms which provide the main user interface to the ISRA system and allows the user to maintain certain standing data for the system.

2.3.3 IDP Daily Profile Production

This subsystem is responsible for carrying out the daily profile production calculations and for producing detailed reports of the results of these calculations.

The process is initiated by the user via Oracle Forms. The core processing is performed by 'C' processes running on the server. Profile production automatically causes the associated reports to be generated.

2.3.4 IRS Run Settlement

This subsystem is responsible for carrying out settlement and reconciliation runs.

The architecture of this subsystem is very similar to IDP. A server process written in 'C' is initiated from Oracle Forms. The standard reports are generated during the settlement run.

2.3.5 IRP Report Production

This subsystem is responsible for the generation of reports. The reports are generated in a machine readable format. They are transmitted to third parties in this format, and can also be formatted into a human readable format by the CRP subsystem for printing.

2.3.6 IAR Archive and Restore

This subsystem is responsible for the removal of old database and file data from the system, and the selective restoring of this data from backup. Data deleted is Settlement Date based data for which the final reconciliation has taken place. Files which are not Settlement Date based are deleted if they were received during the archive period and are no longer in use. Data which is not Settlement Date based is deleted if it was created during the archive period and is no longer in use. File data are input data files, internal data files containing Settlement run and profile production run related data, and report files.

2.3.7 CFR File Receipt

The File Receipt subsystem is responsible for monitoring the arrival of new files, auditing file receipt and invoking file specific processing activities where appropriate using the CSC Scheduler subsystem.

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A daemon process regularly looks for new external files. For each file found a file reference record is created in the database and the file is moved to the local file store. If automatic processing has been configured, an EP98 processing activity is scheduled using the CSC Scheduler subsystem.

2.3.8 CSC Scheduler

The Scheduler subsystem is responsible for initiating and managing other EP98 server processes. A set of common PL/SQL procedures are provided to schedule and control these activities.

A queuing system is used to control server processing. This is a set of queues including an exclusive queue (where only one process may run at a time) to manage mutually exclusive activities.

Each processing operation is assigned a unique activity type and queue identifier. An activity may consist of smaller (child) activities which may run concurrently - such child activities are submitted to run on a different queue.

Activities may have associated parameters - these are held in the database along with scheduling details and activity status.

2.3.9 CLG Logging

The CLG Logging subsystem provides facilities to write to the following log files:

- operator log - records operational events and data errors (eg: ‘SSR run started’, ‘invalid SPM file received’).
- error log - records process and software errors.
- audit log - records details of changes to business data.

2.3.10 CFS File Sender

The File Sender subsystem is responsible for transferring (copying) files from the local file store. If a file transfer fails, it is automatically re-attempted at a later time.

2.3.11 CRP Report Formatter

This subsystem is concerned with the creation of human-readable reports. It operates on the internal report files produced by the system and formats these, based on information held in the database, for human readable display. The resulting output is written to a file which can either be displayed at the client or sent for printing.

2.3.12 CSL Server Library

A common shared library is provided for use by all server processes. This library includes file handling.

2.3.13 CFM Common Forms Library

To support a consistent approach to the user interface a common Forms 6i template is provided which is used by every Form. This ensures that the standards are enforced for each Form and that the user is presented with a common look and feel. The template defines the components of the framework of the ‘outside’ of the Form with the content of the internal ‘box’ being addressed by the functionality required for specific Forms.

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2.3.14 CNP Non POSIX Library

This subsystem contains wrappers for any Operating System functions that are used that are not part of the POSIX standard.

When porting the application to a POSIX compliant operating system other than Compaq Tru64 UNIX, this subsystem should be the main area of code which will need modifying.

There are currently no functions identified for this subsystem.

2.3.15 CPH Process Harness

A common harness is provided for Pro*C EP98 processes which provides standard signal handlers and error reporting facilities.

2.4 Main control flows

The main control flows for ISRA are:

- The arrival of files at the server, these are detected by the CFR subsystem. If the files are configured for automatic processing, this in turn triggers the IDL subsystem using the CSC routines, eg CSC.SUBMIT.
- User initiated activities. These include the manual loading of files, settlement and profile production runs and report generation. The associated server processes are started by requests to the CSC Subsystem.

In addition, the following Oracle Alerts are used for signalling between processes:

- CSC_TERMINATE _ALERT - raised by the CSC daemon process, used by CSC.WAIT_ALL and CSC.WAIT_ANY functions which wait for activities to complete.
- CSC_UPDATE_ALERT - raised by the CSC.SUBMIT and CSC.KILL functions. Used to inform CSC daemon process of new scheduling requests.
- CFS_EXPORT_ALERT - raised by the CFS.EXPORT function. Used to inform the CFS daemon process that a new export request has been received.

2.5 User Interface overview

2.5.1 Web Forms Front End

The forms software consists of an Oracle Applications Server Forms Services application plus a web browser. The user will invoke the application from the web browser (or directly using a Windows shortcut), and will be asked to log in using a username and password.

On start-up the user is asked for a user-name and password. The application uses this information to determine the type of user (Oracle Role) and presents a menu bar containing only commands available to that user type.

2.5.2 Reports

The system produces a number of standard reports. These need to be available in machine readable and printable styles. To avoid duplication, all reports are written to files using a standard machine-readable format. To provide a more human-readable/printable format, the CRP subsystem is used. This translates the report files into a more traditional report format (eg: paginated, with column headers and data

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alignment). This translation is based on formatting information included in the database.

The machine readable format contains a HDR block in addition to the ZPD header block which may repeat some of the data in the ZPD record. This is done to simplify the Human Readable formatting process and to cope with reports which use repeated header information.

Since most report generation work involves access to the database, all reports will be generated on the server, with subsequent (human) viewing and printing of the report, on the client.

In addition the user can generate ad-hoc reports using an ad-hoc reporting tool. These, by their very nature do not have a pre-defined form, but are the result of the user extracting whatever data is required. Oracle is supported by a wide variety of tools, but the one selected for development and testing with ISRA is Oracle Reports.

Graphical presentation can be achieved by importing the human readable or machine readable version of the report into a standard application such as Microsoft Excel and using its standard graphing facilities.

A number of reports consist of a set of detail records along with a summary totals entry. In each case numeric values are rounded to meet the display format for output. Since totals are calculated from the sum of the internal formats and rounded at the end, the total may not necessarily equal the sum of the displayed numbers in the detail records from which it is calculated.

2.5.3 Server

Most users will never need to log-on to the server. However the System Manager will require access for backup and recovery functions and the restoring of archive data. The System Manager will also require access to the server to view the Data Load Standing Data Update reports as these are not available in human readable format. These are implemented as POSIX style command line functions with no special interface requirements.

2.6 Database Overview

2.6.1 Overall Database Structure

ISRA holds data in a local file store and in an Oracle database.

The local file store holds:

- Data Files received by ISRA from other systems,
- Machine-readable Report/Data Files generated as output by ISRA
- Data files used for internal storage of some information.

The Oracle database holds all the logical entities which are not stored in data files.

One of the main design decisions is which data to hold in Oracle and which to hold as data files. The rules applied are as follows:

Data files are used for entities with the following characteristics:

- Individual records are never modified after creation.
- Very large volumes of data are involved.

- The data can be partitioned by settlement day (it may be partitioned by other criteria e.g. GSP Group as well).
- Access to the data is required by a relatively small number of processes.

Where data is held in Oracle, very large tables are avoided by partitioning where necessary. The design aims to keep the size of each individual table below 2Gb. This is not an inherent limit of Oracle, but it makes the database more manageable, for example when exporting and importing tables.

2.6.2 Merging of Logical Entities

In most cases, there is a 1:1 correspondence between entities in the logical design and database tables in the physical design. However some tables have been merged together to improve performance by reducing the number of database reads. Summary information of what has been done is given in this section with further details in Chapter 4.

A common example of where merging has taken place is on link entities with no attributes of their own. In these cases child records have been merged into the parent, particularly when the data which populates the children comes from external sources and there is no defined way to maintain the parent. An example of this is the Date Block entity.

Another case is where the Logical Data Model shows entities as subtypes and super-types. These have been implemented by creating a single entity with the attributes of all subtypes. This is practical as long as the number of different attributes is not excessive. An example of this is the idb_mkt_ppt_roles table.

The following table summarises the entities which have been merged:

Logical Entity	Database Table
Supplier, Distributor, Data Collector Data Aggregator	idb_mkt_ppt_roles
Supplier in GSP Group, GSP Group Distributor, Data Collector in GSP Group	idb_mkt_ppt_role_in_gsp_group
Profile Regression Equation, Period Regression Equation, Regression Coefficient	idb_pd_pfl_regr_coefs
Average Fraction of Yearly Consumption Set, Average Fraction of Yearly Consumption	idb_afycs
Tele-switch Time Pattern Regime, Clock Time Pattern Regime	idb_tprs
Date Block, Time Block	idb_clock_interval
Daily Profile Coefficient, Period Profile Class Coefficient	idf_pd_pfl_class_coefs
Tele-switch Register Rule Tele-switch Contact Rule	idb_teleswitch_contact_rules

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The merging of Average Fraction of Yearly Consumption Set and Average Fraction of Yearly Consumption allows for full flexibility for the periods of effectiveness of the Average Fraction of Yearly Consumption values. The effectiveness dates can be arranged such that they coincide with those of a Valid Settlement Configuration Profile Class, or span several. The effectiveness ranges are managed by the maintenance application to ensure that deletion of a AFYC record does not leave any gaps in the period it covered by adjusting the effectiveness ranges of the remaining records.

2.6.3 Lists of Valid Values

As is common practice in physical database design, lists of valid values for various columns are all combined into one table to avoid the proliferation of small tables. Each set of values is called a domain. Two tables are defined to hold this information: cdb_ref_domains holds a record for each domain and cdb_ref_values holds a record for each value. A domain is defined for each column which has an inclusive fixed set of valid values, e.g.: Market Roles. Most of the domains were not defined as entities in the logical design however the following entities were, and have been absorbed into cdb_ref_domains /cdb_ref_values:

Domain Entities
Market Role
Day Type
Day of the Week
Regression Coefficient Type
Measurement Quantity
SSR Run Type
Tele-Switch Contact

2.6.4 Tables with no Logical Equivalent Entity

Several tables have been added which have no equivalent in the Logical Design. These are used to support the physical implementation, many of the processes are controlled by these tables. This simplifies the implementation and provides greater flexibility. Examples are: idb_params and idb_rept_params.

Full details of these tables are given in Appendix A which describes all the tables.

2.6.5 Elimination of Logical Entities

The ISRA logical model contains several entities which have been eliminated from the physical design altogether. These are as follows:

Entity	Reason for Elimination
Settlement Class	A link entity with no attributes of its own. All the data items comprising its primary key are already stored in its child entities.
Clock Time Changes	Data items moved to the idb_sett_days table.
Settlement Period	The labels it held for reports will be produced by a function.

2.6.6 Implementation of Logical Entities by Data Files

The ISRA logical model contains several entities where implementation as an Oracle database table is inappropriate. The entities which are being handled in this way are:

	Logical Entity	Identifier
1	Aggregated Supplier DA Period Consumption	idf_agtd_sup_da_pd_consums
2	Aggregated BM Unit Period Consumption	idf_agtd_bm_pd_consums
3	Aggregated Supplier Period Consumption	idf_agtd_sup_pd_consums
4	Period Profile Class Coefficient	idf_pd_pfl_class_coefs
5	Basic Period Profile Coefficient	idf_basic_pd_pfl_coefs
6	Combined Period Profile Coefficient	idf_combined-pd_pfl_coefs
7	Period Time Pattern State	idf_pd_time_pattern_states
8	Supplier Purchase Matrix	idf_sup_purchase_matrices
9	Profiled SPM	idf_pfld_spms
10	Aggregated Supplier DA Period Consumption Line Loss	idf_agtd_sup_da_pd_consums_llf
11	Period Time Pattern State	idf_tpr_time_patterns
12	LLF/SSC Data Mapping	idf_llf_ssc_mapn
13	Aggregated Supplier DA Period Disconnection Volume	idf_agtd_sup_da_pd_discon_volume
14	Aggregated Supplier Period Disconnection Volume	idf_agtd_sup_pd_discon_volume
15	Profiled DPM	idf_pfld_dpms
16	Disconnection Purchase Matrix	idf_discon_purchase_matrices
17	Aggregated BM Unit Period Disconnection Volume	idf_agtd_bm_pd_discon_volume
18	Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes	idf_discon_msi_hh_dd_volume

The files will be managed through the common file handling facilities, but named according to the entity they represent and the directory structure holding them will reflect their content.

The files have the following characteristics:

- A separate file is used for each settlement day.
- Where data is run specific, a separate file is used for each run. This can be an SSR run, profile production Run, SSA Run, or Data Aggregation Run.
- Where data is GSP Group specific, a separate file is used for each GSP Group.

The common file handling facilities will be enhanced to provide a layer to allow ISRA to create and read files into and from directories and files whose path and name is given in the following table;

Identifier	Path
idf_sup_purchase_matrices	<ROOT>/<SettDate>/<SettCode>/<GspId>/nM<da_id><agg_run>.d
idf_agtd_sup_da_pd_consums	<ROOT>/<SettDate>/<SettCode>/<GspId>/hM<da_id><agg_run>.d

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Identifier	Path
idf_agtd_bm_pd_consums	<ROOT>/<SettDate>/<SettCode>/<GspId>/<SSR_Run_No>/abpc.d
idf_agtd_sup_pd_consums	<ROOT>/<SettDate>/<SettCode>/<GspId>/<SSR_Run_No>/aspc.d
idf_pfld_spms	<ROOT>/<SettDate>/<SettCode>/<GspId>/<SSR_Run_No>/pspm.d
idf_pd_pfl_class_coefs	<ROOT>/<SettDate>/profiles/ppcc<Gsp_Id>.d
idf_basic_pd_pfl_coefs	<ROOT>/<SettDate>/profiles/bppc<Gsp_Id>.d
idf_combined_pd_pfl_coefs	<ROOT>/<SettDate>/profiles/cppc<Gsp_Id>.d
idf_pd_time_pattern_states	<ROOT>/<SettDate>/tpr.d
idf_agtd_sup_da_pd_consums_llf	<ROOT>/<SettDate>/<SettCode>/<GspId>/g<da_id><agg_run>.d
idf_tpr_time_patterns	<ROOT>/<SettDate>/tpr2.d
idf_llf_ssc_mapn	<ROOT>/data/lsdm/l<ddmmhh24yyss>.d
Aggregated Supplier DA Period disconnection Volume	<ROOT>/<Sett Date>/<Sett Code>/<GSP Id>/~~adh~~<da_id><agg_run>.d
Aggregated Supplier Period disconnection Volume	<ROOT>/<Sett Date>/<Sett Code>/<GSPId>/<SSR_Run_No>/aspdv.d
Profiled DPM	<ROOT>/<Sett Date>/<Sett Code>/<GSP Id/<SSR_Run_No>/pdpm.d
Disconnection Purchase Matrix	<ROOT>/<Sett Date>/<Sett Code>/<GSP Id>/~~bdn~~<da_id><agg_run>.d
Aggregated BM Unit Period disconnection Volume	<ROOT>/<Sett Date>/<Sett Code>/<GSPId>/<SSR_Run_No>/abpdv.d
Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes	<ROOT>/ldceam/admhh.d

where:

<SettDate> is of the form 'yyyymmdd' and

<ROOT> is derived from <SettDate> as follows;

If there is a single record in the database table ‘idb_flat_file_roots’ whose effective date range includes <SettDate> then <ROOT> is assigned the value defined in the ‘path’ column for this record. Otherwise <ROOT> is assigned the value defined in the system parameter ‘Flat File Toplevel Directory’.

The remaining component of the directory path and the filename are derived from the primary key of the entity.

This technique enables flat files to be distributed across multiple directories, on potentially different disks.

Standard Unix links can be used to further spread the structure under the defined root directory.

By using flat files for the largest entities the size of the ORACLE database is kept relatively small. This has significant performance advantages and allows significant scalability of the ISRA system. Increasing volumes are met largely by increased file sizes which can be accommodated by adding extra disk storage capacity. The ORACLE database size is sufficiently small that large-scale growth can occur without reaching any significant limits.

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2.6.7 Distribution of Tables over Tablespaces and Disks

The Physical Design does not rely on a specific distribution of files across disks. For input, data and report files, this is controlled by the cdb_default_directory and cdb_file_directory database tables and is transparent to the application.

The data files are split down into separate files for each settlement day and GSP Group. This allows the potential for parallel runs and processes within each run to be targeted at separate disks.

For the database, Oracle hides the details of the physical storage from the application.

Thus the physical design allows a great deal of flexibility in planning an installation so as to spread the disk activity across multiple disks.

An actual implementation will depend on the size and number of disks used, and the use of mirroring/RAID. However the Installation Guide for ISRA will give a default layout based on that used for System Testing.

2.7 Auditing

The general principles of auditing are described in section 2.7.3 of the Common Technical Specification [CTSPEC].

The mechanism for capturing data to be audited uses database triggers on the tables for which audit changes are required. Since ISRA does not need to distinguish between online and batch changes, the triggers are written to fire irrespective of the initiating user (ie: the filtering out of changes by the 'system' user described in [CTSPEC] is not used by ISRA)

2.8 Fallback, Backup and Recovery

2.8.1 General

The overall strategy is defined in section 2.8 of [CTSPEC].

A characteristic of ISRA is the very large data volumes. Most of this data is held in files rather than the database, is read-only and is held on a settlement day basis. The large volumes come from the need to retain this data on-line for two years. It is expected that this data will only be backed up on a daily basis on the day on which it is created.

It is expected that although the Oracle Database is small compared to the volume of files, it is still too large to take a full backup on a daily basis. Therefore a full backup will be taken at weekends, with all re-do logs since the backup being backed up each day.

Thus the daily backup will consist of:

- New read-only files
- Audit logs
- Database re-do logs

The weekly backup should include the complete database, and files. It is probably not necessary to back-up all files every week. A reasonable weekly backup could be:

- All database files

- All internal data files
- All input files received in the last ‘n’ (eg 4) weeks.
- All output/report files sent in the last ‘n’ weeks.

Thus a recovery of the latest full backup tape would allow operations to continue, but additional tapes (one for every ‘n’ weeks) would be needed to recover all data which is held online.

It is assumed that compression of data will be used during backup. As most of the information on the system is held as text files, this should significantly reduce the volumes involved, probably at least by a factor of two.

Given the volume of data files, it seems likely that the ISR Agent may adopt a strategy to manage the number of disks required. This could involve removable media such as CDs or WORM drives. This would have an impact on the backup strategy, probably a positive one in that it should reduce the data volumes to be backed up.

2.8.2 Archive Backup

On a regular basis, probably monthly, the ISR Agent will archive data and remove it from the live ISRA System. The archive is a two stage process, first the data is backed-up, and then old data is deleted from the system. The deletion and subsequent restore are specified in Chapter 10.

Where a backup is used for archive, it must include the following:

- The entire Oracle database.
- All internal data files for the settlement dates within the range being archived.
- All input files for a specific settlement date within the range being archived.
- All output data files for a specific settlement date within the range being archived. (For reports only the data file, rather than the human-readable version is archived).
- All input data files which do not have a specific settlement date associated with them.
- All output data files which do not have a specific settlement date associated with them.

The files for backup are selected based on the contents of the cdb_data_file, and cdb_file_reference tables.

Chapter 10 includes an estimate for the size of the archive backup.

2.9 Error Handling

The common approach for error handling described in the Common Technical Specification [CTSPEC] applies to the ISRA system.

2.10 Security

The use of the ISRA system is controlled to ensure that only authorised users are granted access to the system. The general principles used to control system security and access are described in the Common Technical Specification [CTSPEC].

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The security of the internal data files is handled through POSIX Operating System facilities. Each user-role is mapped onto an operating system 'user group'. Once created, data files are set to read-only for all user-roles which have access to them, with the addition of 'delete' for those users allowed to run the archive function. File ownership is set such that it can only be modified by the ISRA System Manager.

Once logged on a user is only presented with functions that his role authorises him to use, this prevents a logged in user from attempting to breach security. Unauthorised attempts to log-in can be monitored in two ways:

- Logins to the ISRA application on a PC are controlled through the standard Oracle audit facilities. Attempted logins can be monitored by enabling "SESSION" auditing. Audit information can be reported to either a database table or files.
- Attempted logins to the server can be monitored by the operating system. Generally this will be done in a platform and site specific way.

2.10.1 User Roles

The following roles are required by the ISRA system. The activities for each role are described in the ISRA logical design ([IFUNDEF] User Catalogue)

Role	OS Access
ISRA Standing Data Manager	No
ISRA Operations Supervisor	No
ISRA Operator	No
ISRA System Manager	Yes
ISRA Auditor	Yes

2.11 Operational design

2.11.1 Daily Activities

The main daily activities on the system are:

- Standing data maintenance
- Browsing data
- Requesting Reports
- Loading Data Files
- Profile Production
- SSR Runs
- Backup

In planning a daily schedule, the following constraints apply:

- For settlement dates before the P253 implementation date, the schedule must allow the timetables for Final Initial settlement (SF) and subsequent reconciliations to be met.
- For settlement dates on or after the P253 implementation, the schedule must allow the timetables for Initial Interim (II),Final Initial settlement (SF) and subsequent reconciliations to be met.
- During backup the database is closed down and no other system activities are possible.
- The Profile Production Run locks nearly all the standing data edit functions. This is to ensure that a consistent set is used during the run.
- Active batch processes (PPR, SSR) will degrade the interactive performance of the system.

The most significant constraint from the settlement timetable is the need to perform the Final Initial Settlement between 9am on D+15 and 9am on D+16. To allow maximum time for re-runs it is assumed that this will be done as soon as possible, ie at 9am. Each day there will be between 1 and 5 Final Initial Settlements to perform.

For settlement dates on and after the P253 implementation, the Initial Interim Settlement will be performed anytime between 9am and 6pm on D+4.

The remaining batch activities, Final Initial Settlement Run, Reconciliation Runs, and Profile Production probably have enough slack to allow them to be scheduled over-night.

It is expected that the backup will be performed before the over-night batch processing. Thus a typical schedule could be:

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9am	Initial Interim Settlements, Final Initial Settlements (up to 6)	Interactive Activities: Standing Data Maint Browsing Data Loading
6pm	Backup	
9pm 8am	PPR Runs (up to 6)	Reconciliation Runs (up to 20)

The "up to" limits on the number of runs stated in the example timetable above are indicative of the number of runs typically anticipated. There are no constraints within ISRA on the number of runs that can be requested in a day.

2.11.2 Weekly Activities

The weekly activities in addition to the daily ones are:

- Full system backup
- Analysis of Oracle performance
- Archive (more likely to be done monthly, but considered here).

The settlement and reconciliation timetables are based around working days. It is assumed that these weekly activities can be scheduled outside working days, ie at weekends.

The system backup is discussed in section 2.8, and is expected to be time consuming and take place every week.

As the Oracle Cost Based Optimiser is used, the Oracle Analyse tool needs to be run on a regular basis to generate statistics on table usage for the Optimiser. This is a lengthy activity, and so is expected to be run at weekends. Other Oracle administrative activities may also be required, eg analysing fragmentation of table-spaces.

Archive will probably be performed once a month, it is expected that it will be run following a successful full system backup at the weekend.

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3 Interface Specification

3.1 External Interfaces

3.1.1 General

The external interfaces to the ISRA System are either files or user driven interfaces. Files can be import or export files. The import or data load files have formats which are described in the following sections. The export files can be reports or data extracts; their formats are described in the IRP Reports Subsystem Specification.

All of these files have a common machine readable structure which is described in the Common Subsystem Technical Specification [CTSPEC]. In summary, files contain records, which are delineated by newline characters and identified by three character codes; records contain fields which are separated by a single character. All files contain header ('ZHD') and footer ('ZPT') records as defined in [CTSPEC] and can contain an additional data file header ('ZPD').

If the file received contains extra fields, appended to the end of a record and those fields are not documented in the following section, ISRA will ignore the additional fields during processing.

User driven interfaces are described in the ISY Standing Data Maintenance Subsystem Specification.

The descriptions of Import Files contained in following sections consist of

1. File type, the last three digits of which indicate the version of the file format,
2. A table which details the file format,
3. A Jackson Structure Diagram which details the hierarchical relationship between records and their order in the file.

Data types indicated in the file format tables are defined in the Common Subsystem Technical Specification. Notice that decimals and integers are followed by parentheses containing information about the number. These follow Oracle usage ie: integer(n) means the number can have n digits; decimal(p,s) means that the number can have p digits and that s of them can follow the decimal point.

File format tables contain a 'comments' section which is used to indicate the value of each field and / or its destination in the ISRA System database. An '(O)' in this section indicates fields which are optional. Fields indicated as 'Null' should never have a value.

Not all of the database column values necessary for a successful database write are found in the import file, some values may need to be derived. Similarly all output fields for an export file are not necessarily found in the database they may need to be derived. For example when loading Aggregated Half Hour Data, SUP.Supplier Id is destined for idb_sup_data_agtns.mkt_ppt_id; idb_sup_data_agtns.mkt_ppt_role_code also needs to be populated and the value of this column is derived by the Data Load process.

The files transferred into and out of the system are summarised in the following figure:

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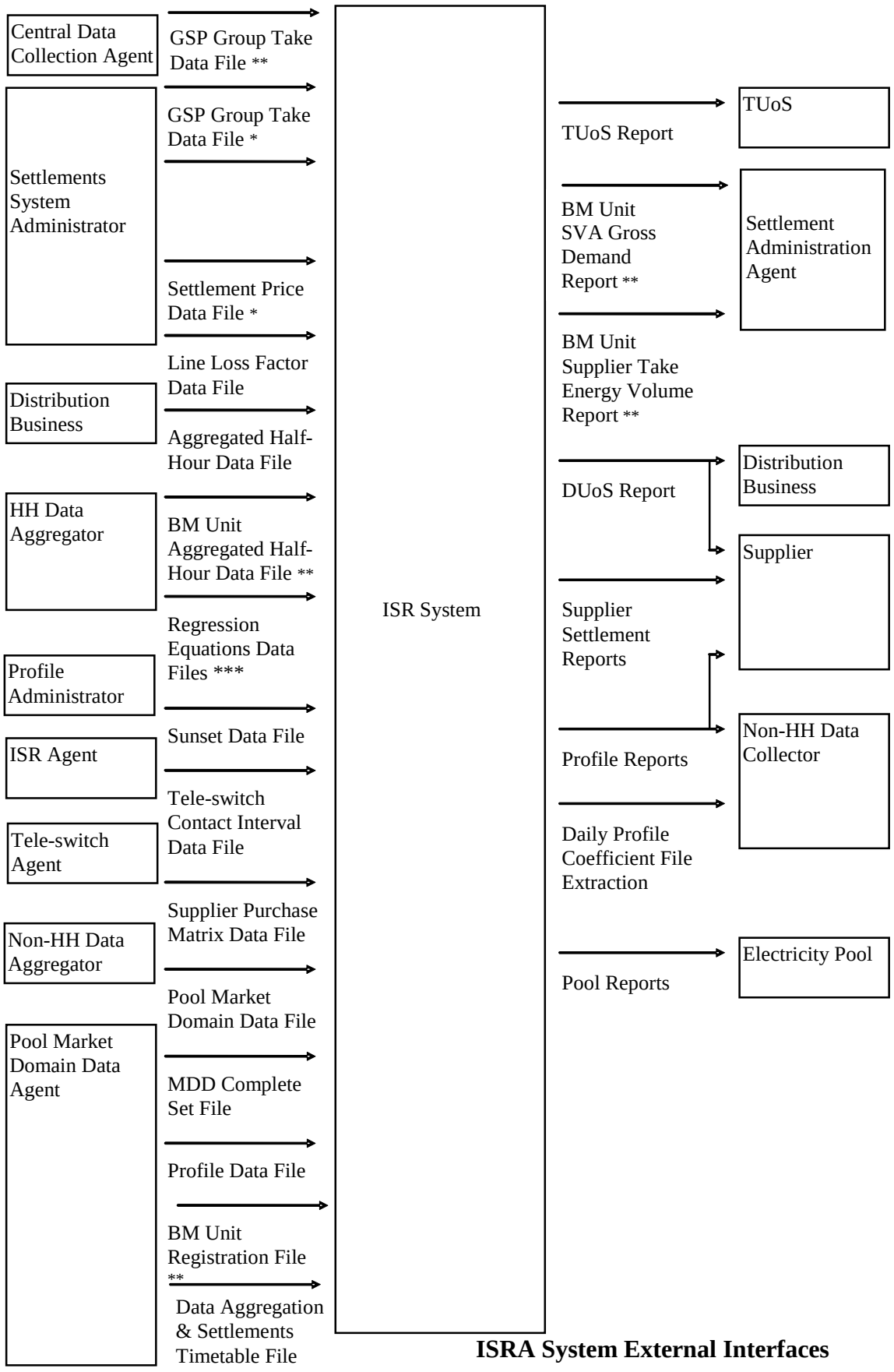

ISRA System External Interfaces

* File only valid for Settlement Days before the start of the NETA.

** File only valid for Settlement Days from the start of the NETA.

*** This includes P0014001 (England and Wales) and P0214001 (Scotland only) regression coefficient files[2].

The following table summarises the estimated average size and frequencies of use for the external interfaces:

Settlement Day Based Data Files

Data File Name	Records per File	File Size (bytes)	Files per settlement day	Total volume per settlement day (bytes)
GSP Group Take Data File (for Settlement Days before NETA start)	52	2,475	26	64,350
GSP Group Take Data File (for Settlement Days from NETA start)	52	2,475	65	160,875
Aggregated Half Hour Data / BM Unit Aggregated Half-Hour Data[3]	8,258	75,157	975	73,277,685
Settlement Price Data File	52	3,270	26	85,020
Supplier Purchase Matrix Data File	48,422	6,533,004	65	424,645,260

Other Data Files

Data File	Records per File	File Size (bytes)	Files per year	Total volume per year (bytes)
Line Loss Factor Data File	2,923,408	52,321,441	40	2,092,857,640
Market Domain Data Complete Set	7,252	474,082	12	5,688,984
Pool Market Domain Data	146,526	3,847,171	12	46,166,052
Regression Equations Data File	603,410	11,189,247	1	11,189,247
Sunset Data File	4,760	119,013	1	119,013
Profile Data File	58	4,479	1	4,479
Tele-Switch Contact Interval Data File	1,323	11,952	365	4,362,480
Data Aggregations and Settlements Timetable File	368	11,146	1	11,146
BM Unit Registration Data File	4,044	120,899	12	1,450,788

Daily Reports

Report Name	Records per Report	Report Size (bytes)	Reports per settlement day	Total volume per settlement day (bytes)
DUOS (Distributor)	31,454	9,436,050	200	1,887,210,000

[2] Loading of the P0214001 file is disabled as a result of LCR235.
[3] Each Half-Hourly Data Aggregator will send either Aggregated Half-Hour Data or BM Unit Aggregated Half-Hour Data within a GSP Group and Settlement Run, but not both.

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Report Name	Records per Report	Report Size (bytes)	Reports per settlement day	Total volume per settlement day (bytes)
DUOS (Supplier)	43,384	13,015,241	145	1,887,210,000
HH Demand	47,424	1,198,080	145	343,824,000
Supplier Settlement Report Header	57	2,280	145	330,600
Supplier BM Unit Report	18,425	736,997	145	106,864,585
Supplier Purchase Matrix Report	21,718	2,171,807	145	314,912,000
Deemed Take	637	87,906	145	12,746,370
Supplier Purchase	637	50,960	145	7,389,200
GSP Group Consumption Totals Report	19,968	1,717,248	145	249,000,960
TUOS	218,863	9,411,109	5	47,055,545
BM Unit Supplier Take Energy Volume Report	196,390	4,320,580	5	21,602,900
BM Unit SVA Gross Demand Report	196,390	4,320,580	5	21,602,900
PR - SSC	71,940	1,798,500	54	97,119,000
PR - Standing Profile Data	2,984	298,400	54	16,113,600
PR - Daily Profile Data	539,565	161,869,500	32	5,179,824,000
PR - Daily Profile Extract	20,709	455,598	14	6,378,372
PR - Tele-Switch Contact Interval Data Report	1,324	33,100	29	959,900

Pool Reports

Report Name	Records per Report	Report Size (bytes)	Per

Report Name	Records per Report	Report Size (bytes)	Per
AFYC Recalculation Report	65,562	1,639,040	Per yearly report

The derivation of these figures is detailed in Volume 4, Appendix A.

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3.1.2 GSP Group Take Data File

The following table shows the file format (excluding File Footer):

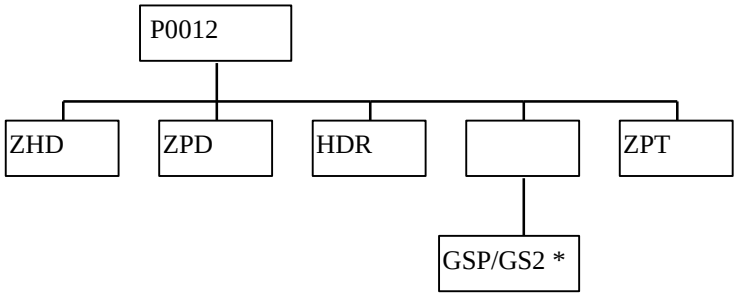
NB: The file may contain either GSP or GS2 record types. The ISRA system will process a file containing either type or a mixture of both within one file.

File Type: P0012

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= P0012001
3	From Role Code	text(1)	= S
4	From Participant Id	text(4)	Id of Settlements System Administrator originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
ZPD - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	to idb_ssa_sett_runs.sett_date to idb_ssa_sett_gsp_group. sett_date to idb_gsp_group_takes. sett_date
3	Settlement Code	text(2)	Null
4	Run Type Code	text(2)	= E
5	Run Number	integer(7)	to idb_ssa_sett_runs. ssa_sett_run_number to idb_ssa_sett_gsp_group. ssa_sett_run_number to idb_gsp_group_takes. ssa_sett_run_number
6	GSP Group	text(2)	to idb_ssa_sett_gsp_group. gsp_group_id to idb_gsp_group_takes. gsp_group_id
HDR - GSP Group Take File Header/Daily GSP Group Purchases			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= HDR
2	CDCS/CDCA Extract Number	integer(2)	to idb_ssa_sett_runs. cdsc_extract_number
3	SSA/CDCA Settlement Run Type Id	text(1)	to idb_ssa_sett_runs. sett_run_type_id
4	Daily GSP Group Purchases	decimal (15,3)	to idb_ssa_sett_gsp_group. daily_gsp_group_purchases
GSP/GS2 - GSP Group Take			

Field	Field Name	Type	Comments
1	Record Type	text(3)	= GSP
2	Settlement Period Id	integer(2)	to idb_gsp_group_takes. sett_pd_id
3	Period GSP Group Purchases	decimal (15,3)	to idb_gsp_group_takes. pd_gsp_group_purchases
4	GSP Group Take	decimal (14,4)	to idb_gsp_group_takes. gsp_group_take

Repeating structure of file:



3.1.3 Line Loss Factor Data File

The following table shows the file format (excluding File Footer):

File Type: D0265

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0265001
3	From Role Code	text(1)	= R (distributor)
4	From Participant Id	text(4)	Id of Distributor originating the file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
DIS - Distributor			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= DIS
2	Distributor Id	text(4)	to idb_sett_pd_llfs. dist_mkt_ppt_id
LLF - Line Loss Factor Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= LLF
2	Line Loss Factor Class Id	integer(3)	to idb_sett_pd_llfs.llf_class_id
SDT - Settlement Date			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SDT
2	Settlement Date	date	to idb_sett_pd_llfs.sett_date
SPL - Settlement Period Line Loss Factor			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPL

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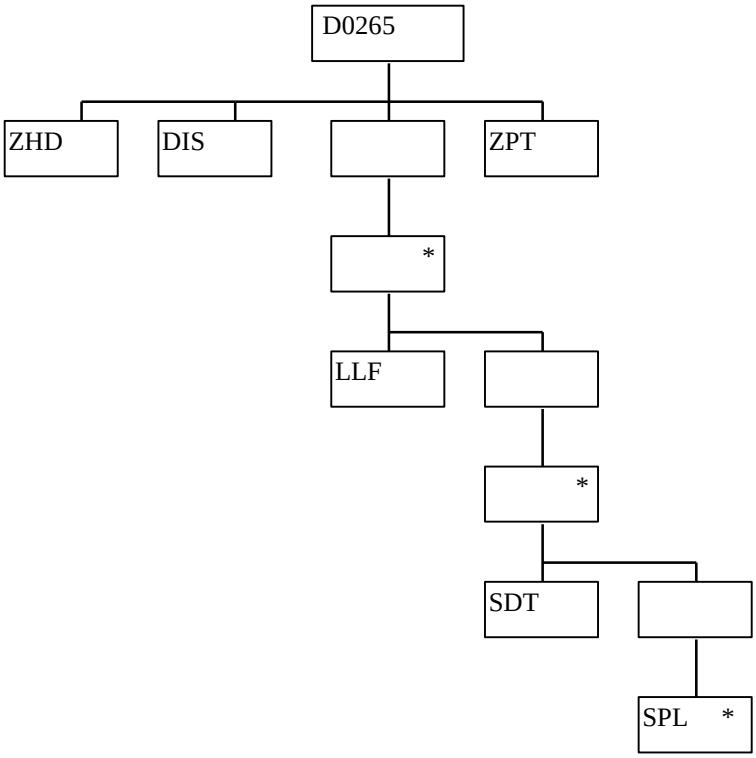
2	Settlement Period Id	integer(2)	to idb_sett_pd_llfs.sett_pd_id
3	Line Loss Factor	decimal (5,3)	to idb_sett_pd_llfs.llf

Repeating structure of file:



3.1.4 Aggregated Half-Hour Data File

The following table shows the file format (excluding File Footer):

File Type: D0040002

Notice that the destination of this file includes the ISRA System flat file store. The flat file contains records of type idf_agtd_sup_da_pd_consums[4], separate files are created for each Settlement Date, Settlement Code and GSP Group.

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0040002
3	From Role Code	text(1)	= A

[4] For Settlement Days before the start of the NETA, this flat file will not include BM Unit Id.

4	From Participant Id	text(4)	Id of Half Hour Aggregator originating file to idb_sup_data_agtns.da_mkt_ppt_id and idf_agtd_sup_da_pd_consums.da_mkt_ppt_id
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
ZPD - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	to idb_sup_data_agtns.sett_date to idf_agtd_sup_da_pd_consums.sett_date
3	Settlement Code	text(2)	to idb_sup_data_agtns.sett_code
4	Run Type Code	text(2)	= A
5	Run Number[5]	Integer(7)	to idb_sup_data_agtns.data_agtn_run_number to idf_agtd_sup_da_pd_consums.data_agtn_run_number
6	GSP Group	text(2)	to idb_sup_data_agtns.gsp_group_id to idf_agtd_sup_da_pd_consums.gsp_group_id
SUP – Supplier			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	to idb_sup_data_agtns.sup_mkt_ppt_id to idf_agtd_sup_da_pd_consums.sup_mkt_ppt_id
CCC - Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	Integer(2)	to idf_agtd_sup_da_pd_consums.consum_comp_class_id
SET - Settlement Period/Data Aggregator HH MSID Count			

[5] For a Data Aggregator, must be unique across all settlement days for a GSP Group. For an individual settlement day/settlement code, the order of the run numbers should reflect the order the runs were performed in.

Field	Field Name	Type	Comments
1	Record Type	text(3)	= SET
2	Settlement Period Id	Integer(2)	used to identify relevant fields for ASC/ASL records in idf_agtd_sup_da_pd_consums ie agtd_sup_consum_01 / _02 etc
3	Data Aggregator HH MSID Count	integer(10)	to idf_agtd_sup_da_pd_consums. da_hh_msid_count
ASC – Aggregated Supplier Consumption			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ASC
2	Aggregated Supplier Consumption	decimal (14,4)	to idf_agtd_sup_da_pd_consums. agtd_sup_consum_nn
ASL – Aggregated Supplier Line Loss			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ASL
2	Aggregated Supplier Line Loss	decimal (14,4)	to idb_agtd_sup_da_pd_consums. agtd_sup_line_loss_nn

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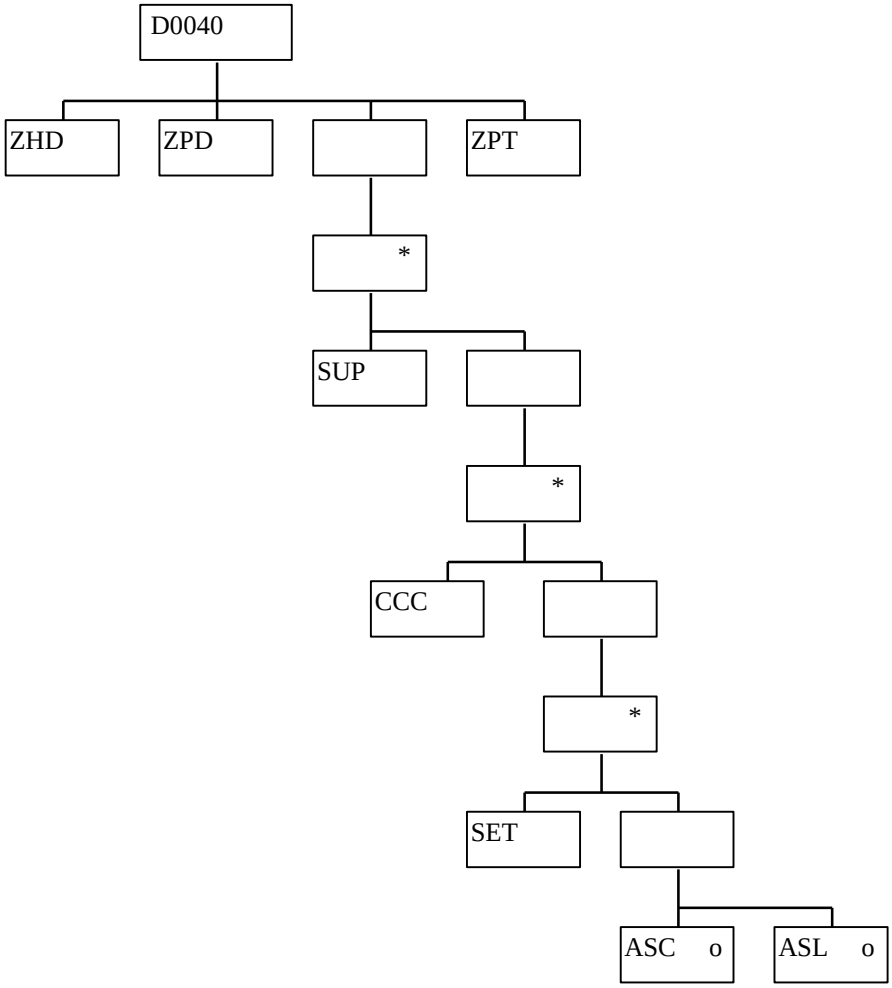
Repeating structure of file:



File Type: D0040003

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0040003
3	From Role Code	text(1)	= A
4	From Participant Id	text(4)	Id of Half Hour Aggregator originating file to idb_sup_data_agtns.da_mkt_ppt_id and idf_agtd_sup_da_pd_consums.da_mkt_ppt_id
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
ZPD - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**

1	Record Type	text(3)	= ZPD
2	Settlement Date	date	to idb_sup_data_agtns.sett_date to idf_agtd_sup_da_pd_consums.sett_date
3	Settlement Code	text(2)	to idb_sup_data_agtns.sett_code
4	Run Type Code	text(2)	= A
5	Run Number	Integer(7)	to idb_sup_data_agtns.data_agtn_run_number to idf_agtd_sup_da_pd_consums.data_agtn_run_number
6	GSP Group	text(2)	to idb_sup_data_agtns.gsp_group_id to idf_agtd_sup_da_pd_consums.gsp_group_id

SUP – Supplier

Field	Field Name	Type	Comments
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	to idb_sup_data_agtns.sup_mkt_ppt_id to idf_agtd_sup_da_pd_consums.sup_mkt_ppt_id

CCC - Consumption Component Class

Field	Field Name	Type	Comments
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	Integer(2)	to idf_agtd_sup_da_pd_consums.consum_comp_class_id

SET - Settlement Period/Data Aggregator HH MSID Count

Field	Field Name	Type	Comments
1	Record Type	text(3)	= SET
2	Settlement Period Id	Integer(2)	used to identify relevant fields for ASC/ASL records in idf_agtd_sup_da_pd_consums ie agtd_sup_consum_01 / _02 etc
3	Data Aggregator HH MSID Count	integer(10)	to idf_agtd_sup_da_pd_consums.da_hh_msid_count

ASC – Aggregated Supplier Consumption

Field	Field Name	Type	Comments

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1	Record Type	text(3)	= ASC
2	Aggregated Supplier Consumption	decimal (14,4)	to idf_agtd_sup_da_pd_consums. agtd_sup_consum_nn

ASL – Aggregated Supplier Line Loss

Field	Field Name	Type	Comments
1	Record Type	text(3)	= ASL
2	Aggregated Supplier Line Loss	decimal (14,4)	to idb_agtd_sup_da_pd_consums. agtd_sup_line_loss_nn

24J – Supplier

Field Name	Type	Comments	
1	Record Type	text(3)	= SID
2	Supplier Id	text(4)	to idb_sup_data_agtns. sup_mkt_ppt_id to idf_agtd_sup_da_pd_consums. sup_mkt_ppt_id

25J - Consumption Component Class

	Field Name	Type	Comments
1	Record Type	text(3)	= CON
2	Consumption Component Class Id	Integer(2)	to idf_agtd_sup_da_pd_consums. consum_comp_class_id

26J – Line Loss Factor Class

	Field Name	Type	Comments
1	Record Type	text(3)	= LLL
2	Distributor Id	text(4)	to idf_agtd_sup_da_pd_consums_ lll distributor_id
3	Line Loss Factor Id	Integer(3)	to idf_agtd_sup_da_pd_consums_ lll llfc_id

27J - Settlement Period/Data Aggregator HH MSID Count

	Field Name	Type	Comments
1	Record Type	text(3)	= SPD
2	Settlement Period Id	Integer(2)	used to identify relevant fields for ASC/ASL records in idf_agtd_sup_da_pd_consums ie agtd_sup_consum_01 / _02 etc
3	Data Aggregator HH MSID Count	integer(10)	to idf_agtd_sup_da_pd_consums. da_hh_msid_count

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28J – Aggregated Supplier Consumption			
	Field Name	Type	Comments
1	Record Type	text(3)	= AGG
2	Aggregated Supplier Consumption	decimal (14,4)	to idf_agtd_sup_da_pd_consums.agtd_sup_consum_nn

29J – Aggregated Supplier Line Loss			
	Field Name	Type	Comments
1	Record Type	text(3)	= ALL
2	Aggregated Supplier Line Loss	decimal (14,4)	to idb_agtd_sup_da_pd_consums.agtd_sup_line_loss_nn

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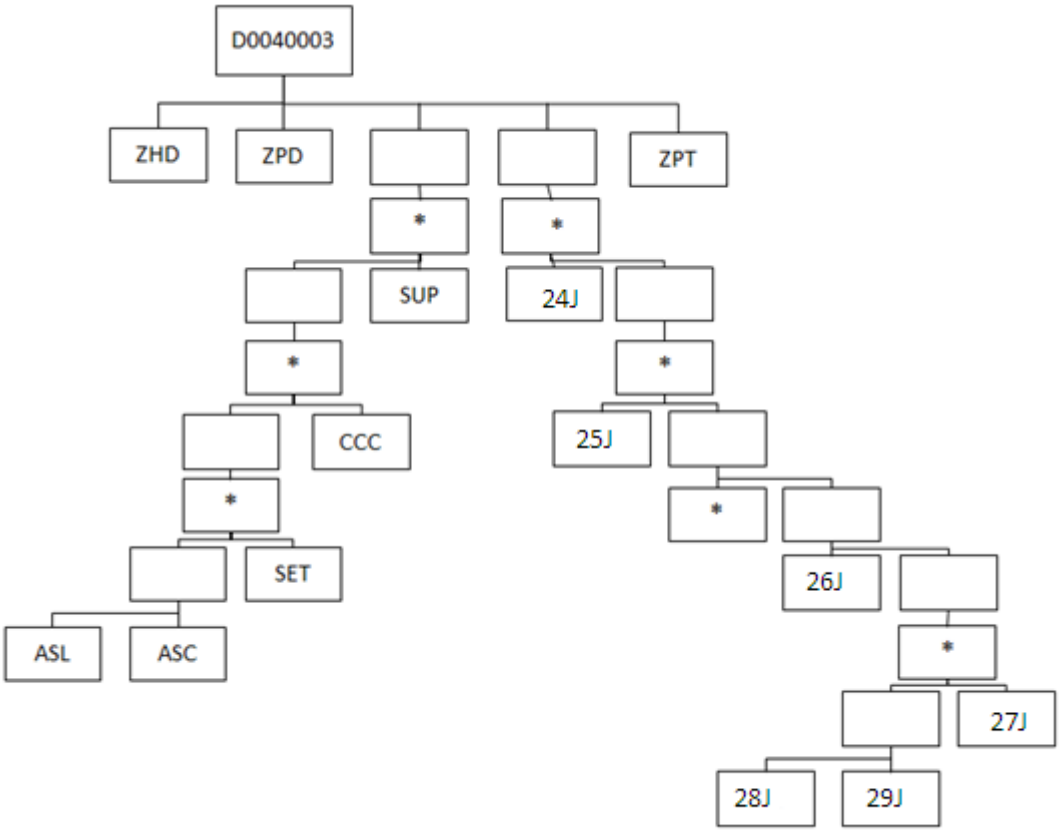
Repeating structure of file:



3.1.5 BM Unit Aggregated Half-Hour Data File

The following table shows the file format (excluding File Footer):

File Type: D0298002

Notice that the destination of this file includes the ISRA System flat file store. The flat file contains records of type idf_agtd_sup_da_pd_consums[6], separate files are created for each Settlement Date, Settlement Code and GSP Group.

ZHD – File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0298002
3	From Role Code	text(1)	= A
4	From Participant Id	text(4)	Id of Half Hour Aggregator originating file to idb_sup_data_agtns. da_mkt_ppt_id and idf_agtd_sup_da_pd_consums. da_mkt_ppt_id
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
ZPD – Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	to idb_sup_data_agtns. sett_date to idf_agtd_sup_da_pd_consums. sett_date
3	Settlement Code	text(2)	to idb_sup_data_agtns.sett_code
4	Run Type Code	text(2)	= A
5	Run Number[7]	integer(7)	to idb_sup_data_agtns. data_agtn_run_number to idf_agtd_sup_da_pd_consums. data_agtn_run_number
6	GSP Group	text(2)	to idb_sup_data_agtns. gsp_group_id to idf_agtd_sup_da_pd_consums. gsp_group_id
SUP – Supplier			

[6] For Settlement Days from the start of the NETA, this flat file will include BM Unit Id, which will be NULL if an Aggregated Half Hour data file was sent.
[7] For a Data Aggregator, must be unique across all settlement days for a GSP Group. For an individual settlement day/settlement code, the order of the run numbers should reflect the order the runs were performed in.

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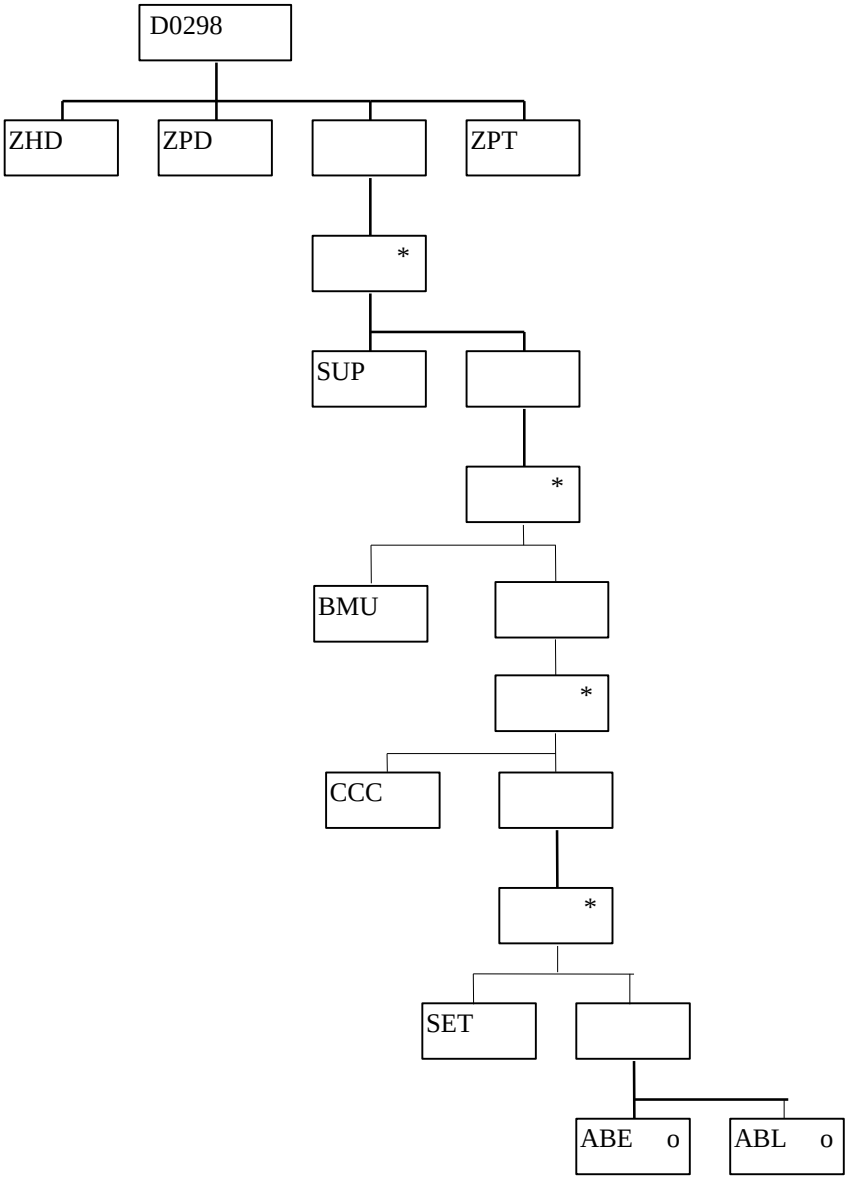
Field	Field Name	Type	Comments
1	Record Type	text(3)	= SUP
2	Supplier	text(4)	To idb_sup_data_agtns. Sup_mkt_ppt_id to idf_agtd_sup_da_pd_consums. Sup_mkt_ppt_id
BMU - BM Unit			
1	Record Type	text(3)	= BMU
2	BM Unit	text(11)	To idf_agtd_sup_da_pd_consums. bm_unit_id
CCC - Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	integer(2)	To idf_agtd_sup_da_pd_consums. Consum_comp_class_id
SET – Settlement Period/Data Aggregator HH MSID Count			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SET
2	Settlement Period Id	integer(2)	used to identify relevant fields for ABE/ABL records in idf_agtd_sup_da_pd_consums ie agtd_bm_consum_01 / _02 etc
3	Data Aggregator HH MSID Count	Integer(10)	To idf_agtd_sup_da_pd_consums_ da_hh_msid_count
ABE – Aggregated BM Unit Energy			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ABE
2	Aggregated BM Unit Energy	decimal (14,4)	To idf_agtd_sup_da_pd_consums. Agtd_bm_consum_nn
ABL – Aggregated BM Unit Line Losses			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ABL
2	Aggregated BM Unit Line Losses	decimal (14,4)	To idb_agtd_sup_da_pd_consums. Agtd_bm_line_loss_nn

Repeating structure of file:



File Type: D0298003

ZHD – File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0298003
3	From Role Code	text(1)	= A
4	From Participant Id	text(4)	Id of Half Hour Aggregator originating file to idb_sup_data_agtns. da_mkt_ppt_id and idf_agtd_sup_da_pd_consums.

			da_mkt_ppt_id
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
ZPD – Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	to idb_sup_data_agtns. sett_date to idf_agtd_sup_da_pd_consums. sett_date
3	Settlement Code	text(2)	to idb_sup_data_agtns.sett_code
4	Run Type Code	text(2)	= A
5	Run Number[8]	integer(7)	to idb_sup_data_agtns. data_agtn_run_number to idf_agtd_sup_da_pd_consums. data_agtn_run_number
6	GSP Group	text(2)	to idb_sup_data_agtns. gsp_group_id to idf_agtd_sup_da_pd_consums. gsp_group_id
SUP – Supplier			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier	text(4)	To idb_sup_data_agtns. Sup_mkt_ppt_id to idf_agtd_sup_da_pd_consums. Sup_mkt_ppt_id
BMU - BM Unit			
1	Record Type	text(3)	= BMU
2	BM Unit	text(11)	To idf_agtd_sup_da_pd_consums. bm_unit_id
CCC - Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	integer(2)	To idf_agtd_sup_da_pd_consums. Consum_comp_class_id

[8] For a Data Aggregator, must be unique across all settlement days for a GSP Group. For an individual settlement day/settlement code, the order of the run numbers should reflect the order the runs were performed in.

SET – Settlement Period/Data Aggregator HH MSID Count			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SET
2	Settlement Period Id	integer(2)	used to identify relevant fields for ABE/ABL records in idf_agtd_sup_da_pd_consums ie agtd_bm_consum_01 / _02 etc
3	Data Aggregator HH MSID Count	Integer(10)	To idf_agtd_sup_da_pd_consums_ da_hh_msid_count
ABE – Aggregated BM Unit Energy			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ABE
2	Aggregated BM Unit Energy	decimal (14,4)	To idf_agtd_sup_da_pd_consums. Agtd_bm_consum_nn
ABL – Aggregated BM Unit Line Losses			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ABL
2	Aggregated BM Unit Line Losses	decimal (14,4)	To idb_agtd_sup_da_pd_consums. Agtd_bm_line_loss_nn
37J – Supplier			
Field	Field Name	Type	Comments
1	Record Type	text(3)	= SID
2	Supplier	text(4)	To idb_sup_data_agtns. Sup_mkt_ppt_id to idf_agtd_sup_da_pd_consums. Sup_mkt_ppt_id
38J - BM Unit			
1	Record Type	text(3)	= BMT
2	BM Unit	text(11)	To idf_agtd_sup_da_pd_consums. bm_unit_id
39J - Consumption Component Class			
Field	Field Name	Type	Comments
1	Record Type	text(3)	= CON
2	Consumption Component Class Id	integer(2)	To idf_agtd_sup_da_pd_consums. Consum_comp_class_id
40J – Line Loss Factor Class			
	Field Name	Type	Comments

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	Record Type	text(3)	= LLL
	Distributor Id	text(4)	to idf_agtd_sup_da_pd_consums_lll distributor_id
	Line Loss Factor Id	Integer(3)	to idf_agtd_sup_da_pd_consums_lll llfc_id

41J – Settlement Period/Data Aggregator HH MSID Count

Field	Field Name	Type	Comments
1	Record Type	text(3)	= SPD
2	Settlement Period Id	integer(2)	used to identify relevant fields for ABE/ABL records in idf_agtd_sup_da_pd_consums ie agtd_bm_consum_01 / _02 etc
3	Data Aggregator HH MSID Count	Integer(10)	To idf_agtd_sup_da_pd_consums_da_hh_msid_count

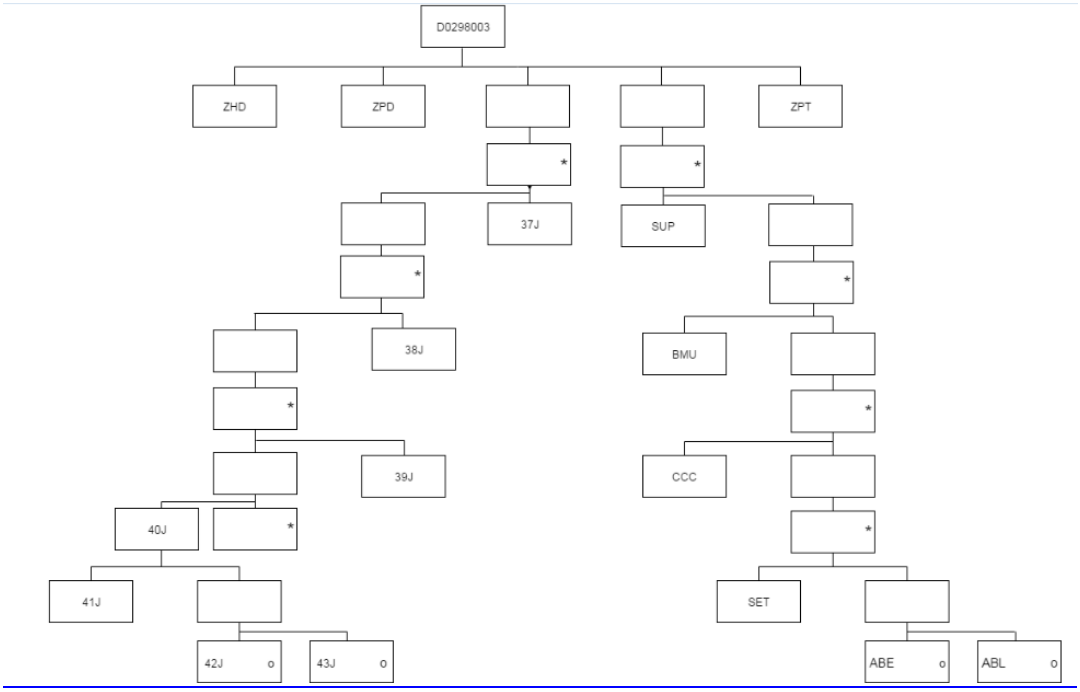
42J – Aggregated BM Unit Energy

Field	Field Name	Type	Comments
1	Record Type	text(3)	= AGG
2	Aggregated BM Unit Energy	decimal (14,4)	To idf_agtd_sup_da_pd_consums. Agtd_bm_consum_nn

43J – Aggregated BM Unit Line Losses

Field	Field Name	Type	Comments
1	Record Type	text(3)	= ABM
2	Aggregated BM Unit Line Losses	decimal (14,4)	To idb_agtd_sup_da_pd_consums. Agtd_bm_line_loss_nn

Repeating Structure of file:


D0298003
ZHD
ZPD
ZPT
37J
SUP
38J
BMU
39J
CCC
40J
41J
SET
42J o
43J o
ABE o
ABL o

3.1.6 Tele-switch Pool Market Domain Data File

The following table shows the file format (excluding File Footer).

Note: This file may contain records with other types destined for other systems. These will be ignored by ISRA (except in the calculation of the record count/checksum).

File Type: D0278002

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0278002
3	From Role Code	text(1)	= U
4	From Participant Id	text(4)	Id of Electricity Pool originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
ZPD – Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	Null
3	Settlement Code	text(2)	Null
4	Run Type Code	text(2)	Null
5	Run Number	integer(7)	Null
6	GSP Group Id	text(2)	Null
TPD – Time Pattern Regime Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TPD
2	GMT Indicator	text(1)	to idb_tprs.gmt_local_time_ind
3	Time Pattern Regime Id	text(5)	to idb_tprs.tpr_id to idb_clock_intervals.tpr_id

4	Tele-switch/Clock Indicator	text(1)	If indicates Tele-switch Then
			TTP records follow
			Else
			CKI records follow
			End
			maps to idb_tprs.tpr_type

TTP – Tele-switch Time Pattern Regime Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TTP
2	Tele-switch User Id	integer(2)	to idb_teleswitch_tprs. Teleswitch_user_id
2	Tele-switch Group Id	integer(4)	to idb_teleswitch_tprs. Teleswitch_group_id

TCR – Tele-switch Contact Rule			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	=TCR
2	Tele-switch Register rule id	integer(2)	to idb_teleswitch_contact_rules.tsw_register_rule_id
3	Tele-switch Contact Code	text(1)	to idb_teleswitch_contact_rules.tsw_contact_code
4	Tele-switch Contact Rule	text(1)	to idb_teleswitch_contact_rules.tsw_contact_rule
CKI – Clock Interval			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CKI
2	Day of the Week Id	integer(1)	to idb_clock_intervals. Day_of_the_week_id
3	End Day	integer(2)	to idb_clock_intervals.end_day
4	End Month	integer(2)	to idb_clock_intervals. End_month
5	End Time	time	to idb_clock_intervals. End_time
6	Start Day	integer(2)	to idb_clock_intervals. Start_day
7	Start Month	integer(2)	to idb_clock_intervals. Start_month
8	Start Time	time	to idb_clock_intervals. Start_time
SCE – Standard Settlement Configuration Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SCE
2	Standard Settlement Configuration Id	text(4)	to idb_sscs.ssc_id idb_measurement_ requirements.ssc_id idb_vscpcs.ssc_id idb_vmr_pfl_classes.ssc_id idb_afycs.ssc_id
3	Standard Settlement Configuration Desc	text(50)	to idb_ssc.ssc_desc
4	Tele-switch User Id	integer(2)	idb_sscs.teleswitch_user_id (O)
5	Tele-switch Group Id	integer(4)	idb_sscs.teleswitch_group_id (O)
6	SSC Type	text(1)	idb_sscs.ssc_type
TPR - Measurement Requirement			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TPR

2	Time Pattern Regime Id	text(5)	to idb_measurement_ requirements.tpr_id idb_afycs.tpr_id
VSD - VSCPC Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= VSD
2	Profile Class Id	integer(2)	to idb_vscpcs.pfl_class_id idb_vmr_pfl_classes. pfl_class_id idb_afycs.pfl_class_id
3	Effective From Settlement Date	date	to idb_vscpcs. eff_from_sett_date
4	Effective To Settlement Date	date	to idb_vscpcs. eff_to_sett_date (O)
SLM - Switched Load Measurement Requirement Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SLM
2	Switched Load Indicator	boolean	to idb_vmr_pfl_classes. Switched_load_ind
3	Time Pattern Regime Id	text(5)	to idb_vmr_pfl_classes.tpr_id
ASD - AFYCS Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ASD
2	GSP Group Id	text(2)	to idb_afycs.gsp_group_id
3	Effective From Settlement Date	date	to idb_afycs. eff_from_sett_date
4	Effective To Settlement Date	date	to idb_afycs. eff_to_sett_date (O)
AFD - Average Fraction of Yearly Consumption Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= AFD
2	Average Fraction of Yearly Consumption	decimal (7,6)	to idb_afycs.afyc
3	Time Pattern Regime Id	text(5)	shows which TPR record is parent

Repeating structure of file:

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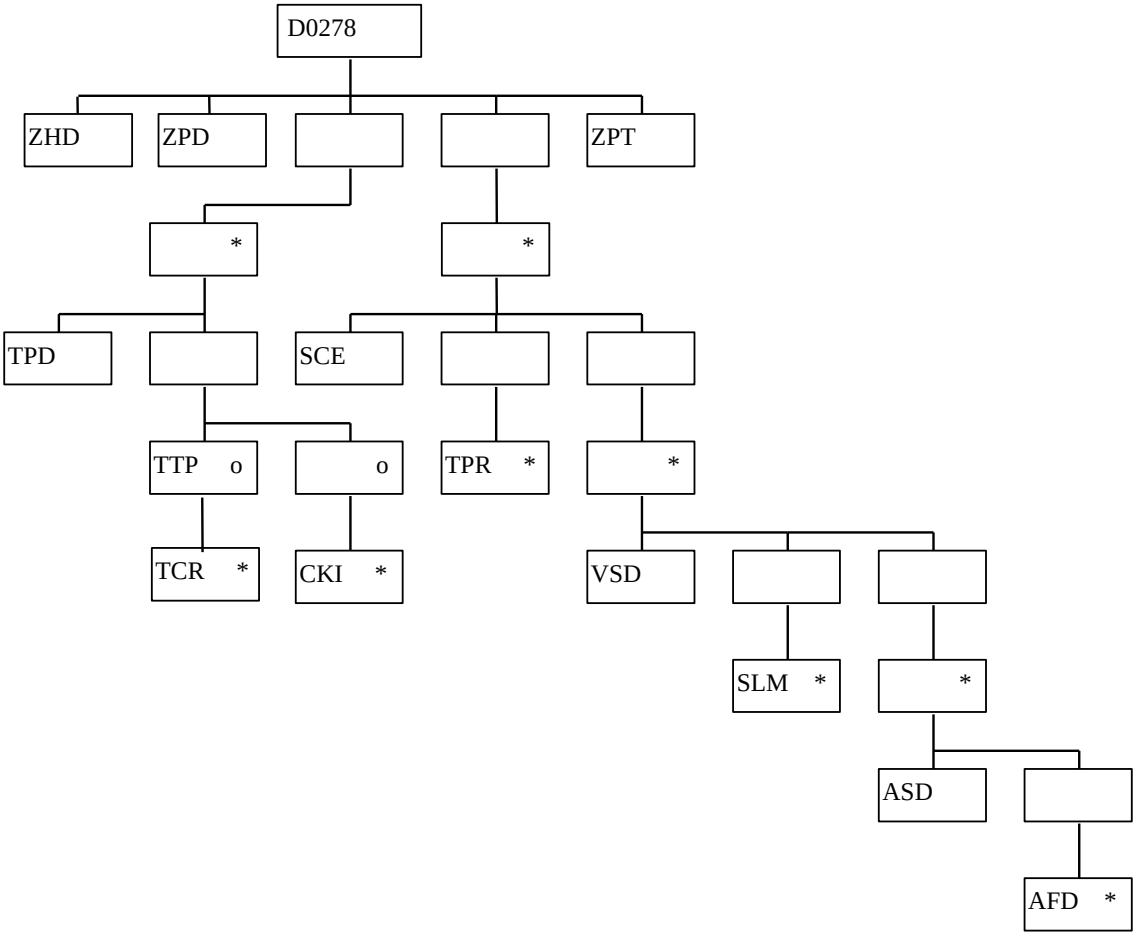
D0278
ZHD
ZPD
ZPT
*
*
TPD
SCE
TTP o
o
TPR *
*
TCR *
CKI *
VSD
SLM *
*
ASD
AFD *

3.1.7 Market Domain Data Complete Set

The following table shows the file format (excluding File Footer).

Note: This file may contain records with other types destined for other systems. These will be ignored by ISRA (except in the calculation of the record count/checksum).

File Type: D0269002

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0269002
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISRA Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
SDT - Settlement Day			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SDT
2	Settlement Date	date	idb_settlement_days.sett_date
3	Day Type Id	text(2)	idb_settlement_days. day_type_id
4	Season Id	integer(1)	idb_settlement_days.season_id
LLF - Line Loss Factor Classes			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= LLF
2	Distributor Id	text(4)	idb_llf_classes.dist_mkt_ppt_id
3	Market Participant Role Code	text(1)	idb_llf_classes.dist_mkt_ppt_role_code
4	Effective from date {MPR}	date	Not used by ISRA
5	Line Loss Factor Class Id	integer(3)	idb_llf_classes.llf_class_id
6	Line Loss Factor Class Description	text(30)	Not used by ISRA
7	MS Specific LLF Class Indicator	text(1)	Used to distinguish between MS Specific and General LLF Classes. Site Specific LLFCs are to be excluded (**ignored**) from the load. Only load types A and C, **A-General LLF Class Import** **C-General LLF Class Export**

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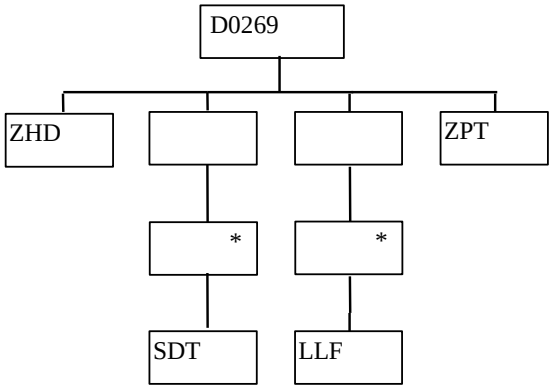
8	Effective From Settlement Date {LLFC}	date	idb_llf_classes.eff_from_sett_date
9	Effective To Settlement Date {LLFC}	date	idb_llf_classes.eff_to_sett_date (O)

Repeating structure of file:



3.1.8 BM Unit Registration Data File

The following table shows the file format (excluding File Footer).

Note: This file may contain an MDD record between the ZHD and GSG records, which is destined for other systems. This will be ignored by ISRA (except in the calculation of the record count/checksum).

File Type: D0299001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0299001
3	From Role Code	text(1)	= U
4	From Participant Id	text(4)	Id of MDDA originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
GSG - GSP Group			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= GSG
2	GSP Group Id	text(2)	to idb_bm_unit_in_gsp_group. gsp_group_id
3	GSP Group Name	text(30)	Not used by SVAA
SUP - Supplier			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	to idb_bm_unit_in_gsp_group. mkt_ppt_id
BMR - BM Unit Registration			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= BMR
2	BM Unit Id	text(11)	to idb_bm_unit_in_gsp_group. bm_unit_id
3	Effective From Settlement Date {BMUIGG}	date	to idb_bm_unit_in_gsp_group. eff_from_sett_date
4	Effective To Settlement Date {BMUIGG}	date	to idb_bm_unit_in_gsp_group. eff_to_sett_date (O)
5	Default BM Unit Flag	boolean	to idb_bm_unit_in_gsp_group. default_bm_unit_flag

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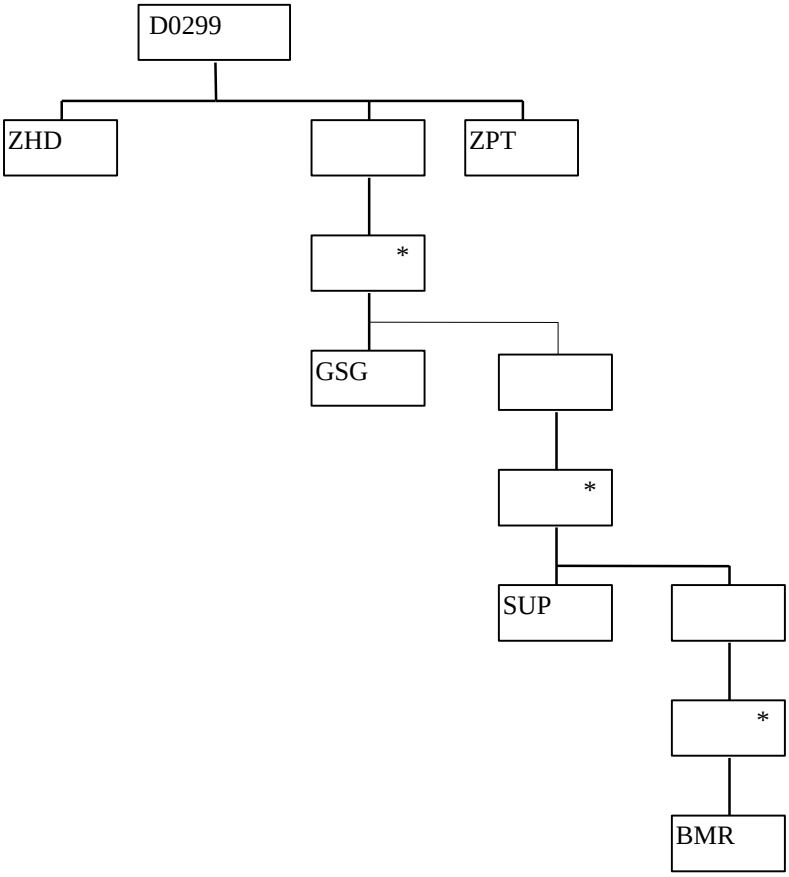
Repeating structure of file:



3.1.9 Regression Equations Data File

The following table shows the file format (excluding File Footer):

File Type: P0014

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= P0014001
3	From Role Code	text(1)	= K
4	From Participant Id	text(4)	Id of Profile Administrator originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
PFL - Profile Set			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PFL

2	Profile Class Id	integer(2)	to idb_pfl_sets.pfl_class_id idb_gsp_group_average_eacs.pfl_class_id idb_pd_pfl_regr_eqs.pfl_class_id
Field	**Field Name**	**Type**	**Comments**
3	Profile Id	integer(2)	to idb_pfl_sets.pfl_id idb_gsp_group_average_eacs.pfl_id idb_pd_pfl_regr_eqs.pfl_id
4	Effective From Settlement Date {PSET}	date	to idb_pfl_sets.eff_from_sett_date idb_gsp_group_average_eacs.eff_from_sett_date idb_pd_pfl_regr_eqs.eff_from_sett_date
GSP - GSP Group Average EAC			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	to idb_gsp_group_average_eacs.gsp_group_id
3	Group Average Consumption	decimal (14,4)	to idb_gsp_group_average_eacs.group_average_annual_consum
RES - Regression Equation Set			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= RES
2	Day Type Id	text(2)	to idb_pd_pfl_regr_coefs.day_type_id
3	Season Id	integer(1)	to idb_pd_pfl_regr_coefs.season_id
PER - Period Regression Equation			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PER
2	Settlement Period Id	integer(2)	to idb_pd_pfl_regr_coefs.sett_pd_id
COF - Regression Coefficient			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= COF
2	Regression Coefficient	decimal (12,9)	to idb_pd_pfl_regr_coefs.regression_coef
3	Regression Coefficient Type	integer(2)	to idb_pd_pfl_regr_coefs.regression_coef_type

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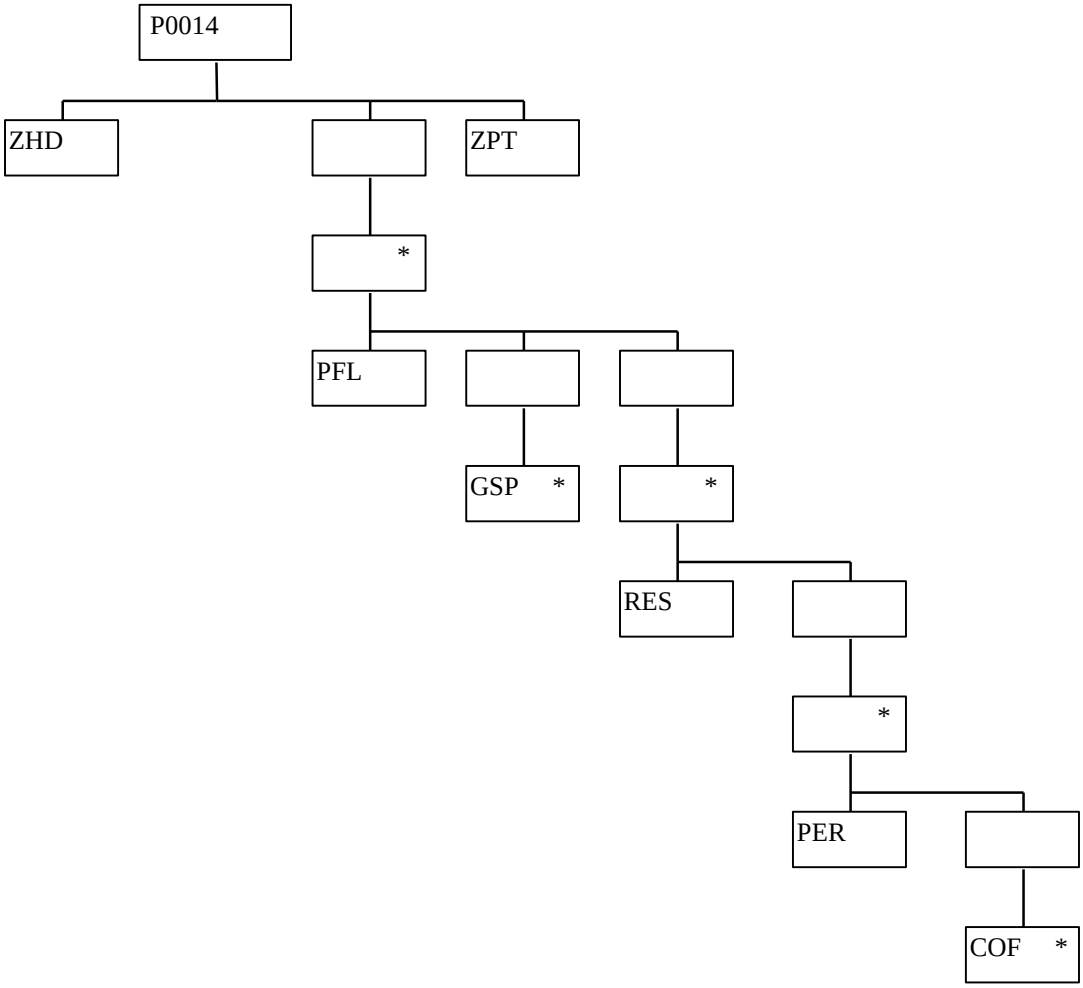
Repeating structure of file:



3.1.10 Scottish Regression Equations Data File[9]

The following table shows the file format (excluding File Footer):

File Type: P0214

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= P0214001
3	From Role Code	text(1)	= K
4	From Participant Id	text(4)	Id of Profile Administrator originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
PFL - Profile Set			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PFL

[9] Loading of this file is disabled as a result of LCR235.

2	Profile Class Id	integer(2)	to idb_pfl_sets.pfl_class_id idb_gsp_group_average_eacs.pfl_class_id idb_pd_pfl_regr_eqs.pfl_class_id
3	Profile Id	integer(2)	to idb_pfl_sets.pfl_id idb_gsp_group_average_eacs.pfl_id idb_pd_pfl_regr_eqs.pfl_id
4	Effective From Settlement Date {PSET}	date	to idb_pfl_sets.eff_from_sett_date idb_gsp_group_average_eacs.eff_from_sett_date idb_pd_pfl_regr_eqs.eff_from_sett_date
GSP - GSP Group Average EAC			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	to idb_gsp_group_average_eacs.gsp_group_id
3	Group Average Consumption	decimal (14,4)	to idb_gsp_group_average_eacs.group_average_annual_consum
RES - Regression Equation Set			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= RES
2	Day Type Id	text(2)	to idb_pd_pfl_regr_coefs.day_type_id
3	Season Id	integer(1)	to idb_pd_pfl_regr_coefs.season_id
PER - Period Regression Equation			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PER
2	Settlement Period Id	integer(2)	to idb_pd_pfl_regr_coefs.sett_pd_id
COF - Regression Coefficient			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= COF
2	Regression Coefficient	decimal (12,9)	to idb_pd_pfl_regr_coefs.regression_coef
3	Regression Coefficient Type	integer(2)	to idb_pd_pfl_regr_coefs.regression_coef_type

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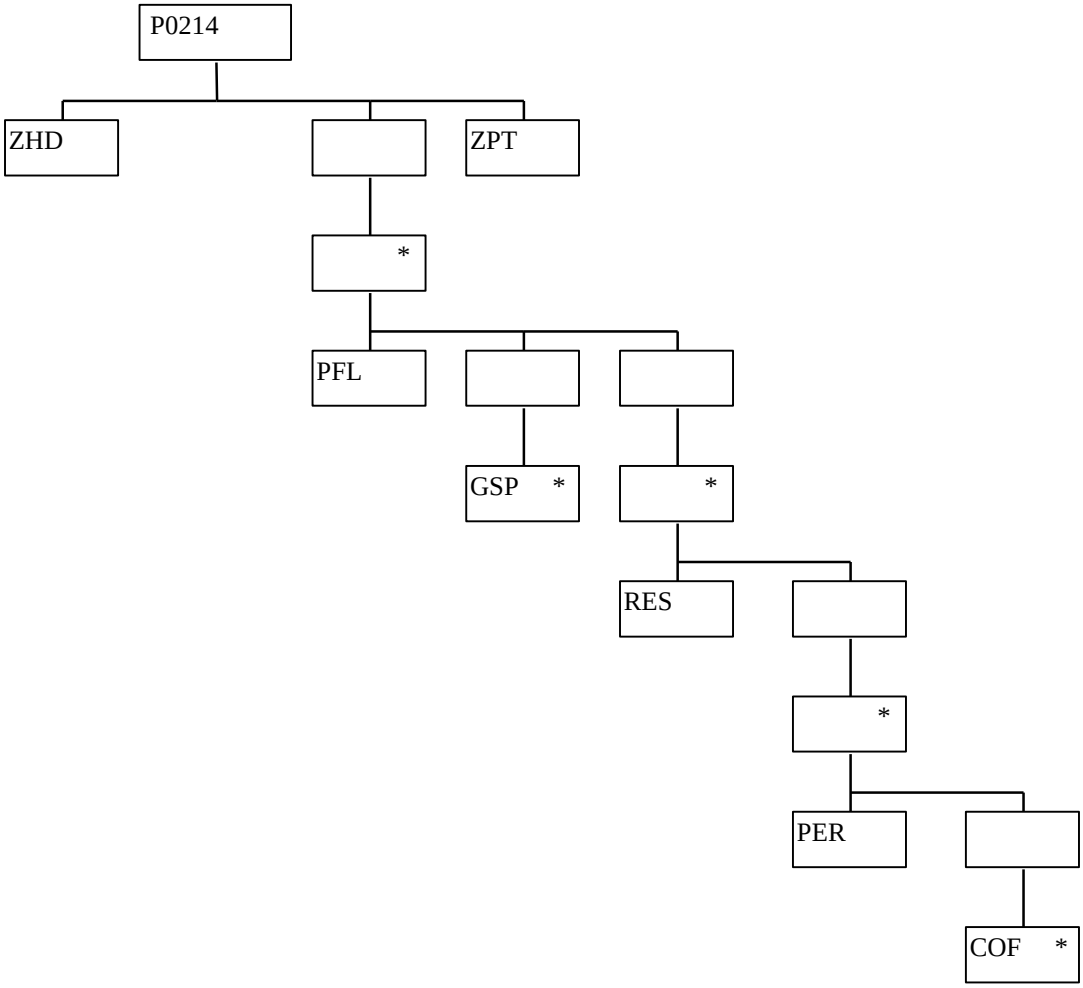
Repeating structure of file:



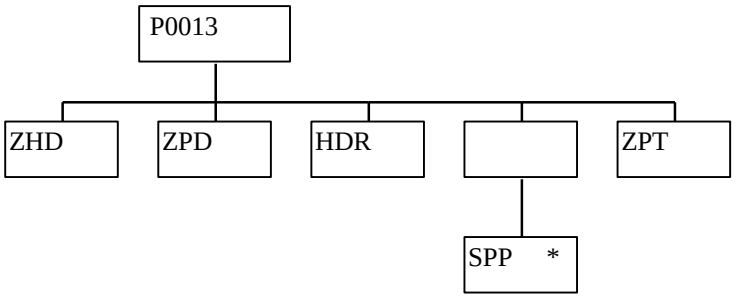
3.1.11 Settlement Price Data File

The following table shows the file format (excluding File Footer):

File Type: P0013

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= P0013001
3	From Role Code	text(1)	= S
4	From Participant Id	text(4)	Id of Settlements System Administrator originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
ZPD - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	to idb_ssa_sett_runs.sett_date to idb_sett_pd_prices.sett_date
3	Settlement Code	text(2)	Null
4	Run Type Code	text(2)	E
5	Run Number	integer(7)	to idb_ssa_sett_runs. ssa_sett_run_number to idb_sett_pd_prices. ssa_sett_run_number
6	GSP Group	text(2)	Null
HDR - Settlement Price File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= HDR
2	CDCS Extract Number	integer(2)	to idb_ssa_sett_runs. cdcs_extract_number
3	SSA Settlement Run Type Id	text(1)	to idb_ssa_sett_runs. sett_run_type_id
SPP - Settlement Period Price Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPP
2	Settlement Period Id	integer(2)	to idb_sett_pd_prices. sett_pd_id
3	Pool Selling Price	decimal (11,6)	to idb_sett_pd_prices. pool_selling_price
4	Transmission Loss Multiplier	decimal (10,9)	to idb_sett_pd_prices. trans_loss_mult
5	Transmission Losses Reconciliation Multiplier	decimal (8,6)	to idb_sett_pd_prices. trans_losses_recon_mult

Repeating structure of file:



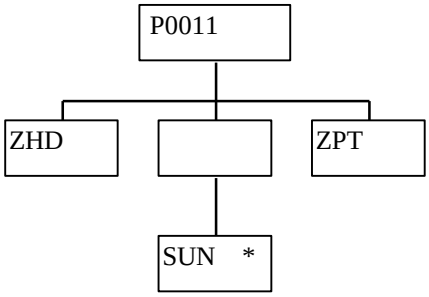
3.1.12 Sunset Data File

The following table shows the file format (excluding File Footer):

File Type: P0011

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= P0011001
3	From Role Code	text(1)	= V
4	From Participant Id	text(4)	Id of the market participant originating the file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
SUN - Sunset Data			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUN
2	GSP Group Id	text(2)	to idb_daily_pfl_parameters. gsp_group_id
3	Settlement Date	date	to idb_daily_pfl_parameters. sett_date
4	Time of Sunset	time	to idb_daily_pfl_parameters. time_of_sunset

Repeating structure of the file:



3.1.13 Supplier Purchase Matrix Data File

The following table shows the file format (excluding File Footer):

File Type: D0041

Notice that the destination of this file is the ISRA System flat file store. The flat file contains records of type idf_supplier_purchase_matrix, separate files are created for each Settlement Date, Settlement Code and GSP Group.

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0041001
3	From Role Code	text(1)	= B
4	From Participant Id	text(4)	Id of Non-HH Data Aggregator originating file to idb_sup_data_agtns. da_mkt_ppt_id idf_sup_purchase_matrices. da_mkt_ppt_id
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation to idb_sup_data_agtns. date_and_time_sent_agtn_run
ZPD - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	to idb_sup_data_agtns. sett_date to idb_sup_purchase_matrices. sett_date
3	Settlement Code	text(2)	to idb_sup_data_agtns. sett_code
4	Run Type Code	text(2)	= D

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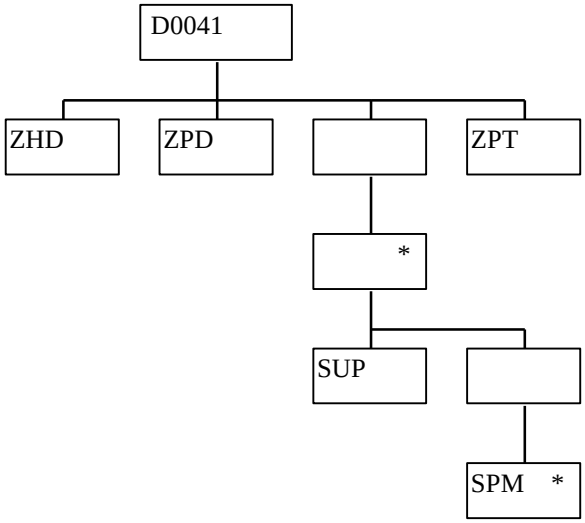
5	Run Number[10]	integer(7)	to idb_sup_data_agtns. data_agtn_run_number to idf_sup_purchase_matrices. data_agtn_run_number
6	GSP Group	text(2)	to idb_sup_data_agtns. gsp_group_id idf_sup_purchase_matrices. gsp_group_id
SUP - Supplier Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	to idb_sup_data_agtns. sup_mkt_ppt_id idf_sup_purchase_matrices. sup_mkt_ppt_id
SPM - Supplier Purchase Matrix Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPM
2	Profile Class Id	integer(2)	to idf_sup_purchase_matrices. pfl_class_id
3	Distributor Id	text(4)	to idf_sup_purchase_matrices. dist_mkt_ppt_id
4	Line Loss Factor Class Id	integer(3)	to idf_sup_purchase_matrices. llf_class_id
5	Standard Settlement Configuration Id	text(4)	to idf_sup_purchase_matrices. ssc_id
6	Time Pattern Regime Id	text(5)	to idf_sup_purchase_matrices. tpr_id
7	SPM Default EAC MSID Count	integer(8)	to idf_sup_purchase_matrices. spm_dflt_eac_msid_count
8	SPM Default Unmetered MSID Count	integer(8)	to idf_sup_purchase_matrices. spm_dflt_unmtd_msid_count
9	SPM Total AA MSID Count	integer(8)	to idf_sup_purchase_matrices. spm_total_aa_msid_count
10	SPM Total Annualised Advance	decimal (14,4)	to idf_sup_purchase_matrices. spm_total_aa
11	SPM Total EAC	decimal (14,4)	to idf_sup_purchase_matrices. spm_total_eac
12	SPM Total EAC MSID Count	integer(8)	to idf_sup_purchase_matrices. spm_total_eac_msid_count
13	SPM Total Unmetered Consumption	decimal (14,4)	to idf_sup_purchase_matrices. spm_total_unmtd_consum
14	SPM Total Unmetered MSID Count	integer(8)	to idf_sup_purchase_matrices. spm_total_unmtd_msid_count

[10] For a Data Aggregator, must be unique across all settlement days for a GSP Group. For an individual settlement day/settlement code, the order of the run numbers should reflect the order the runs were performed in.

Repeating structure of file:



3.1.14 Tele-switch Contact Interval Data File

The following table shows the file format (excluding File Footer):

File Type: D0277001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0277001
3	From Role Code	text(1)	= I
4	From Participant Id	text(4)	Id of Tele-switch Agent
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent
7	Creation Time	date/time	Time of file generation
TSD - Tele-switch Date			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TSD
2	Date (Midnight to Midnight UTC)	date	
TSU - Tele-switch User			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TSU
2	Tele-switch User Id	integer(2)	idb_tsw_contact_intervals.teleswitch_user_id
TSG - Tele-switch Group			
1	Record Type	text(3)	= TSG
2	Tele-switch Group Id	integer(4)	idb_tsw_contact_intervals.teleswitch_group_id
TSC - Tele-switch Contact			

1	Record Type	text(3)	= TSC
2	Tele-switch Contact Code	text(1)	Valid values 'A','B','C','D' idb_tsw_contact_intervals.teleswitch_contact_code
3	Start of Day Tele-switch on Indicator	boolean	'T' contact is ON 'F' contact is OFF used to derive: idb_tsw_contact_intervals.teleswitch_contact_state
TCI - Tele-switch Contact Interval			
1	Record Type	text(3)	= TCI
2	Effective Time (UTC)	time	HH24MISS idb_tsw_contact_intervals.teleswitch_start_date_time idb_tsw_contact_intervals.teleswitch_end_date_time
3	Tele-switch On Indicator	boolean	'T' Contact is ON 'F' Contact is OFF idb_tsw_contact_intervals.teleswitch_contact_state

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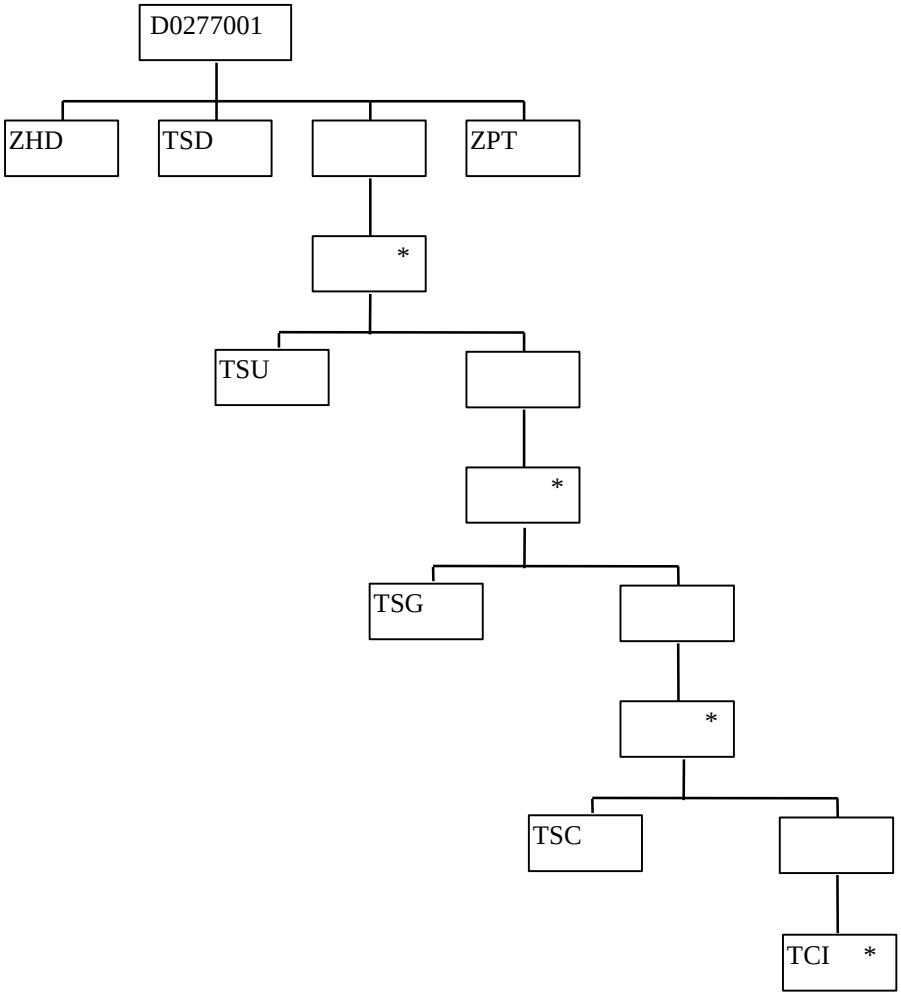
Repeating structure of file:



3.1.15 Data Aggregation and Settlements Timetable File

The following table shows the file format (excluding File Footer):

File Type: D0286

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0286001
3	From Role Code	text(1)	= U
4	From Participant Id	text(4)	Id of Electricity Pool Market Domain Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
TTH - Timetable Header			
Field	Field Name	Type	Comments
1.	Record Type	text(3)	=TTH
2.	First Payment Date	date	first payment date covered by the timetable (not used by ISRA)
3.	Last Payment Date	date	last payment date covered by the timetable (not used by ISRA)
PST - Timetable Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	=PST
2	Settlement Code	text(2)	to idb_settlements. Settlement_code
3	Settlement Date	date	to idb_settlements. Settlement_date
4	Payment Date	date	to idb_settlements. Payment_date
5	ISR Notification Deadline Date	date	(not used by ISRA)
6	Planned Data Aggregation Run Date	date	(not used by ISRA)
7	Planned SSR Run Date	date	to idb_settlements. Planned_ssr_run_date (optional)

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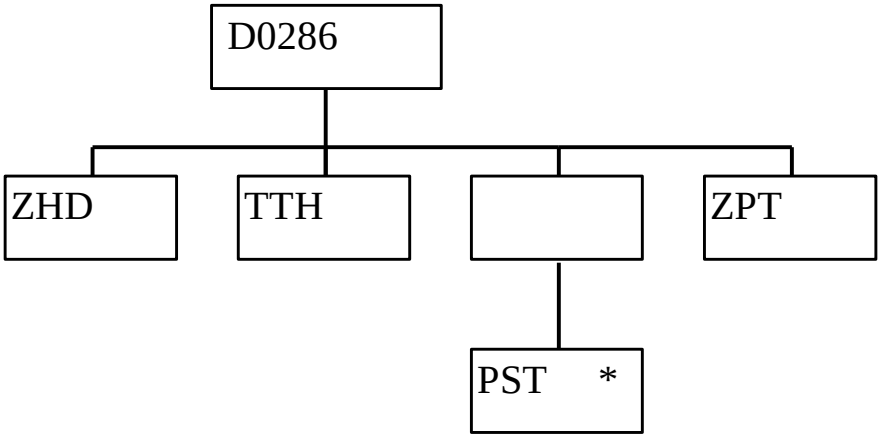
Repeating structure of file:



3.1.16 Profile Data File

The following table shows the file format (excluding File Footer):

File Type: P0015

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= P0015001
3	From Role Code	text(1)	= U
4	From Participant Id	text(4)	Id of Pool Market Domain Data Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
PFC - Profile Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PFC
2	Profile Class Id	integer(2)	idb_pfl_classes.pfl_class_id
3	Profile Class Description	text(50)	idb_pfl_classes.pfl_class_desc
4	Switched Load Profile Class Ind	boolean	idb_pfl_classes. switched_load_pfl_class_ind
PFL - Profile Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PFL
2	Profile Class Id	integer(2)	idb_pfls.pfl_class_id
3	Profile Id	integer(2)	idb_pfls.pfl_id
4	Profile Description	text(50)	idb_pfls.pfl_desc
5	Profile Settlement Periods	integer(2)	idb_pfls.pfl_sett_pds
6	Effective From	date	idb_pfls.eff_from_sett_date

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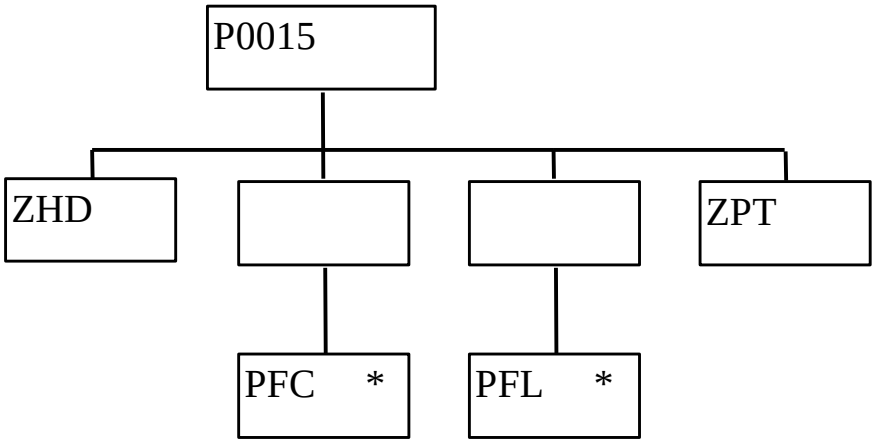
	Settlement Date		
7	Effective To Settlement Date	date	idb_pfls.eff_to_sett_date (O)

Repeating structure of file:



3.1.17 Daily Profile Coefficient File Extraction

This report is produced by *Automatic Daily Profile Coefficient File Extraction* which is described in the IDP Daily Profile Production Subsystem Specification.

IDP_PROF_EXTRACT Machine Readable

The following table shows the file format (excluding footer):

File Type: D0039

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0039001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= D
6	To Participant Id	text(4)	Id of Data Collector receiving file = idb_mkt_ppt_role_in_gsp_groups.mkt_ppt_role_in_gsp_gp_id
7	Creation Time	date/time	Time file processing was started
ZPD - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	Input Parameter
3	Settlement Code	text(2)	Null
4	Run Type Code	text(2)	= B

5	Run Number	integer(7)	Input Parameter
6	GSP Group	text(2)	See note below
Notice that for I0008 - the GSP Group Id in the ZPD header is NOT populated. This is used by the receiving EAC/AA process to distinguish between extracts which are produced when a Data Collector enters a new GSP Group and the Daily Extract. Notice that for I0039 - Extract Selected EAC Data, the GSP Group Id in the ZHD header is populated. This is used by the receiving EAC/AA process to distinguish between extracts which are produced when a Data Collector enters a new GSP Group and the Daily Extract.			
GSP - GSP Group			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	Input Parameter
PCI - Profile Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PCI
2	Profile Class Id	integer(2)	= idb_pfl_classes. pfl_class_id
SCI - Standard Settlement Configuration			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SCI
2	Standard Settlement Configuration Id	text(4)	= idf_pd_pfl_class_coefs.ssc_id
DPC - Daily Profile Coefficient			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= DPC
2	Time Pattern Regime Id	text(5)	= idf_pd_pfl_class_ coefs.tpr_id
3	Daily Profile Coefficient	decimal (14,13)	= idf_pd_pfl_class_ coefs.daily_pfl_coef

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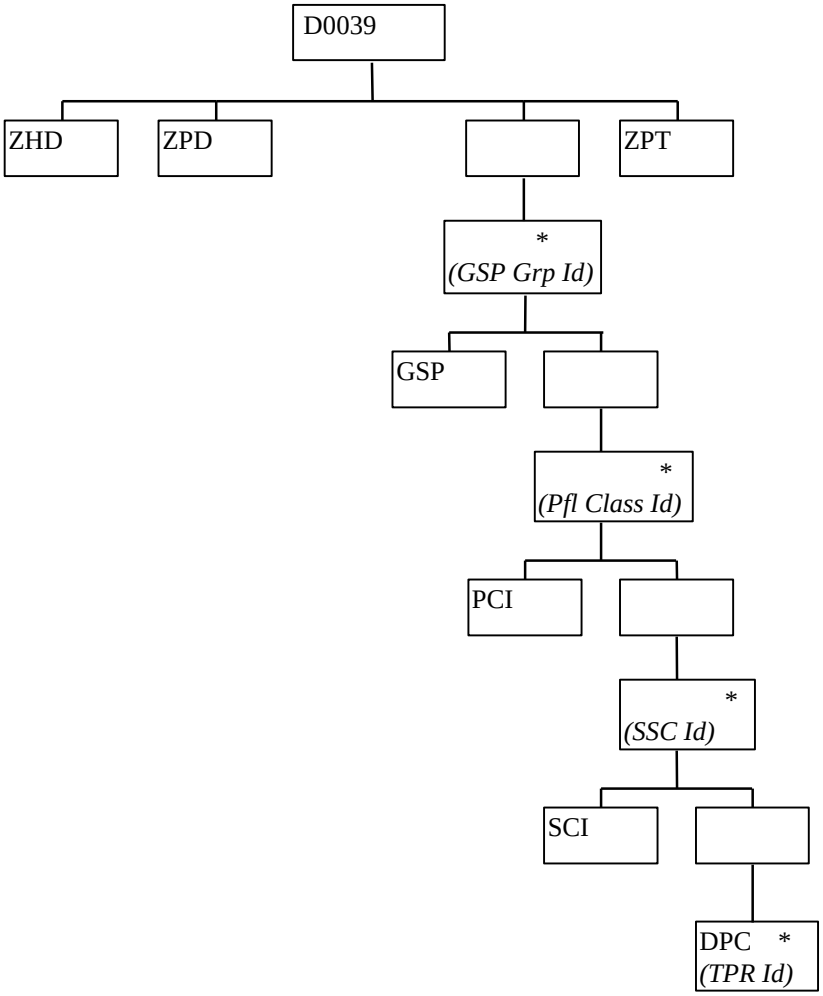
Repeating structure of file *(sort order shown in brackets)*:



IDP_PROF_EXTRACT Human Readable

The Daily Profile Coefficient Extract is only intended for machine processing, therefore no human readable output different from the machine readable output is specified. However, the machine readable output can be printed and inspected if necessary.

3.1.18 Profile Reports

The following reports are produced as a result of the Profile Production Run, each of which is a regarded as a separate External Interface:

1. Standard Settlement Configuration Report,
2. Daily Profile Data Report,
3. Standing Profile Data Report,
4. Tele-Switch Contact Interval Data Report

The format of the reports is specified in this section, and the processing used to generate them is described in *the IDP Daily Profile Production Subsystem* chapter.

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3.1.18.1 Standard Settlement Configuration Report

Function Definition Ref: I0025B Produce Profile Reports - Standard Settlement Configuration Report.

Enquiry Description: Standard Settlement Configuration Report

This report contains Clock or Tele-switch Intervals with their Valid Measurement Profile Class and Profile Class details.

SSC Report Machine readable

The following table shows the file format (excluding footer):

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0029001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= D / X
6	To Participant Id	text(4)	Id of Data Collector / Supplier receiving file = idb_mkt_ppt_roles. mkt_ppt_id
7	Creation Time	date/time	Time file processing was started
ZPD - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	= Input Parameter
3	Settlement Code	text(2)	Null
4	Run Type Code	text(2)	= B
5	Run Number	integer(7)	= Input Parameter
6	GSP Group	text(2)	Null

RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	= cph_username
3	Report Parameters	text(30)	Input Sett Date
4	Report Parameters	text(30)	Input Profile Production Run Number
RUN - Profile Production Run Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= RUN
2	Profile Production Date	date	idb_pfl_production_runs. Pfl_production_run_date
3	Profile Production	time	idb_pfl_production_runs.

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	Time		Pfl_production_run_date
SSC - Standard Settlement Configuration Profile Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SSC
2	Profile Class Id	integer(2)	idb_pfl_classes.pfl_class_id
3	Profile Class Description	text(50)	idb_pfl_classes.pfl_class_desc
4	Switched Load Profile Class Ind	boolean	idb_pfl_classes. Switched_load_pfl_class_ind
5	Standard Settlement Configuration Id	text(4)	idb_vmr_pfl_classes.ssc_id
6	Standard Settlement Configuration Desc	text(50)	idb_sscs.ssc_desc
VMR - Valid Measurement Requirement Profile Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= VMR
2	Time Pattern Regime Id	text(5)	= idb_vmr_pfl_classes. tpr_id
3	Switched Load Indicator	boolean	= idb_vmr_pfl_classes. switched_load_ind
4	GMT Indicator	text(1)	=idb_tprs.gmt_local_ind
AFY - Average_Fraction_of_Yearly_Consumption			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= AFY
2	GSP Group	text(2)	= idb_afycs.gsp_group_id
3	Average fraction of Yearly Consumption	decimal(7,6)	= idb_afycs.afyc
TSW - Tele-switch Intervals			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TSW
2	Tele-switch User Id	integer(2)	= idb_tprs.teleswitch_user_id
3	Tele-switch Group Id	integer(4)	= idb_tprs.teleswitch_group_id
4	Tele-switch Switch Id	text(1)	= 'A' Fixed value to maintain compatibility with earlier file formats.
5	Start Time	time	= idb_teleswitch_intervals. teleswitch_start_time
6	End Time	time	= idb_teleswitch_intervals. teleswitch_end_time
CKI - Clock Intervals			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CKI
2	Day of Week id	integer(1)	= idb_clock_intervals. day_of_the_week_id
3	Start Day	integer(2)	= idb_clock_intervals.

			start_day
4	Start Month	integer(2)	= idb_clock_intervals. start_month
5	Start Time	time	= idb_clock_intervals. start_time
6	End Day	integer(2)	= idb_clock_intervals.end_day
7	End Month	integer(2)	= idb_clock_intervals. end_month
8	End Time	time	= idb_clock_intervals.end_time

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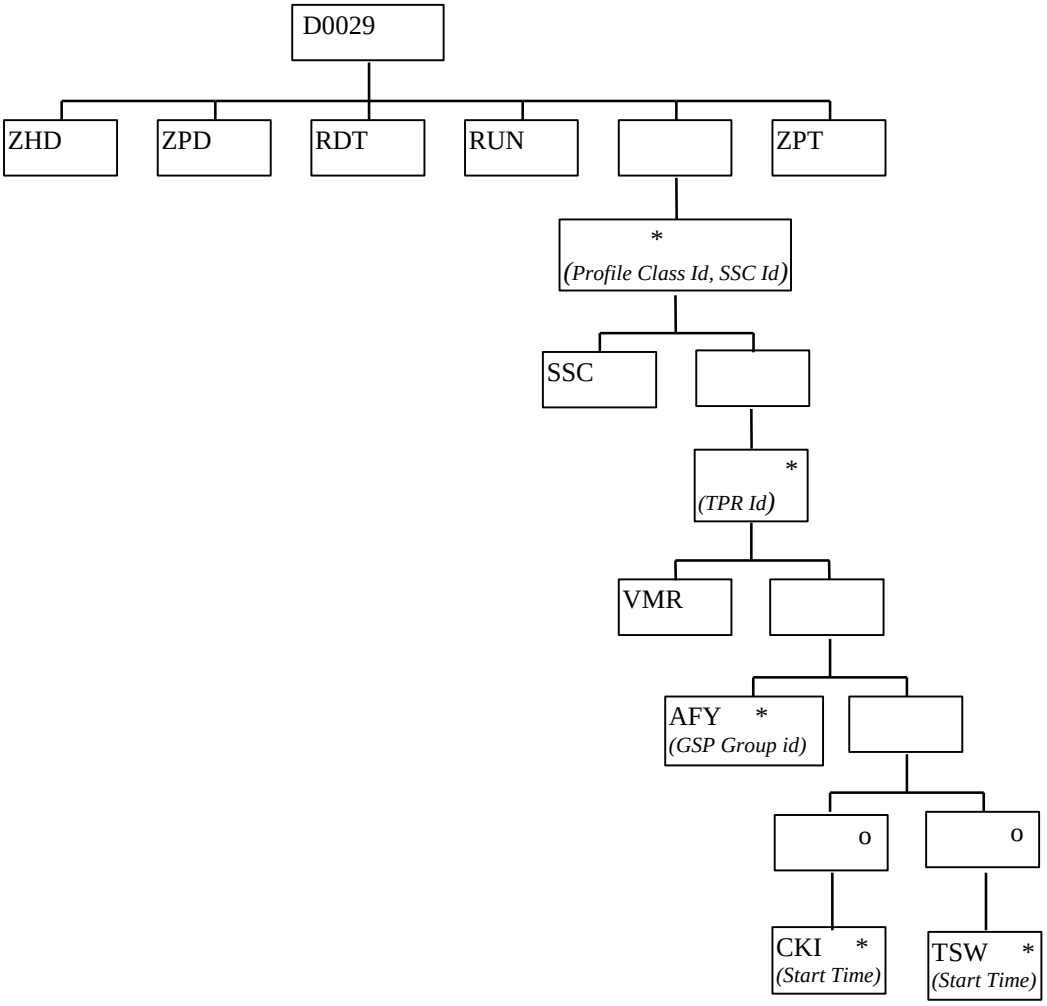
Repeating structure of file *(sort order shown in brackets)*:



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SSC Report Human Readable

```
SSC Report                          ISR Agent                  15/10/1997  14:28

User Name:           PENDERI
Report Parameters:   Sett Date            30/03/1997
                     Prof Run Number      9102



Profile Production Run Date/Time:        15/10/1997 15:28:00



Profile Class:                           1  domestic unrestricted

Switched Load Profile Class:             F

Standard Settlement Configuration:       SC01 Domestic unrestricted std c/s  meter



Time Pattern Regime:                     TP001
Switched Load:                           F
GMT/Local (Y/N):                         Y



GSP Group  Average Fraction of Yearly Consumption
```

G1	1.000000
G2	1.000000
G3	1.000000
G4	1.000000

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Clock Interval Details

Day of Week	Start Day	Start Month	Start Time	End Day	End Month	End Time
7	1	1	00:00:00	31	12	24:00:00

Profile Class: 2 domestic economy 7

Switched Load Profile Class: T

Standard Settlement Configuration: SC02 10-hour E7 (2 TPRs) c/s

Time Pattern Regime: TP101
Switched Load: F
GMT/Local (Y/N): Y

GSP Group	Average Fraction of Yearly Consumption
G1	0.610000
G2	0.380000

Clock Interval Details

Day of Week	Start Day	Start Month	Start Time	End Day	End Month	End Time
7	1	1	00:10:00	31	12	01:40:00
7	1	1	08:35:00	31	12	11:25:00
7	1	1	12:45:00	31	12	14:55:00
7	1	1	16:35:00	31	12	24:00:00

Time Pattern Regime: TP102

Switched Load: T

GMT/Local (Y/N): Y

GSP Group	Average Fraction of Yearly Consumption
G1	0.390000
G2	0.620000

Clock Interval Details

Day of Week	Start Day	Start Month	Start Time	End Day	End Month	End Time
7	1	1	01:40:00	31	12	08:35:00
7	1	1	11:25:00	31	12	12:45:00

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```
          7          1          1 14:55:00         31         12 16:35:00

Profile Class:                           2  domestic economy 7

Switched Load Profile Class:             T

Standard Settlement Configuration:       SC51 12 hour tele-switched (2 regs)  - GMT


Repeat for all valid combinations of Profile Class, SSC, and TPR

                                -- End of Report --
```

3.1.18.2 Daily Profile Data Report

Function Definition Ref: I0025B Produce Profile Reports - Daily Profile Data Report

Enquiry Description: Daily Profile Data Report

This report contains Basic Period Profile Coefficients, Combined Period Profile Coefficients and Period Profile Coefficients with their Standard Settlement Configuration, Profile, Profile Class and GSP Group details. The report runs as a separate Pro*C process which is initiated by the CSC Scheduler.

DPR Report Machine Readable

Table to show source of report contents:

Where a record type holds a set of up to 50 values, they are subject to the following rules:

- The values are ordered on settlement period id, ascending;
- All 50 fields are always present, if there are less than 50 values the remaining fields are left null. It should be noted that the BPP record could contain up to 49 null values, whereas the CPP and PPC records will contain 46, 48 or 50 values.

File Type: D0018

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0018001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= X
6	To Participant Id	text(4)	Id of Supplier receiving file = idb_mkt_ppt_roles. mkt_ppt_id
7	Creation Time	date/time	Time file processing was started
ZPD - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	= Input Parameter
3	Settlement Code	text(2)	Null
4	Run Type Code	text(2)	= B
5	Run Number	integer(7)	= Input Parameter
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	cph_username
3	Report Parameters	text(30)	Input Sett Date

4	Report Parameters	text(30)	Input Profile Production Run Number
HDR - Daily Profile Data Report Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= HDR
2	Profile Production Date	date	idb_pfl_production_runs. Pfl_production_run_date
3	Profile Production Time	time	idb_pfl_production_runs. Pfl_production_run_date
GSP - GSP Group			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	= idb_daily_pfl_parameters. gsp_group_id
3	Actual Noon Temperature	decimal (4,1)	= idb_daily_pfl_parameters. actual_noon_temperature
4	Noon Effective Temperature	decimal (4,1)	= idb_daily_pfl_parameters. noon_eff_temperature
5	Time of Sunset	time	= idb_daily_pfl_parameters. time_of_sunset
6	Sunset Variable	text(5)	= time of sunset in minutes relative to 18:00 eg: 21:00 is '+180'
PCL - Profile Class Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PCL
2	Profile Class Id	integer(2)	= idb_pfls.pfl_class_id
PFL - Profile Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PFL
2	Profile Id	integer(2)	= idb_pfls.pfl_id
BPP - Basic Period Profile Coefficients			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= BPP
2	Period Profile Coefficient Value (Settlement Period 01)	decimal (14,13)	= idf_pd_pfl_class_coeffs.class_ ppc_value[1]
3..50	Period Profile Coefficient Value (Settlement Period 02..49)	decimal (14,13)	= idf_pd_pfl_class_coeffs.class_ ppc_value[2..49]
51	Period Profile Coefficient Value (Settlement Period 50)	decimal (14,13)	= idf_pd_pfl_class_coeffs.class_ ppc_value[50]
SSC - Standard Settlement Configuration Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SSC

2	Standard Settlement Configuration Id	text(4)	= idf_pd_pfl_class_coefs.ssc_id
CPP - Combined Period Profile Coefficients			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CPP
2	Low Register Profile Coefficient (Settlement Period 01)	decimal (14,13)	= combined_ppc[1]. low_reg_ppc_value (retrieved from data file)
3	Normal Register Profile Coefficient (Settlement Period 01)	decimal (14,13)	= combined_ppc[1]. norm_reg_ppc_value (retrieved from data file)
4	Low Register Profile Coefficient (Settlement Period 02)	decimal (14,13)	= combined_ppc[2]. low_reg_ppc_value (retrieved from data file)
5	Normal Register Profile Coefficient (Settlement Period 02)	decimal (14,13)	= combined_ppc[2]. norm_reg_ppc_value (retrieved from data file)
…	…	…	…
100	Low Register Profile Coefficient (Settlement Period 50)	decimal (14,13)	= combined_ppc[50]. low_reg_ppc_value (retrieved from data file)
101	Normal Register Profile Coefficient (Settlement Period 50)	decimal (14,13)	= combined_ppc[50]. norm_reg_ppc_value (retrieved from data file)
VMR - Valid Measure Requirement			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= VMR
2	Time Pattern Regime Id	text(5)	= idf_pd_pfl_class_coefs.tpr_id
PPC - Period Profile Coefficients			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PPC
2	Period Profile Coefficient Value (Settlement Period 01)	decimal (14,13)	= period_ppc[1]. ppc_value
3	Period Register On State Indicator (Settlement Period 01)	boolean	= period_ppc[1]. pd_reg_ind
4	Period Profile Coefficient Value (Settlement Period 02)	decimal (14,13)	= period_ppc[2]. ppc_value
5	Period Register On State Indicator (Settlement Period 02)	boolean	= period_ppc[2]. pd_reg_ind
…	…	…	…
100	Period Profile Coefficient Value (Settlement Period 50)	decimal (14,13)	= period_ppc[50]. ppc_value
101	Period Register On State Indicator (Settlement Period 50)	boolean	= period_ppc[50]. pd_reg_ind

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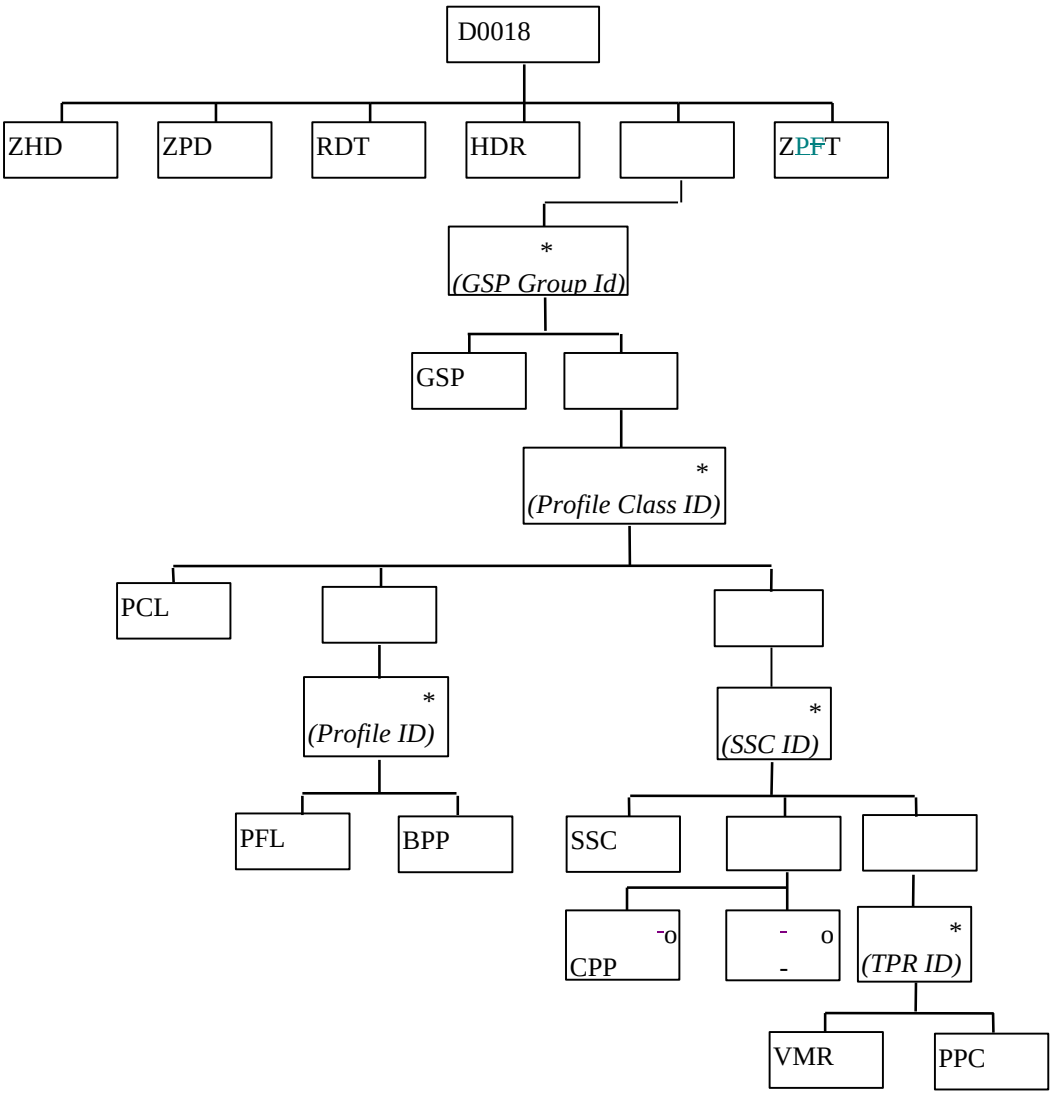
Repeating structure of file *(sort order for iterations shown in brackets)*:



DPR Report Human Readable

```
Daily Profile Data Report          ISR Agent                  15/10/1997  14:30

User Name:           PENDERI

Report Parameters:   Sett Date            30/03/1997
                     Prof Run Number      9102


Production Run Date/Time: 15/10/1997 15:28:00


GSP Group:                                      G1
GSP Group Measured Temperature (degrees F):     16.0
Noon Effective Temperature (degrees F):         15.0
Time of Sunset:                                 19:35:00
Sunset Variable (minutes):                      +35

Profile Class:          2

Profile:                1

Basic Period Profile Coefficients
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610

Profile:                2

Basic Period Profile Coefficients
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610 0.0000151119610
0.0000151119610 0.0000151119610


Repeat for each Profile associated with Profile Class.
```

Standard Settlement Configuration: SC02

Low Register Profile Coefficient	Normal Register Profile Coefficient
0.0000000000000	0.0000162813468
0.0000000000000	0.0000162813468
…	
0.0000000000000	0.0000157823463

Time Pattern Regime: TP101

Period Profile Class Coefficient	Period Time Pattern State Indicator
0.0000266907324	T
0.0000266907324	T
…	
0.0000258726989	T

Time Pattern Regime: TP102

Period Profile Class Coefficient	Period Time Pattern State Indicator
0.0000266907324	F
0.0000266907324	F
…	
0.0000258726989	F

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3.1.18.3 Standing Profile Data Report

Function Definition Ref: I0025B Produce Profile Reports - Standing Profile Data Report

Enquiry Description: Standing Profile Data Report

This report contains Regression Coefficients with their Profile and Profile Class details. It runs as a separate Pro*C program which is initiated by the CSC Scheduler.

IDP_PR_SPD Machine Readable

Table to show source of report contents:

File Type: D0028

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0028001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= D / X
6	To Participant Id	text(4)	Id of Data Collector / Supplier receiving file = idb_mkt_ppt_roles. mkt_ppt_id
7	Creation Time	date/time	Time file processing was started
ZPD - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	= Input Parameter
3	Settlement Code	text(2)	Null
4	Run Type Code	text(2)	= B
5	Run Number	integer(7)	= Input Parameter
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input Sett Date
4	Report Parameters	text(30)	Input Profile Production Run Number
5	Report Parameters (GSP Groups)	text(39)	Input GSP Groups (assumes a maximum of 13 groups)
HDR - Standing Profile Data Report Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= HDR
2	Season Id	integer(1)	= idb_settlement_days. season_id
3	Day Type Id	text(2)	= idb_settlement_days. day_type_id
4	Profile Production Date	date	idb_pfl_production_runs. Pfl_production_run_date
5	Profile Production Time	time	idb_pfl_production_runs.

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			Pfl_production_run_date
PCD - Profile Class Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PCD
2	Profile Class Id	integer(2)	idb_pfl_classes.pfl_class_id
3	Profile Class Description	text(50)	idb_pfl_classes.pfl_class_desc
4	Switched Load Profile Class Ind	boolean	idb_pfl_classes. switched_load_pfl_class_ind
PFD - Profile Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PFD
2	Profile Id	integer(2)	= idb_pfls.pfl_id
3	Profile Description	text(50)	= idb_pfls.pfl_desc
4	Profile Settlement Periods	integer(2)	= idb_pfls.pfl_sett_pds
GAA - Group Average Annual Consumption			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= GAA
2	GSP Group Id	text(2)	= idb_gsp_group_average_eacs. gsp_group_id
3	Group Average Annual Consumption	decimal (12,3)	= idb_gsp_group_average_eacs. group_average_annual_ consum
RGC - Regression Coefficient			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= RGC
2	Period Id	integer(2)	= idb_pd_pfl_regr_coefs. sett_pd_id
3	Regression Coefficient	decimal (12,9)	= idb_pd_pfl_regr_coefs. regression_coef where regression_coeff_type is 'Time of Sunset'
4	Regression Coefficient	decimal (12,9)	= idb_pd_pfl_regr_coefs. regression_coef where regression_coeff_type is '(Time of Sunset)2'
5	Regression Coefficient	decimal (12,9)	= idb_pd_pfl_regr_coefs. regression_coef where regression_coef_type is 'Noon Eff Temp'
6	Regression Coefficient	decimal (12,9)	= idb_pd_pfl_regr_coefs. regression_coef where regression_coef_type is 'Day of Week 1'
7	Regression Coefficient	decimal (12,9)	= idb_pd_pfl_regr_coefs. regression_coef where regression_coef_type is 'Day of Week 2'
8	Regression Coefficient	decimal (12,9)	= idb_pd_pfl_regr_coefs. regression_coef where regression_coef_type is 'Day of Week 3'
9	Regression Coefficient	decimal (12,9)	= idb_pd_pfl_regr_coefs. regression_coef where regression_coef_type is 'Day of Week 4'
10	Regression Coefficient	decimal (12,9)	= idb_pd_pfl_regr_coefs. regression_coef where regression_coef_type is 'Day 'Constant'

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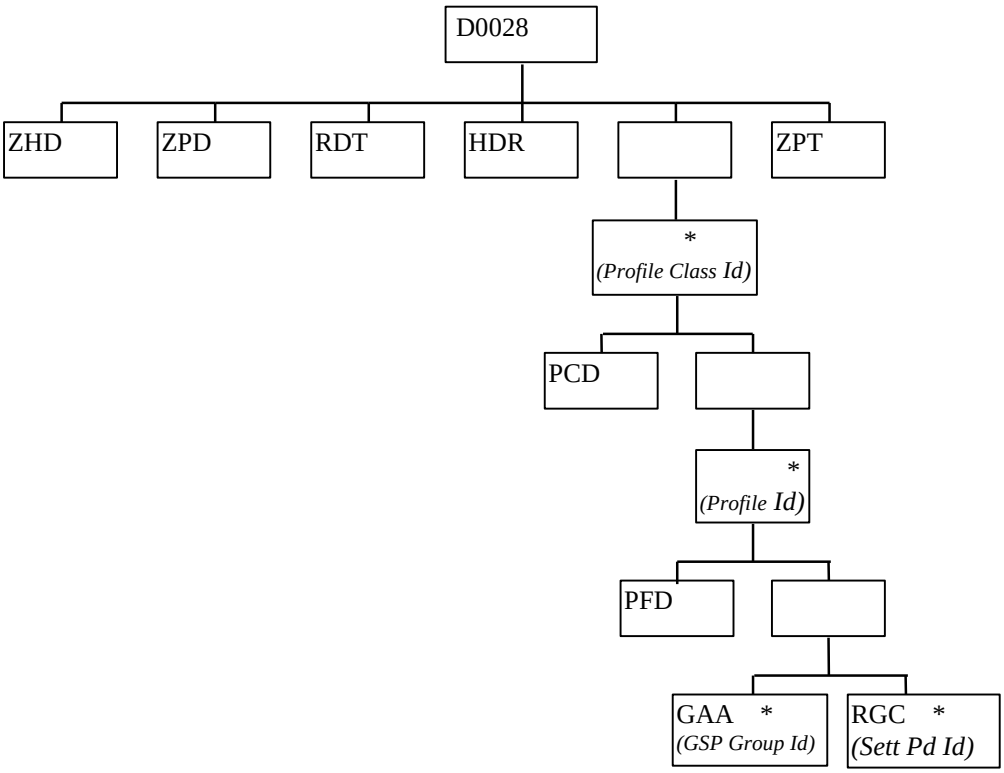
Repeating structure of file *(sort order shown in brackets)*:



SPD Report Human Readable

```
Standing Profile Data Report                                    ISR Agent                                    15/10/1997 14:28

User Name:           PENDERI
Report Parameters:   Sett Date            30/03/1997
                     Prof Run Number      9102
                     GSP Groups           G1


Season:     1 Day Type:  SA Production Run Date/Time: 15/10/1997 15:28:22


Profile Class:        1 domestic unrestricted

Switched Load Profile Class: F


Profile:    1 standard profile              Number of Settlement Periods:  48


GSP Group       Group Average Annual Consumption (MWh)
=============== ======================================
G1                                        231101.000


Settlement       Time of      (Time of      Noon Eff        Day of        Day of        Day of        Day of      Constant
    Period        Sunset      Sunset)2          Temp        Week 1        Week 2        Week 3        Week 4
========== ============= ============= ============= ============= ============= ============= ============= =============
```

```
         1  56.250000000   1.350000000 412.500000000 600.375000000 600.000000000 450.000000000 600.000000000 712.503750000
         2  56.250000000   1.350000000 412.500000000 600.375000000 600.000000000 450.000000000 600.000000000 712.503750000
        ..
        48  60.000000000   1.500000000 375.000000000 525.375000000 600.000000000 412.500000000 600.000000000 637.503750000

Profile Class:        2 domestic economy 7

Switched Load Profile Class: T


Profile:    1 std consumption               Number of Settlement Periods:  48


GSP Group       Group Average Annual Consumption (MWh)
=============== ======================================
G1                                      278521.200


Settlement       Time of      (Time of      Noon Eff        Day of        Day of        Day of        Day of      Constant
    Period        Sunset      Sunset)2          Temp        Week 1        Week 2        Week 3        Week 4
========== ============= ============= ============= ============= ============= ============= ============= =============
         1  45.000000000   1.080000000 330.000000000 480.300000000 480.000000000 360.000000000 480.000000000 570.003000000
         2  45.000000000   1.080000000 330.000000000 480.300000000 480.000000000 360.000000000 480.000000000 570.003000000
        ..
        48  48.000000000   1.200000000 300.000000000 420.300000000 480.000000000 330.000000000 480.000000000 510.003000000

Profile:    2 11 hour switched load         Number of Settlement Periods:  22
```

GSP Group	Group Average Annual Consumption (MWh)
G1	232201.000

Settlement Period	Time of Sunset	(Time of Sunset)2	Noon Eff Temp	Day of Week 1	Day of Week 2	Day of Week 3	Day of Week 4	Constant
1	61.500000000	1.425000000	390.000000000	570.000000000	375.000000000	487.500000000	375.000000000	712.500000000
2	61.500000000	1.425000000	390.000000000	570.000000000	375.000000000	487.500000000	375.000000000	712.500000000
..								
22	61.500000000	1.425000000	390.000000000	570.000000000	375.000000000	487.500000000	375.000000000	712.500000000

Only Settlement Periods included in the Profile are included. Repeat for all Profile Sets valid on the Settlement Date

-- End of Report --

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3.1.18.4 Tele-switch Contact Interval Data Report

Function Definition Ref: I0025B Produce Profile Reports - Tele-switch Contact Interval Data

Enquiry Description: Tele-switch Contact Interval Data Report

This report contains the set of Tele-switch Contact Intervals, ordered by tele-switch user id, tele-switch group id, contact code and start date/time, which apply to the applicable settlement date. It runs as a separate Pro*C program which is initiated by the CSC Scheduler.

TSCI Report Machine Readable

Table to show source of report contents:

File Type: D0279001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0279001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= X
6	To Participant Id	text(4)	Id of Supplier receiving file
7	Creation Time	date/time	Time file processing was started
ZPD - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	Date	= Input Parameter
3	Settlement Code	text(2)	Null
4	Run Type Code	text(2)	= B
5	Run Number	integer(7)	= Input Parameter
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input Settlement Date
4	Report Parameters	text(30)	Input Profile Production Run Number
HDR - Tele-switch Contact Interval Data Report Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= HDR
2	Profile Production Run Date	Date	idb_pfl_production_runs. Pfl_production_run_date

3	Profile Production Run Time	Time	idb_pfl_production_runs. Pfl_production_run_time
4	Tele-switch date	Date	idb_pfl_production_runs. teleswitch_date
TSU - Tele-switch User			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TSU
2	Tele-switch User Id	integer(2)	No leading zeroes = idb_tsw_contact_intervals. ts_user_id
TSG - Tele-switch Group			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TSG
2	Tele-switch Group Id	integer(4)	No leading zeroes = idb_tsw_contact_intervals. Tsw_group_id
TSC - Tele-switch Contact			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TSC
2	Tele-switch Contact Code	text(1)	= idb_tsw_contact_intervals. Tsw_contact_code
TCI - Tele-switch Contact Interval			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TCI
2	Start Date and Time	date/time	= idb_tsw_contact_intervals. Tsw_start_date_time
3	End Date and Time	date/time	= idb_tsw_contact_intervals. Tsw_end_date_time
4	Tele-switch Contact State	Boolean	= idb_tsw_contact_intervals. Tsw_contact_state

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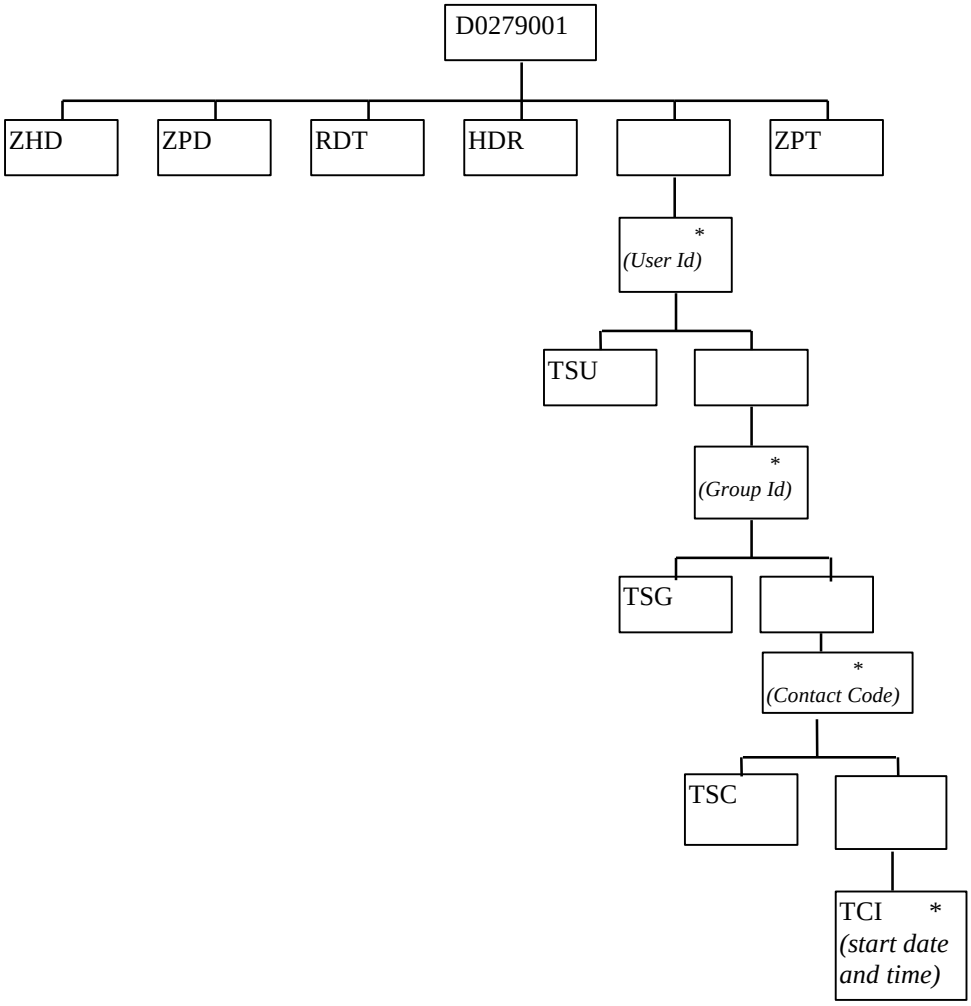
Repeating structure of file *(sort order shown in brackets)*:



TSCI Report Human Readable

```
TSW Contact Interval Report ISR Agent                      15/10/1997 14:28

User Name:           PENDERI
Report Parameters:   Sett Date           30/03/1997
                     Prof Run Number     9102



Profile Production Run Date/Time:       15/10/1997 15:28:00



Tele-switch User:        12

Tele-switch Group:       1234

Tele-switch Contact:     A

Tele-switch Contact Intervals:
================================================================================
Start Date-Time         End Date-Time             Tele-switch Contact State
===============         =============             =========================
01/01/1998 03:00       01/01/1998 04:00           T
01/01/1998 05:00       01/01/1998 06:00           F
01/01/1998 07:00       01/01/1998 08:00           T

Tele-switch Contact:        B

Tele-switch Contact Intervals:
================================================================================
Start Date-Time         End Date-Time             Tele-switch Contact State
===============         =============             =========================
01/01/1998 03:00       01/01/1998 04:00           T
01/01/1998 07:00       01/01/1998 08:00           F

Tele-switch Contact:        D

Tele-switch Contact Intervals:
================================================================================
Start Date-Time         End Date-Time             Tele-switch Contact State
===============         =============             =========================
01/01/1998 01:00       01/01/1998 04:00           F
01/01/1998 05:00       01/01/1998 08:00           T
```

Repeat for all Tele-switch Groups within Tele-switch User

Repeat for all Tele-switch Users

-- End of Report --

3.1.19 Supplier Settlement Reports

The following reports are produced for suppliers as part of the Settlement and Reconciliation process, each is regarded as a separate External Interface:

1. Supplier Settlement Header Report,
2. Supplier Purchase Matrix Report,
3. HH Demand Report,
4. Deemed Take Report,
5. Supplier Purchase Report,
6. GSP Group Consumption Totals Report
7. Supplier BM Unit Report
8. SVA Gross Demand Report

The format of the reports is specified in this section, and the processing used to generate them is described in the *IRP Reports Subsystem Specification* Chapter.

3.1.19.1 Supplier Settlement Header Report

Function Definition Ref: I0026B Produce Settlement Reports - Supplier Settlement Header Report

Supplier Settlement Header Machine Readable

Table to show source of report contents:

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0266001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	X
6	To Participant Id	text(4)	Supplier Id
7	Creation Time	date/time	Time report processing started
ZPD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number

HDR			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HDR
2	Supplier Id	text(4)	idb_sup_data_agtn_in_ssr_runs / sup_mkt_ppt_id
3	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
4	Pool Member Id	text(4)	idb_mkt_ppt_roles / pool_member_id
5	Settlement Date	date	idb_ssr_runs / sett_date
6	Settlement Code	text(2)	idb_ssr_runs / sett_code
7	Settlement Code Description	text(30)	idb_sett_types / description
SSR			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SSR
2	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
3	SSR Run Date	date	idb_ssr_runs / ssr_run_date
4	SSR Run Type	text(2)	idb_ssr_runs / ssr_run_type_id
5	Settlement Code Description	text(30)	idb_sett_types / description
6	SSR Run Status	text(1)	idb_ssr_runs / ssr_run_status
7	Settlement Run Status Description	text(30)	cdb_ref_values / description
GP1			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GP1
2	GSP Group Id	text(2)	idb_ssr_run_gsp_group / gsp_group_id
IDD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= IDD
2	System Market Participant Id	text(4)	cdb_system_parameter / value Keyed using the param_type which identifies the ISRA Agent
3	Profile Production Run Number	integer(7)	idb_ssr_run_gsp_group / pfl_production_run_number
4	Profile Production Run Date	date	idb_pfl_production_runs / pfl_production_run_time (date part used)
5	Profile Production Run Time	time	idb_pfl_production_runs / pfl_production_run_time (time part used)
GP2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GP2
2	GSP Group Id	text(2)	idb_pfl_production_runs / gsp_group_id
DA			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= DA
2	Data Aggregator Id	text(4)	idb_sup_data_agtn_in_ssr_runs / da_mkt_ppt_id

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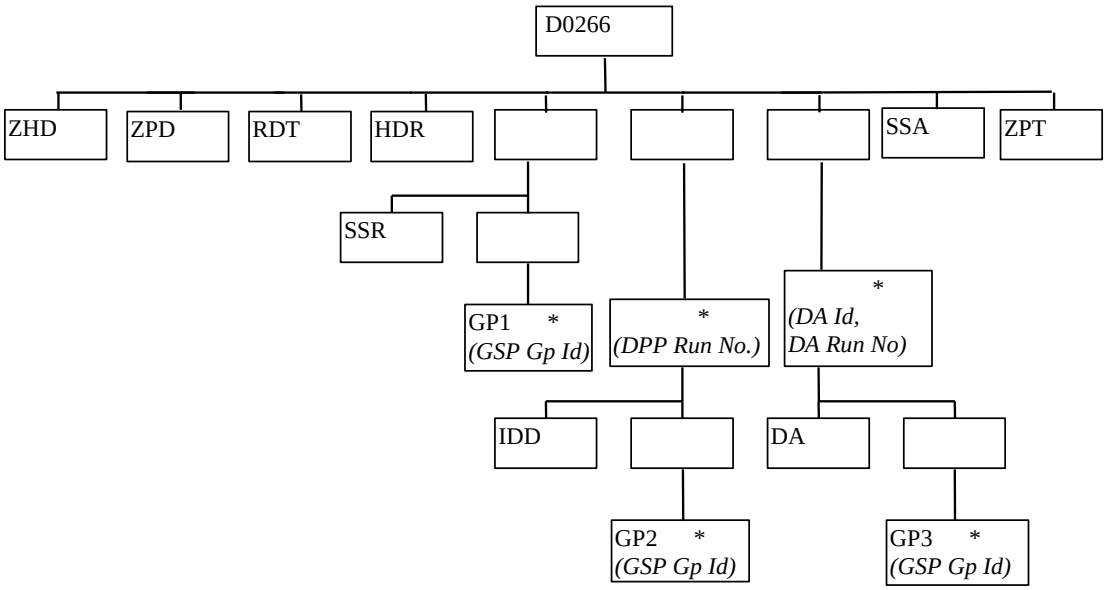
3	Data Aggregator Name	text(40)	idb_mkt_ppts / mkt_ppt_name
4	Data Aggregator Type	text(1)	'H' or 'N'. Assign Data Aggregation Type to matching Participant Role Code (i.e. 'N' for role code 'B' and 'H' for role code 'A').
5	Data Aggregator Run Number	integer(7)	idb_sup_data_agtn_in_ssr_runs / data_agtn_run_number
6	Data Aggregator Run Settlement Date	date	idb_sup_data_agtn / sett_date
GP3			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GP3
2	GSP Group Id	text(2)	idb_sup_data_agtn_in_ssr_runs / gsp_group_id
SSA			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SSA
2	SSA Settlement Run Number	integer(2)	idb_ssr_runs / ssa_sett_run_number
3	SSA Settlement Date	date	idb_ssa_sett_runs / sett_date
4	SSA Settlement Run Type	text(1)	idb_ssa_sett_runs / sett_run_type_id
5	CDCS Extract Number	integer(2)	idb_ssa_sett_runs / cdsc_extract_number

Repeating Structure of the File *(sort order shown in brackets)*:



IRP_SUPPLIER_SETT_HDR Human Readable

```
Supplier Report Header              ISR Agent                  16/10/1997 10:12

User:                FAT2OPSU
Report Parameters:   SSR Run No          25301




Supplier:            M101 Supplier 1 / NHHDA 1 Pool Member:         PM01
Settlement Date:     01/03/1997  Settlement Code:     SF Final Initial Settlement




SSR Settlement Run Details

SSR Run Number:      25301
SSR Run Date:        16/10/1997
SSR Run Type:        SF Final Initial Settlement
SSR Run Status:      X Job Completed with Exceptions

GSP Group Included:  G1



Input Data Details


Profile Production Run Details

ISR Agent:                              M001
Profile Production Run Number:          1
Profile Production Run Date:            12/03/1997
Profile Production Run Time:            00:00:00

GSP Groups Included: G1

(Repeated for each Profile Production Run used in SSR Run)


Data Aggregation Run Details

Data Aggregator:                        M101 Supplier 1 / NHHDA 1
Data Aggregation Run Type:              N
Data Aggregation Run Number:            2
Settlement Date:                        01/03/1997
```

GSP Groups Included: G1

Data Aggregation Run Details

Data Aggregator:	M301 HHDA 1
Data Aggregation Run Type:	H
Data Aggregation Run Number:	2
Settlement Date:	01/03/1997

GSP Groups Included: G1

(Repeated for each Data Aggregation Run used in SSR Run, and for each Data Aggregator)

SSA Settlement Run Details

SSA Settlement Run Number:	3
SSA Settlement Date:	01/03/1997
SSA Settlement Run Type:	A
CDCS Extract Number:	24

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3.1.19.2 Supplier Purchase Matrix Report

Function Definition Ref: I0026B Produce Settlement Reports - Supplier Purchase Matrix Report

IRP_Supplier_Purchase_Matrix Machine Readable

Table to show source of report contents:

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0082001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	X
6	To Participant Id	text(4)	Supplier Id
7	Creation Time	date/time	Time report processing started
ZPD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
HDR			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HDR
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	date	idb_ssr_runs / ssr_run_date

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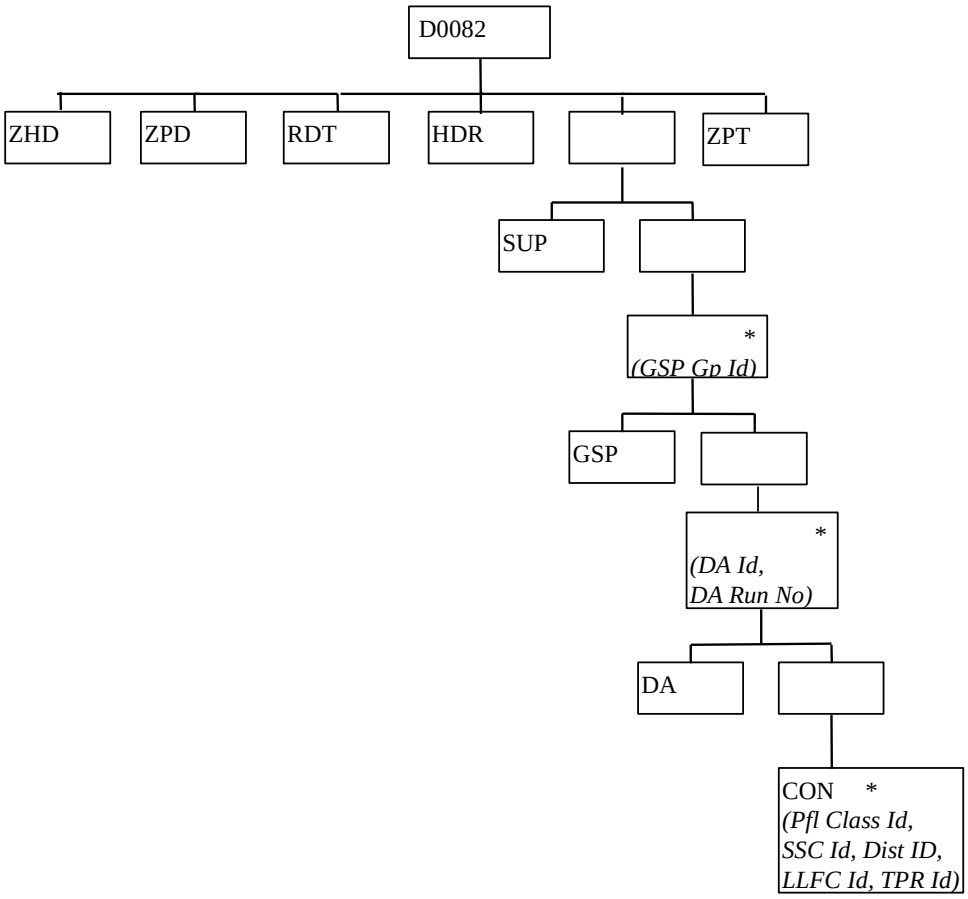
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
SUP			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	idb_sup_data_agtn_in_ssr_runs / sup_mkt_ppt_id
3	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
GSP			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	idb_sup_data_agtn_in_ssr_runs / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
DA			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= DA
2	Data Aggregator Id	text(4)	idb_sup_data_agtn_in_ssr_runs / da_mkt_ppt_id
3	Data Aggregator Name	text(40)	idb_mkt_ppts / mkt_ppt_name
4	Data Aggregation Type	text(1)	'N'
5	Data Aggregation Run Number	integer(7)	idb_sup_data_agtn_in_ssr_runs / data_agtn_run_number
CON			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= CON
2	Profile Class Id	integer(2)	idf_sup_purchase_matrices / pfl_class_id
3	Standard Settlement Configuration Id	text(4)	idf_sup_purchase_matrices / ssc_id
4	Line Loss Factor Class Id	integer(3)	idb_llf_classes / llf_class_id
5	Distributor Id	text(4)	idb_llf_classes / dist_mkt_ppt_id
6	Time Pattern Regime Id	text(5)	idf_sup_purchase_matrices / tpr_id
7	SPM Total EAC	Decimal (13,3)	idf_sup_purchase_matrices / spm_total_eac

8	SPM Total EAC MSID Count	integer(8)	idf_sup_purchase_matrices / spm_total_eac_msid_count
9	SPM Total Annualised Advance	Decimal (13,3)	idf_sup_purchase_matrices / spm_total_aa
10	SPM Total AA MSID Count	integer(8)	idf_sup_purchase_matrices / spm_total_aa_msid_count
11	SPM Total Unmetered Consumption	Decimal (13,3)	idf_sup_purchase_matrices / spm_total_unmtd_consum
12	SPM Total Unmetered MSID Count	integer(8)	idf_sup_purchase_matrices / spm_total_unmtd_msid_count
13	SPM Default EAC MSID Count	integer(8)	idf_sup_purchase_matrices / spm_dflt_eac_msid_count
14	SPM Default Unmetered MSID Count	integer(8)	idf_sup_purchase_matrices / spm_dflt_unmtd_msid_count

Repeating structure of the file *(sort order shown in brackets)*:



IRP_Supplier_Purchase_Matrix Human Readable

Supplier Purchase Matrix Rprt ISR Agent 16/10/1997 10:12

User: FAT2OPSU

Report Parameters: SSR Run No 25301

Settlement Date: 01/03/1997 Settlement Code: SF Final Initial Settlement

SSR Run Date: 16/10/1997 SSR Run Number: 25301 SSR Run Type: SF

Supplier: M101 Supplier 1 / NHHDA 1

GSP Group: G1 SSR GSP Group 1

Data Aggregator: M101 Supplier 1 / NHHDA 1 Data Aggregation Type: N Data Aggregation Run Number: 2

Pfl Class	SSC	LLFC	Dist	TPR Id	Total EAC (MWh)	Total EAC MSID Count	Total AA (MWh)	Total AA MSID Count	Total Unmetered (MWh)	Total Unmetered MSID Count	Default EAC MSID Count	Default Unmetered MSID Count
1	SC01	1	M401	TP001	2496594.349	245671	496594.349	987	6594.765	165	159	173
1	SC01	2	M401	TP001	2495349.349	245154	498529.349	1002	6504.884	175	174	158
1	SC01	3	M401	TP001	2494104.349	244637	500464.349	1017	6415.419	185	189	143
2	SC02	1	M401	TP101	2496345.349	245567	496981.349	990	6576.456	167	162	170
2	SC02	1	M402	TP102	2496096.349	245464	497368.349	993	6558.563	169	165	167
2	SC02	2	M402	TP102	2495100.349	245050	498916.349	1005	6486.991	177	177	155

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```
    2 SC02    2 M402 TP102     2494851.349     244947      499303.349       1008        6469.098        179        180        152
    2 SC03    1 M403 TP111     2495847.349     245361      497755.349        996        6540.670        171        168        164
    2 SC03    1 M403 TP111     2495598.349     245257      498142.349        999        6522.777        173        171        161
    2 SC03    2 M404 TP112     2494602.349     244844      499690.349       1011        6451.205        181        183        149
    2 SC03    2 M404 TP112     2494353.349     244740      500077.349       1014        6433.312        183        186        146
```

(Repeated for all Settlement Classes relevant to Supplier)

(Repeated for all Data Aggregators associated with Supplier)

3.1.19.3 Half Hour Demand Report

Function Definition Ref: I0026B Produce Settlement Reports - HH Demand Report.

If there is any NHH consumption for a GSP Group, then records for all NHH CCCs will be output for that GSP Group.IRP_HH_DEMAND Machine Readable

Table to show source of report contents:

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0081001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	X
6	To Participant Id	text(4)	Supplier Id
7	Creation Time	date/time	Time report processing started
ZPD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
HDR			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HDR
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	date	idb_ssr_runs / ssr_run_date

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6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
8	Supplier Id	text(4)	idf_agtd_sup_pd_consums / sup_mkt_ppt_id
9	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
GSP			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	idf_agtd_sup_pd_consums / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
CCC			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	integer(2)	idb_consum_comp_classes / consum_comp_class_id
3	GSP Group Correction Scaling Factor	Decimal (4,2)	idb_gsp_group_cctn_sf_ssr_runs / gsp_group_correction_sf
4	AA/EAC Indicator	text(1)	idb_consum_comp_classes / aa_eac_ind (O)
5	Actual/Estimated Indicator	text(1)	idb_consum_comp_classes / actual_estimated_ind (O)
6	Data Aggregation Type	text(1)	idb_consum_comp_classes / data_agtn_type
7	Metered/Unmetered Indicator	text(1)	idb_consum_comp_classes / mtd_unmtd_ind
8	Consumption Component Indicator	text(1)	idb_consum_comp_classes / consum_comp_ind
9	Measurement Quantity Id	text(2)	idb_consum_comp_classes / measurement_quantity_id
SPX			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SPX
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds / sett_pd_id
3	Settlement Period Label	text(6)	Provided by a function call
4	Aggregated Supplier Consumption	Decimal (13,3)	idf_agtd_sup_pd_consums / agtd_sup_consum(O)
5	Aggregated Supplier Line Loss	Decimal (13,3)	idf_agtd_sup_pd_consums / agtd_sup_line_loss(O)

6	Corrected Supplier Consumption	Decimal (13,3)	idf_agtd_sup_pd_consums / corrected_sup_consum(O)
7	Corrected Supplier Line Loss	Decimal (13,3)	idf_agtd_sup_pd_consums / corrected_sup_line_loss(O)
TOT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= TOT
2	Daily CCC Aggregated Supplier Consumption	Decimal (13,3)	Sum of the Aggregated Supplier Consumption for all settlement periods of the day(O)
3	Daily CCC Aggregated Supplier Line Loss	Decimal (13,3)	Sum of the Aggregated Supplier Line Loss for all settlement periods of the day(O)
4	Daily CCC Corrected Supplier Consumption	Decimal (13,3)	Sum of the Corrected Supplier Consumption for all settlement periods of the day(O)
5	Daily CCC Corrected Supplier Line Loss	Decimal (13,3)	Sum of the Corrected Supplier Line Loss for all settlement periods of the day(O)

HD2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HD2
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	date	idb_ssr_runs / ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
8	Supplier Id	text(4)	idf_agtd_sup_da_pd_consums / sup_mkt_ppt_id
9	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
GP2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GP2
2	GSP Group Id	text(2)	idf_agtd_sup_da_pd_consums / gsp_group_id

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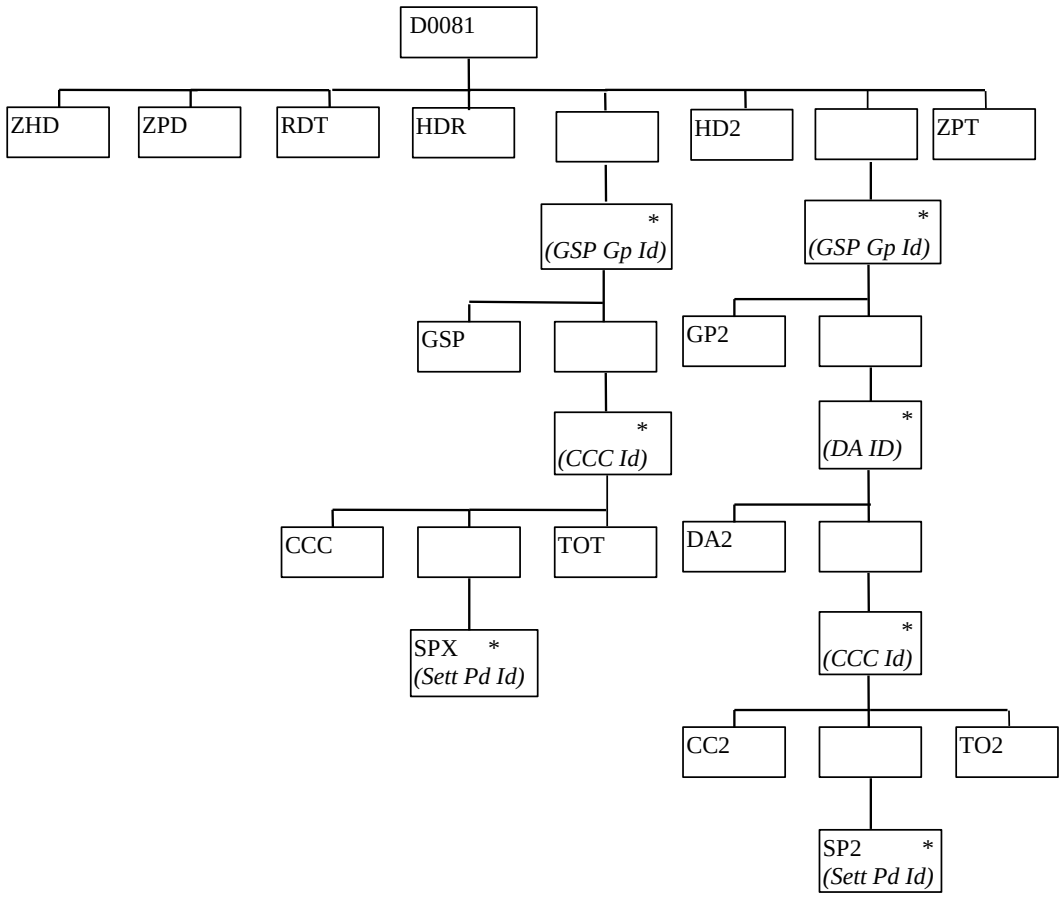
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
DA2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= DA2
2	Data Aggregator Id	text(4)	idf_agtd_sup_da_pd_consums / da_mkt_ppt_id
3	Data Aggregator Name	text(40)	idb_mkt_ppts / mkt_ppt_name
CC2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= CC2
2	AA/EAC Indicator	text(1)	idb_consum_comp_classes / aa_eac_ind (O)
3	Actual/Estimated Indicator	text(1)	idb_consum_comp_classes / actual_estimated_ind (O)
4	Consumption Component Class Id	integer(2)	idb_consum_comp_classes / consum_comp_class_id
5	Consumption Component Indicator	text(1)	idb_consum_comp_classes / consum_comp_ind
6	Data Aggregation Type	text(1)	idb_consum_comp_classes / data_agtn_type
7	Measurement Quantity Id	text(2)	idb_consum_comp_classes / measurement_quantity_id
8	Metered/Unmetered Indicator	text(1)	idb_consum_comp_classes / mtd_unmtd_ind
SP2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SP2
2	Settlement Period Id	integer(2)	idf_agtd_sup_da_pd_consums / sett_pd_id
3	Settlement Period Label	text(6)	Generated by function call
4	Aggregated Supplier Consumption	Decimal (13,3)	For Settlement Days before the start of the NETA - idf_agtd_sup_da_pd_consums / agtd_sup_consum(O) For Settlement Days from the start of the NETA derived by summing idf_agtd_sup_da_pd_consums / agtd_sup_consum across BM Units for a CCC (O)
5	Aggregated Supplier Line Loss	Decimal (13,3)	For Settlement Days before the start of the NETA - idf_agtd_sup_da_pd_consums / agtd_sup_line_loss(O) For Settlement Days from the start of the NETA derived by summing idf_agtd_sup_da_pd_consums /

			agtd_sup_line_loss across BM Units for a CCC (O)
6	Data Aggregator HH MSID Count	integer(10)	idf_agtd_sup_da_pd_consums / da_hh_msid_count
TO2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= TO2
2	Daily DA Aggregated Supplier Consumption	Decimal (13,3)	Derived by summing the daily settlement period values of aggregated supplier consumption(O)
3	Daily DA Aggregated Supplier Line Loss	Decimal (13,3)	Derived by summing the daily settlement period values of aggregated supplier line losses(O)
4	Daily DA HH MSID Count	integer(10)	Derived by summing the daily settlement period values of Data Aggregator HH MSID Count

Repeating Structure of the File *(sort order shown in brackets)*:



IRP_HH_DEMAND Human Readable

HH Demand Report ISR Agent 17/10/1997 10:07

User: FAT2OPSU
Report Parameters: SSR Run No 25321

HH Demand Report - Supplier Totals by Consumption Component Class

Settlement Date: 01/03/1997 Settlement Code: SF Final Initial Settlement
SSR Run Date: 17/10/1997 SSR Run Number: 25321 SSR Run Type: SF
Supplier: M101 SSA Administrator

GSP Group: G1 SSR GSP Group 1

Consumption Component Class: 1
GSP Group Correction Scaling Factor: 1.00
AA/EAC:
Actual/Estimated: A
Data Aggregation Type: H
Metered/Unmetered: M
Consumption Component: C
Measurement Quantity: AI

Sett End Prd	Time	Half Hourly Consumption (Non-Losses) (MWh)	Half Hourly Consumption (Losses) (MWh)	Corrected Component (Non-Losses) (MWh)	Corrected Component (Losses) (MWh)
1	00:30	2.476		6.907	
2	01:00	2.476		6.907	
3	01:30	2.476		6.907	
4	02:00	2.476		6.907	
5	02:30	2.476		7.046	
6	03:00	2.476		7.046	
7	03:30	2.476		7.046	
.					
.					
47	23:30	2.567		7.004	
48	00:00	2.567		7.004	

Dly Tot: 121.032 337.119

Consumption Component Class: 3
GSP Group Correction Scaling Factor: 1.00
AA/EAC:
Actual/Estimated: A
Data Aggregation Type: H
Metered/Unmetered: M
Consumption Component: M
Measurement Quantity: AI

Sett End Prd	Time	Half Hourly Consumption (Non-Losses) (MWh)	Half Hourly Consumption (Losses) (MWh)	Corrected Component (Non-Losses) (MWh)	Corrected Component (Losses) (MWh)
1	00:30		2.476		6.907
2	01:00		2.476		6.907
3	01:30		2.476		6.907
4	02:00		2.476		6.907
5	02:30		2.476		7.046
6	03:00		2.476		7.046
.					
.					
48	00:00		2.476		6.755
Dly Tot:			118.838		331.106

(Repeated for all CCCs relevant to Supplier, and for all GSP Groups Supplier trades in)

HH Demand Report - Supplier Totals by Data Aggregator

Settlement Date: 01/03/1997 Settlement Code: SF Final Initial Settlement
SSR Run Date: 17/10/1997 SSR Run Number: 25321 SSR Run Type: SF
Supplier: M101 SSA Administrator

GSP Group: G1 SSR GSP Group 1

Data Aggregator: M301 Eastern Electricity

AA/EAC:

Actual/Estimated: A

Consumption Component Class: 1

Consumption Component: C

Data Aggregation Type: H

Measurement Quantity: AI

Metered/Unmetered: M

Sett Prd	End Time	Suppliers Metered Consumption (Non-Losses) (MWh)	Suppliers Metered Consumption (Losses) (MWh)	Data Aggregator HH MSID Count
1	00:30	2.476		3456
2	01:00	2.476		3456
.				
.				
48	00:00	2.567		3456

Daily Totals: 121.032

(Repeated for all CCCs relevant to Supplier, for all Data Aggregators Supplier is associated with, for all GSP Groups Supplier trades in)

3.1.19.4 Deemed Take Report

Function Definition Ref: I0026B Produce Settlement Reports - Deemed Take Report

IRP_DEEMED_TAKE Machine Readable

Table to show source of report contents:

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0043001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	X
6	To Participant Id	text(4)	Supplier Id
7	Creation Time	date/time	Time report processing started

ZPD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZPD
2	Settlement Date	Date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	idb_ssr_runs / ssr_run_type_id
6	GSP Group	text(2)	Null

RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number

HDR			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HDR
2	Settlement Date	Date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	Date	idb_ssr_runs / ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number

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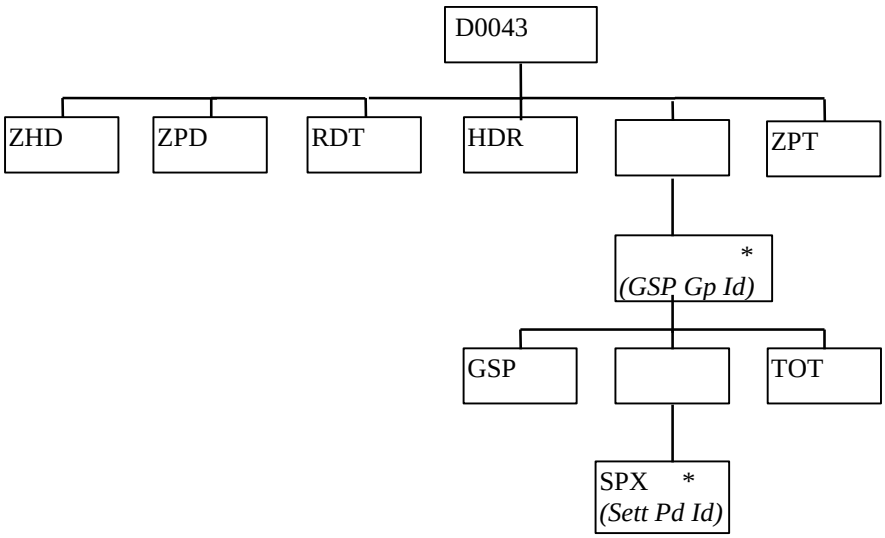
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
8	Supplier Id	text(4)	idb_pd_sup_purchases / sup_mkt_ppt_id
9	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
GSP			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	idb_pd_sup_purchases / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
SPX			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SPX
2	Settlement Period Id	integer(2)	idb_pd_sup_purchases / sett_pd_id
3	Settlement Period Label	text(6)	Generated by a function call
4	Period Supplier Deemed Take	Decimal (13,3)	idb_pd_sup_purchases / pd_sup_deemed_take
5	Unadjusted Supplier Deemed Take	Decimal (13,3)	idb_pd_sup_purchases / unadj_sup_deemed_take
6	Supplier Pre-Spill Adjusted Take (Supplier Period Weighted Consumption)	Decimal (13,3)	idb_pd_sup_purchases / sup_pd_weighted_consum
7	Total Period NPG Spill	Decimal (13,3)	idb_ssr_run_gsp_group_pds / total_pd_npg_spill
8	Total Period Weighted Consumption	Decimal (13,3)	idb_ssr_run_gsp_group_pds / total_pd_weighted_consum
9	GSP Group Correction Factor	Decimal (18,9)	idb_ssr_run_gsp_group_pds / gsp_group_cctn_factor
10	CCC Aggregated Supplier Consumption	Decimal (13,3)	A derived value formed by summing idf_agtd_sup_pd_consums / agtd_sup_consum across all Consumption Component Classes for a supplier
11	CCC Aggregated Supplier Line Loss	Decimal (13,3)	A derived value formed by summing idf_agtd_sup_pd_consums / agtd_sup_line_loss across all CCC for a supplier

12	CCC Corrected Supplier Consumption	Decimal (13,3)	A derived value formed by summing idf_agtd_sup_pd_consums / corrected_sup_consum across all Consumption Component Classes for a supplier
13	CCC Corrected Supplier Line Loss	Decimal (13,3)	A derived value formed by summing idf_agtd_sup_pd_consums / corrected_sup_line_loss across all CCC for a supplier
TOT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= TOT
2	Daily Supplier Deemed Take	Decimal (13,3)	idb_pd_sup_purchases / pd_sup_deemed_take summed for all periods of the day
3	Daily Unadjusted Supplier Deemed Take	Decimal (13,3)	idb_pd_sup_purchases / unadj_sup_deemed_take summed for all periods of the day
4	Daily Supplier Pre-Spill Adjusted Take	Decimal (13,3)	idb_pd_sup_purchases / sup_pd_weighted_consum summed for all periods of the day
5	Daily CCC Aggregated Supplier Consumption	Decimal (13,3)	A derived value formed by summing idf_agtd_sup_pd_consums / agtd_sup_consum across all Consumption Component Classes for a supplier summed for all periods of the day
6	Daily CCC Aggregated Supplier Line Loss	Decimal (13,3)	A derived value formed by summing idf_agtd_sup_pd_consums / agtd_sup_line_loss across all CCC for a supplier summed for all periods of the day
7	Daily CCC Corrected Supplier Consumption	Decimal (13,3)	A derived value formed by summing idf_agtd_sup_pd_consums / corrected_sup_consum across all Consumption Component Classes for a supplier summed for all periods of the day
8	Daily CCC Corrected Supplier Line Loss	Decimal (13,3)	A derived value formed by summing idf_agtd_sup_pd_consums / corrected_sup_line_loss across all CCC for a supplier summed for all periods of the day

Repeating Structure of the File *(sort order shown in brackets)*:



IRP_DEEMED_TAKE Human Readable

Deemed Take Report ISR Agent 16/10/1997 10:12

User: FAT2OPSU

Report Parameters: SSR Run No 25301

Settlement Date: 01/03/1997 Settlement Code: SF Final Initial Settlement

SSR Run Date: 16/10/1997 SSR Run Number: 25301 SSR Run Type: SF

Supplier: M101 Supplier 1 / NHHDA 1

GSP Group: G1 SSR GSP Group 1

Sett Prd	End Time	Supplier Deemed Take (MWh)	Unadjusted Supplier Deemed Take (MWh)	Supplier Pre-Spill Adjusted Take (MWh)	Non Pooled Generation Spill (MWh)	Total Period Weighted Consumption (MWh)	GSP Group Correction Factor	Half Hourly Consumption (Non-Losses) (MWh)	Half Hourly Consumption (Losses) (MWh)	Corrected Component (Non-Losses) (MWh)	Corrected Component (Losses) (MWh)
1	00:30	2023.484	2023.484	0.000	0.000	0.000	2.789713831	698.959	75.404	1921.927	101.557
2	01:00	2023.484	2023.484	0.000	0.000	0.000	2.789713831	698.959	75.404	1921.927	101.557
…											
48	00:00	2023.484	2023.484	0.000	0.000	0.000	2.728392591	710.175	85.347	1910.287	113.197
Dly Tot:		97127.222	97127.222	0.000				33523.970	3788.145	92042.633	5084.587

(Repeated for all GSP Groups that Supplier trades in)

3.1.19.5 Supplier Purchase Report

Function Definition Ref: I0026B Produce Settlement Reports - Supplier Purchase Report

IRP_SUPPLIER_PURCHASE Machine Readable

Table to show source of report contents:

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0079001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	X
6	To Participant Id	text(4)	Supplier Id
7	Creation Time	date/time	Time report processing started
ZPD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	idb_ssr_runs / ssr_run_number
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
HDR			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HDR
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	date	idb_ssr_runs / ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
8	Supplier Id	text(4)	idb_pd_sup_purchases / sup_mkt_ppt_id
9	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
10	Pool Member Id	text(4)	idb_mkt_ppt_roles / pool_member_id
GSP			
Field	**Field Name**	**Type**	**Source / Value**

1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	idb_pd_sup_purchases / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
SPX			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SPX
2	Settlement Period Id	integer(2)	idb_pd_sup_purchases / sett_pd_id
3	Settlement Period Label	text(6)	Generated by function call
4	GSP Group Take	Decimal (13,3)	idb_gsp_group_takes / gsp_group_take
5	Period Supplier Deemed Take	Decimal (13,3)	idb_pd_sup_purchases / pd_sup_deemed_take
6	Period Supplier Purchase Total	Decimal (14,2)	idb_pd_sup_purchases / pd_sup_purchase_total
7	Pool Selling Price	Decimal (11,6)	idb_sett_pd_prices / pool_selling_price
8	Transmission Loss Multiplier	Decimal (10,9)	idb_sett_pd_prices / trans_loss_mult
9	Transmission Losses Reconciliation Multiplier	Decimal (8,6)	idb_sett_pd_prices / trans_losses_recon_mult
TOT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= TOT
2	Daily GSP Group Take	Decimal (13,3)	Derived item formed by summing idb_gsp_group_takes / gsp_group_take for all settlement periods
3	Daily Supplier Deemed Take	Decimal (13,3)	idb_pd_sup_purchases / pd_sup_deemed_take summed for all periods in the day
4	Daily Supplier Purchase Total	Decimal (14,2)	Derived by summing the Period Supplier Purchase Total for the whole day

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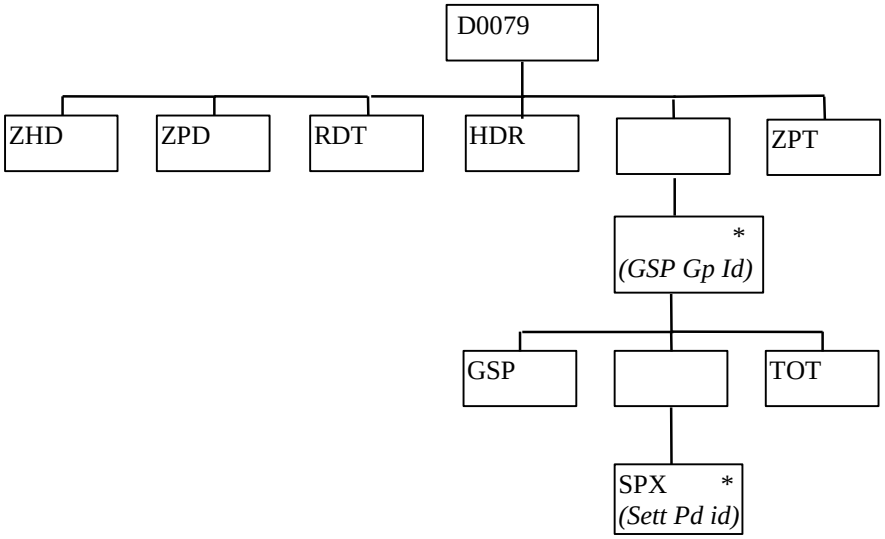
Repeating Structure of the File *(sort order shown in brackets)*:



IRP_SUPPLIER_PURCHASE Human Readable

Supplier Purchase Report ISR Agent 16/10/1997 10:12

User: FAT2OPSU

Report Parameters: SSR Run No 25301

Settlement Date: 01/03/1997 Settlement Code: SF Final Initial Settlement

SSR Run Date: 16/10/1997 SSR Run Number: 25301 SSR Run Type: SF

Supplier: M101 Supplier 1 / NHHDA 1

Pool Member: PM01

GSP Group: G1 SSR GSP Group 1

Sett Prd	End Time	GSP Group Take (MWh)	Supplier Deemed Take (MWh)	Supplier GSP Group Purchase (£)	Pool Selling Price (£/MWh)	Transmission Loss Multiplier	Transmission Losses Reconciliation Multiplier
1	00:30	2023.484	2023.484	52114.83	25.000000	0.010000000	0.020000
2	01:00	2023.484	2023.484	52114.83	25.000000	0.010000000	0.020000
3	01:30	2023.484	2023.484	52114.83	25.000000	0.010000000	0.020000
…							
48	00:00	2023.484	2023.484	52114.83	25.000000	0.010000000	0.020000
Dly Tot:		97127.222	97127.222	2501511.60			

(Repeated for all GSP Groups that Supplier trades in)

3.1.19.6 GSP Group Consumption Totals Report

Function Definition Ref: I0026B Produce Supplier Settlement Report

Enquiry Description: GSP Group Consumption Totals Report Requested

This report contains GSP Group Consumption Totals for all GSP Groups that a supplier trades in. If there is any NHH consumption for a GSP Group, then records for all NHH CCCs will be output for that GSP Group. The report runs as a separate Pro*C process which is initiated by the CSC Scheduler.

GSP Group Consumption Totals Report Machine Readable

Table to show source of report contents:

File Type: D0276002

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0276002
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= X
6	To Participant Id	text(4)	Id of Supplier receiving file
7	Creation Time	date/time	Time report processing was started
ZPD - SSR Run Parameters			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	ZPD
2	Settlement Date	date	idb_ssr_runs.sett_date
3	Settlement Code	text(2)	idb_ssr_runs.sett_code
4	Run Type Code	text(2)	idb_ssr_runs.ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number
6	GSP Group	text(2)	Null
HDR			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= HDR
2	Settlement Date	date	idb_ssr_runs.sett date
3	Settlement Code	text(2)	idb_ssr_runs.sett_code
4	Settlement Code Description	text(30)	idb_sett_types.description
5	SSR Run Date	date	idb_ssr_runs.ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs.ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs.ssr_run_type_id
8	Supplier Id	text(4)	idf_agtd_sup_pd_consums / sup_mkt_ppt_id
9	Supplier Name	text(40)	idb_mkt_ppts.mkt_ppt_name

GSP - GSP Group			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	idf_agtd_sup_pd_consums.gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups.gsp_group_name
CCC			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	integer(2)	idb_consum_comp_classes.consum_comp_class_id
3	GSP Group Correction Scaling Factor	Decimal (4,2)	idb_gsp_group_cctn_sf_ssr_runs.gsp_group_correction_sf
4	AA/EAC Indicator	text(1)	idb_consum_comp_classes.aa_eac_ind (optional)
5	Actual/Estimated Indicator	text(1)	idb_consum_comp_classes.actual_estimated_ind (optional)
6	Data Aggregation Type	text(1)	idb_consum_comp_classes.data_agtn_type
7	Metered/Unmetered Indicator	text(1)	idb_consum_comp_classes.mtd_unmtd_ind
8	Consumption Component Indicator	text(1)	idb_consum_comp_classes.consum_comp_ind
9	Measurement Quantity Id	text(2)	idb_consum_comp_classes.measurement_quantity_id
SPX			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SPX
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds.sett_pd_id
3	Settlement Period Label	text(6)	Provided by a function call
4	Total CCC Aggregated Supplier Consumption	Decimal (13,3)	Sum of the Aggregated Supplier Consumption for all the CCC / GSP Group (optional)
5	Total CCC Aggregated Supplier Line Loss	Decimal (13,3)	Sum of the Aggregated Supplier Line Loss for all Suppliers for the CCC / GSP Group. (optional)
6	Total CCC Corrected Supplier Consumption	Decimal (13,3)	Sum of the Corrected Supplier Consumption for all Suppliers for the CCC / GSP Group. (optional)
7	Total CCC Corrected Supplier Line Loss	Decimal (13,3)	Sum of the Corrected Supplier Line Loss for all Suppliers for the CCC / GSP Group. (optional)

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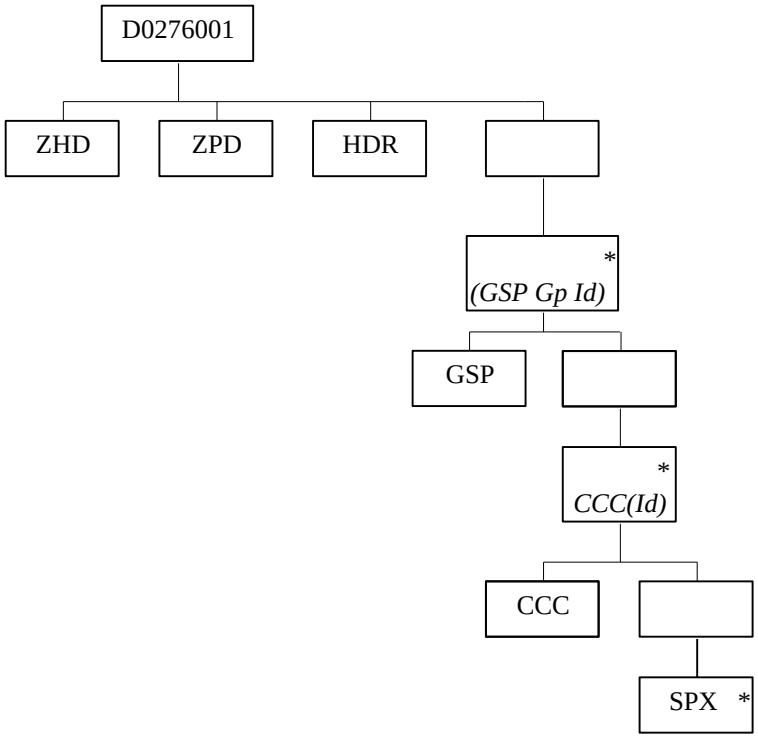
8	Total CCC MSID Count	integer(8)	Sum of the counts of Metering Systems for all Suppliers for the CCC / GSP Group. (optional)

Repeating structure of file *(sort order for iterations shown in brackets)*:



IRP_GSP_GROUP_CONSUM_TOTALS Report Human Readable

GSP Group Consum Totals Report ISR Agent 16/10/1997 10:24

Settlement Date: 01/03/1997 Settlement Code: SF Final Initial Settlement
SSR Run Date: 17/10/1997 SSR Run Number: 25321 SSR Run Type: SF
Supplier: M101 SSA Administrator

GSP Group: G1 SSR GSP Group 1

Consumption Component Class: 1
GSP Group Correction Scaling Factor: 1.00
AA/EAC:
Actual/Estimated: A
Data Aggregation Type: H
Metered/Unmetered: M
Consumption Component: C
Measurement Quantity: AI

Sett End Prd	Time	Half Hourly Consumption (Non-Losses) (MWh)	Half Hourly Consumption (Losses) (MWh)	Corrected Component (Non-Losses) (MWh)	Corrected Component (Losses) (MWh)	MSID Count
1	00:30	2.476		6.907		1592592
2	01:00	2.476		6.907		1592592
3	01:30	2.476		6.907		1592592
4	02:00	2.476		6.907		1592592
5	02:30	2.476		7.046		1592592
6	03:00	2.476		7.046		1592592
7	03:30	2.476		7.046		1592592
.						
.						
47	23:30	2.567		7.004		1592592
48	00:00	2.567		7.004		1592592

3.1.19.7 Supplier BM Unit Report

Function Definition Ref: I0026B Produce Supplier Settlement Report

Enquiry Description: Supplier BM Unit Report Requested

This report contains details of the Supplier's valid BM Units, Non-Half Hourly BM Unit Allocations, the Half Hourly consumption/generation data input into the system and the combined Half Hourly and Non-Half Hourly consumption/generation by BM Unit and Consumption Component Class calculated by the SSR run. If there is any NHH consumption for a BM Unit, then records for all NHH CCCs will be output for that BM Unit. The report runs as a separate Pro*C process which is initiated by the CSC Scheduler.

Supplier BM Unit Report Machine Readable

Table to show source of report contents:

File Type: D0296001

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0296001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	SVAA Agent Id
5	To Role Code	text(1)	X
6	To Participant Id	text(4)	Supplier Id
7	Creation Time	date/time	Time report processing started
ZPD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	idb_ssr_runs.sett_date
3	Settlement Code	text(2)	idb_ssr_runs.sett_code
4	Run Type Code	text(2)	idb_ssr_runs.ssr_run_type_id
5	Run Number	integer(7)	idb_ssr_runs.ssr_run_number
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
HDR			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HDR
2	Settlement Date	date	idb_ssr_runs.sett_date
3	Settlement Code	text(2)	idb_ssr_runs.sett_code
4	Settlement Code Description	text(30)	idb_sett_types.description

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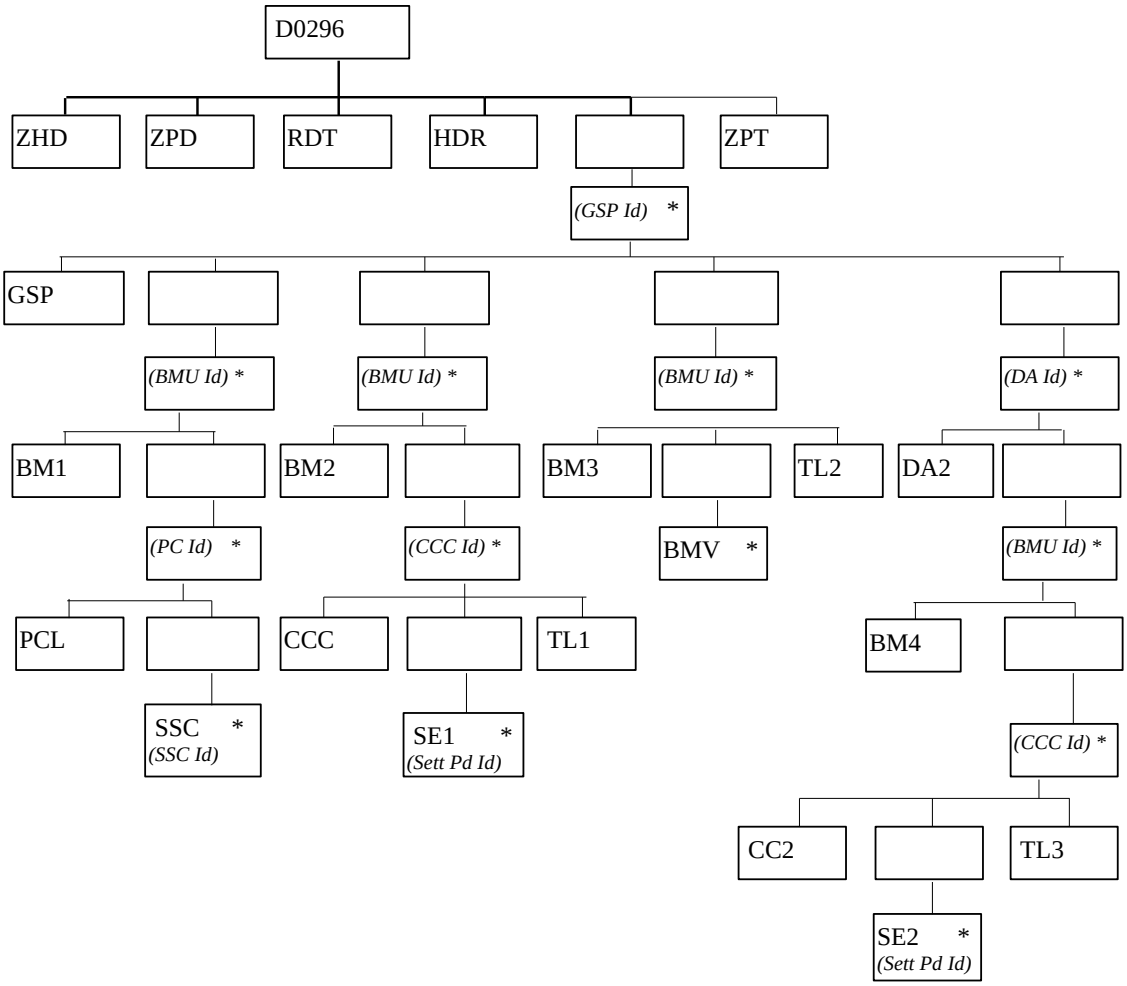
5	SSR Run Date	date	idb_ssr_runs.ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs.ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs.ssr_run_type_id
8	Supplier Id	text(4)	idf_agtd_bm_pd_consums.sup_mkt_ppt_id
9	Supplier Name	text(40)	idb_mkt_ppts.mkt_ppt_name
GSP			
Field	Field Name	Type	Source / Value
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	idf_agtd_bm_pd_consums.gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups.gsp_group_name
BM1			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= BM1
2	BM Unit Id	text(11)	idb_bm_unit_in_gsp_group.bm_unit_id
3	Default BM Unit Flag	boolean	idb_bm_unit_in_gsp_group. default_bm_unit_flag
PCL			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= PCL
2	Profile Class Id	integer(2)	idb_nhh_bmu_allocation.profile_class_id
SSC			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SSC
2	Standard Settlement Configuration Id	text(4)	idb_nhh_bmu_allocation.ssc_id
BM2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= BM2
2	BM Unit Id	text(11)	idf_agtd_bm_pd_consums.bm_unit_id
3	Default BM Unit Flag	boolean	idb_bm_unit_in_gsp_group. default_bm_unit_flag
CCC			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	integer(2)	idf_agtd_bm_pd_consums. consum_comp_class_id
3	GSP Group Correction Scaling Factor	decimal (4,2)	idb_gsp_group_cctn_sf_ssr_runs. gsp_group_correction_sf
4	AA/EAC Indicator	text(1)	idb_consum_comp_classes.aa_eac_ind (O)
5	Actual/ Estimated Indicator	text(1)	idb_consum_comp_classes. actual_estimated_ind (O)

6	Data Aggregation Type	text(1)	idb_consum_comp_classes.data_agtn_type
7	Metered/ Unmetered Indicator	text(1)	idb_consum_comp_classes.mtd_unmtd_ind
8	Consumption Component Indicator	text(1)	idb_consum_comp_classes.consum_comp_ind
9	Measurement Quantity Id	text(2)	idb_consum_comp_classes. measurement_quantity_id
SE1			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SE1
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds .sett_pd_id
3	Settlement Period Label	text(6)	Provided by a function call
4	Aggregated BM Unit Energy	decimal (14,4)	idf_agtd_bm_pd_consum. agtd_bm_consum_nn *where nn is the appropriate settlement period* (O)
5	Aggregated BM Unit Line Losses	decimal (14,4)	idf_agtd_bm_pd_consum. agtd_bm_line_loss_nn *where nn is the appropriate settlement period* (O)
6	Corrected BM Unit Energy	decimal (14,4)	idf_agtd_bm_pd_consum. corrected_bm_consum_nn *where nn is the appropriate settlement period* (O)
7	Corrected BM Unit Line Losses	decimal (14,4)	idf_agtd_bm_pd_consum. corrected_bm_line_loss_nn *where nn is the appropriate settlement period* (O)
TL1			
Field	Field Name	Type	Source / Value
1	Record Type	text(3)	= TL1
2	Daily Aggregated BM Unit Energy	decimal (14,4)	Derived by summing Aggregated BM Unit Energy over all periods (O)
3	Daily Aggregated BM Unit Line Losses	decimal (14,4)	Derived by summing Aggregated BM Unit Line Losses over all periods (O)
4	Daily Corrected BM Unit Energy	decimal (14,4)	Derived by summing Corrected BM Unit Energy over all periods (O)
5	Daily Corrected BM Unit Line Losses	decimal (14,4)	Derived by summing Corrected BM Unit Line Losses over all periods (O)
BM3			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= BM3
2	BM Unit Id	text(11)	idf_agtd_bm_pd_consums.bm_unit_id

3	Default BM Unit Flag	boolean	idb_bm_unit_in_gsp_group. default_bm_unit_flag
BMV			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= BMV
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds .sett_pd_id
3	Settlement Period Label	text(6)	Provided by a function call
4	Uncorrected Period BM Unit Total Allocated Volume	decimal (14,4)	Derived by: sum (idf_agtd_bm_pd_consums. agtd_bm_consum_nn for Active Import CCCs) minus sum (idf_agtd_bm_pd_consums. agtd_bm_consum_nn for Active Export CCCs) *where nn is the appropriate settlement period* for all CCCs for a BM Unit for Supplier in GSP Group
5	Period BM Unit Total Allocated Volume	decimal (14,4)	Derived by: sum (idf_agtd_bm_pd_consums. corrected_bm_consum_nn for Active Import CCCs) minus sum (idf_agtd_bm_pd_consums. corrected_bm_consum_nn for Active Export CCCs) *where nn is the appropriate settlement period* for all CCCs for a BM Unit for Supplier in GSP Group
TL2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= TL2
2	Daily Uncorrected Period BM Unit Total Allocated Volume	decimal (14,4)	Derived by summing Uncorrected Period BM Unit Total Allocated Volume for a BM Unit for Supplier in GSP Group
3	Daily Period BM Unit Total Allocated Volume	decimal (14,4)	Derived by summing Period BM Unit Total Allocated Volume for a BM Unit for Supplier in GSP Group
DA2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= DA2
2	Data Aggregator Id	text(4)	idf_agtd_sup_da_pd_consums.da_mkt_ppt_id
3	Data Aggregator Name	text(40)	idb_mkt_ppts.mkt_ppt_name
BM4			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= BM4
2	BM Unit Id	text(11)	idf_agtd_sup_da_pd_consums.bm_unit_id (O)
3	SSR Run BM Unit Id	text(11)	Derived by a function call (O)
4	Default BM Unit Reason Code	text(2)	Derived by a function call (O)
CC2			
Field	**Field Name**	**Type**	**Source / Value**

1	Record Type	text(3)	= CC2
2	AA/EAC Indicator	text(1)	idb_consum_comp_classes.aa_eac_ind (O)
3	Actual/ Estimated Indicator	text(1)	idb_consum_comp_classes. actual_estimated_ind (O)
4	Consumption Component Class Id	integer(2)	idf_agtd_bm_pd_consums. consum_comp_class_id
5	Consumption Component Indicator	text(1)	idb_consum_comp_classes.consum_comp_ind
6	Data Aggregation Type	text(1)	idb_consum_comp_classes.data_agtn_type
7	Measurement Quantity Id	text(2)	idb_consum_comp_classes. measurement_quantity_id
8	Metered/ Unmetered Indicator	text(1)	idb_consum_comp_classes.mtd_unmtd_ind
SE2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SE2
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds .sett_pd_id
3	Settlement Period Label	text(6)	Provided by a function call
4	Aggregated BM Unit Energy	decimal (14,4)	idf_agtd_sup_da_pd_consum. agtd_sup_consum_nn *where nn is the appropriate settlement period* (O)
5	Aggregated BM Unit Line Losses	decimal (14,4)	idf_agtd_sup_da_pd_consum. agtd_sup_line_loss_nn *where nn is the appropriate settlement period* (O)
6	Data Aggregator HH MSID Count	integer (10)	idf_agtd_sup_da_pd_consums / da_hh_msid_count
TL3			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= TL3
2	Daily Aggregated BM Unit Energy	decimal (14,4)	Derived by summing Aggregated BM Unit Energy over all periods (O)
3	Daily Aggregated BM Unit Line Losses	decimal (14,4)	Derived by summing Aggregated BM Unit Line Losses over all periods (O)
4	Daily Aggregator HH MSID Count	integer (10)	Derived by summing the daily settlement period values of Data Aggregator HH MSID Count

Repeating structure of file *(sort order for iterations shown in brackets)*:



Human Readable

```
Supplier BM Unit Report                  ISR Agent                        03/07/2000 12:46

User:                FAT1STAN
Report Parameters:   SSR Run No   71683


Settlement Date:     01/01/2000  Settlement Code:      SF Final Initial Settlement
SSR Run Date:        03/07/2000   SSR Run Number:   71683 SSR Run Type:        SF
Supplier:            M101    Supplier 1

Supplier BM Unit Report - GSP Group
==================================

GSP Group:           G1      SSR GSP Group 1



Supplier BM Unit Report - BM Unit Details


BM Unit Id: A003        Default BM:  F

Profile Class:      1

SSC
=====
SC01
```

(Repeated for all Profile Classes that have allocations for the BM Unit)

```
BM Unit Id: DBMG1M101   Default BM:  T
```

(Repeated for all BM Units- with and without Non-Half Hourly Allocations)

```
Supplier BM Unit Report - BM Unit Energy Volumes by CCC


BM Unit ID:          A003        Default BM:  F

Consumption Component Class:              1
GSP Group Correction Scaling Factor:    0.90
AA/EAC:
Actual/Estimated:                         A
Data Aggregation Type:                    H
Metered/Unmetered:                        M
Consumption Component:                    C
Measurement Quantity:                     AI

Sett End        Aggregated      Aggregated       Corrected       Corrected
 Prd Time   BM Unit Energy  BM Unit Energy  BM Unit Energy  BM Unit Energy
```

```
              (Non-Losses)         (Losses)     (Non-Losses)         (Losses)
                     (MWh)            (MWh)            (MWh)            (MWh)
==== ===== =============== =============== =============== ===============
   1 00:30          2.5000                           3.3261
```

(Repeated for all settlement periods)

```
  48 00:00          2.5000                           3.0045

Daily Tot:        120.0000                         159.5082
```

(Repeated for all CCCs & BM Units for the Supplier in GSP Group which have recorded consumption)

```
Supplier BM Unit Report - Total BM Unit Energy Volumes


BM Unit ID:          A003        Default BM:  F

Sett End       Uncorrected       Corrected
 Prd Time  Total Allocated Total Allocated
                   Volume           Volume
                    (MWh)            (MWh)
==== ===== =============== ===============
   1 00:30        136.3214         182.1831
```

(Repeated for all settlement periods)

```
  48 00:00        136.3114         164.3176

Daily Tot:       6543.0472       8736.2647
```

(*Repeated for all BM Units for the Supplier in GSP Group which have recorded consumption)*

```
Supplier BM Unit Report - BM Unit Energy Volumes by Half Hourly Data Aggregator


Data Aggregator:     M301 HHDA 1

BM Unit ID:               A003
SSR Run BM Unit ID:       A003
Default BM Reason Code:

AA/EAC:
Actual/Estimated:                         A
Consumption Component Class:              1
Consumption Component:                    C
Data Aggregation Type:                    H
Measurement Quantity:                     AI
Metered/Unmetered:                        M

Sett End           BM Unit         BM Unit            Data
 Prd Time           Energy     Line Losses      Aggregator
                     (MWh)            (MWh)   HH MSID Count
==== ===== =============== =============== ===============
```

```
   1 00:30          2.5000                          3456
```

(Repeated for all settlement periods)

```
  48 00:00          2.5000                          3456

Daily Tot:        120.0000                        165888
```

(*Repeated for all CCCs relevant to the BM Unit)*

(Repeated for all BM Units relevant to the Supplier in GSP Group for the Data Aggregator)

(Repeated for all Half Hourly Data Aggregators who have sent energy values for the Supplier and GSP Group)

```
                                        Page 95
_Supplier BM Unit Report                ISR Agent                       03/07/2000 12:46

                                    -- End of Report --
```

3.1.20 TUoS Report

The TUoS Report is described in the IRP Reports Subsystem Specification.

Function Definition Ref: I0027B Produce SSR Reports - TUoS Report

TUoS Machine Readable:

Table to show source of report contents:

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	P0210001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	Configurable via System Parameters (default is Z)
6	To Participant Id	text(4)	Transmission Authority ID (configurable via System Parameters).
7	Creation Time	date/time	Time report processing started
ZPD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	idb_ssr_runs / ssr_run_number
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
HDR			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HDR
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description

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5	SSR Run Date	date	idb_ssr_runs / ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
GSP			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	idb_pd_sup_purchases / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
SUP			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	idb_pd_sup_purchases / sup_mkt_ppt_id
3	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
SPX			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SPX
2	Settlement Period Id	integer(2)	idb_pd_sup_purchases / sett_pd_id
3	Settlement Period Label	text(6)	Derived from a function call
4	GSP Group Take	Decimal (13,3)	idb_gsp_group_takes / gsp_group_take
5	Period Supplier Deemed Take	Decimal (13,3)	idb_pd_sup_purchases / pd_sup_deemed_take
6	Period Corrected Supplier Deemed Take	Decimal (13,3)	Calculated by subtracting Period Non-corrected Supplier Deemed Take from Period Daily Supplier Deemed Take
7	Period Non-Corrected Supplier Deemed Take	Decimal (13,3)	idf_agtd_sup_pd_consums / agtd_sup_consum_*nn* summed over all CCCs not subject to Group Correction relevant to Supplier. *(nn is the relevant period)*
TOT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= TOT
2	Daily GSP Group Take	Decimal (13,3)	idb_gsp_group_takes / gsp_group_take summed over all periods in the day
3	Daily Supplier Deemed Take	Decimal (13,3)	idb_pd_sup_purchases / pd_sup_deemed_take summed over all periods in the day
4	Daily Corrected Supplier Deemed Take	Decimal (13,3)	Calculated by summing Period Corrected Supplier Deemed Take values from all SPX records.

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5	Daily Non-Corrected Supplier Deemed Take	Decimal (13,3)	Calculated by summing Period Non-Corrected Supplier Deemed Take values from all SPX records.
BMU			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= BMU
2	BM Unit ID	text(11)	idb_bm_unit_in_gsp_group / bm_unit_id
3	Default BM Unit Flag	boolean	To idb_bm_unit_in_gsp_group. default_bm_unit_flag
HHA			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HHA
2	Settlement Period Id	integer(2)	idb_pd_sup_purchases / sett_pd_id
3	Settlement Period Label	text(6)	Derived from a function call
4	Period BMU HH Allocated Volume	Decimal (13,4)	Calculated by summing the Corrected Energy/Line Loss volume from the CON record of the L0032001 file for all consumption classes with an aggregation type of "H". Netted by adding Active Import and subtracting Active Export
5	Period BMU NHH Allocated Volume	Decimal (13,4)	Calculated by summing the Corrected Energy/Line Loss volume from the CON record of the L0032001 file for all consumption classes with an aggregation type of "N". Netted by adding Active Import and subtracting Active Export
TO2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	Text(3)	= TO2
2	Daily HH Allocated Volume	Decimal (13,4)	Calculated by summing Period BMU HH Allocated Volume values from all HHA records within the current BMU and SUP records.
3	Daily NHH Allocated Volume	Decimal (13,4)	Calculated by summing Period BMU NHH Allocated Volume values from all HHA records within the current BMU and SUP records.

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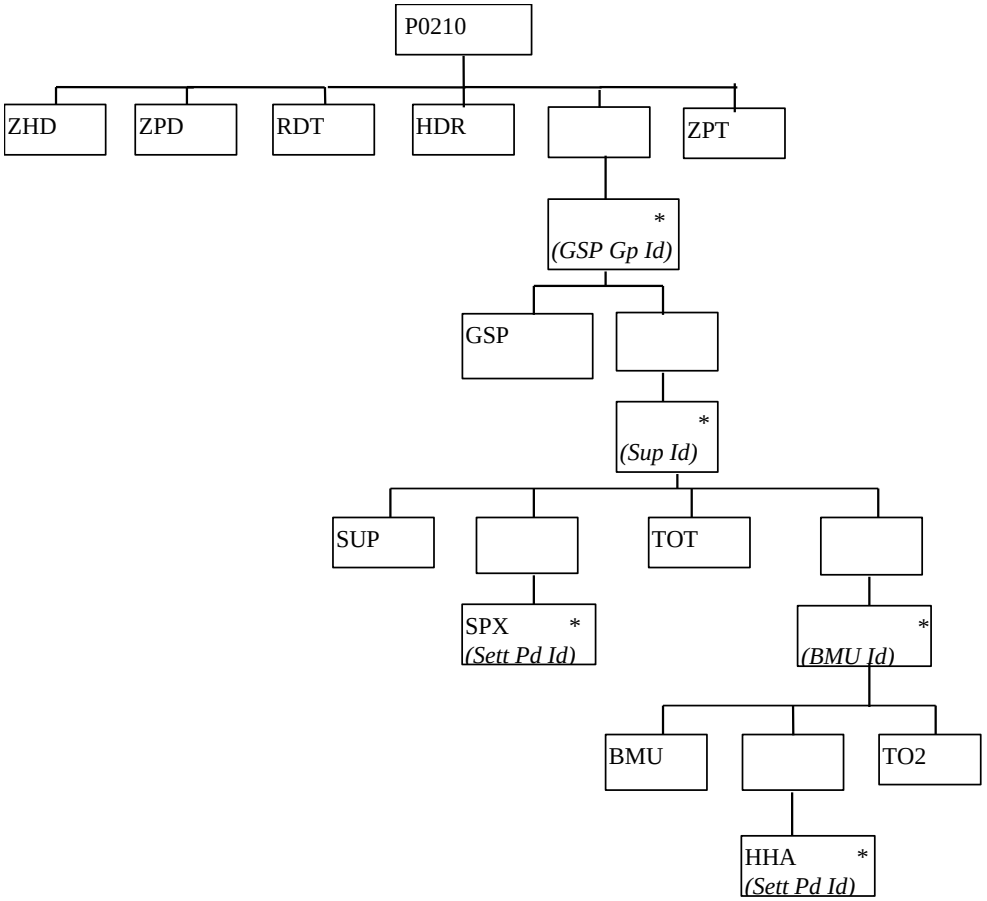
Repeating Structure of the File *(sort order shown in brackets)*:



TUoS Human Readable:

TUoS Report(HH/NHH Split) ISR Agent 16/10/1997 10:12

User: FAT2OPSU
Report Parameters: SSR Run No 25301

Settlement Date: 01/03/1997 Settlement Code: SF Final Initial Settlement
SSR Run Date: 16/10/1997 SSR Run Number: 25301 SSR Run Type: SF

GSP Group: G1 SSR GSP Group 1

Supplier: M101 Supplier 1 / NHHDA 1

Sett Prd	End Time	GSP Group Take (MWh)	Supplier Deemed Take (MWh)	Corrected Supplier Deemed Take (MWh)	Non-corrected Supplier Deemed Take (MWh)
1	00:30	2023.484	2023.484	503.242	1520.242
2	01:00	2023.484	2023.484	503.242	1520.242
3	01:30	2023.484	2023.484	503.242	1520.242
4	02:00	2023.484	2023.484	503.242	1520.242
5	02:30	2023.484	2023.484	503.242	1520.242
6	03:00	2023.484	2023.484	503.242	1520.242
.					
.					
48	00:00	2023.484	2023.484	503.242	1520.242
Daily Totals:		97127.232	97127.232	24155.616	72971.616

BM Unit: A003 Default Flag: F

Sett Prd	End Time	HH Allocated Volume	NHH Allocated Volume
1	00:30	506.9311	506.9311
2	01:00	506.9311	506.9311
3	01:30	506.9311	506.9311
4	02:00	506.9311	506.9311
5	02:30	506.9311	506.9311
6	03:00	506.9311	506.9311
.			
.			
48	00:00	506.9311	506.9311
Daily Totals:		24332.6928	24332.6928

BM Unit: A003 Default Flag: F

Sett Prd	End Time	HH Allocated Volume	NHH Allocated Volume
1	00:30	506.9311	506.9311
2	01:00	506.9311	506.9311
3	01:30	506.9311	506.9311
4	02:00	506.9311	506.9311
5	02:30	506.9311	506.9311
6	03:00	506.9311	506.9311
.			
.			
48	00:00	506.9311	506.9311
Daily Totals:		24332.6928	24332.6928

(Repeated for all BM Units in BM unit id order for all Suppliers trading in GSP Group in Supplier Id order, and for all GSP Groups)

3.1.21 BM Unit Supplier Take Energy Volume Report

BM Unit Supplier Take Energy Volume Report which is described the IRP Reports Subsystem Specification.

Function Definition Ref: I0027B Produce SSR Reports - BM Unit Supplier Take Energy Volume Report

BM Unit Supplier Take Energy Volume Machine Readable

Table to show source of report contents:

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	P0182001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	SVA Agent Id
5	To Role Code	text(1)	Configurable via System Parameters (default is F)
6	To Participant Id	text(4)	Settlements Administration Agent ID (configurable via System Parameters).
7	Creation Time	date/time	Time report processing started
ZP2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
HD2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HDR
2	SSR Run Date	date	idb_ssr_runs / ssr_run_date
3	CDCA Set Number	integer(2)	idb_ssa_sett_runs / ssa_sett_run_number

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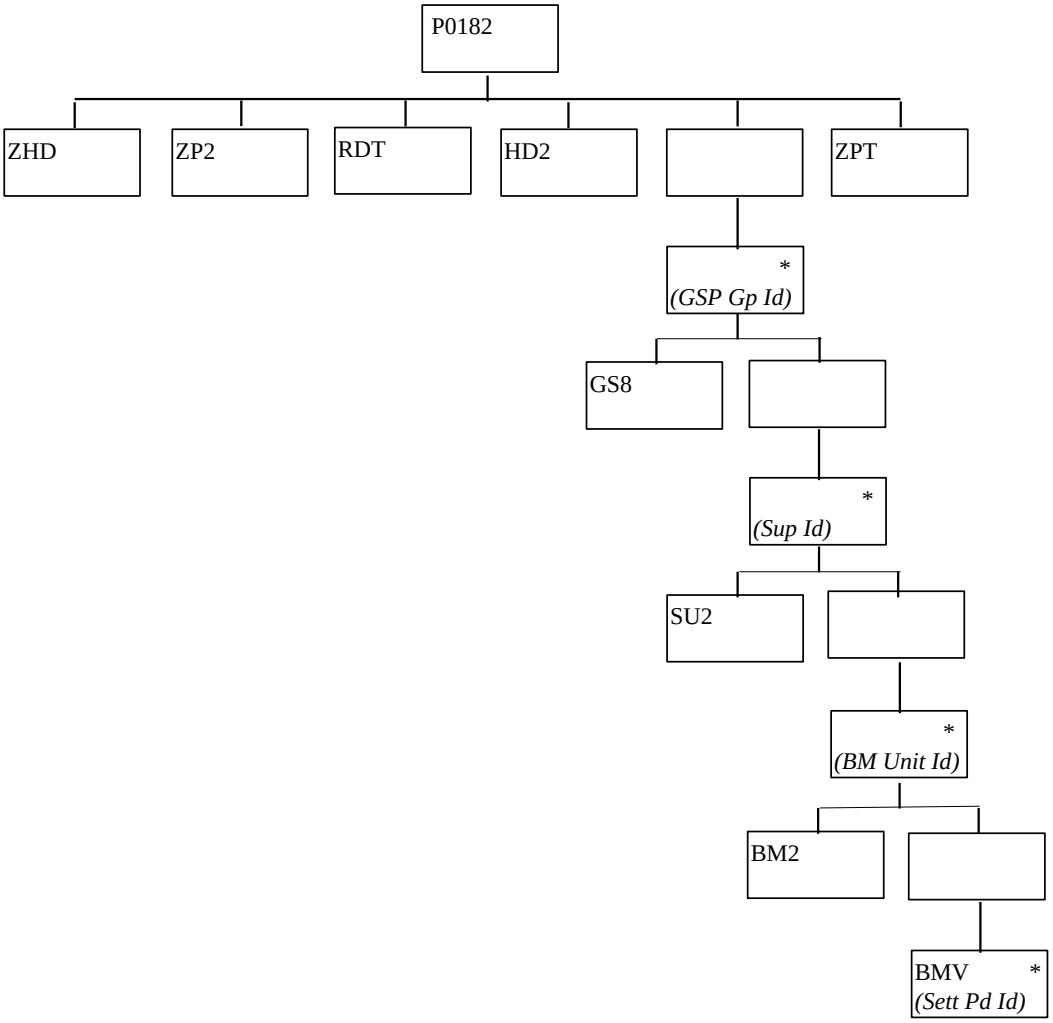
4	CDCA Settlement Date	date	idb_ssa_sett_runs / sett_date
GS8			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	idb_bm_unit_in_gsp_group / gsp_group_id
SU2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	idb_bm_unit_in_gsp_group / mkt_ppt_id
BM2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= BMU
2	BM Unit Id	text(11)	idb_bm_unit_in_gsp_group / bm_unit_id
BMV			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= BMV
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds / sett_pd_id
3	Period BM Unit Allocated Volume	Decimal (14,4)	sum (idf_agtd_bm_pd_consums. corrected_bm_consum_nn for Active Import CCCs) minus sum (idf_agtd_bm_pd_consums. corrected_bm_consum_nn for Active Export CCCs) *where nn is the appropriate settlement period* for all CCCs for a BM Unit for Supplier in GSP Group

Repeating Structure of the File *(sort order shown in brackets)*:



BM Unit Supplier Take Energy Volume Report Human Readable

BM Unit Supplier Volume Report ISR Agent 13/4/2001 10:12

Settlement Date: 01/03/2001 Settlement Code: SF
SSR Run Type: SF SSR Run Number: 25301

User: FAT2OPSU
Report Parameters: SSR Run No 25301

SSR Run Date: 13/04/2001 CDCA Run Number: 3 CDCA Settlement Date: 01/03/2001

GSP Group: G1
(Repeated for all GSP Groups in SSR Run)

Supplier: M101
(Repeated for all Suppliers that trade in GSP Group, ordered by Supplier Id)

BM Unit Id: 1234567890

Sett Prd	Allocated Volume (MWh)
1	506.9311
2	506.9312

3.1.22 BM Unit SVA Gross Demand Report

BM Unit SVA Gross Demand Report which is described the IRP Reports Subsystem Specification.

Function Definition Ref: I0027B Produce SSR Reports - BM Unit SVA Gross Demand Report

BM Unit SVA Gross Demand Machine Readable

Table to show source of report contents:

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	P0236001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	SVA Agent Id
5	To Role Code	text(1)	Configurable via System Parameters (default is F)
6	To Participant Id	text(4)	Settlements Administration Agent ID (configurable via System Parameters).
7	Creation Time	date/time	Time report processing started
ZP2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number
6	GSP Group	text(2)	Null
RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
HD2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HDR
2	SSR Run Date	date	idb_ssr_runs / ssr_run_date
3	CDCA Set Number	integer(2)	idb_ssa_sett_runs / ssa_sett_run_number

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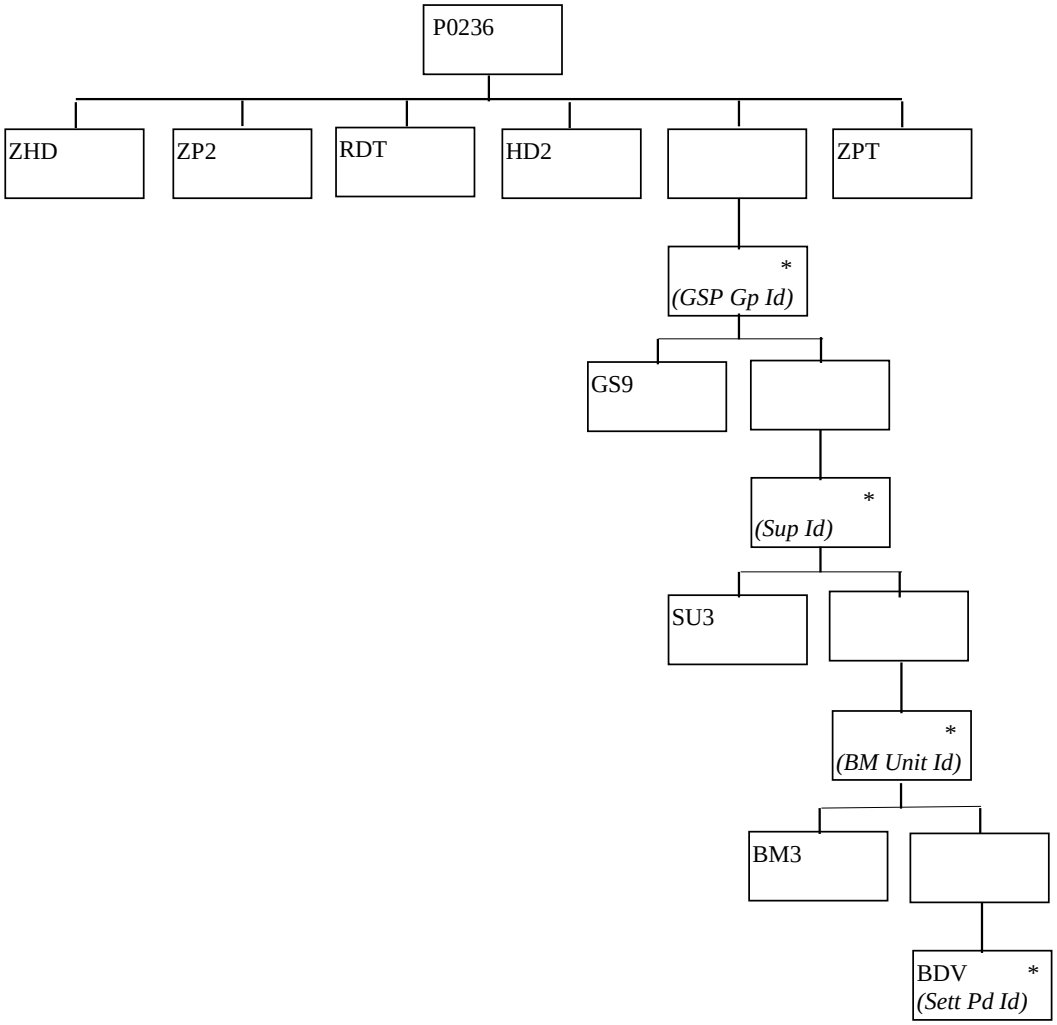
4	CDCA Settlement Date	date	idb_ssa_sett_runs / sett_date
GS9			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GSP
2	GSP Group Id	text(2)	idb_bm_unit_in_gsp_group / gsp_group_id
SU3			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	idb_bm_unit_in_gsp_group / mkt_ppt_id
BM3			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= BMU
2	BM Unit Id	text(11)	idb_bm_unit_in_gsp_group / bm_unit_id
BDV			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= BDV
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds / sett_pd_id
3	Period BM Unit Gross Demand	Decimal (14,4)	sum (idf_agtd_bm_pd_consums. corrected_bm_consum_nn for Active Import CCCs) *where nn is the appropriate settlement period* for all CCCs for a BM Unit for Supplier in GSP Group

Repeating Structure of the File *(sort order shown in brackets)*:



BM Unit SVA Gross Demand Report Human Readable

BMU SVA Gross Demand Report ISR Agent 09/03/2014 09:05

Settlement Date: 05/01/2014 Settlement Code: SF
SSR Run Type: SF SSR Run Number: 181626

User: FAT1STAN
Report Parameters: SSR Run No 181626

SSR Run Date: 07/03/2014 CDCA Run Number: 3 CDCA Settlement Date: 05/01/2014

GSP Group: G1
(Repeated for all GSP Groups in SSR Run)

Supplier: M102
(Repeated for all Suppliers that trade in GSP Group, ordered by Supplier Id)

BM Unit ID: DBMG1M102

Sett Prd	Allocated Volume (MWh)
1	1511.6685
2	1511.6685

3.1.23 DUoS Report

DUoS Report (of two sections - DUoS and DUoS Domain Data) which is described in the IRP Reports Subsystem Specification.

Function Definition Ref: I0027B Produce SSR Reports - DUoS Report

DUoS Machine Readable

Table to show source of report contents:

The first part of the report (profiled SPM data, beneath SUP record) contains only data that relates to the Distributor or Supplier receiving the report; ie it contains only those SUP, DIS, GP1, VMR, SPX and TOT records needed to contain this data.

The second part of the Distributor version of this report (beneath SUP record) contains data for all active suppliers in the GSP Groups used in the SSR Run, in which the distributor is active. For some of these Supplier/GSP Group combinations the Distributor receiving the report may not be the appointed Distributor.

Where a record type holds a set of up to 50 values, they are subject to the following rules:

- The values are ordered on settlement period id, ascending;
- All 50 fields are always present, if there are less than 50 values the remaining fields are left null. It should be noted that the SPX will contain 46, 48 or 50 values.

DUoS Report

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0030001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	X/R
6	To Participant Id	text(4)	Supplier Id/Distributor Id
7	Creation Time	date/time	Time report processing started
ZPD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZPD
2	Settlement Date	Date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number
6	GSP Group	text(2)	Null

RDT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= RDT
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
HDR			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HDR
2	Settlement Date	Date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	Date	idb_ssr_runs / ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
SUP			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	idf_sup_purchase_matrices / sup_mkt_ppt_id
3	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
4	Pool Member Id	text(4)	idb_market_ppt_roles / pool_member_id
DIS			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= DIS
2	Distributor Id	text(4)	idf_sup_purchase_matrices / dist_mkt_ppt_id
3	Distributor Name	text(40)	idb_mkt_ppts / mkt_ppt_name
GP1			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GP1
2	GSP Group Id	text(2)	idf_sup_purchase_matrices / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
VMR			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= VMR

2	Profile Class	integer(2)	idf_sup_purchase_matrices /pfl_class_id
3	Standard Settlement Configuration Id	text(4)	idf_sup_purchase_matrices / ssc_id
4	Distributor Id	text(4)	idb_llf_classes / dist_mkt_ppt_id
5	Line Loss Factor Class Id	integer(3)	idb_llf_classes / llf_class_id
6	Time Pattern Regime Id	text(5)	idf_sup_purchase_matrices / tpr_id
7	SPM Total All EACs	Decimal (14,4)	idf_sup_purchase_matrices / spm_total_eac + idf_sup_purchase_matrices / spm_total_unmtd_consum
8	SPM Total Annualised Advance Report Value	Decimal (13,3)	idf_sup_purchase_matrices / spm_total_aa
9	SPM Total EAC MSID Count	integer(8)	idf_sup_purchase_matrices / spm_total_eac_msid_count + idf_sup_purchase_matrices / spm_total_unmtd_msid_count
10	SPM Total AA MSID Count	integer(8)	idf_sup_purchase_matrices / spm_total_aa_msid_count
11	SPM Default EAC MSID Count	integer(8)	idf_sup_purchase_matrices / spm_dflt_eac_msid_count + idf_sup_purchase_matrices / spm_dflt_unmtd_msid_count
SPX			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SPX
2	Profiled SPM Consumption (Settlement Period 01)	Decimal (13,3)	Formed by taking the total of the SPM values for EAC, AA, and Unmetered consumption and applying the PPC, for settlement period 1.
[3..50]	Profiled SPM Consumption (Settlement Period 02..49)	Decimal (13,3)	Formed by taking the total of the SPM values for EAC, AA, and Unmetered consumption and applying the PPC, for settlement period [2..49].
51	Profiled SPM Consumption (Settlement Period 50)	Decimal (13,3)	Formed by taking the total of the SPM values for EAC, AA, and Unmetered consumption and applying the PPC, for settlement period 50.
TOT			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= TOT

2	Daily Profiled SPM Total EAC	Decimal (13,3)	Supplier Profiled EAC and Profiled Unmetered consumption summed for all settlement periods
3	Daily Profiled SPM Total Annualised Advance	Decimal (13,3)	Supplier Profiled AA summed for all settlement periods

DUoS Report : Domain Data

HD2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HD2
2	Settlement Date	Date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	Date	idb_ssr_runs / ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
SU2	**(Supplier Report)**		
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SU2
2	Supplier Id	text(4)	idf_agtd_sup_pd_consums / sup_mkt_ppt_id
3	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
SUP	**(Distributor Report)**		
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	idf_sup_purchase_matrices / sup_mkt_ppt_id
3	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
4	Pool Member Id	text(4)	idb_market_ppt_roles / pool_member_id
CCC			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	integer(2)	idb_consum_comp_class / consum_comp_class_id

3	AA/EAC Indicator	text(1)	idb_consum_comp_class / aa_eac_ind (O)
4	Actual/Estimated Indicator	text(1)	idb_consum_comp_class / actual_estimated_ind (O)
5	Data Aggregation Type	text(1)	idb_consum_comp_class / data_agtn_type
6	Metered/Unmetered Indicator	text(1)	idb_consum_comp_class / mtd_unmtd_ind
7	Consumption Component Indicator	text(1)	idb_consum_comp_class / consum_comp_ind
8	Measurement Quantity Id	text(2)	idb_consum_comp_class / measurement_quantity_id
9	GSP Group Correction Scaling Factor	Decimal (4,2)	idb_gsp_group_correction_sf_ssr_runs / gsp_group_correction_sf
SP2			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SP2
2	GSP Group Id	text(2)	idb_ssr_run_gsp_groups / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
4	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds / sett_pd_id
5	Settlement Period Label	text(6)	Generated by a function call
6	GSP Group Correction Factor	Decimal (18,9)	idb_ssr_run_gsp_group_pds / gsp_group_cctn_factor

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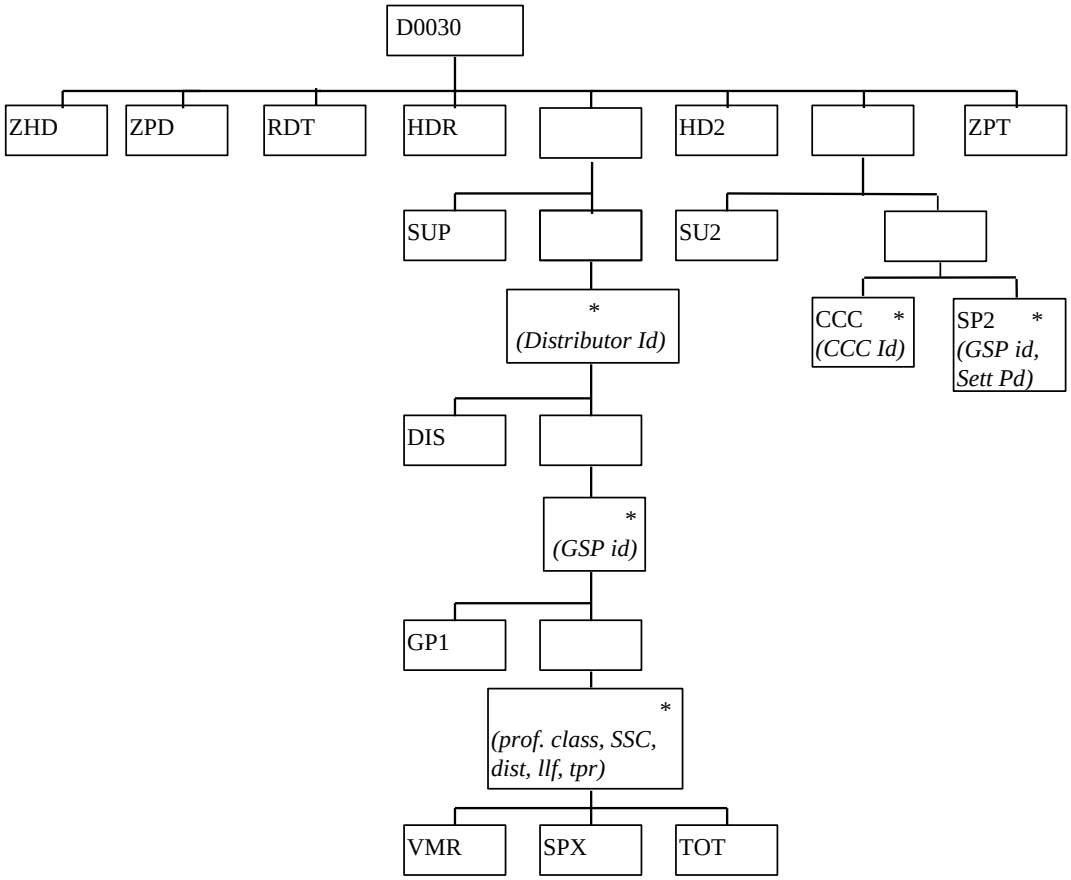
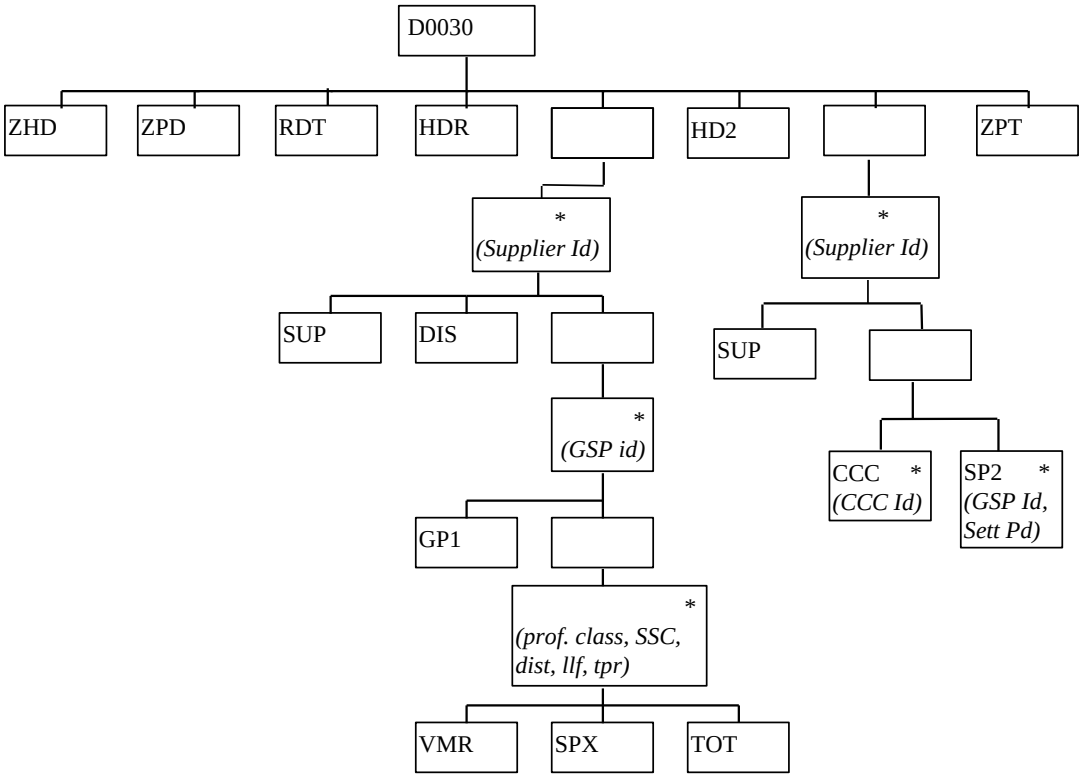
DUoS Report for a supplier *(sort order for iterations shown in brackets)*:



DUoS Report for a Distributor*(sort order for iterations shown in brackets)*:



IRP_DUoS Human Readable

DUoS Report ISR Agent 16/10/1997 10:12

User: FAT2OPSU

Report Parameters: SSR Run No 25301

Settlement Date: 01/03/1997 Settlement Code: SF Final Initial Settlement

SSR Run Date: 16/10/1997 SSR Run Number: 25301 SSR Run Type: SF

Supplier: M101 Supplier 1 / NHHDA 1 Pool Member: PM01

Distributor: M401 Distributor 1

GSP Group: G1 SSR GSP Group 1

Profile Class: 2

Standard Settlement Configuration: SC02

Distributor/Line Loss Factor Class: M401 / 1

Time Pattern Regime: TP101

Total Estimated Consumption (MWh): 2496345.3492

Total Actual Consumption (MWh): 496981.349

Total Estimated MSID Count: 245567

Total Actual MSID Count: 990

Default Estimated MSID Count: 162

Profiled Consumption (MWh):

1234567890.123 1234567890.123 1234567890.123 1234567890.123 1234567890.123

1234567890.123 1234567890.123 1234567890.123 1234567890.123 1234567890.123

1234567890.123 1234567890.123 1234567890.123 1234567890.123 1234567890.123

1234567890.123 1234567890.123 1234567890.123 1234567890.123 1234567890.123

1234567890.123 1234567890.123 1234567890.123 1234567890.123 1234567890.123

1234567890.123 1234567890.123 1234567890.123 1234567890.123 1234567890.123

1234567890.123 1234567890.123 1234567890.123 1234567890.123 1234567890.123

1234567890.123 1234567890.123 1234567890.123 1234567890.123 1234567890.123

1234567890.123 1234567890.123 1234567890.123 1234567890.123 1234567890.123

1234567890.123 1234567890.123 1234567890.123

Total Profiled Estimated Consumption (MWh): 1234567890.123

Total Profiled Actual Consumption (MWh): 1234567890.123

(Repeated for all Settlement Classes relevant to Supplier, and for all GSP Groups the Supplier trades in… For the Distributor version, repeated for all the Suppliers in the GSP groups (used in the SSR Run) that the distributor is active in.)

DUoS Report : Domain Data

Settlement Date: 01/03/1997 Settlement Code: SF Final Initial Settlement

SSR Run Date: 16/10/1997 SSR Run Number: 25301 SSR Run Type: SF

Supplier: LEB London Electricity Board *(This line only for Supplier version)*

Supplier: M101 Supplier 1 / NHHDA 1 Pool Member: PM01 *(This line only for Distributor version)*

Consp Compnt Class	AA/ EAC/ Estimt	Actual/ Data Aggr Type	Metrd/ Unmtrd	Consmp Comp	Measur Qty	GSP Group Corrc Scaling Wgt
1	A	H	M	C	AI	1.00
2	A	H	U	C	AI	0.00
3	A	H	M	M	AI	1.00
4	A	H	M	L	AI	0.00
.						
.						
22	E	N	U	L	AI	0.60

(For the Supplier version of this report, only details for Consumption Component Classes relevant to Supplier are reported. For the Distributor version of this report, details for Consumption Component Classes are reported, for all active Suppliers in the GSP Groups (used in the SSR Run), in which the Distributor is active.)

GSP Group	Sett Prd	End Time	GSP Group Correction Factor
G1 GSP Group 1	1	00:30	2.789713831
G1 GSP Group 1	2	01:00	2.789713831
G1 GSP Group 1	3	01:30	2.789713831
G1 GSP Group 1	4	02:00	2.789713831
.			
.			
G1 GSP Group 1	48	00:00	2.728392591
G2 GSP Group 2	1	00:30	2.789713831
G2 GSP Group 2	2	01:00	2.789713831
G2 GSP Group 2	3	01:30	2.789713831
G2 GSP Group 2	4	02:00	2.789713831
.			
.			
G2 GSP Group 2	48	00:00	2.728392591
.			
.			

(For the Supplier version of the report, this is repeated for all GSP Groups relevant to Supplier. For the Distributor version of this report, this is repeated for all GSP Groups (used in the SSR Run), in which the Distributor is active.)

3.1.24 Annually Recalculated Researched Consumption Report

Annually Recalculated Researched Consumption Report which is described in the IRP Reports Subsystem Specification.

Function Definition Ref: I0045 Produce AFYC Recalculation Report

Machine Readable

Table to show source of report contents:

Annually Recalculated Researched Consumption

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0287001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	G
6	To Participant Id	text(4)	ISR Agent Id
7	Creation Time	date/time	Time report processing started
GSP			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	GSP
2	GSP Group Id	text(2)	idb_gsp_groups / gsp_group_id
PFC			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= PFC
2	Profile Class Id	integer(2)	idf_pd_pfl_class_coefs / profile_class_id
SSC			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SSC
2	Standard Settlement Configuration Id	text(4)	idf_pd_pfl_class_coefs / settlement_configuration
AFC			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= AFC
2	Time Pattern Regime Id	text(5)	idf_pd_pfl_class_coefs / time_pattern_regime_id

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3	Average Fraction of Yearly Consumption	decimal (7,6)	Calculated by averaging Total AA data for this TPR and for all TPRs of this Profile Class / SSC, obtained from all idf_sup_purchase_matrices files for the most recent successfully completed SSR Run for this GSP Group for the Settlement Date range input by the user
4	Effective From Settlement Date {AFOYCS}	Date	Input by user when requesting the report
5	Effective To Settlement Date {AFOYCS}	Date	= NULL
GAE			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GAE
2	GSPG PC Average EAC	decimal (12,1)	Calculated by averaging Total AA data for this Profile Class / SSC, obtained from all idf_sup_purchase_matrices files files for the most recent successfully completed SSR Run for this GSP Group for the Settlement Date range input by the user
GDE			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= GDE
2	GSPG PC Default EAC	decimal (12,1)	Calculated by averaging Total AA data for this Profile Class, obtained from all idf_sup_purchase_matrices files files for the most recent successfully completed SSR Run for this GSP Group for the Settlement Date range input by the user

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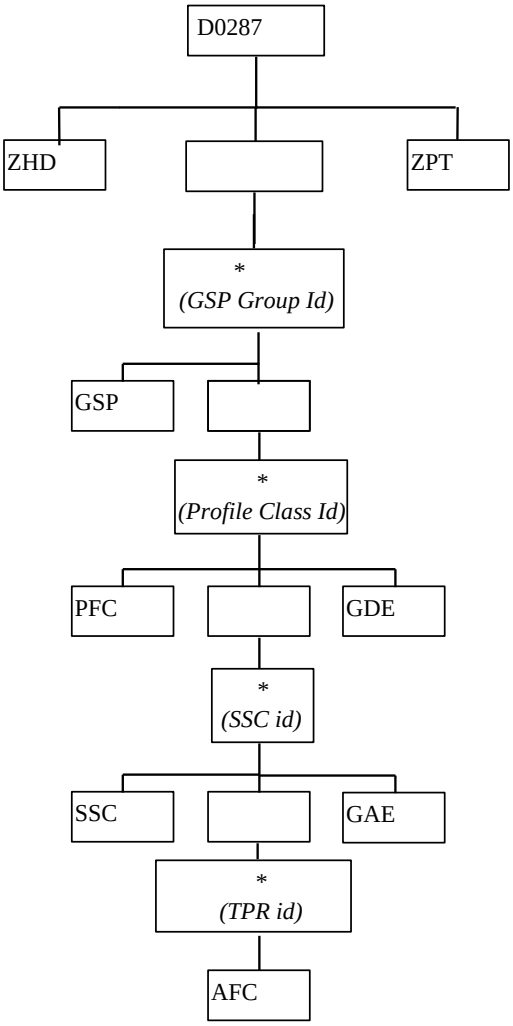
Annually Recalculated Researched Consumption Report



Annually Recalculated Researched Consumption Report *Human Readable*

Annually Recalculated Researched Consumption Report ISR Agent 12/01/2000 16:06

GSP Group: G1

Profile Class: 2

Standard Settlement Configuration: S1

Time Pattern Regime	AFYC	Effective From Settlement Date	Effective To Settlement Date
TP001	0.332922	01/07/2000	
TP002	0.667078	01/07/2000	

Researched Average EAC 672084.7

Effective From Settlement Date 01/07/2000

Standard Settlement Configuration: S2

Time Pattern Regime	AFYC	Effective From Settlement Date	Effective To Settlement Date
TP001	0.332922	01/07/2000	
TP002	0.667078	01/07/2000	

Researched Average EAC 672084.7

Effective From Settlement Date 01/07/2000

Researched Default EAC 672084.7

Annually Recalculated Researched Consumption Report ISR Agent 12/01/2000 16:06

3.1.25 Line Loss Factor Standard Settlement Configuration Mapping Data

File Type: P0239001

These LLFCs will be mapped to SSCs using this P-flow

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0042001
3	From Role Code	text(1)	= R
4	From Participant Id	text(4)	Distributor Id
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of SVA Agent originating file
7	Creation Time	date/time	Time of file generation
LLF - LLF/SSC Mapping			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= LLF
2	Distributor Id	text(5)	idf_llf_ssc_mapn/idb_llfdata
3	Line Loss Factor Class Id	num(3)	idf_llf_ssc_mapn/idb_llfdata
4	Standard Settlement Configuration Id	text(5)	idf_llf_ssc_mapnidb_llfdata
5	Effective From Settlement Date {LLFSSC}	date	idf_llf_ssc_mapn/idb_llfdata
SSC - Standard Settlement Configuration			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SSC
2	Standard Settlement Configuration Id	text(5)	idf_llf_ssc_mapn/idb_cki_data/ idb_ssc_tpr_data
3	Standard Settlement Configuration Desc	text(50)	idf_llf_ssc_mapn
4	Effective from Settlement Date {SSC}	date	idf_llf_ssc_mapn/idb_ssc_tpr_da ta
5	Effective to Settlement Date {SSC}	date	idf_llf_ssc_mapn/idb_ssc_tpr_da ta
6	Standard Settlement Configuration Type	text(1)	idf_llf_ssc_mapn
TPR - Measurement Requirement			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TPR
2	Time Pattern Regime Id	text(5)	idb_cki_data/ idb_ssc_tpr_data/ idf_llf_ssc_mapn
CKI - Clock Intervals			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CKI
2	Day of the Week Id	integer(1)	idf_llf_ssc_mapn

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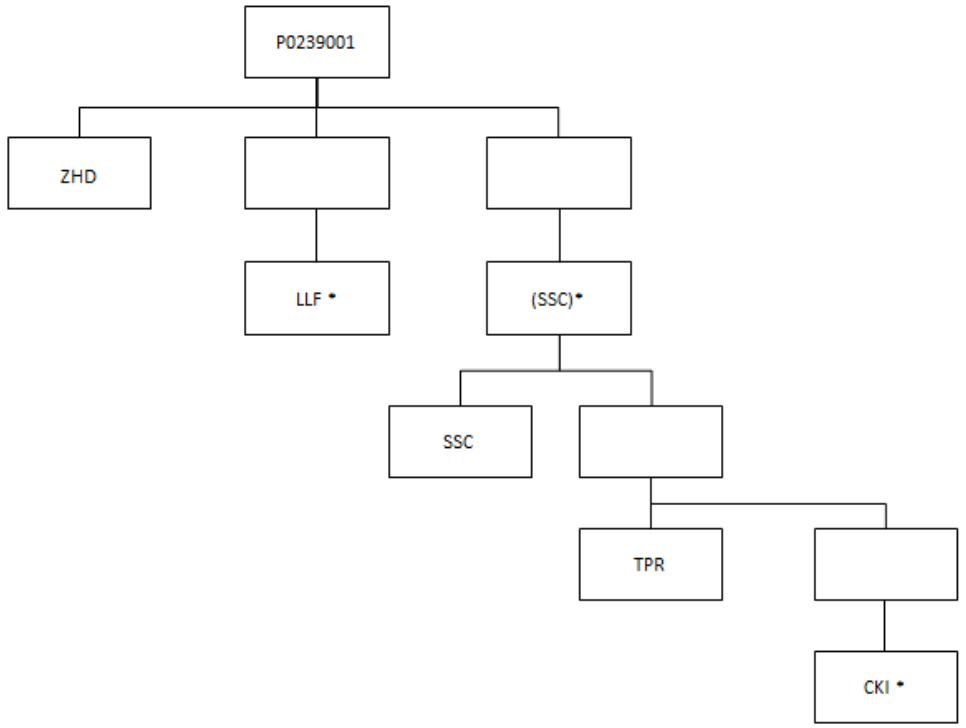
3	Start Day	integer(2)	idf_llf_ssc_mapn
4	Start Month	integer(2)	idf_llf_ssc_mapn
5	End Day	integer(2)	idf_llf_ssc_mapn
6	End Month	integer(2)	idf_llf_ssc_mapn
7	Start Time	integer(6)	idb_cki_data/ idf_llf_ssc_mapn
8	End Time	Integer(6)	idb_cki_data/ idf_llf_ssc_mapn

Repeating structure of file



3.1.26 Supplier's Demand Disconnection Volume Data File

The following table shows the file format (excluding File Footer):

File Type: D0376001

Notice that the destination of this file includes the ISRA System flat file store. The flat file contains records of type idf_agtd_sup_da_pd_discon_volume.

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0376001
3	From Role Code	text(1)	= A
4	From Participant Id	text(4)	Id of Half Hour Aggregator originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
65K - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	to idb_~~sup~~demand_data_agtns. sett_date to idf_agtd_sup_da_pd_discon_volume. sett_date
3	Settlement Code	text(2)	to idb_demand~~sup~~_data_agtns.set t_code
4	Run Type Code	text(2)	= A
5	Run Number[11]	Integer(7)	to idb_demand~~sup~~_data_agtns. data_agtn_run_number to idf_agtd_sup_da_pd_discon_volume. data_agtn_run_number
6	GSP Group	text(2)	to idb_demand~~_sup~~_data_agtns. gsp_group_id to idf_agtd_sup_da_pd_discon_volume. gsp_group_id
66K - Demand Control Event Details			
1	Record Type	text(3)	= 66K
2	Demand Control Event Id	Char(30)	idf_agtd_sup_da_pd_discon_volume.dce_id

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3	Start Date and Time	Date	idf_agtd_sup_da_pd_discon_volume. start_date_time
4	End Date and Time	Date	idf_agtd_sup_da_pd_discon_volume. end_date_time
67K – Supplier			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	to idb_demandsup_data_agtns. sup_mkt_ppt_id to idf_agtd_sup_da_pd_discon_volume. sup_mkt_ppt_id
68K - Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	Integer(2)	to idf_agtd_sup_da_pd_discon_volume. consum_comp_class_id
69K - Settlement Period/Data Aggregator HH MSID Count			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SET
2	Settlement Period Id	Integer(2)	used to identify relevant fields for ASC/ASL records in idf_agtd_sup_da_pd_discon_volume ie agtd_sup_consum_01 / _02 etc
3	Data Aggregator HH MSID Count	integer(10)	to idf_agtd_sup_da_pd_discon_volume. da_hh_msid_count
70K – Aggregated Supplier Disconnection Volume			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ASC
2	Aggregated Supplier Consumption	decimal (14,4)	to idf_agtd_sup_da_pd_discon_volume. agtd_sup_consum_nn
71K – Aggregated Supplier Disconnection Line Loss			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ASL
2	Aggregated Supplier Line Loss	decimal (14,4)	to idb_agtd_sup_da_pd_consums. agtd_sup_line_loss_nn

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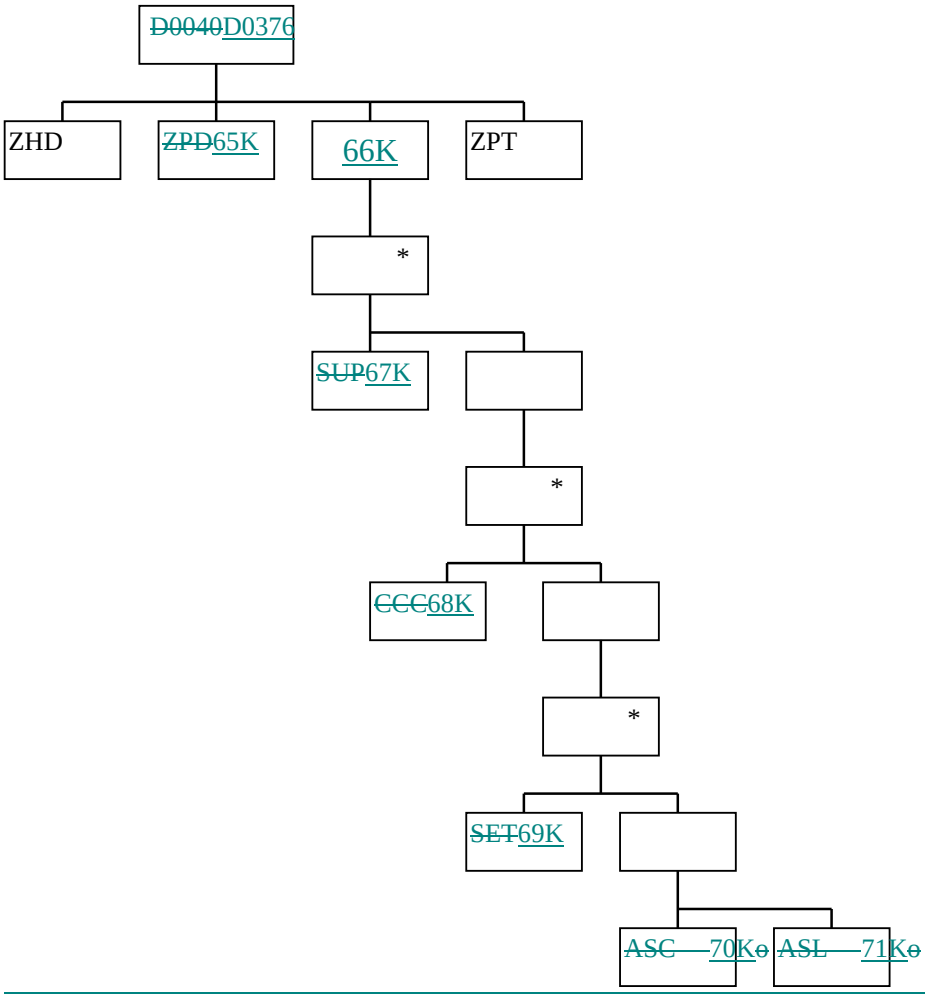
Repeating structure of file:



3.1.27 Disconnection Purchase Matrix Data File

The following table shows the file format (excluding File Footer):

File Type: D0377001

Notice that the destination of this file is the ISRA System flat file store. The flat file contains records of type idf_discon_purchase_matrices.

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0377001
3	From Role Code	text(1)	= B
4	From Participant Id	text(4)	Id of Non-HH Data Aggregator originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation to idb_sup_data_agtns. date_and_time_sent_agtn_run
72K - Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	to idb_demand~~sup~~_data_agtns. sett_date to idb_sup_purchase_matrices. sett_date
3	Settlement Code	text(2)	to idb_demand~~_sup~~_data_agtns. sett_code
4	Run Type Code	text(2)	= D
5	Run Number[12]	integer(7)	to idb_demand~~sup~~_data_agtns. data_agtn_run_number to idf_discon_purchase_matrices. data_agtn_run_number
6	GSP Group	text(2)	to idb_sup_data_agtns. gsp_group_id idf_discon_purchase_matrices. gsp_group_id
73K - Demand Control Event Details			
1	Record Type	text(3)	= 73K
2	Demand Control Event Id	Char(30)	idf_discon_purchase_matrices.dce_id
3	Start Date and Time	Date	idf_discon_purchase_matrices. start_date_time
4	End Date and Time	Date	idf_discon_purchase_matrices. end_date_time

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74K - Supplier Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= 74K
2	Supplier Id	text(4)	to idb_demand~~_sup~~_data_agtns.sup_mkt_ppt_id idf_discon_purchase_matrices.sup_mkt_ppt_id
75K - Supplier Purchase Matrix Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= DPM
2	Profile Class Id	integer(2)	to idf_discon_purchase_matrices.pfl_class_id
3	Distributor Id	text(4)	to idf_discon_purchase_matrices.dist_mkt_ppt_id
4	Line Loss Factor Class Id	integer(3)	to idf_discon_purchase_matrices.llf_class_id
5	Standard Settlement Configuration Id	text(4)	to idf_discon_purchase_matrices.ssc_id
6	Time Pattern Regime Id	text(5)	to idf_discon_purchase_matrices.tpr_id
7	DPM Default EAC MSID Count	integer(8)	to idf_discon_purchase_matrices.spm_dflt_eac_msid_count
8	DPM Default Unmetered MSID Count	integer(8)	to idf_discon_purchase_matrices.spm_dflt_unmtd_msid_count
9	DPM Total AA MSID Count	integer(8)	to idf_discon_purchase_matrices.spm_total_aa_msid_count
10	DPM Total Annualised Advance	decimal (14,4)	to idf_discon_purchase_matrices.spm_total_aa
11	DPM Total EAC	decimal (14,4)	to idf_discon_purchase_matrices.spm_total_eac
12	DPM Total EAC MSID Count	integer(8)	to idf_discon_purchase_matrices.spm_total_eac_msid_count
13	DPM Total Unmetered Consumption	decimal (14,4)	to idf_discon_purchase_matrices.spm_total_unmtd_consum
14	DPM Total Unmetered MSID Count	integer(8)	to idf_discon_purchase_matrices.spm_total_unmtd_msid_count

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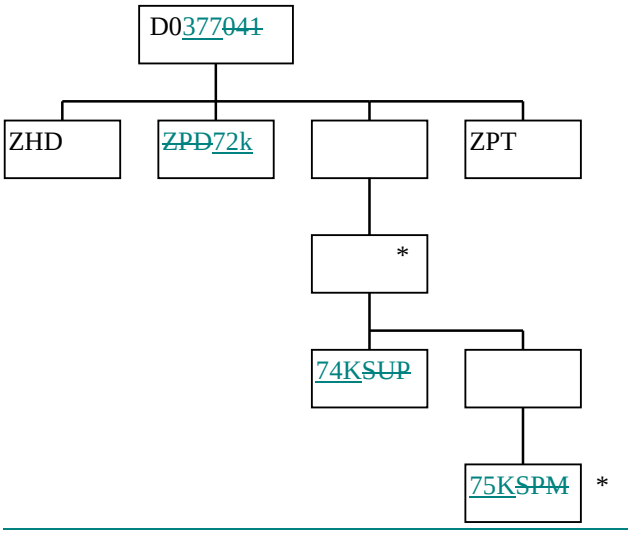
Repeating structure of file:



3.1.28 BM Unit Aggregated Half Hour Demand Disconnection Data File

The following table shows the file format (excluding File Footer):

File Type: D0378001

Notice that the destination of this file includes the ISRA System flat file store. The flat file contains records of type idf_agtd_sup_da_pd_discon_volume.

ZHD – File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0378001
3	From Role Code	text(1)	= A
4	From Participant Id	text(4)	Id of Half Hour Aggregator originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
76K – Data File Additional Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	to idb_demandsup_data_agtns.sett_date to idf_agtd_sup_da_pd_discon_volume. sett_date
3	Settlement Code	text(2)	to idb_demandsup_data_agtns.sett_code
4	Run Type Code	text(2)	= A
5	Run Number[13]	integer(7)	to idb_demandsup_data_agtns.data_agtn_run_number to idf_agtd_sup_da_pd_discon_volume. data_agtn_run_number
6	GSP Group	text(2)	to idb_demandsup_data_agtns.gsp_group_id to idf_agtd_sup_da_pd_discon_volume. gsp_group_id
77K - Demand Control Event Details			
1	Record Type	text(3)	= 77K
2	Demand Control Event Id	Char(30)	idf_agtd_sup_da_pd_discon_volume.dce_id
3	Start Date and Time	Date	idf_agtd_sup_da_pd_discon_volume.start_date_time

4	End Date and Time	Date	idf_agtd_sup_da_pd_discon_volume.end_date_time
78K – Supplier			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier	text(4)	To idb_demandsup_data_agtns. Sup_mkt_ppt_id to idf_agtd_sup_da_pd_discon_volume. Sup_mkt_ppt_id
79K - BM Unit			
1	Record Type	text(3)	= BMU
2	BM Unit	text(11)	To idf_agtd_sup_da_pd_discon_volume. bm_unit_id
80K - Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	integer(2)	To idf_agtd_sup_da_pd_discon_volume. Consum_comp_class_id
81K – Settlement Period/Data Aggregator HH MSID Count			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SET
2	Settlement Period Id	integer(2)	used to identify relevant fields for ABE/ABL records in idf_agtd_sup_da_pd_discon_volume ie agtd_bm_consum_01 / _02 etc
3	Data Aggregator HH MSID Count	Integer(10)	To idf_agtd_sup_da_pd_discon_volume_da_hh_msid_count
82K – Aggregated BM Unit Demand Disconnection Energy			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ABE
2	Aggregated BM Unit Energy	decimal (14,4)	To idf_agtd_sup_da_pd_discon_volume. Agtd_bm_consum_nn
83K – Aggregated BM Unit Demand Disconnection Line Losses			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ABL
2	Aggregated BM Unit Line Losses	decimal (14,4)	To idb_agtd_sup_da_pd_consums. Agtd_bm_line_loss_nn

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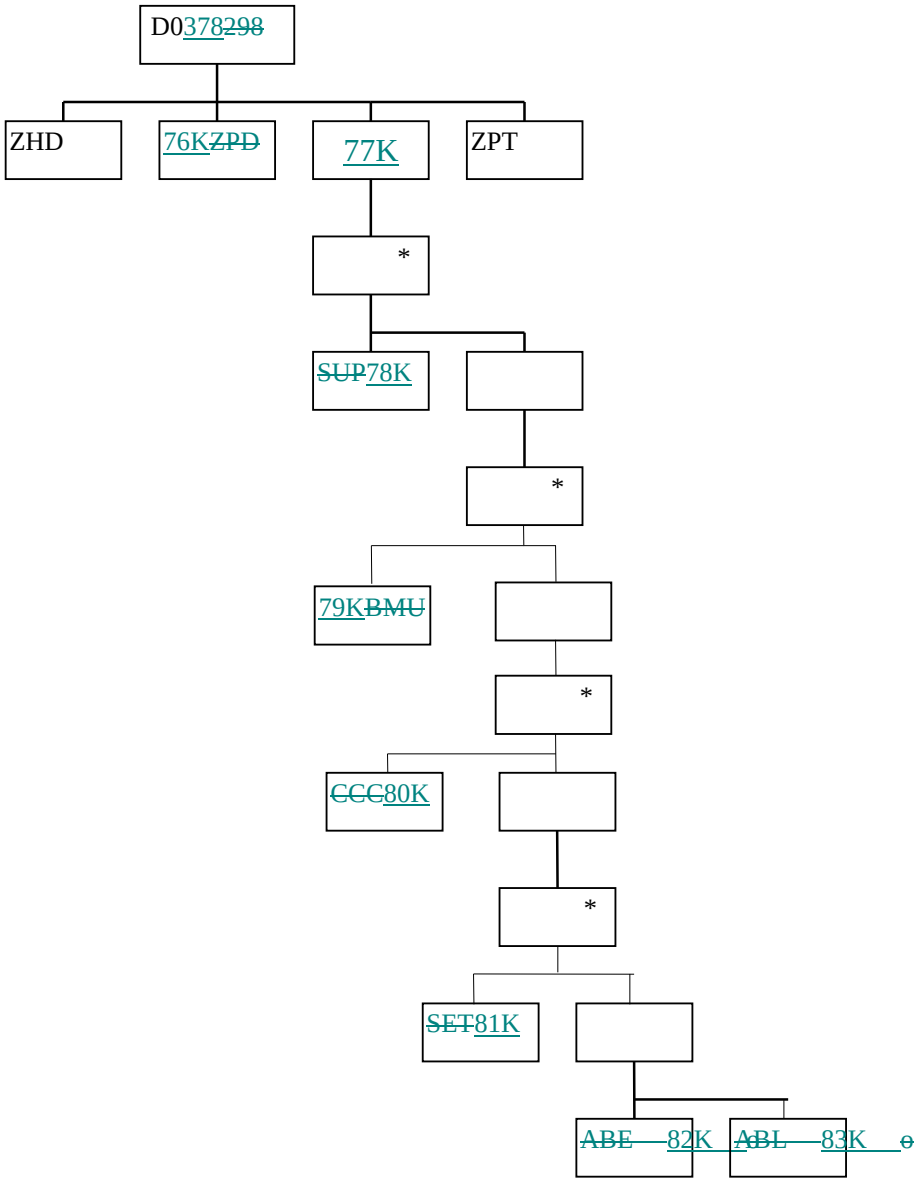
Repeating structure of file:



3.1.29 MSIDs affected by Demand Control Event

The following table shows the file format (excluding File Footer):

File Type: P0238001

Notice that the destination of this file includes the ISRA database idb_demand_control_event.

ZHD – File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= P0238001
3	From Role Code	text(1)	= A
4	From Participant Id	text(4)	Id of Half Hour Aggregator originating file to idb_demand_control_event.participant_id
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent receiving file
7	Creation Time	date/time	Time of file generation
DCE - Demand Control Event Details			
1	Record Type	text(3)	= DCE
2	Demand Control Event Id	Char(30)	idb_demand_control_event.dce_id
3	Start Date and Time	Date	idb_demand_control_event.start_date_time
4	End Date and Time	Date	idb_demand_control_event.end_date_time
MSD – Metering Systems			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= MSD
2	Metering System ID	integer(13)	idb_demand_control_event.metering_system_id

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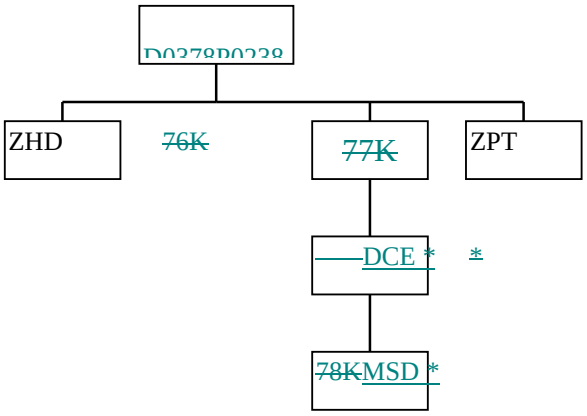
Repeating structure of file:



*

79K

*

80K

*

81K

82K 83K

3.1.30 Aggregated Disconnected DUoS Report

DUoS Report (of two sections - DUoS and DUoS Domain Data) which is described in the IRP Reports Subsystem Specification.

Function Definition Ref: I0058 Produce SSR Reports - Aggregated Disconnected DUoS Report

DUoS Machine Readable

Table to show source of report contents:

The first part of the report (profiled DPM data, beneath SUP record) contains only data that relates to the Distributor or Supplier receiving the report; ie it contains only those SUP, DIS, GP1, VMR, SPX and TOT records needed to contain this data.

The second part of the Distributor version of this report (beneath SUP record) contains data for all active suppliers in the GSP Groups used in the SSR Run, in which the distributor is active. For some of these Supplier/GSP Group combinations the Distributor receiving the report may not be the appointed Distributor.

Where a record type holds a set of up to 50 values, they are subject to the following rules:

- The values are ordered on settlement period id, ascending;
- All 50 fields are always present, if there are less than 50 values the remaining fields are left null. It should be noted that the SPX will contain 46, 48 or 50 values.

DUoS Report

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0369001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	X/R
6	To Participant Id	text(4)	Supplier Id/Distributor Id
7	Creation Time	date/time	Time report processing started
77J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 77J
2	Settlement Date	Date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number

6	GSP Group	text(2)	Null
78J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 78J
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
79J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 79J
2	Demand Control Event Id	Char(30)	idb_demand_data_agtns/demand_control_event_id
3	Start Date and Time	Date	idb_demand_data_agtns/start_date
4	End Date and Time	Date	idb_demand_data_agtns/end_date
80J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 80J
2	Settlement Date	Date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	Date	idb_ssr_runs / ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
81J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 81J
2	Supplier Id	text(4)	idf_sup_purchase_matrices / sup_mkt_ppt_id
3	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
4	Pool Member Id	text(4)	idb_market_ppt_roles / pool_member_id
82J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 82J
2	Distributor Id	text(4)	idf_sup_purchase_matrices / dist_mkt_ppt_id

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3	Distributor Name	text(40)	idb_mkt_ppts / mkt_ppt_name
83J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 83J
2	GSP Group Id	text(2)	idf_sup_purchase_matrices / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
84J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 84J
2	Profile Class	integer(2)	idf_sup_purchase_matrices /pfl_class_id
3	Standard Settlement Configuration Id	text(4)	idf_sup_purchase_matrices / ssc_id
4	Distributor Id	text(4)	idb_llf_classes / dist_mkt_ppt_id
5	Line Loss Factor Class Id	integer(3)	idb_llf_classes / llf_class_id
6	Time Pattern Regime Id	text(5)	idf_sup_purchase_matrices / tpr_id
7	SPM Total All EACs	Decimal (14,4)	idf_sup_purchase_matrices / spm_total_eac + idf_sup_purchase_matrices / spm_total_unmtd_consum
8	SPM Total Annualised Advance Report Value	Decimal (13,3)	idf_sup_purchase_matrices / spm_total_aa
9	SPM Total EAC MSID Count	integer(8)	idf_sup_purchase_matrices / spm_total_eac_msid_count + idf_sup_purchase_matrices / spm_total_unmtd_msid_count
10	SPM Total AA MSID Count	integer(8)	idf_sup_purchase_matrices / spm_total_aa_msid_count
11	SPM Default EAC MSID Count	integer(8)	idf_sup_purchase_matrices / spm_dflt_eac_msid_count + idf_sup_purchase_matrices / spm_dflt_unmtd_msid_count
85J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 85J
2	Profiled SPM Consumption (Settlement Period 01)	Decimal (13,3)	Formed by taking the total of the SPM values for EAC, AA, and Unmetered consumption and applying the PPC, for settlement period 1.

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[3..50]	Profiled SPM Consumption (Settlement Period 02..49)	Decimal (13,3)	Formed by taking the total of the SPM values for EAC, AA, and Unmetered consumption and applying the PPC, for settlement period [2..49].
51	Profiled SPM Consumption (Settlement Period 50)	Decimal (13,3)	Formed by taking the total of the SPM values for EAC, AA, and Unmetered consumption and applying the PPC, for settlement period 50.
86J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 86J
2	Daily Profiled SPM Total EAC	Decimal (13,3)	Supplier Profiled EAC and Profiled Unmetered consumption summed for all settlement periods
3	Daily Profiled SPM Total Annualised Advance	Decimal (13,3)	Supplier Profiled AA summed for all settlement periods

DUoS Report : Domain Data

94J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= HD2
2	Settlement Date	Date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	Date	idb_ssr_runs / ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
95J (Supplier Report)			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SU2
2	Supplier Id	text(4)	idf_agtd_sup_pd_consums / sup_mkt_ppt_id
3	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
SUP	**(Distributor Report)**		
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	idf_sup_purchase_matrices / sup_mkt_ppt_id

3	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
4	Pool Member Id	text(4)	idb_market_ppt_roles / pool_member_id
96J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= CCC
2	Consumption Component Class Id	integer(2)	idb_consum_comp_class / consum_comp_class_id
3	AA/EAC Indicator	text(1)	idb_consum_comp_class / aa_eac_ind (O)
4	Actual/Estimated Indicator	text(1)	idb_consum_comp_class / actual_estimated_ind (O)
5	Data Aggregation Type	text(1)	idb_consum_comp_class / data_agtn_type
6	Metered/Unmetered Indicator	text(1)	idb_consum_comp_class / mtd_unmtd_ind
7	Consumption Component Indicator	text(1)	idb_consum_comp_class / consum_comp_ind
8	Measurement Quantity Id	text(2)	idb_consum_comp_class / measurement_quantity_id
9	GSP Group Correction Scaling Factor	Decimal (4,2)	idb_gsp_group_correction_sf_ssr_runs / gsp_group_correction_sf
97J			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= SP2
2	GSP Group Id	text(2)	idb_ssr_run_gsp_groups / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
4	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds / sett_pd_id
5	Settlement Period Label	text(6)	Generated by a function call
6	GSP Group Correction Factor	Decimal (18,9)	idb_ssr_run_gsp_group_pds / gsp_group_cctn_factor

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3.1.31 Supplier Half Hourly Demand Disconnection Report

Function Definition Ref: I0026B Produce Settlement Reports - HH Demand Disconnection Report.

Table to show source of report contents:

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0370001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	X
6	To Participant Id	text(4)	Supplier Id
7	Creation Time	date/time	Time report processing started
01K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 01K
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number
6	GSP Group	text(2)	Null
02K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 02K
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
05K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 05K
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	date	idb_ssr_runs / ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number

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7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
8	Supplier Id	text(4)	idf_agtd_sup_pd_consums / sup_mkt_ppt_id
9	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
06K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 06K
2	GSP Group Id	text(2)	idf_agtd_sup_pd_consums / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
07K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 07K
2	Consumption Component Class Id	integer(2)	idb_consum_comp_classes / consum_comp_class_id
3	GSP Group Correction Scaling Factor	Decimal (4,2)	idb_gsp_group_cctn_sf_ssr_runs / gsp_group_correction_sf
4	AA/EAC Indicator	text(1)	idb_consum_comp_classes / aa_eac_ind (O)
5	Actual/Estimated Indicator	text(1)	idb_consum_comp_classes / actual_estimated_ind (O)
6	Data Aggregation Type	text(1)	idb_consum_comp_classes / data_agtn_type
7	Metered/Unmetered Indicator	text(1)	idb_consum_comp_classes / mtd_unmtd_ind
8	Consumption Component Indicator	text(1)	idb_consum_comp_classes / consum_comp_ind
9	Measurement Quantity Id	text(2)	idb_consum_comp_classes / measurement_quantity_id
08K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 08K
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds / sett_pd_id
3	Settlement Period Label	text(6)	Provided by a function call
4	Aggregated Supplier Consumption	Decimal (13,3)	idf_agtd_sup_pd_consums / agtd_sup_consum(O)
5	Aggregated Supplier Line Loss	Decimal (13,3)	idf_agtd_sup_pd_consums / agtd_sup_line_loss(O)
6	Corrected Supplier Consumption	Decimal (13,3)	idf_agtd_sup_pd_consums / corrected_sup_consum(O)

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7	Corrected Supplier Line Loss	Decimal (13,3)	idf_agtd_sup_pd_consums / corrected_sup_line_loss(O)

09K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 09K
2	Daily CCC Aggregated Supplier Consumption	Decimal (13,3)	Sum of the Aggregated Supplier Consumption for all settlement periods of the day(O)
3	Daily CCC Aggregated Supplier Line Loss	Decimal (13,3)	Sum of the Aggregated Supplier Line Loss for all settlement periods of the day(O)
4	Daily CCC Corrected Supplier Consumption	Decimal (13,3)	Sum of the Corrected Supplier Consumption for all settlement periods of the day(O)
5	Daily CCC Corrected Supplier Line Loss	Decimal (13,3)	Sum of the Corrected Supplier Line Loss for all settlement periods of the day(O)

10K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 10K
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	date	idb_ssr_runs / ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
8	Supplier Id	text(4)	idf_agtd_sup_da_pd_consums / sup_mkt_ppt_id
9	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
11K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 11K
2	GSP Group Id	text(2)	idf_agtd_sup_da_pd_consums / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
12K			

Field	Field Name	Type	Source / Value
1	Record Type	text(3)	= 12K
2	Data Aggregator Id	text(4)	idf_agtd_sup_da_pd_consums / da_mkt_ppt_id
3	Data Aggregator Name	text(40)	idb_mkt_ppts / mkt_ppt_name
13K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 13K
2	AA/EAC Indicator	text(1)	idb_consum_comp_classes / aa_eac_ind (O)
3	Actual/Estimated Indicator	text(1)	idb_consum_comp_classes / actual_estimated_ind (O)
4	Consumption Component Class Id	integer(2)	idb_consum_comp_classes / consum_comp_class_id
5	Consumption Component Indicator	text(1)	idb_consum_comp_classes / consum_comp_ind
6	Data Aggregation Type	text(1)	idb_consum_comp_classes / data_agtn_type
7	Measurement Quantity Id	text(2)	idb_consum_comp_classes / measurement_quantity_id
8	Metered/Unmetered Indicator	text(1)	idb_consum_comp_classes / mtd_unmtd_ind
14K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 14K
2	Settlement Period Id	integer(2)	idf_agtd_sup_da_pd_consums / sett_pd_id
3	Settlement Period Label	text(6)	Generated by function call
4	Aggregated Supplier Consumption	Decimal (13,3)	For Settlement Days before the start of the NETA - idf_agtd_sup_da_pd_consums / agtd_sup_consum(O) For Settlement Days from the start of the NETA derived by summing idf_agtd_sup_da_pd_consums / agtd_sup_consum across BM Units for a CCC (O)
5	Aggregated Supplier Line Loss	Decimal (13,3)	For Settlement Days before the start of the NETA - idf_agtd_sup_da_pd_consums / agtd_sup_line_loss(O) For Settlement Days from the start of the NETA derived by summing idf_agtd_sup_da_pd_consums / agtd_sup_line_loss across BM Units for a CCC (O)
6	Data	integer(10)	idf_agtd_sup_da_pd_consums /

	Aggregator HH MSID Count		da_hh_msid_count
15K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 15K
2	Daily DA Aggregated Supplier Consumption	Decimal (13,3)	Derived by summing the daily settlement period values of aggregated supplier consumption(O)
3	Daily DA Aggregated Supplier Line Loss	Decimal (13,3)	Derived by summing the daily settlement period values of aggregated supplier line losses(O)
4	Daily DA HH MSID Count	integer(10)	Derived by summing the daily settlement period values of Data Aggregator HH MSID Count

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3.1.32 Supplier Purchase Matrix Report

Function Definition Ref: I0026B Produce Settlement Reports - Disconnection Purchase Matrix Report

IRP_Disconnection_Purchase_Matrix Machine Readable

Table to show source of report contents:

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0371001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	ISR Agent Id
5	To Role Code	text(1)	X
6	To Participant Id	text(4)	Supplier Id
7	Creation Time	date/time	Time report processing started
16K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 16K
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number
6	GSP Group	text(2)	Null
17K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 17K
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
19K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 19K
2	Settlement Date	date	idb_ssr_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code
4	Settlement Code Description	text(30)	idb_sett_types / description
5	SSR Run Date	date	idb_ssr_runs / ssr_run_date

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6	SSR Run Number	integer(7)	idb_ssr_runs / ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs / ssr_run_type_id
20K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 20K
2	Supplier Id	text(4)	idb_sup_data_agtn_in_ssr_runs / sup_mkt_ppt_id
3	Supplier Name	text(40)	idb_mkt_ppts / mkt_ppt_name
21K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 21K
2	GSP Group Id	text(2)	idb_sup_data_agtn_in_ssr_runs / gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups / gsp_group_name
22K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 22K
2	Data Aggregator Id	text(4)	idb_sup_data_agtn_in_ssr_runs / da_mkt_ppt_id
3	Data Aggregator Name	text(40)	idb_mkt_ppts / mkt_ppt_name
4	Data Aggregation Type	text(1)	'N'
5	Data Aggregation Run Number	integer(7)	idb_sup_data_agtn_in_ssr_runs / data_agtn_run_number
23K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 23K
2	Profile Class Id	integer(2)	idf_sup_purchase_matrices / pfl_class_id
3	Standard Settlement Configuration Id	text(4)	idf_sup_purchase_matrices / ssc_id
4	Line Loss Factor Class Id	integer(3)	idb_llf_classes / llf_class_id
5	Distributor Id	text(4)	idb_llf_classes / dist_mkt_ppt_id
6	Time Pattern Regime Id	text(5)	idf_sup_purchase_matrices / tpr_id
7	SPM Total EAC	Decimal (13,3)	idf_sup_purchase_matrices / spm_total_eac

8	SPM Total EAC MSID Count	integer(8)	idf_sup_purchase_matrices / spm_total_eac_msid_count
9	SPM Total Annualised Advance	Decimal (13,3)	idf_sup_purchase_matrices / spm_total_aa
10	SPM Total AA MSID Count	integer(8)	idf_sup_purchase_matrices / spm_total_aa_msid_count
11	SPM Total Unmetered Consumption	Decimal (13,3)	idf_sup_purchase_matrices / spm_total_unmtd_consum
12	SPM Total Unmetered MSID Count	integer(8)	idf_sup_purchase_matrices / spm_total_unmtd_msid_count
13	SPM Default EAC MSID Count	integer(8)	idf_sup_purchase_matrices / spm_dflt_eac_msid_count
14	SPM Default Unmetered MSID Count	integer(8)	idf_sup_purchase_matrices / spm_dflt_unmtd_msid_count

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3.1.33 GSP Group Demand Disconnection Totals Report

Function Definition Ref: I0026B Produce Supplier Settlement Report

Enquiry Description: GSP Group Demand Disconnection Totals Report Requested

This report contains GSP Group Demand Disconnection Totals for all GSP Groups that a supplier trades in. If there is any NHH consumption for a GSP Group, then records for all NHH CCCs will be output for that GSP Group. The report runs as a separate Pro*C process which is initiated by the CSC Scheduler.

GSP Group Demand Disconnection Totals Report Machine Readable

Table to show source of report contents:

File Type: D0373001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0373001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= X
6	To Participant Id	text(4)	Id of Supplier receiving file
7	Creation Time	date/time	Time report processing was started
37K - SSR Run Parameters			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	37K
2	Settlement Date	date	idb_ssr_runs.sett_date
3	Settlement Code	text(2)	idb_ssr_runs.sett_code
4	Run Type Code	text(2)	idb_ssr_runs.ssr_run_type_id
5	Run Number	integer(7)	Input SSR Run Number
6	GSP Group	text(2)	Null
35K			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= 35K
2	Settlement Date	date	idb_ssr_runs.sett date
3	Settlement Code	text(2)	idb_ssr_runs.sett_code
4	Settlement Code Description	text(30)	idb_sett_types.description
5	SSR Run Date	date	idb_ssr_runs.ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs.ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs.ssr_run_type_id
8	Supplier Id	text(4)	idf_agtd_sup_pd_consums / sup_mkt_ppt_id

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9	Supplier Name	text(40)	idb_mkt_ppts.mkt_ppt_name

38K - GSP Group

Field	Field Name	Type	Comments
1	Record Type	text(3)	= 38K
2	GSP Group Id	text(2)	idf_agtd_sup_pd_consums.gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups.gsp_group_name

39K

Field	Field Name	Type	Source / Value
1	Record Type	text(3)	= 39K
2	Consumption Component Class Id	integer(2)	idb_consum_comp_classes.consum_comp_class_id
3	GSP Group Correction Scaling Factor	Decimal (4,2)	idb_gsp_group_cctn_sf_ssr_runs.gsp_group_correction_sf
4	AA/EAC Indicator	text(1)	idb_consum_comp_classes.aa_eac_ind (optional)
5	Actual/Estimated Indicator	text(1)	idb_consum_comp_classes.actual_estimated_ind (optional)
6	Data Aggregation Type	text(1)	idb_consum_comp_classes.data_agtn_type
7	Metered/Unmetered Indicator	text(1)	idb_consum_comp_classes.mtd_unmtd_ind
8	Consumption Component Indicator	text(1)	idb_consum_comp_classes.consum_comp_ind
9	Measurement Quantity Id	text(2)	idb_consum_comp_classes.measurement_quantity_id

40K

Field	Field Name	Type	Source / Value
1	Record Type	text(3)	= 40K
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds.sett_pd_id
3	Settlement Period Label	text(6)	Provided by a function call
4	Total CCC Aggregated Supplier Consumption	Decimal (13,3)	Sum of the Aggregated Supplier Consumption for all the CCC / GSP Group (optional)
5	Total CCC Aggregated Supplier Line Loss	Decimal (13,3)	Sum of the Aggregated Supplier Line Loss for all Suppliers for the CCC / GSP Group. (optional)
6	Total CCC Corrected Supplier Consumption	Decimal (13,3)	Sum of the Corrected Supplier Consumption for all Suppliers for the CCC / GSP Group. (optional)

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7	Total CCC Corrected Supplier Line Loss	Decimal (13,3)	Sum of the Corrected Supplier Line Loss for all Suppliers for the CCC / GSP Group. (optional)
8	Total CCC MSID Count	integer(8)	Sum of the counts of Metering Systems for all Suppliers for the CCC / GSP Group. (optional)

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3.1.34 Supplier BM Unit Demand Disconnection Report

Function Definition Ref: I0026B Produce Supplier Settlement Report

Enquiry Description: Supplier BM Unit Demand Disconnection Report Requested

This report contains details of the Supplier's valid BM Units, Non-Half Hourly BM Unit Allocations, the Half Hourly consumption/generation data input into the system and the combined Half Hourly and Non-Half Hourly consumption/generation by BM Unit and Consumption Component Class calculated by the SSR run. If there is any NHH consumption for a BM Unit, then records for all NHH CCCs will be output for that BM Unit. The report runs as a separate Pro*C process which is initiated by the CSC Scheduler.

Supplier BM Unit Demand Disconnection Report Machine Readable

Table to show source of report contents:

File Type: D0374001

ZHD			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	D0374001
3	From Role Code	text(1)	G
4	From Participant Id	text(4)	SVAA Agent Id
5	To Role Code	text(1)	X
6	To Participant Id	text(4)	Supplier Id
7	Creation Time	date/time	Time report processing started
41K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 41K
2	Settlement Date	date	idb_ssr_runs.sett_date
3	Settlement Code	text(2)	idb_ssr_runs.sett_code
4	Run Type Code	text(2)	idb_ssr_runs.ssr_run_type_id
5	Run Number	integer(7)	idb_ssr_runs.ssr_run_number
6	GSP Group	text(2)	Null
42K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 42K
2	User Name	text(8)	
3	Report Parameters	text(30)	Input SSR Run Number
44K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 44K
2	Settlement Date	date	idb_ssr_runs.sett_date
3	Settlement Code	text(2)	idb_ssr_runs.sett_code
4	Settlement Code Description	text(30)	idb_sett_types.description

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5	SSR Run Date	date	idb_ssr_runs.ssr_run_date
6	SSR Run Number	integer(7)	idb_ssr_runs.ssr_run_number
7	SSR Run Type Id	text(2)	idb_ssr_runs.ssr_run_type_id
8	Supplier Id	text(4)	idf_agtd_bm_pd_consums.sup_mkt_ppt_id
9	Supplier Name	text(40)	idb_mkt_ppts.mkt_ppt_name
45K			
Field	Field Name	Type	Source / Value
1	Record Type	text(3)	= 45K
2	GSP Group Id	text(2)	idf_agtd_bm_pd_consums.gsp_group_id
3	GSP Group Name	text(30)	idb_gsp_groups.gsp_group_name
46K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 46K
2	BM Unit Id	text(11)	idb_bm_unit_in_gsp_group.bm_unit_id
3	Default BM Unit Flag	boolean	idb_bm_unit_in_gsp_group. default_bm_unit_flag
47K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 47K
2	Profile Class Id	integer(2)	idb_nhh_bmu_allocation.profile_class_id
48K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 48K
2	Standard Settlement Configuration Id	text(4)	idb_nhh_bmu_allocation.ssc_id
49K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 49K
2	BM Unit Id	text(11)	idf_agtd_bm_pd_consums.bm_unit_id
3	Default BM Unit Flag	boolean	idb_bm_unit_in_gsp_group. default_bm_unit_flag
50K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 50K
2	Consumption Component Class Id	integer(2)	idf_agtd_bm_pd_consums. consum_comp_class_id
3	GSP Group Correction Scaling Factor	decimal (4,2)	idb_gsp_group_cctn_sf_ssr_runs. gsp_group_correction_sf
4	AA/EAC Indicator	text(1)	idb_consum_comp_classes.aa_eac_ind (O)
5	Actual/ Estimated Indicator	text(1)	idb_consum_comp_classes. actual_estimated_ind (O)

6	Data Aggregation Type	text(1)	idb_consum_comp_classes.data_agtn_type
7	Metered/ Unmetered Indicator	text(1)	idb_consum_comp_classes.mtd_unmtd_ind
8	Consumption Component Indicator	text(1)	idb_consum_comp_classes.consum_comp_ind
9	Measurement Quantity Id	text(2)	idb_consum_comp_classes. measurement_quantity_id
51K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 51K
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds .sett_pd_id
3	Settlement Period Label	text(6)	Provided by a function call
4	Aggregated BM Unit Energy	decimal (14,4)	idf_agtd_bm_pd_consum. agtd_bm_consum_nn *where nn is the appropriate settlement period* (O)
5	Aggregated BM Unit Line Losses	decimal (14,4)	idf_agtd_bm_pd_consum. agtd_bm_line_loss_nn *where nn is the appropriate settlement period* (O)
6	Corrected BM Unit Energy	decimal (14,4)	idf_agtd_bm_pd_consum. corrected_bm_consum_nn *where nn is the appropriate settlement period* (O)
7	Corrected BM Unit Line Losses	decimal (14,4)	idf_agtd_bm_pd_consum. corrected_bm_line_loss_nn *where nn is the appropriate settlement period* (O)
52K			
Field	Field Name	Type	Source / Value
1	Record Type	text(3)	= 52K
2	Daily Aggregated BM Unit Energy	decimal (14,4)	Derived by summing Aggregated BM Unit Energy over all periods (O)
3	Daily Aggregated BM Unit Line Losses	decimal (14,4)	Derived by summing Aggregated BM Unit Line Losses over all periods (O)
4	Daily Corrected BM Unit Energy	decimal (14,4)	Derived by summing Corrected BM Unit Energy over all periods (O)
5	Daily Corrected BM Unit Line Losses	decimal (14,4)	Derived by summing Corrected BM Unit Line Losses over all periods (O)
53K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 53K

2	BM Unit Id	text(11)	idf_agtd_bm_pd_consums.bm_unit_id
3	Default BM Unit Flag	boolean	idb_bm_unit_in_gsp_group. default_bm_unit_flag
54K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 54K
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds .sett_pd_id
3	Settlement Period Label	text(6)	Provided by a function call
4	Uncorrected Period BM Unit Total Allocated Volume	decimal (14,4)	Derived by: sum (idf_agtd_bm_pd_consums. agtd_bm_consum_nn for Active Import CCCs) minus sum (idf_agtd_bm_pd_consums. agtd_bm_consum_nn for Active Export CCCs) *where nn is the appropriate settlement period* for all CCCs for a BM Unit for Supplier in GSP Group
5	Period BM Unit Total Allocated Volume	decimal (14,4)	Derived by: sum (idf_agtd_bm_pd_consums. corrected_bm_consum_nn for Active Import CCCs) minus sum (idf_agtd_bm_pd_consums. corrected_bm_consum_nn for Active Export CCCs) *where nn is the appropriate settlement period* for all CCCs for a BM Unit for Supplier in GSP Group
55K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 55K
2	Daily Uncorrected Period BM Unit Total Allocated Volume	decimal (14,4)	Derived by summing Uncorrected Period BM Unit Total Allocated Volume for a BM Unit for Supplier in GSP Group
3	Daily Period BM Unit Total Allocated Volume	decimal (14,4)	Derived by summing Period BM Unit Total Allocated Volume for a BM Unit for Supplier in GSP Group
56K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 56K
2	Data Aggregator Id	text(4)	idf_agtd_sup_da_pd_consums.da_mkt_ppt_id
3	Data Aggregator Name	text(40)	idb_mkt_ppts.mkt_ppt_name
57K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 57K
2	BM Unit Id	text(11)	idf_agtd_sup_da_pd_consums.bm_unit_id (O)
3	SSR Run BM Unit Id	text(11)	Derived by a function call (O)

4	Default BM Unit Reason Code	text(2)	Derived by a function call (O)
58K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 58K
2	AA/EAC Indicator	text(1)	idb_consum_comp_classes.aa_eac_ind (O)
3	Actual/ Estimated Indicator	text(1)	idb_consum_comp_classes. actual_estimated_ind (O)
4	Consumption Component Class Id	integer(2)	idf_agtd_bm_pd_consums. consum_comp_class_id
5	Consumption Component Indicator	text(1)	idb_consum_comp_classes.consum_comp_ind
6	Data Aggregation Type	text(1)	idb_consum_comp_classes.data_agtn_type
7	Measurement Quantity Id	text(2)	idb_consum_comp_classes. measurement_quantity_id
8	Metered/ Unmetered Indicator	text(1)	idb_consum_comp_classes.mtd_unmtd_ind
59K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 59K
2	Settlement Period Id	integer(2)	idb_ssr_run_gsp_group_pds .sett_pd_id
3	Settlement Period Label	text(6)	Provided by a function call
4	Aggregated BM Unit Energy	decimal (14,4)	idf_agtd_sup_da_pd_consum. agtd_sup_consum_nn *where nn is the appropriate settlement period* (O)
5	Aggregated BM Unit Line Losses	decimal (14,4)	idf_agtd_sup_da_pd_consum. agtd_sup_line_loss_nn *where nn is the appropriate settlement period* (O)
6	Data Aggregator HH MSID Count	integer (10)	idf_agtd_sup_da_pd_consums / da_hh_msid_count
60K			
Field	**Field Name**	**Type**	**Source / Value**
1	Record Type	text(3)	= 60K
2	Daily Aggregated BM Unit Energy	decimal (14,4)	Derived by summing Aggregated BM Unit Energy over all periods (O)
3	Daily Aggregated BM Unit Line Losses	decimal (14,4)	Derived by summing Aggregated BM Unit Line Losses over all periods (O)

4	Daily Aggregator HH MSID Count	integer (10)	Derived by summing the daily settlement period values of Data Aggregator HH MSID Count

3.1.35 Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes Report

Function Definition Ref: I0026B Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes

Enquiry Description: GSP Group Demand Disconnection Totals Report Requested

This report contains Estimated Half Hourly Demand Disconnection Volumes for all HH Metering Systems disconnected by a Distributor as reported on the SVAA-IZZZ.

File Type: D0375001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= D0375001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= X
6	To Participant Id	text(4)	Id of Supplier receiving file
7	Creation Time	date/time	Time report processing was started
61K - Demand Control Event Details			
1	Record Type	text(3)	= 61K
2	Demand Control Event Id	Char(30)	idf_discon_msi_hh_dd_volume.dce_id
3	Start Date and Time	Date	idf_discon_msi_hh_dd_volume.start_date_time
4	End Date and Time	Date	idf_discon_msi_hh_dd_volume.end_date_time
62K - Metering Systems			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= 62K
2	Metering System Id	integer(13)	idf_discon_msi_hh_dd_volume.
3	Measurement Quantity Id	text(3)	idf_discon_msi_hh_dd_volume.measurement_quantity_id
4	Supplier Id	text(4)	idf_discon_msi_hh_dd_volume.supplier_id
63K – Settlement Date			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= 63K
2	Settlement Date	Date	idf_discon_msi_hh_dd_volume.settlement_date
64K – HH Periods			
Field	**Field Name**	**Type**	**Source / Value**

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1	Record Type	text(3)	= 64K
2	Estimated HH Demand Disconnection Volume Consumption	integer(2)	idf_discon_msi_hh_dd_volume.estimated_hh_dd_vol_consumption

3.1.36 Demand Control Instructions

Function Definition Ref: I0065 Demand Control Instructions File

Enquiry Description: Demand Control Instruction File

This report contains details of the Demand Control Instructions.

File Type: P0240001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	ZHD
2	File Type	text(8)	P0240001
3	From Role Code	text(1)	E
4	From Participant Id	text(4)	UKDC
5	To Role Code	text(1)	G
6	To Participant Id	text(4)	M001
7	Creation Time	date/time	Time of file generation
DCI - Demand Control Instrucrtion			
Field	**Field Name**	**Type**	**Comments**
1	Affected DSO	varchar2(10)	
2	Demand Control Identification Number	varchar2(5)	
3	Instruction Sequence	integer(2)	
5	Demand Control Event Flag	char	
6	Time From	datetime	
7	Time To	datetime	
8	Volume	decimal(10,3)	
9	SO Flag	varchar2(5)	
10	Amendment Flag	datetime	

3.1.37 Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes Report

Function Definition Ref: I0026B Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes

Enquiry Description: GSP Group Demand Disconnection Totals Report Requested

This report contains Estimated Half Hourly Demand Disconnection Volumes for all HH Metering Systems disconnected by a Distributor.

File Type: ~~D0375~~P0241001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= P0241001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= X
6	To Participant Id	text(4)	Id of Supplier receiving file
7	Creation Time	date/time	Time report processing was started
61K - Demand Control Event Details			
1	Record Type	text(3)	= 61K
2	Demand Control Event Id	Char(30)	idf_discon_msi_hh_dd_volume.dce_id
3	Start Date and Time	Date	idf_discon_msi_hh_dd_volume.start_date_time
4	End Date and Time	Date	idf_discon_msi_hh_dd_volume.end_date_time
62K - Metering Systems			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= 62K
2	Metering System Id	integer(13)	idf_discon_msi_hh_dd_volume.
3	Measurement Quantity Id	text(3)	idf_discon_msi_hh_dd_volume.measurement_quantity_id
4	Supplier Id	text(4)	idf_discon_msi_hh_dd_volume.supplier_id
63K – Settlement Date			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= 63K
2	Settlement Date	Date	idf_discon_msi_hh_dd_volume.settlement_date
64K – HH Periods			
Field	**Field Name**	**Type**	**Source / Value**

1	Record Type	text(3)	= 64K
2	Estimated HH Demand Disconnection Volume Consumption	integer(2)	idf_discon_msi_hh_dd_volume.estimated_hh_dd_vol_consumption

3.2 Internal Interfaces

3.2.1 General

Internal interfaces between processes within the ISRA System are implemented through the database. Where a process needs data which is generated by another process, the generating process writes the data to the database and the process which requires the data reads it from the database.

The following sections specify files that are generated internally within ISRA.

3.2.2 Audit Report

Function Definition Ref: I0023 Produce Audit Reports

Enquiry Description: Audit Report Requested

Audit Report Machine Readable

The following table shows the file format (excluding footer):

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0030001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	Null
6	To Participant Id	text(4)	Null
7	Creation Time	date/time	Time file processing was started
RDT			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= RDT
2	User Name	text(30)	= cph_username
PR1 - Report Parameters 1			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PR1
2	User Name	text(30)	= Input Parameter
PR2 - Report Parameters 2			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PR1
2	Entity Name	text(30)	= Input Parameter
PR3 - Report Parameters 3			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PR2
2	Current Day Activity Indicator	text(1)	= Input Parameter (default 'N')

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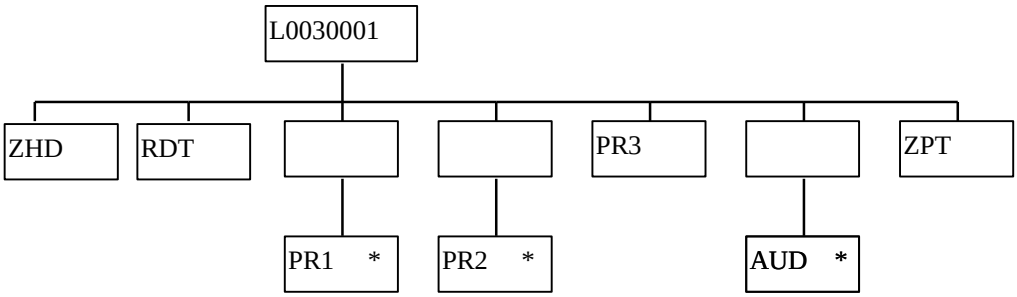
3	Date Range Start	date	= Input Parameter
4	Date Range End	date	= Input Parameter
AUD - Audit Entry			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= AUD
2	User Name	text(8)	= Input Parameter
3	Date / Time of Change	date/time	= Audit Record.Modification Time
4	Entity	text(255)	= Input Parameter
5	Online/Batch Indicator	text(1)	= O or B - derived from the username. Schema Owner => Batch
6	Audit Operation	text(6)	= Audit Record.Modification Type (INSERT, UPDATE, DELETE)
7	Change Details	text(500)	= Audit Record.Field Value 1, Audit Record.Field Value 2 etc All fields comma separated. Max 100 characters per field, and 500 in total. Null fields written as "NULL".

Repeating Structure of the File:



Audit Report Human Readable

```
Audit Report                                              ISR Agent                                    17/10/1997 09:26

User:   PENDERI

Report Parameters:       User:                    PENDERI

                         Entity:                  *


                         Current Day Activity:    N
                         Date Range Start:        16-OCT-1997
                         Date Range End:          17-OCT-1997

User     Date/Time        Entity                         Online Oprtn   Change Details
                                                         /Batch
======== ================ ============================== ====== ======================
PENDERI  16/10/1997 17:08 IDB_MKT_PPT_ROLES              O      Insert  M701,Z,NULL,Y
PENDERI  16/10/1997 17:08 IDB_MKT_PPT_ROLES              O      Insert  M701,P,NULL,Y
PENDERI  16/10/1997 17:11 IDB_MKT_PPT_ROLES              O      Insert  M701,G,NULL,Y
PENDERI  16/10/1997 17:11 IDB_MKT_PPT_ROLES              O      Insert  M701,K,NULL,Y
PENDERI  16/10/1997 17:11 IDB_MKT_PPT_ROLES              O      Insert  M701,U,NULL,Y

(Repeated for all changes made to selected Entity, by User, on days in selected Date  Range)
                                  ---- End of Report ----
```

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3.2.3 Standing Data Audit Reports

This report is produced from a character string parameter which contains the audit report data for a change to one row in the ISRA Database. This report is only submitted by the Standing Data Maintenance Forms when a change is made to ISRA data which has been used in a Final Initial Settlement Run.

Outputs

The following table shows the file format (excluding footer):

ZHD - File Header			
Field	Field Name	Type	Comments
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0031001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	Null
6	To Participant Id	text(4)	Null
7	Creation Time	date/time	Time file processing was started
RDT			
Field	Field Name	Type	Comments
1	Record Type	text(3)	= RDT
2	User Name	text(30)	= cph_username
AUD - Audit Entry			
Field	Field Name	Type	Comments
1	Record Type	text(3)	= AUD
2	User Name	text(8)	= Input Parameter
3	Date / Time of Change	date/time	= Audit Record.Modification Time
4	Entity	text(255)	= Input Parameter
5	Online/Batch Indicator	text(1)	= O or B - derived from the username. Schema Owner => Batch
6	Audit Operation	text(6)	= Audit Record.Modification Type (INSERT, UPDATE, DELETE)
7	Change Details	text(500)	= Audit Record.Field Value 1, Audit Record.Field Value 2 etc All fields comma separated. Max 100 characters per field, and 500 in total. Null fields written as "NULL".
WRN - Warning Message			
Field	Field Name	Type	Comments
1	Record Type	text(3)	= WRN
2	Warning message	text(100)	= Warning message, generated if the change may invalidate one or more sets of Period Profile Class Coefficients and Daily Profile Coefficients.

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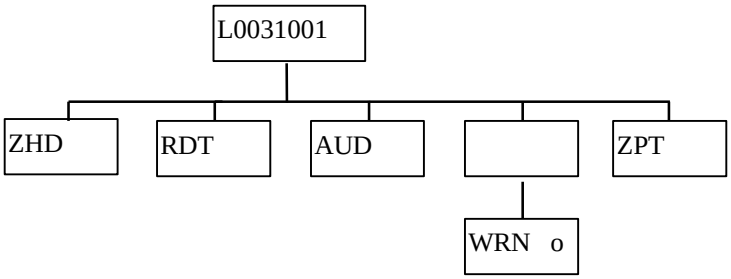
Repeating Structure of the File:



Human Readable Output

```
Standing Data Audit Report                                ISR Agent                                17/10/1997 15:26

User:   FAT1STAN

User     Date/Time        Entity                   Online Oprtn   Change Details
                                                   Batch
                                                   Update
======== ================ ======================== ====== ======= ==================
FAT1STAN 17/10/1997 16:24 IDB_LLF_CLASSES          O      Update  2,M401,R,01-JAN-
1997,02-FEB-1997,Y

                        -- End of Report --
```

3.2.4 Exception Reports

The format of each of these is as defined below(excluding footer):

File Type: L0008

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0008001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent originating file
7	Creation Time	date/time	Time of file generation

HDR - Exception Report Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= HDR
2	Function Id	text(20)	= Activity Type of the activity generating the exception report. cdb_activity/ activity type
3	Function Name	text(40)	= Textual description of the activity. For file loads, it includes the file id of the file being loaded.
4	File Id	integer(10)	= The file id of the exception file ie this file. cdb_file_reference.file_id
5	File Name	text(14)	= The file id of the exception file ie this file. cdb_file_reference.file_name
6	User Id	text(8)	= cph_username

ZPD - Exception Report Additional Header (Only present for SSR Run and DPP Run Exception Reports)			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZPD
2	Settlement Date	date	idb_ssr_runs or idb_pfl_production_runs / sett_date
3	Settlement Code	text(2)	idb_ssr_runs / sett_code, null for DPP run
4	Run Type Code	text(2)	idb_ssr_runs / ssr_run_type_id, null for DPP run
5	Run Number	integer(7)	SSR Run Number or idb_pfl_production_runs / pfl_production_run_number
6	GSP Group	text(2)	Null

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XHD - Copy of ZHD From Data File Being Loaded (Only present for Data Load Exception Reports)			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= XHD
2	File Type	text(8)	= copy of this field from data file
3	From Role Code	text(1)	= copy of this field from data file
4	From Participant Id	text(4)	= copy of this field from data file
5	To Role Code	text(1)	= copy of this field from data file
6	To Participant Id	text(4)	= copy of this field from data file
7	Creation Time	date/time	= copy of this field from data file

XPD - Copy of ZPD From Data File Being Loaded (Only present for Data Load Exception Reports for load files with a ZPD)			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= XPD
2	Settlement Date	date	= copy of this field from data file
3	Settlement Code	text(2)	= copy of this field from data file
4	Run Type Code	text(2)	= copy of this field from data file
5	Run Number	integer(7)	= copy of this field from data file
6	GSP Group	text(2)	= copy of this field from data file

EXD - Exception Detail			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= EXD
2	Exception Type	text(1)	= E (error) or W (warning)
3	Exception Text	text(200)	= text of exception eg: 'No valid profile can be found for settlement configuration'

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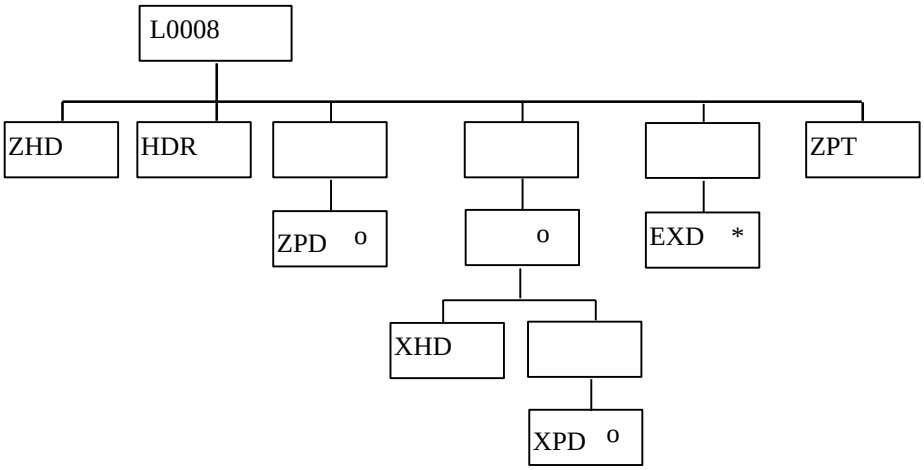
Repeating Structure of file:



Human Readable Output:

```
Exception Report                                        ISR Agent                                    17/10/1997 09:29
Function Id:                  IRSSSR
Function Name:                SSR Run
File Id:                      19533
File Name:                    GM001000019533
User Id:                      PENDERI

Settlement Date:              03/03/1997
Settlement Code:              R1
Run Type Code:                R1
Run Number:                   18889

Exception Type/Text
============================================================================
W  GSP Group G1: Half-hourly data from data aggregator M301 excluded from SSR run
W  GSP Group G2: Half-hourly data from data aggregator M301 excluded from SSR run
                            ♦  End of Report -
```

3.2.5 Exception Reports

The format of each of these is as defined below(excluding footer):

File Type: P0035

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0008001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent originating file
7	Creation Time	date/time	Time of file generation

HDR - Exception Report Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= HDR
2	Function Id	text(20)	= Activity Type of the activity generating the exception report. cdb_activity/ activity type
3	Function Name	text(40)	= Textual description of the activity. For file loads, it includes the file id of the file being loaded.
4	File Id	integer(10)	= The file id of the exception file ie this file. cdb_file_reference.file_id
5	File Name	text(14)	= The file id of the exception file ie this file. cdb_file_reference.file_name
6	User Id	text(8)	= cph_username

XHD - Copy of ZHD From Data File Being Loaded (Only present for Data Load Exception Reports)			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= XHD
2	File Type	text(8)	= copy of this field from data file
3	From Role Code	text(1)	= copy of this field from data file
4	From Participant Id	text(4)	= copy of this field from data file
5	To Role Code	text(1)	= copy of this field from data file
6	To Participant Id	text(4)	= copy of this field from data file
7	Creation Time	date/time	= copy of this field from data

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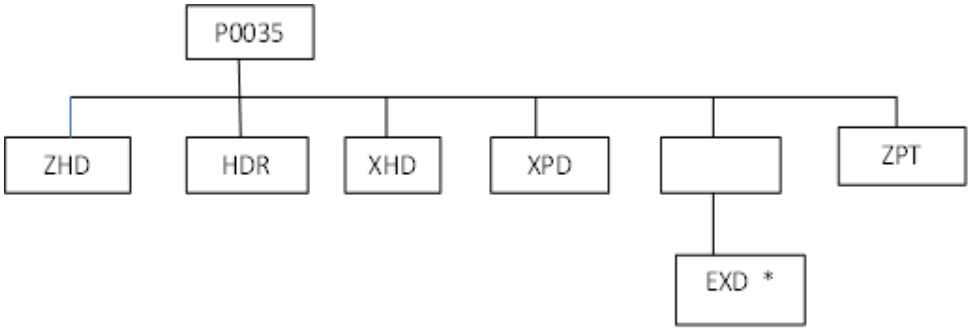
			file
XPD - Copy of ZPD From Data File Being Loaded (Only present for Data Load Exception Reports for load files with a ZPD)			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= XPD
2	Settlement Date	date	= copy of this field from data file
3	Settlement Code	text(2)	= copy of this field from data file
4	Run Type Code	text(2)	= copy of this field from data file
5	Run Number	integer(7)	= copy of this field from data file
6	GSP Group	text(2)	= copy of this field from data file
EXD - Exception Detail			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= EXD
2	Exception Type	text(1)	= E (error) or W (warning)
3	Exception Text	text(200)	= text of exception eg: 'Duplicate SPM records found for Supplier %s, LLFC %s, Distributor %s, SSC %s, TPR %s and PC %s.'

Repeating Structure of file:



Human Readable Output:

```
Exception Report                                    ISR Agent                                    10/12/2014 05:18
Function Id:                  idl_spm
Function Name:                Load Supplier Purchases Matrix Data File id:145764
File Id:                      145767
File Name:                    GM001000145767
User Id:                      SVAA55


File Type:                    D0041001
From Role Code:               B
From Participant Id:          M101
To Role Code:                 G
To Participant Id:            M001
Creation Time:                02/06/1998 00:00

Settlement Date:              01/01/2000
Settlement Code:              SF
Run Type Code:                D
Run Number:                   12
GSP Group:                    G1

Exception Type/Text
== ============================================================================
E  Duplicate SPM records found for Supplier M101, LLFC 2, Distributor M403, SSC SC03, TPR TP111 and PC 2.
E  Duplicate SPM records found for Supplier M101, LLFC 2, Distributor M403, SSC SC03, TPR TP112 and PC 2.
E  Duplicate SPM records found for Supplier M101, LLFC 3, Distributor M403, SSC SC01, TPR TP001 and PC 1.

                                                                  -- End of Report --
```

3.2.6 Data Load Standing Data Update Report

The format of this file is defined below(excluding footer):

File Type: L0006

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0006001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent originating file
7	Creation Time	date/time	Time of file generation

HDR - Exception Report Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= HDR
2	Function Id	text(20)	= Activity Type of the activity generating the exception report. cdb_activity/ activity type
3	Function Name	text(40)	= Textual description of the activity. For file loads, it includes the file id of the file being loaded.
4	File Id	integer(10)	= The file id of the exception file ie this file. cdb_file_reference.file_id
5	File Name	text(14)	= The file id of the exception file ie this file. cdb_file_reference.file_name
6	User Id	text(8)	= cph_username

XHD - Copy of ZHD From Data File Being Loaded			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= XHD
2	File Type	text(8)	= copy of this field from data file
3	From Role Code	text(1)	= copy of this field from data file
4	From Participant Id	text(4)	= copy of this field from data file
5	To Role Code	text(1)	= copy of this field from data file
6	To Participant Id	text(4)	= copy of this field from data file
7	Creation Time	date/time	= copy of this field from data file

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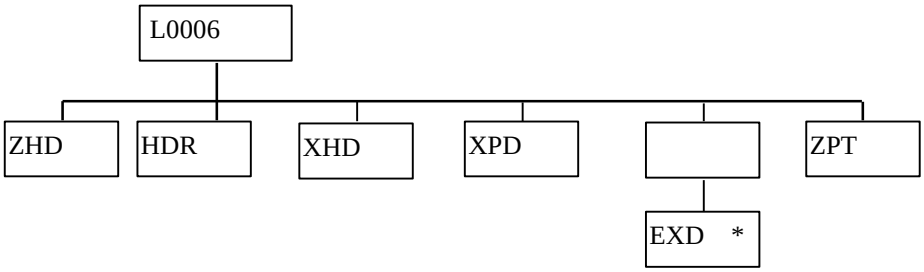
XPD - Copy of ZPD From Data File Being Loaded			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= XPD
2	Settlement Date	date	= copy of this field from data file
3	Settlement Code	text(2)	= copy of this field from data file
4	Run Type Code	text(2)	= copy of this field from data file
5	Run Number	integer(7)	= copy of this field from data file
6	GSP Group	text(2)	= copy of this field from data file

EXD - Exception Detail			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= EXD
2	Update Type	text(1)	= W (Warning)
3	Update Text	text(200)	= text of update message

Repeating Structure of file:



Human Readable Output:

There is no human readable version of this file.

3.2.7 Standing Data Update Report for Suppliers

The format of this file is defined below (excluding footer):

File Type: L0049001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0049001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	Null
6	To Participant Id	text(4)	Null

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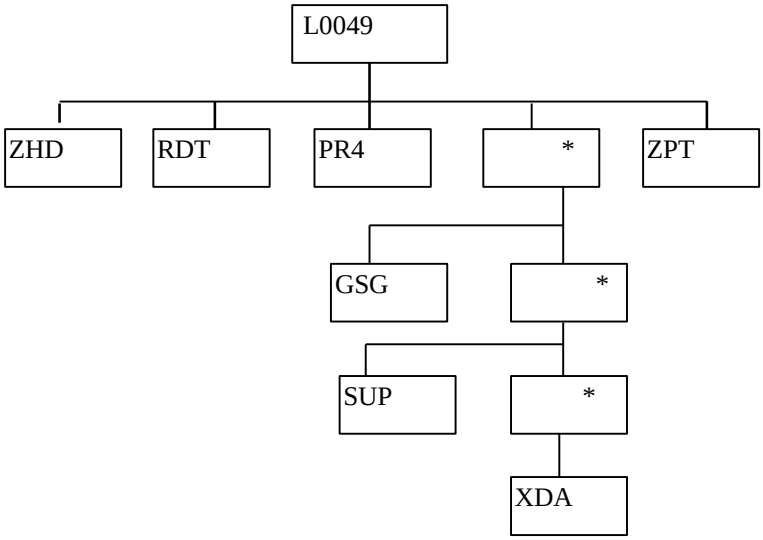
7	Creation Time	date/time	Time of file generation
	RDT		
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= RDT
2	User Name	text(30)	= cph_username
	PR4 – Report Parameters 4		
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PR4
2	Supplier ID	text(4)	= Supplier ID Selected (may be NULL)
4	Start Load Date Range	date	= Start of date range to select records over. Records having their "earliest change date" or "latest change date" values between Start Load Date Range and End Load Date Range will be included in the report.
3	End Load Date Range	date	= End of date range to select records over. Records having their "earliest change date" or "latest change date" values between Start Load Date Range and End Load Date Range will be included in the report.
	GSG - GSP Group		
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= GSG
2	GSP Group Id	text(2)	= GSP Group ID
3	GSP Group Name	text(30)	= GSP Group Name
	SUP – Supplier		
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	= Supplier ID
3	Supplier Name	text(30)	= Supplier Name
	XDA – Action Data		
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= XDA
2	Action Type	Text(1)	= Standing Data Update Action/ One of: I - Insert D - Delete
3	Data Aggregator Role Code	text(1)	= Data Aggregator Role Code (may be NULL)
4	Data Aggregator ID	text(4)	= Data Aggregator ID (may be NULL)

5	Effective From Settlement Date	date	= first settlement date of change. For Delete actions, this is the first date now cut off.
6	Effective To Settlement Date	date	= last settlement date of change For Delete actions, this is the last date now cut off.
7	Earliest Change Date	date	= earliest date on which this audit span was updated
8	Latest Change Date	date	= latest date on which this audit span was updated
9	Cleared	boolean	= indicates whether the audit record has been cleared or not by a manual standing data change.

Repeating Structure of file:



Human Readable Output:

Audit Report Human Readable

```
Standing Data Update Report         ISR Agent                  26/01/2006 12:31

User: SUPER


Report Parameters:
==================

Supplier:         NEEB
Date Range Start: 26/01/2006
Date Range End:   26/01/2006


GSP Group:
==========

GSP Group Id:     _A
GSP Group Name:   Eastern



Supplier Id:   NEEB - Northern Electric plc

                    <------------------ Dates -------------------->

Action DA Role DA Id From Sett  To Sett    Earliest Load Latest Load Cleared
====== ======= ===== ========== ========== ============= =========== =======
D      A       HYDE  01/04/2000 03/04/2000 26/01/2006    26/01/2006  N
I      A       HYDE  01/04/2000 03/04/2000 26/01/2006    26/01/2006  N
D      A       HYDE  05/04/2000 09/04/2000 26/01/2006    26/01/2006  N
I      A       HYDE  06/04/2000 10/04/2000 26/01/2006    26/01/2006  N
I      B       NEEB  01/04/2000 04/04/2000 26/01/2006    26/01/2006  N
I      B       NEEB  06/04/2000 09/04/2000 26/01/2006    26/01/2006  N
I                    01/04/2000 04/04/2000 26/01/2006    26/01/2006  N
I                    06/04/2000 10/04/2000 26/01/2006    26/01/2006  N


GSP Group:
==========

GSP Group Id:     _B
```

GSP Group Name: East Midlands

Supplier Id: NEEB - Northern Electric plc

<------------------ Dates -------------------->

Action	DA Role	DA Id	From Sett	To Sett	Earliest Load	Latest Load	Cleared
I	A	HYDE	01/04/2000	04/04/2000	26/01/2006	26/01/2006	N
D	A	HYDE	01/04/2000	09/04/2000	26/01/2006	26/01/2006	N
I	A	HYDE	06/04/2000	09/04/2000	26/01/2006	26/01/2006	N
I	B	NEEB	01/04/2000	04/04/2000	26/01/2006	26/01/2006	N
I	B	NEEB	06/04/2000	09/04/2000	26/01/2006	26/01/2006	N
I			01/04/2000	04/04/2000	26/01/2006	26/01/2006	N
I			06/04/2000	09/04/2000	26/01/2006	26/01/2006	N

-- End of Report --

Page 1

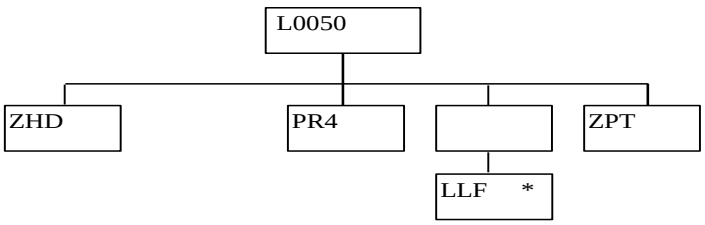
3.2.8 LLF Confirmation Report

The format of this file is defined below (excluding footer):

File Type: L0050001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0050001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	=Id of ISR Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	=Id of ISR Agent originating file
7	Creation Time	date/time	=Time of file generation
PR4 – Report Parameters 4			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PR4
2	Distributor	text(4)	= Distributor Selected
3	Settlement Date	date	= Settlement Date Selected
4	Settlement Period	integer(2)	= Settlement Period Selected
5	LLF File Id	integer(10)	= LLF File Id Latest llf_file_id for the selected Distributor, Settlement Date and Settlement period combination.
LLF – LLF Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= LLF
2	LLF Class Id	integer(3)	= LLF Class ID
3	LLF	decimal(5,3)	= Line Loss Factor

Repeating Structure of file:



Human Readable Output:

LLF Confirmation Report Human Readable

```
LLF Confirmation Report         ISR Agent                   07/07/2008 10:25

Report Parameters:
==================

Distributor: EMEB
Settlement Date: 01-AUG-2008
Settlement Period: 22
File Id: 25633785

LLF Class  LLF
=========  ======
0          1.404
1          1.404
2          1.241
3          1.163
4          1.129
5          1.111

(Contains all the LLF details for the selected distributor, settlement date, settlement period and
llf file id)
                                -- End of Report -
```

3.2.9 Temperature Loading

The format of this file is defined below:

File Type: Text file

Temperature Data			
Field	**Field Name**	**Type**	**Comments**
1	Date	date	= Temperature loading date in YYYY-MM-DD format
2	Site_Name	text(17)	= Name of the Observation Site
3	Temperature	decimal (4,1)	= Temperature in Fahrenheit
4	GSP Group	text(16)	=GSP Group Name

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Human Readable Input:

```
YYYY-MM-DD  SITE_NAME        TEMP(DEGF)  ALIAS(GSP GROUP)

 2008-07-03  WATTISHAM           65.3     A-EASTERN
 2008-07-03  WATNALL             63.5     B-EMEB
 2008-07-03  HEATHROW            69.8     C-LONDON
 2008-07-03  RHYL                62.6     D-MANWEB
 2008-07-03  COLESHILL           55.0     E-MIDLANDS
 2008-07-03  ALBEMARLE           63.6     F-NORTHERN
 2008-07-03  WOODFORD            64.4     G-NORWEB
 2008-07-03  HEATHROW            69.8     H-SOUTHERN
 2008-07-03  CHARLWOOD           67.8     J-SEEBOARD
 2008-07-03  ST. ATHAN           60.2     K-SWALEC
 2008-07-03  YEOVILTON           61.8     L-SWEB
 2008-07-03  CHURCH FENTON       64.2     M-YORKSHIRE
 2008-07-03  BISHOPTON           60.0     N-S SCOTLAND
 2008-07-03  DYCE                58.8     P-N SCOTLAND
```

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4 Database Specification

4.1 General

This chapter describes the physical ISRA database. It includes a section describing each of the top level components of the system database. Sections discuss:

- Operating System Files
- The Oracle Database
- Audit Logs
- Archive
- Database Sizing

The following naming conventions have been adopted throughout the system:

All common tables have been defined as cdb_<table_name> and all ISRA specific Oracle database tables idb_<table_name>. ISRA specific tables being implemented by flat files are defined as idf_<table_name>. This is in line with the naming conventions detailed in Appendix A of the Technical Product Description.

Each table has a three letter *table alias*. All primary keys use the convention of <table_alias>_pk, foreign keys use the convention <foreign key table alias>_<prime key table alias>_fk1, <foreign key table alias>_<prime key table alias>_fk2 etc., unique keys use the convention of <table_alias>_uk1, <table_alias>_uk2 etc. This is consistent with the Oracle Designer 6i naming convention.

In certain instances, links between tables are shown as <foreign key table alias>_<prime key table alias>_sk, which are *Special Keys*. Special keys are detailed in Section 4.3.3.1.1

4.2 Operating System Files

The file store within the system consists of both files received from external sources and files produced by the ISRA system. The details of these files are given in the ISRA External Interfaces section.

There are several types of file managed by the system:

- Data Files;
- Report Files;
- Operator logs;
- Exception reports;
- Internal data files.

All these files are recorded in the Oracle database (using cdb_file_reference and associated tables). Thus each file can be referenced by a unique file identifier (file_id).

The physical stores where the files are stored are specified as rows in the cdb_file_directory table. For each physical store, this table contains a unique id and its associated directory name.

See [CTSPEC] section 4.2 for more information on file management.

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4.3 Oracle Database

4.3.1 General

The appendices comprise a set of physical data model diagrams and detailed information on each table in the ISRA Oracle database. This information is produced as diagrams and reports generated from the Oracle Designer 6i toolset and is provided in:

- Appendix A - Physical data model diagrams
- Appendix B - User Roles
- Appendix C - Table, Column, Key, Index details
- Appendix D - View details

There are also subsections on ISRA's use of the Common Database tables, required Oracle initialisation parameters for an ISRA database instance and ISRA's use of Oracle sequences. A general overview of the database was given in section 2.7.

4.3.2 Assumptions

For the purposes of estimating the Oracle database size, the following assumptions have been made:

- a database block size of 8092 bytes is used;
- ISRA tables will be located in tablespaces according to their storage characteristics;
- indexes on the ISRA tables will be located in tablespaces mirroring those for the tables;
- indexes will be created for all Primary and Foreign keys.
- a scaling factor of 1.5 is applied to the table size to estimate the likely total index size for the table;
- Oracle default storage parameters apply.

During the implementation phase, further refinement in the storage area will take place and changes to tablespace definitions and storage clauses will occur and are therefore subject to change. Further indexing may also be required to meet performance targets. The data model will be maintained in Oracle Designer 6i and the reports detailing the data model given in the appendices will be reissued at the end of this phase.

Where time period denormalisation has taken place, space for a maximum of 50 time periods in a day are provided. In the normal 24 hour day case, fields representing periods 1 to 48 will be complete and periods 49 and 50 will be null. In a 25 hour day, all fields will be filled and in a 23 hour day, periods 1 to 46 will be filled and periods 47 to 50 will be null.

4.3.3 Physical Data Model Details

4.3.3.1 Physical Data Model Diagrams

The Physical Data Model Diagrams for the ISRA database are given in Appendix A.

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Note that these diagrams include the tables which are being physically implemented as flat files for the purposes of completeness. Foreign key relationships to/from these tables are shown but are not, of course, implemented as prime/foreign key constraints in the Oracle database.

4.3.3.1.1 Special Keys

Special Keys have been defined in places on the Diagrams where it is not possible to implement a true Primary-Foreign key relationship in Oracle. This is usually due to the fact that the table containing the foreign key is stored in a flat file.

If the table containing the special key is an Oracle table, then a "proper" foreign key cannot be defined since not all of its parent's prime key fields exist in the table. The referential integrity of the logical relationships will be managed by the applications (forms, data loading programs).

4.3.3.2 User Roles

The Oracle User Roles defined for the ISRA database are given in Appendix B. They are defined such that both the modules and database table access requirements are given.

4.3.3.3 Oracle Table, Column, Key and Index details

The Oracle Table, Column, Key and Index details are given in Appendix C by means of a Oracle Designer 6i report.

Note that the number of rows defined for each table is that given in section 4.8.

4.3.4 Use of common Database Tables

In addition to the idb_ tables, the ISRA database contains all the cdb_ tables defined in [CTSPEC]. These are listed in Appendix C but full details are given in [CTSPEC].

4.3.4.1 ISRA use of cdb_ref_domains / cdb_ref_values

The following domains are defined for ISRA, in addition to those given in [CTSPEC].

Note that field validation in the form of range checking is performed against the domains used by ISRA having "range use" = Y

domain_code	domain_name	User Edit
AAEA	AA / EAC Indicator	N
ACES	Actual / Estimated Indicator	N
ACTD	Activity Type Description	N
AGTY	Aggregation Type (which is a subset of MAPR)	N
ASDC	Automatic Standing Data Change Reason Codes	N
COCO	Consumption Component Indicator	N
CDAR	Current Day Audit Report Indicator	N
DAYT	Day Type Indicator	N
DAYW	Day of the Week Indicator	N
GMTT	GMT / Local time Indicator	N

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domain_code	domain_name	User Edit
MAPR	Market Participant Role Code (as per CTSPEC)	N
MEQU	Measurement Quantity	N
MONT	Month Indicator	N
MTUN	Metered / Unmetered Indicator	N
RCOT	Regression Coefficient Type	N
REPT	ISRA Report	N
RTCO	Run Type Code (as per CTSPEC)	N
RUST	SSR Run Status	N
SEAS	Season Code	N
SSCT	SSC Type	N
TPRT	Time Pattern Regime Type	N
TSWC	Tele-switch contact	N
TSCS	Tele-switch Contact Rule state	N

In addition to the above domains used for validation, the following additional domains are used for the implementation of numeric range checking on input to ISRA database tables.

domain_code	domain_name	User Edit	field checked
AFYC	Average Fraction of Yearly Consumption	Y	idb_afycs.afyc
DPPA	Daily Profile Parameter	Y	idb_daily_pfl_paramaters. Actual_noon_temperature
GCSF	GSP Group Correction Scaling Factor	Y	idb_gsp_group_cctn_sfs. Gsp_group_correction_sf
LLFC	Line Loss Factor	Y	idb_sett_pd_llfs.llf
SSAR	SSA Settlement run number	Y	idb_ssa_sett_runs. ssa_sett_run_number idb_ssa_sett_gsp_groups. ssa_sett_run_number idb_gsp_group_takes. ssa_sett_run_number idb_sett_pd_prices. Ssa_sett_run_number
CDCS	CDCS extract number	Y	idb_ssa_sett_runs. Cdcs_extract_number
DGGP	Daily GSP Group purchases	Y	idb_ssa_sett_gsp_groups. Daily_gsp_group_purchases
PGGP	Period GSP Group purchases	Y	idb_gsp_group_takes. Pd_gsp_group_purchases
GGTA	GSP Group take	Y	idb_gsp_group_takes. Gsp_group_take.

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domain_code	domain_name	User Edit	field checked
DARN	Data aggregation run number	Y	idb_sup_data_agtns. Data_agtn_run_number idf_agtd_sup_da_pd_consums. Data_agtn_run_number idf_sup_purchase_matrices. Data_agtn_run_number
HHMC	Data aggregator HH MSID count	Y	idf_agtd_sup_da_pd_consums. Da_hh_msid_count
AGSC	Aggregated supplier consumption	Y	idf_agtd_sup_da_pd_consums. Agtd_sup_consum_*nn*
AGSL	Aggregated supplier line loss	Y	idf_agtd_sup_da_pd_consums. Agtd_sup_line_loss_*nn*
GAAC	GSP Group average annual consumption	Y	ibd_gsp_group_average_eacs. Group_average_annaul_consum
REGC	Regression coefficient	Y	idb_pd_pfl_regr_coefs. Regression_coef
SPID	Settlement period ID	Y	idb_sett_pd_prices. Sett_pd_id
PLSP	Pool selling price	Y	idb_sett_pd_prices. Pool_selling_price
TXLM	Transmission loss multiplier	Y	idb_sett_pd_prices. Trans_loss_mult
TXRM	Transmission losses reconciliation multiplier	Y	idb_sett_pd_prices. Trans_losses_recon_mult
DEMC	SPM default EAC MSID count	Y	idf_sup_purchase_matrices. Spm_dflt_eac_msid_count
DUMC	SPM default unmetered MSID count	Y	idf_sup_purchase_matrices. Spm_dflt_unmtd_msid_count
TAMC	SPM total AA MSID count	Y	idf_sup_purchase_matrices. Spm_total_aa_msid_count
TAAD	SPM total annualised advance	Y	idf_sup_purchase_matrices. Spm_tot_aa
TEAC	SPM total EAC	Y	idf_sup_purchase_matrices. Spm_total_eac
TEMC	SPM total EAC MSID count	Y	idf_sup_purchase_matrices. Spm_total_eac_msid_count
TUNC	SPM total unmetered consumption	Y	idf_sup_purchase_matrices. Spm_total_unmtd_consum
TUMC	SPM total unmetered MSID count	Y	idf_sup_purchase_matrices. Spm_total_unmtd_msid_count
PSPD	Profile settlement periods	Y	idb_pfls.pfl_sett_pds
BPPC	Basic period profile coefficient	Y	idf_basic_pd_pfl_coefs.basic_pd _pfl_coef
CPPC	Period Profile Class Coefficient	Y	idf_pd_pfl_class_coefs. class_ppc_value_01

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domain_code	domain_name	User Edit	field checked
			… class_ppc_value_50
GGCC	GSP Group Correction Factor	Y	idb_ssr_run_gsp_group_pds. gsp_group_correction_factor
TPNS	Total period NPG spill	Y	idb_ssr_run_gsp_group_pds. Total_pd_npg_spill
PFCI	Profile Class Id	Y	idb_pfl_classes.pfl_class_id
PFID	Profile Id	Y	idb_pfls.pfl_id
LFCI	Line Loss Factor Class Id	Y	idb_llf_classes.llf_class_id
TSUI	Tele-switch User Id	Y	idb_sscs.teleswitch_user_id idb_tprs.teleswitch_user_id
TSGI	Tele-switch Group Id	Y	idb_sscs.teleswitch_group_id idb_tprs.teleswitch_group_id

4.3.4.2 ISRA use of cdb_system_parameter

The following rows have been identified for ISRA. This list also includes values additionally given in [CTSPEC] required by ISRA:

param_type	param_type2	description	value	maintain_ui
CFR	FRT	File receipt daemon timeout	3600	N
CFR	PFQ	Poll frequency (secs)	10	Y
CFS	ALT	File send Alert timeout (secs)	10	Y
CFS	NFS	Number of sends	3	Y
CFS	NRT	CFS Timeout	10	Y
CLG	PTM	Pipe timeout (secs)	5	Y
CSC	ALT	Scheduler Alert timeout (secs)	5	Y
CSC	CLD	Closedown Timeout	20	Y
CSC	DIE	Process shutdown time (secs)	30	N
CSC	LCK	Scheduler Lock name	CSC_<user>	N
CSC	LOG	Log Directory	../csc_log	Y
CRP	WFS	Warning File Size	2000	Y
IAR	DRP	The Data retention Period: the minimum number of months that data must be retained online. This value should be numeric. There is no maximum for this value.	>= 24 months (for archiving to be possible)	Y
IDF	DIR	Flat File top level directory	$RUNTIME/data	N
IDL	DPR	GSP daily purchases tolerance	10	Y

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param_type	param_type2	description	value	maintain_ui
IDL	PPR	GSP period purchases tolerance	1	Y
MPR	BSR	BUSTEV Report Recipient Role	F	Y
MPR	TSR	TUOS Role Code	Z	Y
MPT	BSR	BUSTEV Report Recipient Id	Agent's ID	Y
MPT	CDC	CDCA Participant Id	Agent's ID	Y
MPT	SSA	SSA Participant Id	Agent's ID	N
MPT	TSR	TUOS Participant Id	Agent's ID	Y
SYS	DBV	Oracle database version number	Instance specific	N
SYS	DUS	No. Suppliers batched to DUoS	20	Y
SYS	ISV	ISRA software version number	Instance specific	N
SYS	MDD	Multiple Distrib Start Date	01-AUG-2003	N
SYS	MKR	System Market Role	G	N
SYS	NTD	Date that the New Electricity Trading Arrangements become effective	expect to be '31-OCT-2000'	N
SYS	ORG	System Organisation Name	ISR Organisation Name	N
SYS	OSV	Operating system version number	Instance specific	Y
SYS	PID	System Participant ID	CAPG	N
SYS	SCO	ISRA database object schema owner.	Username	N
SYS	SBV	Supplier BM Unit Report SSR Run BM Unit Id Value	To be supplied by the Pool	N
SYS	SBC	Supplier BM Unit Report Default BM Unit Reason Code Value (for exclusion of energy from the SSR Run)	To be supplied by the Pool	N
SYS	BSD	BETTA Start Date	01-Jan-2005	N
SYS	BRD	BETTA Coefficients End Date	01-JUN-2006	N

4.3.5 Oracle Parameters and Optimisation

The parameters listed below are identified as necessary for ISRA to work correctly. Other parameters can be set to tune the Oracle instance or run it in a certain way.

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Parameter	Value	Comment
compatible	11.2.0	Development and testing Oracle release number for ISRA.
log_archive_dest	<directory>	must be set to a directory spec - actual value unimportant
log_archive_start	true	enables archive logging
log_checkpoint_interval	larger than redo log size	ensures that checkpoints do not happen between log switches
log_checkpoint_timeout	0	ensures that checkpoints do not happen between log switches
processes	50 or above	number of concurrent processes that can run against database
row_locking	always	enables row-level locking

Furthermore, the Oracle database instance must be running with Oracle's own auditing facility turned on such that unsuccessful login attempts are recorded.

4.4 Flat File Database

The ISRA logical model contains several entities where implementation as an Oracle database table is inappropriate. The entities which are being handled in this way are:

	Logical Entity	Identifier
1	Aggregated Supplier DA Period Consumption	idf_agtd_sup_da_pd_consums
2	Aggregated BM Unit Period Consumption	idf_agtd_bm_pd_consums
3	Aggregated Supplier Period Consumption	idf_agtd_sup_pd_consums
4	Period Profile Class Coefficient	idf_pd_pfl_class_coefs
5	Basic Period Profile Coefficient	idf_basic_pd_pfl_coefs
6	Combined Period Profile Coefficient	idf_combined_pd_pfl_coefs
7	Period Time Pattern State	idf_pd_time_pattern_states
8	Supplier Purchase Matrix	idf_sup_purchase_matrices
9	Profiled SPM	idf_pfld_spms
10	Aggregated Supplier DA Period Consumption Line Loss	idf_agtd_sup_da_pd_consums_llf
11	Period Time Pattern State	idf_tpr_time_patterns
12	Line Loss Standard Settlement Configuration Mapping Data	idf_llf_ssc_mapn
13	Aggregated Supplier DA Period disconnection Volume	idf_agtd_sup_da_pd_discon_volume
14	Aggregated Supplier Period disconnection volume	idf_agtd_sup_pd_discon_volume
15	Profiled DPM	idf_pfld_dpms
16	Disconnection Purchase Matrix	idf_discon_purchase_matrices
17	Aggregated BM Unit Period disconnection volume	idf_agtd_bm_pd_discon_volume
18	Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes	idf_discon_msi_hh_dd_volume

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Routines provided by CSL together with two additional routines provided by ISRA will be used to create and read these entities.

The following sections define the structure of the files for each of the entities and also the naming convention for where the files will be stored in the file system. A description of the two additional routines to be supplied by ISRA to support access to these entities are also detailed.

4.4.1 idf_agtd_sup_da_pd_consums

This file has three versions (version one is pre NETA and is no longer supported). Version two is for Settlement Run Dates s before the implementation of CP892. Version 3 is for Settlement Run Dates following the implementation of CP892.

Even though L0022002 holds data from files loaded into the system before the implementation of CP892, there is nothing to stop an L0022002 being used for a Settlement Run Date after the implementation of CP892.

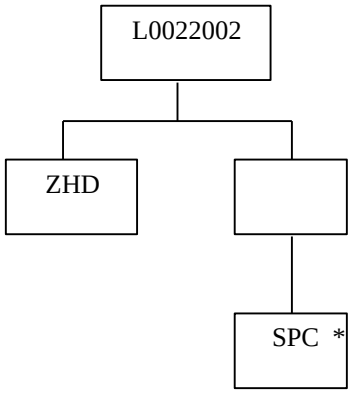
Relative Storage Path:

```
.../<Sett Date>/<Sett Code>/<GSP Id>/h<da_id><agg_run>.d
```

File Type: L0022002

ZHD – File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0022002
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of SVA Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of SVA Agent originating file
7	Creation Time	date/time	Time of file generation
SPC – Supplier / BM Unit / Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPC
2	Supplier Id	text(4)	
3	BM Unit Id	text(11)	This field will be NULL if the incoming data file was an Aggregated Half-Hour Data file (O).
4	Consumption Comp Class Id	integer(2)	
5	Data Aggregator HH MSID Count	num(10)	
6	Number of Periods	integer(2)	= 0 to 50
7	Aggregated BM Unit Energy/Line Losses	decimal (14,4)	
...			
56	Aggregated BM Unit Energy/Line Losses	decimal (14,4)	

Repeating structure of file:



File Type: L0022003

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0022003
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of SVA Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of SVA Agent originating file
7	Creation Time	date/time	Time of file generation
SPC - Supplier / BM Unit / Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPC
2	Supplier Id	text(4)	
3	BM Unit Id	text(11)	This field will be NULL if the incoming data file was an Aggregated Half-Hour Data file (O).
4	Consumption Comp Class Id	integer(2)	
6	Number of Periods	Integer(2)	= 0 to 50
MSC – Data Aggregator HH MSID Count			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	Text(3)	= MSC
2	Data Aggregator HH MSID Count	Num(10)	
ABM – Aggregated BM Unit Energy/Line Losses			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	Text(3)	= ABM
2	Aggregated BM Unit Energy/Line Losses	Decimal (14,4)	

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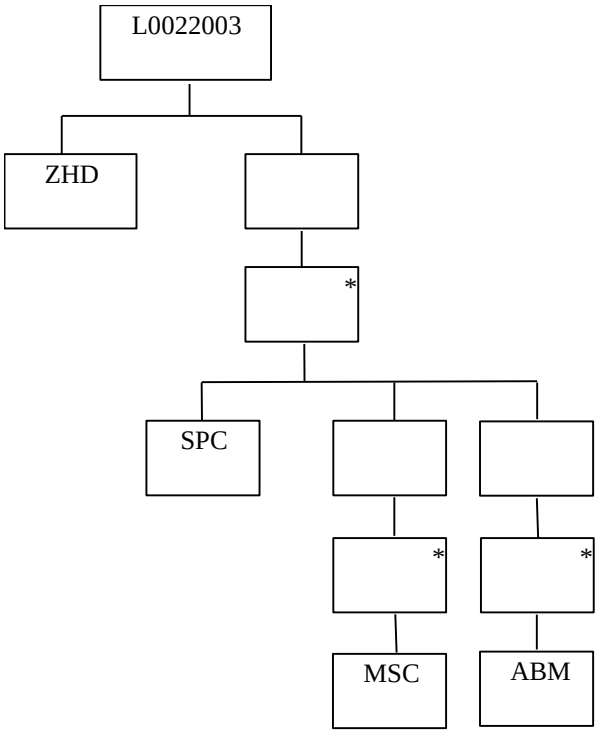
Repeating structure of file:



4.4.2 idf_agtd_sup_pd_consums

This file has two versions. Version one is for Settlement Run Dates before the implementation of CP1209. Version two is for Settlement Run Dates following the implementation of CP1209.

After the implementation of CP1209, a L0023001 could be required to re-create SSR reports for a Settlement Run performed before the implementation. Where this is the case the GSP Group Consumption Totals Report (D0276002) will contain null values in the MSID Count Totals records.

Relative Storage Path:

`.../<Sett Date>/<Sett Code>/<GSPId>/<SSR_Run_No>/aspc.d`

File Type: L0023001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0023001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent originating file

7	Creation Time	date/time	Time of file generation
SPC - Supplier / Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPC
2	Supplier Id	text(4)	
3	Consumption Comp Class ID	integer(2)	
4	Number of Periods	integer(2)	= 0 to 50
CON - Consumption Data			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CON
2	Aggregated Supplier Consumption/LL	decimal (14,4)	
3	Corrected Supplier Consumption/LL	decimal (14,4)	

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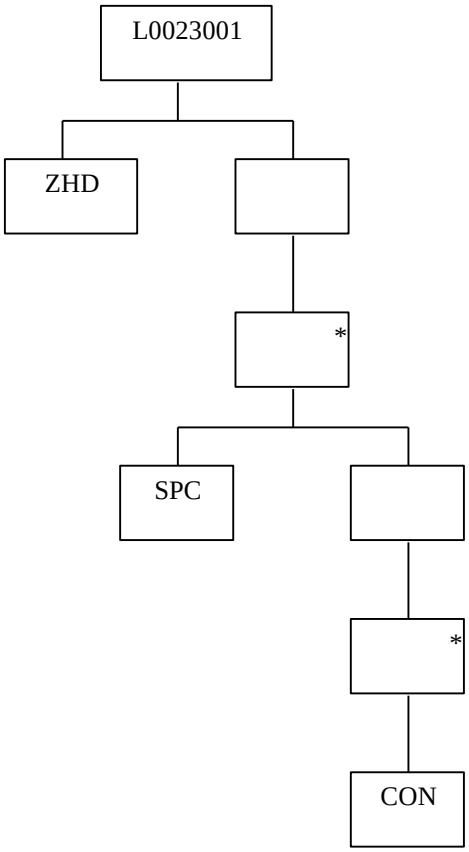
Repeating structure of file:

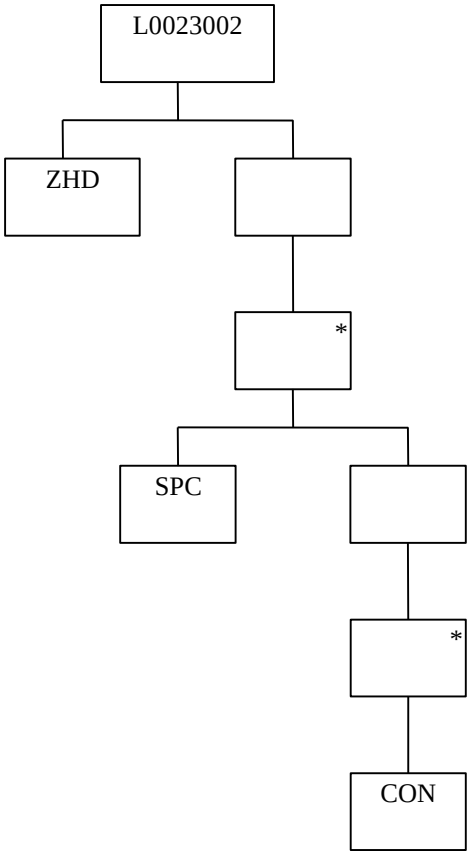


File Type: L0023002

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0023002
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent originating file
7	Creation Time	date/time	Time of file generation
SPC - Supplier / Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPC
2	Supplier Id	text(4)	
3	Consumption Comp Class ID	integer(2)	
4	Number of Periods	integer(2)	= 0 to 50
CON - Consumption Data			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CON

2	Aggregated Supplier Consumption/LL	decimal (14,4)	
3	Corrected Supplier Consumption/LL	decimal (14,4)	
4	Aggregated Supplier MSID Count	integer (8)	

Repeating structure of file:



4.4.3 idf_pfld_spms

Relative Storage Path:

`.../<Sett Date>/<Sett Code>/<GSP Id/<SSR_Run_No>/pspm.d`

File Type: L0024001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0024001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent originating file
7	Creation Time	date/time	Time of file generation

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SUP - Supplier Key			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	
STC - Configuration			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= STC
2	Distributor Id	text(4)	
3	Line Loss Factor Class	integer(3)	
4	Profile Class Id	integer(2)	
5	Settlement Configuration Id	text(4)	
6	Time Pattern Regime Id	text(5)	
7	Number of Periods	integer(2)	= 0 to 50
PPM - Profiled Supplier Purchase Matrix			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PPM
2	Profiled SPM Total AA	decimal (14,4)	
3	Profiled SPM Total EAC	decimal (14,4)	
4	Profiled SPM Total Unmetered Consumption	decimal (14,4)	

Note that the MSID counts from the logical entity Profiled SPM are excluded from the physical flat file. They are calculated and held in memory during the SSR Run, but there is no requirement to store them in the flat file.

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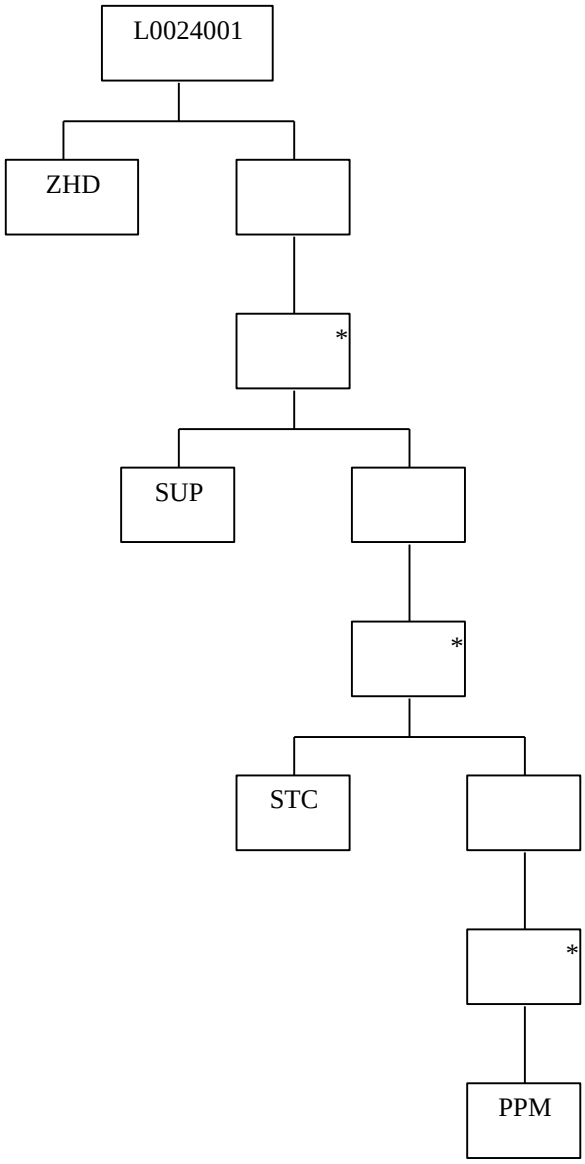
Repeating structure of file:



4.4.4 idf_sup_purchase_matrices

Relative Storage Path:

`.../<Sett Date>/<Sett Code>/<GSP Id>/n<da_id><agg_run>.d`

File Type: L0025001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0025001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent originating file

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7	Creation Time	date/time	Time of file generation
SUP - Supplier / Distributor Key			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	
CON - Consumption Data			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CON
2	Distributor Id	text(4)	
3	Line Loss Factor Class	integer(3)	
4	Profile Class Id	integer(2)	
5	Settlement Configuration Id	text(4)	
6	Time Pattern Regime Id	text(5)	
7	Total EAC	decimal (14,4)	
8	Total AA	decimal (14,4)	
9	Total Unmetered Consumption	decimal (14,4)	
10	Total EAC MSID Count	integer(8)	
11	Total AA MSID Count	integer(8)	
12	Total Unmetered MSID Count	integer(8)	
13	Default EAC MSID Count	integer(8)	
14	Default Unmetered MSID Count	integer(8)	

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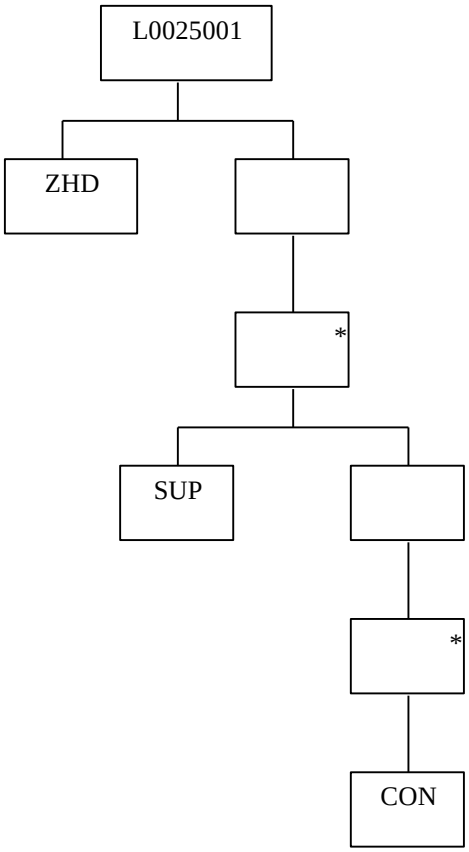
Repeating structure of file:



4.4.5 idf_pd_pfl_class_coefs

Relative Storage Path:

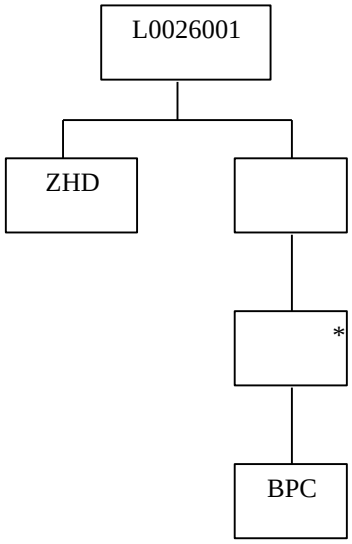
`.../<Sett Date>/profiles/ppcc<Gsp_Id>.d`

File Type: L0026001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0026001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= NULL
6	To Participant Id	text(4)	= NULL
7	Creation Time	date/time	Time of file generation
BPC - Basic Period Profile Coefficient			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= BPC
2	Profile Class Id	integer(2)	
3	Settlement Configuration	text(4)	
4	Time Pattern Regime Id	text(5)	

5	Daily Profile Coefficient	decimal (14,13)	
6	Number of Periods	integer(2)	= 0 to 50
7	Profile Coefficient	decimal (13,13)	
…			
56	Profile Coefficient	decimal (13,13)	

Repeating structure of file:



4.4.6 idf_pd_time_pattern_states

Relative Storage Path:

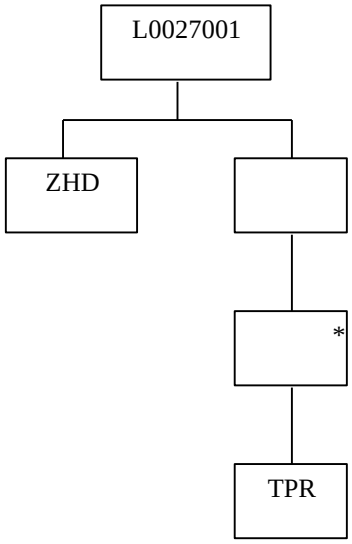
`.../<Sett Date>/tpr.d`

File Type: L0027001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0027001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= NULL
6	To Participant Id	text(4)	= NULL
7	Creation Time	date/time	Time of file generation
TR2 - Time Pattern State			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TR2
2	Time Pattern Regime Id	text(5)	
3	Standard Settlement Configuration Id	text(4)	

4	Number of Periods	integer(2)	= 0 to 50
5	Period On State Indicator	text(1)	= '0' or '1'
…			
54	Period On State Indicator	text(1)	= '0' or '1'

Repeating structure of file:



4.4.7 idf_basic_pd_pfl_coefs

Relative Storage Path:

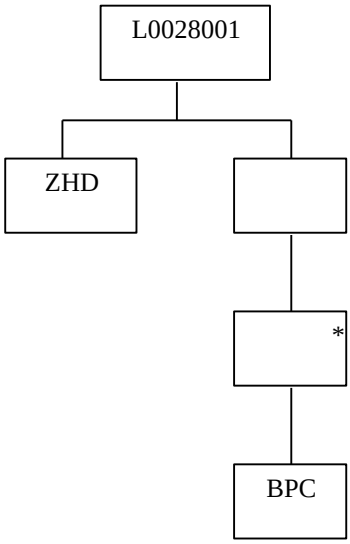
`.../<Sett Date>/profiles/bppc<Gsp_Id>.d`

File Type: L0028001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0028001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= NULL
6	To Participant Id	text(4)	= NULL
7	Creation Time	date/time	Time of file generation
BPC - Basic Period Profile Coefficient			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= BPC
2	Profile Class Id	integer(2)	
3	Profile Id	integer(2)	
4	Number of Periods	integer(2)	= 0 to 50
5	Profile Coefficient 0	decimal	

		(13,13)	
54	Profile Coefficient 49	decimal (13,13)	

Repeating structure of file:



4.4.8 idf_combined_pd_pfl_coefs

Relative Storage Path:

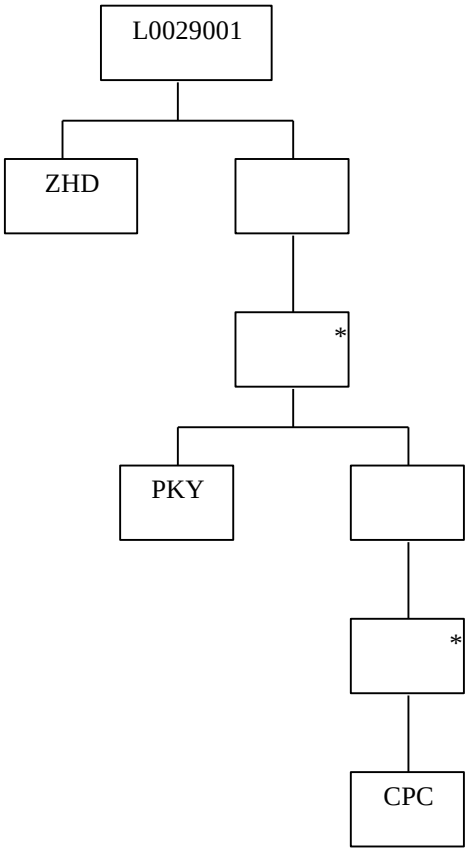
```
.../<Sett Date>/profiles/cppc<Gsp_Id>.d
```

File Type: L0029001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0029001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= NULL
6	To Participant Id	text(4)	= NULL
7	Creation Time	date/time	Time of file generation
PKY - Primary Key			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= PKY
2	Profile Class Id	integer(2)	
3	SSC Id	text(4)	
4	Number of Periods	integer(2)	= 0 to 50
CPC - Combined Period Profile Coefficient			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CPC
2	Normal Register	decimal	

	Coefficient	(13,13)	
3	Low Register Coefficient	decimal (13,13)	

Repeating structure of file:



4.4.9 idf_agtd_bm_pd_consums

Relative Storage Path:

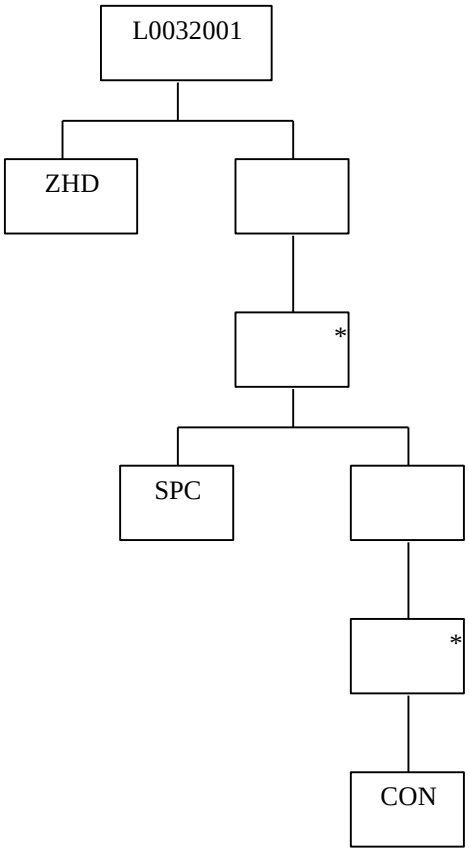
`.../<Sett Date>/<Sett Code>/<GSPId>/<SSR_Run_No>/abpc.d`

File Type: L0032001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0032001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of SVA Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of SVA Agent originating file
7	Creation Time	date/time	Time of file generation
SPC - Supplier / BM Unit Id / Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPC

2	Supplier Id	text(4)	
3	BM Unit Id	text(11)	
4	Consumption Comp Class ID	integer(2)	
5	Number of Periods	integer(2)	= 0 to 50
CON - Consumption Data			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CON
2	Aggregated BM Unit Energy/Line Losses	decimal (14,4)	
3	Corrected BM Unit Energy/Line Losses	decimal (14,4)	

Repeating structure of file:



4.4.10 idf_agtd_sup_da_pd_consums_llf

Relative Storage Path:

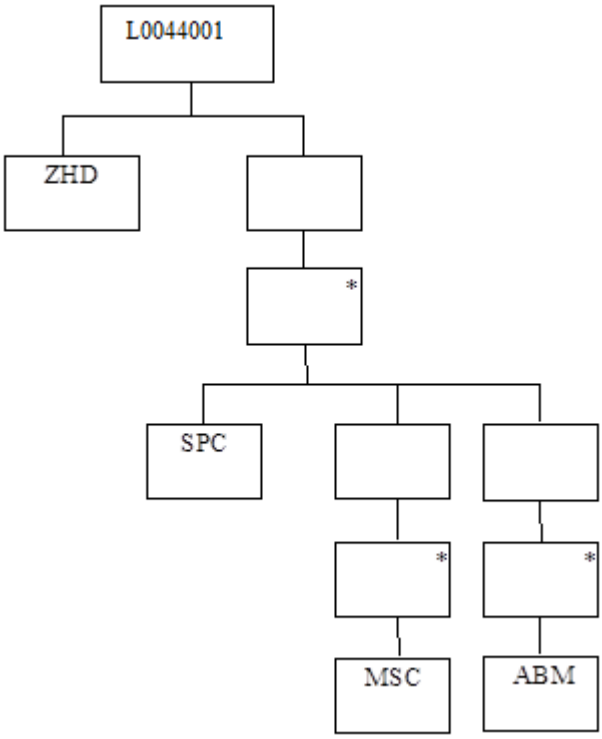
`.../<Sett_Date>/<Sett_Code>/<GSP_Id>/g<da_id><agg_run>.d`

File Type: L0044001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0044001

3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of SVA Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of SVA Agent originating file
7	Creation Time	date/time	Time of file generation
SPC - Supplier / BM Unit / Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPC
2	Supplier Id	text(4)	
3	BM Unit Id	text(11)	This field will be NULL if the incoming data file was an Aggregated Half-Hour Data file (O).
4	Consumption Comp Class Id	integer(2)	
5	Distributor Id	Text(4)	
6	Line Loss Factor Class Id	Integer(3)	
7	Number of Periods	Integer(2)	= 0 to 50
MSC – Data Aggregator HH MSID Count			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	Text(3)	= MSC
2	Data Aggregator HH MSID Count	Num(10)	
ABM – Aggregated BM Unit Energy/Line Losses			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	Text(3)	= ABM
2	Aggregated BM Unit Energy/Line Losses	Decimal (14,4)	

Repeating structure of file:



4.4.11 idf_tpr_time_patterns

Relative Storage Path:

`.../<Sett Date>/tpr2.d`

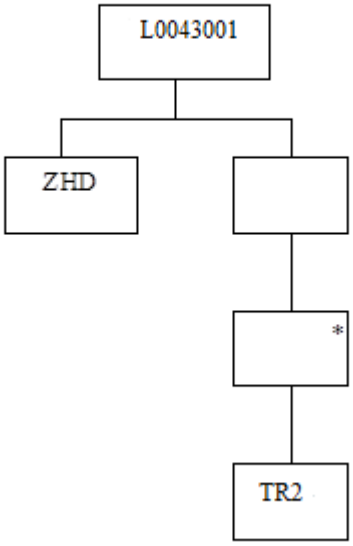
File Type: L0043001

This flat file witll store the time pattern states for the dummy SSCs.

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0043001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= NULL
6	To Participant Id	text(4)	= NULL
7	Creation Time	date/time	Time of file generation
TR2 - Time Pattern State			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TR2
2	Time Pattern Regime Id	text(5)	
3	Standard Settlement Configuration Id	text(4)	
4	Number of Periods	integer(2)	= 0 to 50
5	Period On State Indicator	text(1)	= '0' or '1'

...			
54	Period On State Indicator	text(1)	= '0' or '1'

Repeating structure of file:



4.4.12 idf_llf_ssc_mapn

Relative Storage Path:

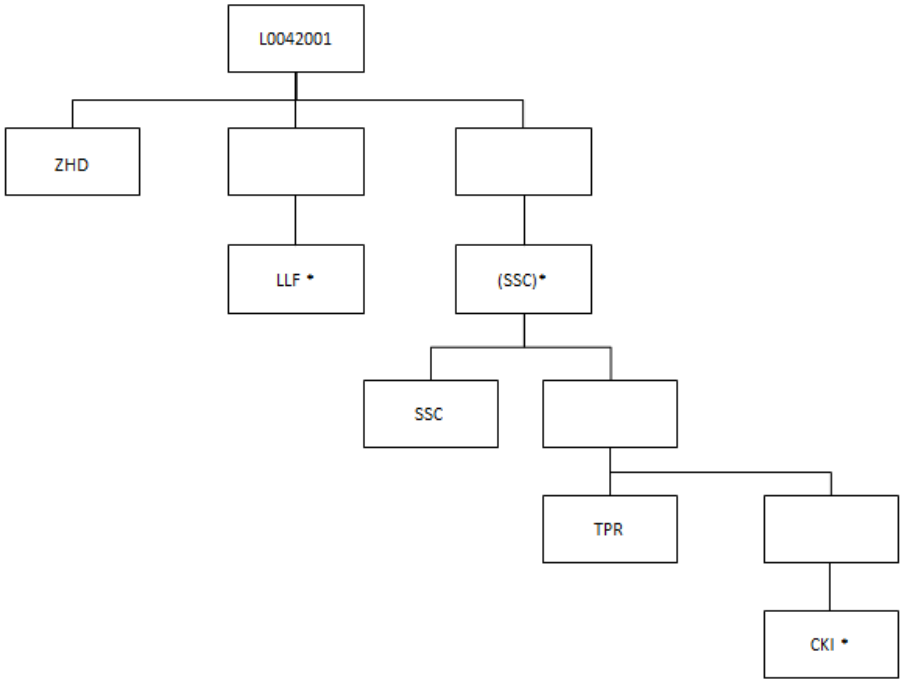
`.../data/lsdm/`

File Type: L0042001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0042001
3	From Role Code	text(1)	= R
4	From Participant Id	text(4)	Distributor Id
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of SVA Agent originating file
7	Creation Time	date/time	Time of file generation
LLF - LLF/SSC Mapping			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= LLF
2	Distributor Id	text(5)	
3	Line Loss Factor Class Id	num(3)	
4	Standard Settlement Configuration Id	text(5)	

5	Effective From Settlement Date {LLFSSC}	date	
SSC - Standard Settlement Configuration			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SSC
2	Standard Settlement Configuration Id	text(5)	
3	Standard Settlement Configuration Desc	text(50)	
4	Effective from Settlement Date {SSC}	date	
5	Effective to Settlement Date {SSC}	date	
6	Standard Settlement Configuration Type	text(1)	
TPR - Measurement Requirement			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= TPR
2	Time Pattern Regime Id	text(5)	
CKI - Clock Intervals			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CKI
2	Day of the Week Id	integer(1)	
3	Start Day	integer(2)	
4	Start Month	integer(2)	
5	End Day	integer(2)	
6	End Month	integer(2)	
7	Start Time	integer(6)	
8	End Time	Integer(6)	

Repeating structure of File



4.4.13 idf_agtd_sup_da_pd_discon_volume

Relative Storage Path:

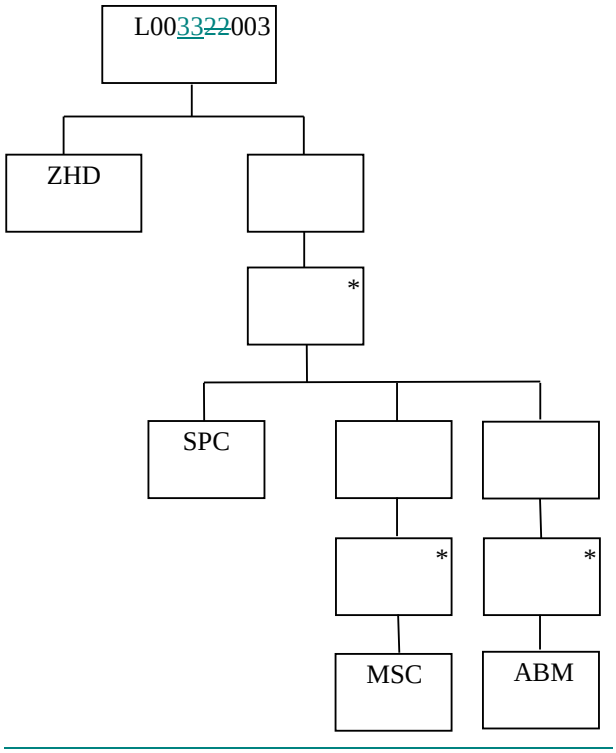
.../<Sett Date>/<Sett Code>/<GSP Id>/a~~dh~~<da_id><agg_run>.d

File Type: L0033001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0033001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of SVA Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of SVA Agent originating file
7	Creation Time	date/time	Time of file generation
SPC - Supplier / BM Unit / Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPC
2	Demand Control Event Id	text(5)	
3	Supplier Id	text(4)	
4	BM Unit Id	text(11)	This field will be NULL if the incoming data file was an Aggregated Half-Hour Data file (O).
5	Consumption Comp Class Id	integer(2)	
6	Number of Periods	Integer(2)	= 0 to 50

MSC – Data Aggregator HH MSID Count			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	Text(3)	= MSC
2	Data Aggregator HH MSID Count	Num(10)	
ABM – Aggregated BM Unit Energy/Line Losses			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	Text(3)	= ABM
2	Aggregated BM Unit Energy/Line Losses	Decimal (14,4)	

Repeating structure of file:



4.4.14 idf_agtd_sup_pd_discon_volume

Relative Storage Path:

`.../<Sett Date>/<Sett Code>/<GSPId>/<SSR_Run_No>/aspdv.d`

File Type: L0036001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0036001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file

5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent originating file
7	Creation Time	date/time	Time of file generation
SPC - Supplier / Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPC
2	Supplier Id	text(4)	
3	Consumption Comp Class ID	integer(2)	
4	Number of Periods	integer(2)	= 0 to 50
CON - Consumption Data			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CON
2	Aggregated Supplier Consumption/LL	decimal (14,4)	
3	Corrected Supplier Consumption/LL	decimal (14,4)	
4	Aggregated Supplier MSID Count	integer (8)	

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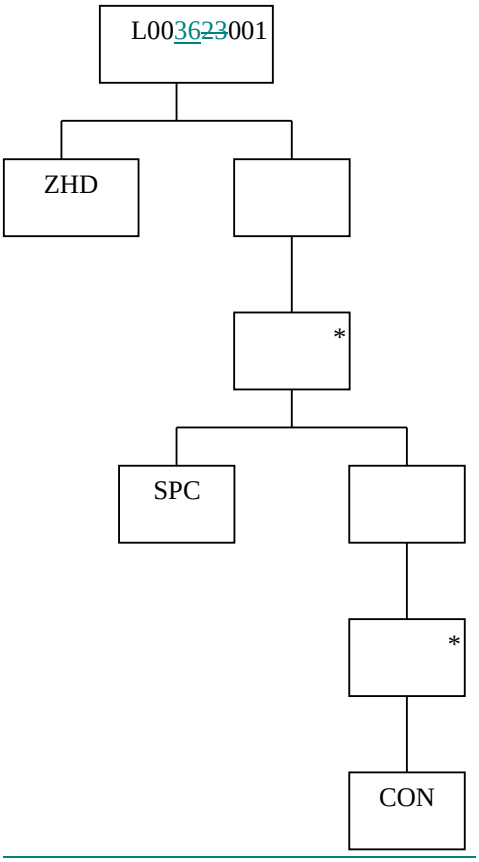
Repeating structure of file:



4.4.15 idf_pfld_dpms

Relative Storage Path:

`.../<Sett_Date>/<Sett_Code>/<GSP_Id/<SSR_Run_No>/pdpm.d`

File Type: L0035001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0035001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent originating file
7	Creation Time	date/time	Time of file generation
SUP - Supplier Key			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	
STC - Configuration			
Field	**Field Name**	**Type**	**Comments**

1	Record Type	text(3)	= STC
2	Distributor Id	text(4)	
3	Line Loss Factor Class	integer(3)	
4	Profile Class Id	integer(2)	
5	Settlement Configuration Id	text(4)	
6	Time Pattern Regime Id	text(5)	
7	Number of Periods	integer(2)	= 0 to 50

PPM - Profiled Supplier Purchase Matrix

Field	Field Name	Type	Comments
1	Record Type	text(3)	= PPM
2	Profiled SPM Total AA	decimal (14,4)	
3	Profiled SPM Total EAC	decimal (14,4)	
4	Profiled SPM Total Unmetered Consumption	decimal (14,4)	

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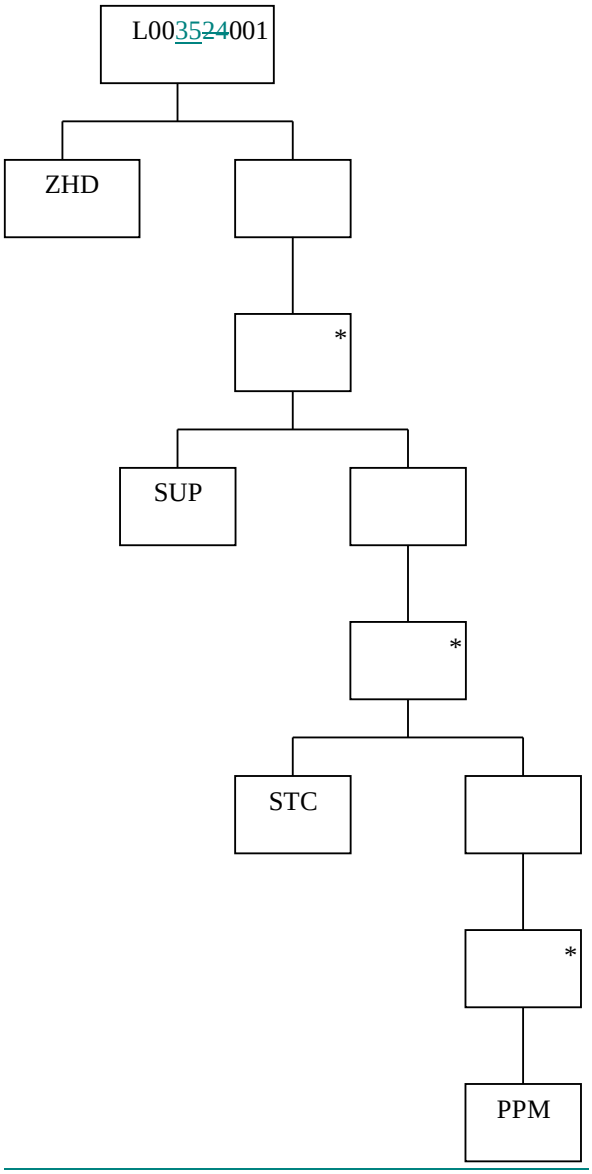
Repeating structure of file:



4.4.16 idf_discon_purchase_matrices

Relative Storage Path:

`.../<Sett Date>/<Sett Code>/<GSP Id>/bdn<da_id><agg_run>.d`

File Type: L0034001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0034001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of ISR Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of ISR Agent originating file

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7	Creation Time	date/time	Time of file generation
DCE - Demand Control Event Details			
Field	**Field Name**	**Type**	**Comments**
1	Demand Control Event ID	Text(5)	= DCE
2	Start Date and Time	Date/time	
3	End Date and Time	Date/time	
SUP - Supplier / Distributor Key			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SUP
2	Supplier Id	text(4)	
DCV - Disconnection Purchase Matrix Details			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= DCV
2	Distributor Id	text(4)	
3	Line Loss Factor Class	integer(3)	
4	Profile Class Id	integer(2)	
5	Settlement Configuration Id	text(4)	
6	Time Pattern Regime Id	text(5)	
7	Total EAC	decimal (14,4)	
8	Total AA	decimal (14,4)	
9	Total Unmetered Consumption	decimal (14,4)	
10	Total EAC MSID Count	integer(8)	
11	Total AA MSID Count	integer(8)	
12	Total Unmetered MSID Count	integer(8)	
13	Default EAC MSID Count	integer(8)	
14	Default Unmetered MSID Count	integer(8)	

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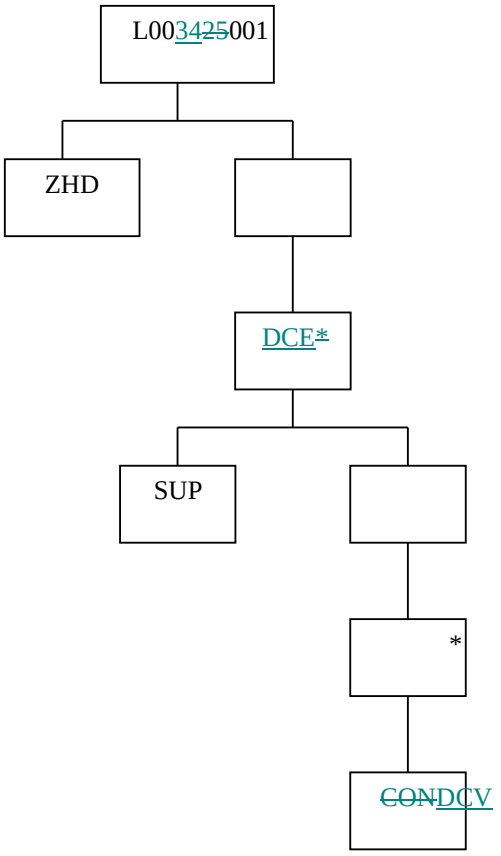
Repeating structure of file:



4.4.17 idf_agtd_bm_pd_discon_volume

Relative Storage Path:

`.../<Sett_Date>/<Sett_Code>/<GSPId>/<SSR_Run_No>/abpdv.d`

File Type: L0037001

ZHD - File Header			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= ZHD
2	File Type	text(8)	= L0037001
3	From Role Code	text(1)	= G
4	From Participant Id	text(4)	Id of SVA Agent originating file
5	To Role Code	text(1)	= G
6	To Participant Id	text(4)	Id of SVA Agent originating file
7	Creation Time	date/time	Time of file generation
SPC - Supplier / BM Unit Id / Consumption Component Class			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= SPC
2	Supplier Id	text(4)	
3	BM Unit Id	text(11)	
4	Consumption Comp Class ID	integer(2)	
5	Number of Periods	integer(2)	= 0 to 50

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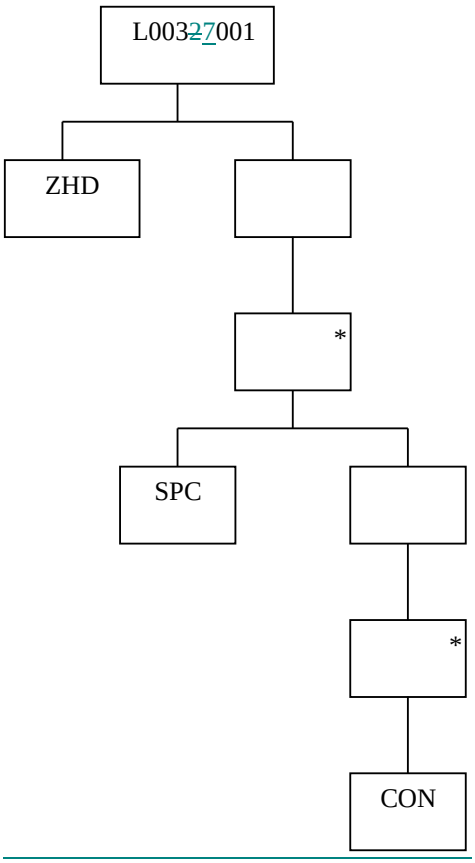
CON - Consumption Data			
Field	**Field Name**	**Type**	**Comments**
1	Record Type	text(3)	= CON
2	Aggregated BM Unit Energy/Line Losses	decimal (14,4)	
3	Corrected BM Unit Energy/Line Losses	decimal (14,4)	

Repeating structure of file:



4.4.104.4.18 Flat File Database Supporting Routines

The following routines will be developed to enhance CSL so that it can provide the necessary support for allowing access to the logical entities which are to be stored in flat files.

4.4.10.14.4.18.1 Open File

```
Procedure Name:     ISL_open_file
Arguments:          File Type (IN)
                    Key Field (IN)
                    File Id (OUT)
                    File Context (OUT)
Return:             Error Status
                      OK
```

```
                    File not opened
                    File not online
```

Opens a file for read. The root directory (<ROOT>) of the full path is derived from the Settlement Date of the file as follows;

> If there is a single record in idb_flat_file_roots whose effective date range includes <Sett Date> then the <ROOT> is taken from idb_flat_file_roots.path for that record. Otherwise, <ROOT> is taken from the system parameter 'Flat File Toplevel Directory'.

The remainder of the location of the file (the Relative Storage Path as defined in sections 4.4.1 to 0) is specific to the files' type and is derived from the values contained in the key field. The key field is a composite structure containing the following information:

Settlement Date

Settlement Code

GSP Id

Data Aggregator Id

Aggregation Run Number

SSR Run Number

Not all components of the composite key will be required for each file type.

~~4.4.10.2~~4.4.18.2Create File

```
Procedure Name:     ISL_create_file
Arguments:          File Type (IN)
                    Key Field (IN)
                    File Id (OUT)
                    File Context (OUT)
Return:             Error Status
                      OK
                      failed to create file
                      failed to create directory
                      failed to insert file reference table
                      context not allocated
```

Creates a file of the specified type, deriving it's name and location using the technique discussed in section 4.4.10.1, and opens it for write access. CSL routines are used to update the database and maintain the file location and file reference tables. The key field parameter is a composite structure as described for ISL_open_file.

4.5 Audit Logs

The audit process will be common across the NHHDA and ISRA systems. On-line logging is handled through the common subsystem Update Audit Log (CLG). No batch logging is performed.

Only the following ISRA tables will be audited to the on-line audit log. No other tables are audited.

Table name	Alias
CDB_REF_VALUES	CRV
CDB_SYSTEM_PARAMETER	CSP
IDB_AFYCS	IAF
IDB_BM_UNIT_IN_GSP_GROUPS	IBU
IDB_CLOCK_INTERVALS	ICI
IDB_CONSUM_COMP_CLASSES	ICC
IDB_DA_IN_GSP_GROUPS	IDG
IDB_DAILY_PFL_PARAMETERS	IDP
IDB_GSP_GROUP_CCTN_SFS	IGC
IDB_GSP_GROUPS	IGG
IDB_GSP_GROUP_AVERAGE_EACS	IGE
IDB_NHH_BM_UNIT_ALLOCATION	INA
IDB_LLF_CLASSES	ILC
IDB_MEASUREMENT_REQUIREMENTS	IMR
IDB_MKT_PPT_ROLE_IN_GSP_GROUPS	IMG
IDB_MKT_PPT_ROLES	IMP
IDB_MKT_PPTS	IMK
IDB_PFL_CLASSES	IPC
IDB_PFL_SETS	IPS
IDB_PFLS	IPF
IDB_SETTLEMENT_DAYS	ISD
IDB_SETTLEMENTS	ISE
IDB_SSCS	ISC
IDB_SSR_RUNS	ISR
IDB_TELESWITCH_INTERVALS	ITI
IDB_TSW_CONTACT_INTERVALS	ITC
IDB_TELESWITCH_CONTACT_RULES	ITR
IDB_TPRS	ITP
IDB_USER_ROLES (View)	IUR
IDB_VMR_PFL_CLASSES	IVP
IDB_VSCPCS	IVS
IDB_DEMAND_CONTROL_EVENT	IDE
IDB_DEMAND_CONTROL_INSTRUCTION	IDI

4.5.1 Audit method

In order to carry out the required auditing, each of the tables listed above will be built with a set of triggers which fire whenever a record is inserted/ updated/deleted to/in/from the table. The triggers will call a table-specific stored database procedure

which will write data to the Common Database tables cbd_audit_*n* and cdn_audit_fields_*n*. The three-letter alias for the changing table (see table above), username or file id of the actor causing the change, the change type (insert/update/delete), the time of the change and for file updates, the record number in the file causing the change will be written to the cbd_audit_*n* table.

The values written to the cdb_audit_fields_*n* tables will be different depending on the action being performed:

- insert/update - an "after image" for all the fields will be written;
- delete - only the key-value fields will be written.

4.6 Logical Deletion

For some of the ISRA tables, records may occasionally need to be deleted if their presence is no longer required for correct function. In these instances, the user performs a *logical delete* on the record. Physical deletion is not possible for two main reasons:

1. reports or functions may need to be rerun against this data at some point in the future and so some record of the values needs to be held;
2. since there are referential integrity constraints imposed by the database, this may not be possible if the record's prime key is used as a foreign key in a child table.

Logical deletion of records means that the record is simply flagged as being inactive and will not be usable by any function from that point in time onwards.

The following tables will allow logical deletes to be performed on their records:

Table name
idb_pfls
idb_pfl_classes
idb_mkt_ppt_roles
idb_sscs
idb_tprs
idb_llf_classes
idb_ssc_tpr_data

4.7 Archive

ISRA data relating to settlement days for which Final Reconciliation has been run, and has been retained on the system for more than a certain number of months, is archived and deleted from the system. This number of months is recorded in the Data Retention Period (DRP) system parameter (this must be 24 months or more).

ISRA data that cannot be logically linked to a specific Settlement Date and that needs to be archived is removed using the criteria of received time (in the case of data files) or schedule time (in the case of internal database records of activity). The received and schedule times of the data must be more than the required number of months in the past, as indicated by the DRP. This technique ensures that any data removed in this manner will be sufficiently old to not be needed again.

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The copying of data to tape is achieved by the daily backup of data. The ability to delete data from the system is provided by the Archive/Restore subsystem. This subsystem is detailed in a later section.

Archive data can be restored to a database separate from the production database. The restoring of database data is achieved by retrieving data from the archive tape. File data can then be selectively restored on a Settlement Date basis. The ability to restore Settlement Date related file data is provided by the Archive/Restore subsystem.

4.8 Database Sizing

The sizing of the ISRA database is split into two parts; the Oracle database and the flat file database. A series of tables containing the details of sizing is given in the next section.

The figures for estimated number of rows given for each table below are derived from the Likely Occurrences figures given in section 6.5 of [ILDATA] for the corresponding entities via the entity-table mapping, except where stated. The definition and values for the labels in the derivations column are taken from sections 6.2, 6.3 and 6.4 of [ILDATA].

4.8.1 Database sizing summary

An overall summary of the database size is given in the following table:

Element	Size (Gbytes)
Oracle Database total	43
Flat File Database total	2404
Overall Total	2447

This is made up of 2 elements, standing data and data increasing on a daily basis broken down as follows:

Element	Standing Data (Bytes)	Daily Growth (Bytes)
Oracle Database	91,573,610	58,952,678
Flat File Database	0	3,288,673,341

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4.8.2 Database sizing estimate

The following sizing estimates are divided into sections roughly in line with the entity populations given in the logical data model.

The values in this section are based on five runs per day (SPRSD = 5). After implementation of P253, there will be six runs per day (SRPSD = 6). Number of rows for tables which reference SRPSD will also increase accordingly.

The labels and values for them used in the #rows and Derivation columns are the same as those given in section 6 of [ILDATA] with the addition of the following:

4.8.2.1 Additional Base numbers for Physical Design

Description	Value	Label	Per	Derivation
Reports per SSR Run	274	REP_SSR	SETLMNT	7 per supplier, + 1 per supplier & distributor + 1 for PFA/SAA + 1 to NGET[P192]
Daily Other Reports	167	REP_OTH	SD	1 per Data Collector + 3 per Data Collector and Supplier
Flat Files	565	FF	SD	21 idf_pd_time_pattern_state + 1 idf_llf_ssc_mapn + (1 idf_pd_pfl_class_coef + 1 idf_basic_pd_pfl_coef + 1 idf_combined_pdPpfl_coef) per GSP Group + ((21 idf_agtd_sup_da_pd_consum per HHDA per GSP Group) + (1 idf_sup_purchase_matrices per NHHDA per GSP Group)) per settlement code + (1 idf_agtd_sup_pd_consum + 1 idf_pfld_spm + 1 idf_agtd_bm_pd_consums) per GSP Group per settlement code
Flat File Directories	20	FFD	SD	1 settlement date + 1 Period time pattern state + 1 idf_llf_ssc_mapn + 1 profile + (1 data in + (1 per SSR Run)) per settlement code
Other Data Loads	94	LOAD_OTH	Year	1 LLF file per Distributor + 12 Pool market domain data files + 4 Regression Equation Data files + 1 Sunset Data File + 12 Profile Data Files + 12 BM Unit Registration Data Files + 12 Market Domain Data Loads + 1 Settlement Calendar Data Load

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Description	Value	Label	Per	Derivation
Daily Data Loads	2014	LOAD_DAILY	SD	GSP Group Takes (= GSP * AVG_SSA_SD) + Aggregated HH Data (= SRPSD*TOTAL_DA*GSP) + Settlement Price Data (= AVG_SSA_SD) + Supplier Purchase Matrix data file (= TOTAL_DA*SRPSD)

4.8.2.2 ISRA Settlement Run Related Data

Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
IDB_GSP_GROUP_CCTN_SF_IN_SSR_RUNS	116,960	(HHCCC + NHHCCC) * SRPSD * RPD	18	2,629,001	3	Mb	3,943,501	4	Mb
IDB_PD_SUP_PURCHASES	66,140,880	PSP_GSPST * GSP * SRPSD * RPD	68	5,247,176,480	5	Gb	7,870,764,720	7	Gb
IDB_SSR_RUNS	3,655	SRPSD * RPD	37	160,741	157	Kb	241,111	235	Kb
IDB_SSR_RUN_GSP_GROUPS	47,515	GSP * SRPSD * RPD	15	908,963	888	Kb	1,363,445	1	Mb
IDB_SSR_RUN_GSP_GROUP_PDS	2,280,720	SPD * GSP * SRPSD * RPD	53	141,966,048	135	Mb	212,949,072	203	Mb
IDB_SUP_DATA_AGTNS	4,133,805	SDA_GSPST * GSP * SRPSD * RPD	48	232,296,875	222	Mb	348,445,313	332	Mb
IDB_SUP_DATA_AGTN_IN_SSR_RUNS	4,133,805	SDA_GSPST * GSP * SRPSD * RPD	37	181,797,555	173	Mb	272,696,332	260	Mb
IDB_SSR_RUN_LLF_FILES	237,575	GSP * DISPG * SRPSD * RPD	17	5,072,446	5	Mb	7,608,668	7	Mb

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4.8.2.3 Line Loss Factors

Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
IDB_SETT_PD_LLFS	228,773,760	SPLLF_DISSD * RPD * DIS	37	10,061,072,097	9	Gb	15,091,608,146	14	Gb

4.8.2.4 Profile Run Data

Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
IDB_PFL_PRODUCTION_RUNS	10,453	GSP * PRPSD * RPD	37	459,718	449	Kb	689,577	673	Kb

4.8.2.5 Other Daily Data

Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
IDB_DAILY_PFL_PARAMETERS	9,503	GSP * RPD	29	331,458	324	Kb	497,187	486	Kb
IDB_SETTLEMENTS	3,655	SRPSD * RPD	30	131,450	128	Kb	197,175	193	Kb
IDB_SETTLEMENT_DAYS	731	RPD	33	28,855	28	Kb	43,282	42	Kb
IDB_TELESWITCH_INTERVALS	701,760	TSR_SD * RPD	28	23,661,008	23	Mb	35,491,512	34	Mb
IDB_TSW_CONTACT_INTERVALS	935,680	TSW_CON_INT * RPD	30	33,651,211	32	Mb	50,476,817	48	Mb

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4.8.2.6 SSA Settlement

Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
IDB_GSP_GROUP_TAKES	912,288	SPD * GSP * AVG_SSA_SD * RPD	42	45,289,782	43	Mb	67,934,673	65	Mb
IDB_SETT_PD_PRICES	70,176	SPD * AVG_SSA_SD * RPD	38	3,154,801	3	Mb	4,732,202	5	Mb
IDB_SSA_SETT_GSP_GROUP	19,006	GSP * AVG_SSA_SD * RPD	31	705,489	689	Kb	1,058,233	1	Mb
IDB_SSA_SETT_RUNS	1,462	AVG_SSA_SD * RPD	20	36,179	35	Kb	54,268	53	Kb

4.8.2.7 Profile Sets

Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
IDB_PD_PFL_REGR_EQS	133,632	PRE_PS * SPD * RPY	32	5,124,882	5	Mb	7,687,323	7	Mb
IDB_PFL_SETS	96	PROF * RPY	17	8,092	8	Kb	12,138	12	Kb

4.8.2.7.1 Fixed Volume Standing Data

Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
IDB_AFYCS	32,400	VMRPC * RPY	44	1,680,646	2	Mb	2,520,969	2	Mb
IDB_BM_UNIT_IN_GSP_GROUPS	4,000	BMUIGG	43	202,300	198	Kb	303,450	296	Kb
IDB_CLOCK_INTERVALS	71,344	CLOCK_INT_TB	32	2,736,093	3	Mb	4,104,140	4	Mb
IDB_CONSUM_COMP_CLASSES	32	HHCCC + NHHCCC	19	8,092	8	Kb	12,138	12	Kb
IDB_DA_IN_GSP_GROUPS	767	(DAPG + HHDA_SG * HHSUP_GSP) * GSP	39	35,466	35	Kb	53,199	52	Kb
IDB_GSP_GROUPS	13	GSP	56	8,092	8	Kb	12,138	12	Kb
IDB_GSP_GROUP_AVERAGE_EACS	1,248	PRFS*GSP	31	46,325	45	Kb	69,487	68	Kb
IDB_GSP_GROUP_CORRECTION_SFS	64	GCSF_CCC_Y * (HHCCC + NHHCCC) * RPY	26	8,092	8	Kb	12,138	12	Kb

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Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
IDB_LLF_CLASSES	6,520	LLFCPD*DIS	32	250,047	244	Kb	375,070	366	Kb
IDB_MKT_PPTS	77	DC + TOTAL_DA + SUP	49	8,092	8	Kb	12,138	12	Kb
IDB_MKT_PPT_ROLES	77	TOTAL_MP	17	8,092	8	Kb	12,138	12	Kb
IDB_MKT_PPT_ROLE_IN_GSP_GROUPS	473	(SUP_GSP * GSP) + (GSPPD * DIS * DISPG) + (AVG_GSP_DC * DC)	32	18,140	18	Kb	27,210	27	Kb
IDB_MEASUREMENT_REQUIREMENTS	4,500	MR	14	80,920	79	Kb	121,380	119	Kb
IDB_NHH_BM_UNIT_ALLOCATION	7,246	NHHBMUA	44	375,863	367	Kb	563,795	551	Kb
IDB_PFLS	48	PROF	81	8,092	8	Kb	12,138	12	Kb
IDB_PFL_CLASSES	8	PC	70	8,092	8	Kb	12,138	12	Kb
IDB_SETT_TYPES	6	SRPSD	40	8,092	8	Kb	12,138	12	Kb
IDB_SSCS	1,500	SSC	66	155,600	113	Kb	173,400	169	Kb
IDB_TELESWITCH_CONTACT_RULES	3,200	TELE_TPR * CONTACTS * AVG_RULES	17	68,323	67	Kb	102,484	100	Kb
IDB_TPRS	4,560	TPR	65	344,855	337	Kb	517,283	505	Kb
IDB_VMR_PFL_CLASSES	16,200	VMRPC	19	383,305	374	Kb	574,958	561	Kb
IDB_VSCPCS	4,500	VSSCPC	27	146,831	143	Kb	220,246	215	Kb

4.8.2.8 Use of Supporting Tables

Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
IDB_PARAMS	30	Realistic estimate	204	8,092	8	Kb	12,138	12	Kb
IDB_REPT_PARAMS	500	Realistic estimate	34	20,230	20	Kb	30,345	30	Kb
IDB_FILE_TYPE_SOURCE_ROLES	500	Realistic estimate	14	32,768	32	Kb	32,768	32	Kb

4.8.2.9 Use of Common Database Tables

Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	

Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
CDB_ACTIVITY	2,607,644	((REP_SSR + 1)*SRPSD+REP_POOL+REP_OTH + LOAD_DAILY + PRPSD) * RPD + LOAD_OTH	61	185,096,983	177	Mb	277,645,474	265	Mb
CDB_ACTIVITY_PARAMETER	5,215,288	#cdb_activity * 2	44	270,526,360	258	Mb	405,789,540	387	Mb
CDB_ACTIVITY_TYPE	10	Realistic estimate	237	8,092	8	Kb	12,138	12	Kb
CDB_DATA_FILES	2,698,200	(LOAD_DAILY + FF) * RPD + (LOAD_OTH)	33	106,506,509	102	Mb	159,759,764	152	Mb
CDB_DEFAULT_DIRECTORY	50	Realistic estimate	19	8,092	8	Kb	12,138	12	Kb
CDB_DEFAULT_PARAMETER	75	#cdb_activity_type * 3	44	8,092	8	Kb	12,138	12	Kb
CDB_ERROR_MESSAGES	500	Realistic estimate	62	36,125	35	Kb	54,188	53	Kb
CDB_EXPORT_CONFIGURATION	50	Realistic estimate : 1 per outgoing file type	251	14,450	14	Kb	21,675	21	Kb
CDB_FIELD_HEADERS	3,300	#cdb_field_info * 3	103	392,700	383	Kb	589,050	575	Kb
CDB_FIELD_INFO	1,100	#cdb_record_info * 10	32	42,186	41	Kb	63,279	62	Kb
CDB_FILE_DIRECTORY	14,640	(FFD * RPD) + 20 others (realistic estimate)	225	3,821,512	4	Mb	5,732,268	5	Mb
CDB_FILE_EXPORT	1,130,857	#cdb_report_file	23	31,773,940	30	Mb	47,660,911	45	Mb
CDB_FILE_PROCESSING	10	#cdb_activity_type	21	8,092	8	Kb	12,138	12	Kb
CDB_FILE_REFERENCE	4,959,914	cdb_data_file + cdb_instruction_file + cdb_report_file + cdb_export_file	96	549,803,070	524	Mb	824,704,605	786	Mb
CDB_INSTRUCTION_FILE	0	Not used	25	8,092	8	Kb	12,138	12	Kb
CDB_QUEUE	10	#cdb_activity _type	20	8,092	8	Kb	12,138	12	Kb
CDB_RECORD_INFO	110	5 per report type	20	8,092	8	Kb	12,138	12	Kb
CDB_REF_DOMAINS	30	Realistic estimate	41	8,092	8	Kb	12,138	12	Kb
CDB_REF_VALUES	300	#cbd_ref_domain * 10	798	269,733	263	Kb	404,600	395	Kb

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Table	# rows	Derivation	rowsize	Table data	Size		Index	Size	
CDB_REPORT_FILE	1,130,857	((REP_SSR * SRPSD) + (REP_POOL) + (REP_OTH)) *RPD	17	24,144,841	23	Mb	36,217,262	35	Mb
CDB_REPORT_TYPE	22	22 known reports	43	8,092	8	Kb	12,138	12	Kb
CDB_SYSTEM_PARAMETER	50	Realistic estimate	65	8,092	8	Kb	12,138	12	Kb
		Oracle total		7,837,386,246	7	Gb	11,756,079,370	11	Gb

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4.8.2.10 Use of Flat File Tables

Flat File	Record Type	Size (Bytes)	Per	Derivation
idf_agtd_sup_da_pd_consums	ZHD	36		
	SPC	21		
	CON	33		
	File Size	1,024,026	Each	ZHD + ((HHCCC*HHSUP_GSP)* SDK + (HHCCC*HHSUP_GSP)*(CON*SPD))
		26,624,676	HH data aggregator per supplier per GSP Group	* HHDA_SG * GSP
		133,123,380	Settlement Day	*SRPSD
		97,313,190,780	Retention days	*RPD
idf_agtd_sup_pd_consums				
	ZHD	36		
	SPC	11		
	CON	44		
	File Size	1,970,180	GSP Group	ZHD+((HHCCC*HHSUP_GSP + NHHCCC*NHHSUP_GSP)*SDK + (HHCCC*HHSUP_GSP+NHHCCC*NHHSUP_GSP)*(CON*SPD))
		25,612,340	Settlement Run	*GSP
		128,061,700	Settlement Day	*SRPSD
		93,613,102,700	Retention	*RPD

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Flat File	Record Type	Size (Bytes)	Per	Derivation
			days	
idf_agtd_bm_pd_consums				
	ZHD	36		
	SPC	22		
	CON	33		
	File Size	15,812,959	GSP Group	ZHD+(((HHCCC+NHHCCC)*BMUIGG/GSP)*SPC) + ((HHCCC+NHHCCC)*BMUIGG/GSP*SPD*CON)
		205,568,468	Settlement Run	*GSP
		1,027,842,340	Settlement Day	*SRPSD
		751,352,750,540	Retention days	*RPD
idf_pfld_spms				
	ZHD	36		
	SDK	11		
	LPS	19		
	PPM	48		
	File Size	22,482,070	GSP Group	ZHD + (SDK*SUP) + ((SUP*VMRPC_DAGG*LLFC_FACTOR*SUP_FACTOR*LPS) + (SUP*VMRPC_DAGG*LLFC_FACTOR*SUP_FACTOR*SPD*PPM))
		292,266,913	Settlement Run	*GSP
		1,461,334,566	Settlement Day	*SRPSD

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Flat File	Record Type	Size (Bytes)	Per	Derivation
		1,068,235,567,454	RPD	*RPD
idf_sup_purchase_matrices				
	ZHD	36		
	SDK	11		
	DAT	102		
	File Size	4,936,135		ZHD + SPM_GSPST*SDK + SPM_GSPST*DAT
		64,169,755		*GSP
		320,848,775	Settlement Day	*SRPSD
		234,540,454,525	Retention days	*RPD
idf_pd_pfl_class_coefs				
	ZHD	17		
	SDK	31		
	DAT	36		
	File Size	13,721,436	GSP Group	ZHD + ((VMRPC)*SDK + VMRPC*(DAT*SPD))
		178,378,668	VMRPC	*GSP
		130,394,806,308	RPD	*RPD
idf_pd_time_pattern_states				
	ZHD	36		
	TPR	16		
	STA	4		
	File Size	948,516		ZHD + (*TPR*)*TPR + TPR*(STA*SPD)
		693,365,196	Retention days	*RPD

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Flat File	Record Type	Size (Bytes)	Per	Derivation
idf_basic_pd_pfl_coefs				
	COF	17		
	BPC	9		
	ZHD	36		
	File Size	39,636		ZHD+((PROF)*BPC+PROF*(COF*SPD))
		515,268		*GSP
		376,660,908	RPD	*RPD
idf_combined_pd_pfl_coefs				
	CPC	31		
	PKY	11		
	ZHD	36		
	File Size	2,893,856		ZHD +VSSCPC*VSSC_SW_FACTOR*PKY + VSSCPC*VSSC_SW_FACTOR*SPD*CPC
		37,620,128	Settlement Day	*GSP
		27,500,313,568	Retention	*RPD

Summary sizing table

Table	Table data	Size	
IDF_AGTD_SUP_DA_PD_CONSUMS	97,313,190,780	91	Gb
IDF_AGTD_SUP_PD_CONSUMS	93,613,102,700	87	Gb
IDF_AGTD_BM_PD_CONSUMS	751,352,750,540	700	Gb
IDF_PROFILED_SPMS	1,068,235,567,454	995	Gb
IDF_SUP_PURCHASE_MATRICES	234,540,454,525	218	Gb
IDF_PD_PFL_CLASS_COEFS	130,394,806,308	121	Gb
IDF_PD_TIME_PATTERN_STATES	693,365,196	1	Gb
IDF_BASIC_PD_PFL_COEFS	376,660,908	0	Gb
IDF_COMBINED_PD_PFL_COEFS	27,500,313,568	26	Gb

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4.9 Mapping From Logical Design

4.9.1 Entities to Physical Implementation Cross check

Entity	Attribute	ISRA Database Table	Field name	Explanation
Aggregated Supplier DA Period Consumption		idf_agtd_sup_da_pd_consums		Not implemented as an Oracle database table. See chapters 2 and 4 on flat file implementation.
	GSP Group Id		gsp_group_id	
	Data Aggregation Run Number		data_agtn_run_number	
	Settlement Date		sett_date	
	Settlement Period Id		N/A	Time-period denormalised in the file.
	Consumption Component Class Id		consum_comp_class_id	
	Data Aggregator Market Participant Id		da_mkt_ppt_id	
	Data Aggregator Market Participant Role Code		da_mkt_ppt_role_code	
	Supplier Market Participant Id		sup_mkt_ppt_id	
	Supplier Market Participant Role Code		sup_mkt_ppt_role_code	
	Data Aggregation Type		da_mkt_ppt_role_code	Derivable.
	Data Aggregator HH MSID Count		da_hh_msid_count	
	Aggregated Supplier Consumption		agtd_sup_consum_*nn*	
	Aggregated Supplier Line Loss		agtd_sup_line_loss_*nn*	
Aggregated BM Unit Period Consumption		idf_agtd_bm_pd_consums		Not implemented as an Oracle database table. See chapters 2 and 4 on flat file implementation.
	SSR Run BM Unit Id		bm_unit_id	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Consumption Component Class Id		Consum_comp_class_id	
	GSP Group Id		gsp_group_id	
	Settlement Date		sett_date	
	SSR Run Number		ssr_run_number	
	Settlement Period Id		N/A	Time-period denormalised in the file.
	Supplier Market Participant Id		sup_mkt_ppt_id	
	Aggregated BM Unit Energy		agtd_bm_consum_*nn*	
	Aggregated BM Unit Line Losses		agtd_bm_line_loss_*nn*	
	Corrected BM Unit Energy		Corrected_bm_consum_*nn*	
	Corrected BM Unit Line Losses		Corrected_bm_line_loss_*nn*	
Aggregated Supplier Period Consumption		idf_agtd_sup_pd_consums		Not implemented as an Oracle database table. See chapters 2 and 4 on flat file implementation.
	Consumption Component Class Id		Consum_comp_class_id	
	GSP Group Id		gsp_group_id	
	Settlement Date		sett_date	
	SSR Run Number		ssr_run_number	
	Settlement Period Id		N/A	Time-period denormalised in the file.
	Supplier Market Participant Id		sup_mkt_ppt_id	
	Supplier Market Participant Role Code		sup_mkt_ppt_role_code	
	Aggregated Supplier Consumption		agtd_sup_consum_*nn*	
	Aggregated Supplier Line Loss		agtd_sup_line_loss_*nn*	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Corrected Supplier Consumption		corrected_sup_consum_*nn*	
	Corrected Supplier Line Loss		corrected_sup_line_loss_*nn*	
Average Fraction Of Yearly Consumption		idb_afycs		This entity has been merged with its parent, Average Fraction of Yearly Consumption Set. The attributes "Time Pattern Regime ID" and "Average Fraction of Yearly Consumption" have been added to the parent. The merged table takes the name of the child as it more logically corresponds to what it holds.
	Profile Class Id		pfl_class_id	
	Time Pattern Regime Id		tpr_id	
	Standard Settlement Configuration Id		ssc_id	
	Effective From Settlement Date {AFOYCS}		eff_from_sett_date	
	GSP Group Id		gsp_group_id	
	Effective From Settlement Date {VSCPC}		N/A	
	Average Fraction of Yearly Consumption		afyc	
Average Fraction Of Yearly Consumption Set		idb_afycs		Entity "Average Fraction of Yearly Consumption" has been merged in.
	GSP Group Id		gsp_group_id	
	Profile Class Id		pfl_class_id	
	Standard Settlement Configuration Id		ssc_id	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Effective From Settlement Date {VSCPC}		N/A	
	Effective From Settlement Date {AFOYCS}		eff_from_sett_date	
	Effective to Settlement Date {AFOYCS}		eff_to_sett_date	
Basic Period Profile Coefficient		idf_basic_pd_pfl_coefs		Not implemented as an Oracle database table. See chapters 2 and 4 on flat file implementation.
	GSP Group Id		gsp_group_id	
	Profile Class Id		pfl_class_id	
	Profile Id		pfl_id	
	Settlement Date		sett_date	
	Settlement Period Id		N/A	Time-period denormalised in the file.
	Basic Period Profile Coefficient		pd_pfl_coef	
BM Unit for Supplier in GSP Group		idb_bm_unit_in_gsp_groups		
	GSP Group Id		gsp_group_id	
	Supplier Market Participant Id		mkt_ppt_id	
	Supplier Market Participant Role Code		mkt_ppt_role_code	
	BM Unit Id		bm_unit_id	
	Effective From Settlement Date {BMUIGG}		eff_from_sett_date	
	Effective To Settlement Date {BMUIGG} (O)		eff_to_sett_date	
	Default BM Unit Flag		default_bm_unit_flag	
Clock Interval		idb_clock_intervals		

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Time Pattern Regime Id		tpr_id	
	Day of the Week Id		day_of_the_week_id	
	Start Day		start_day	
	Start Month		start_month	
	End Day		end_day	
	End Month		end_month	
	GMT Start Time		start_time	
	GMT End Time		end_time	
Clock Time Change		idb_settlement_days		This entity has been implemented by merging with the entity "Settlement Days".
	Change Date		sett_date	
	GMT Time		gmt_time	
	Post Change Local Time		post_change_local_time	
Clock Time Pattern Regime		idb_tprs		This entity is a subtype of a "Time Pattern Regime".
	Time Pattern Regime Id		tpr_id	
Combined Period Profile Coefficient		idf_combined_pd_pfl_coefs		Not implemented as an Oracle database table. See chapters 2 and 4 on flat file implementation.
	GSP Group Id		gsp_group_id	
	Profile Class Id		pfl_class_id	
	Standard Settlement Configuration Id		ssc_id	
	Settlement Date		sett_date	
	Settlement Period Id		N/A	Time-period denormalised in the file.
	Effective From Settlement Date {VSCPC}		N/A	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Normal Register Period Profile Coefficient		normal_register_pd_pfl_coef	
	Low Register Period Profile Coefficient		low_register_pd_pfl_coef	
Consumption Component Class		idb_consum_comp_classes		
	Consumption Component Class Id		consum_comp_class_id	
	Measurement Quantity Id		measurement_quantity_id	
	Data Aggregation Type		data_agtn_type	
	Metered/Unmetered Indicator		mtd_unmtd_ind	
	Actual/Estimated Indicator		actual_estimated_ind	
	AA/EAC Indicator		aa_eac_ind	
	Consumption Component Indicator		consum_comp_ind	
Daily Profile Coefficient		idf_pd_pfl_class_coefs		This entity has been merged into the denormalised "Period Profile Class Coefficient" entity.
	GSP Group Id		gsp_group_id	
	Profile Class Id		pfl_class_id	
	Time Pattern Regime Id		tpr_id	
	Standard Settlement Configuration Id		ssc_id	
	Settlement Date		sett_date	
	Daily Profile Coefficient		daily_pfl_coef	
Daily Profile Parameters		idb_daily_pfl_parameters		
	GSP Group Id		gsp_group_id	
	Settlement Date		sett_date	
	Time of Sunset		time_of_sunset	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Actual Noon Temperature		actual_noon_tempertaure	
	Noon Effective Temperature		noon_eff_temperature	
Data Aggregator		idb_mkt_ppt_roles		This entity is a subtype of a "Market Participant Role".
	Market Participant Id		mkt_ppt_id	
	Market Participant Role Code		mkt_ppt_role_code	
	Active Flag		active_flag	
Data Aggregator In GSP Group		idb_da_in_gsp_groups		This entity has been subtyped by this table.
	GSP Group Id		gsp_group_id	
	Data Aggregation Type			Derivable from the da_mkt_ppt_role_code
	Data Aggregator Market Participant Id		da_mkt_ppt_id	
	Data Aggregator Market Participant Role Code		da_mkt_ppt_role_code	
	Supplier Market Participant Id		sup_mkt_ppt_id	
	Supplier Market Participant Role Code		sup_mkt_ppt_role_code	
	Effective From Settlement Date {DAIGG}		eff_from_sett_date	
	Effective To Settlement Date {DAIGG}		eff_to_sett_date	
	Effective From Settlement Date {SIGG}		N/A	Not carried down from parent. Surrogate key field mkt_ppt_role_in_gsp_group_id will identify parent.
Data Collector		idb_mkt_ppt_roles		This entity is a subtype of a "Market Participant Role".
	Market Participant Id		mkt_ppt_id	
	Market Participant Role Code		mkt_ppt_role_code	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
Data Collector in GSP Group		idb_mkt_ppt_role_in_gsp_groups		This entity has been subtyped by this table.
	Data Collector Market Participant Id		mkt_ppt_id	
	Data Collector Market Participant Role Code		mkt_ppt_role_code	
	GSP Group Id		gsp_group_id	
	Effective From Date {DCIGG}		eff_from_date	Note: calendar dates
	Effective To Date {DCIGG}		eff_to_date	Note: calendar dates
Data File		cdb_data_file and cdb_file_reference		
	Market Participant Id		cdb_file_reference.participant_id	
	Market Participant Role Code		cdb_file_reference.market_role	
	Data File Sequence Number		cdb_file_reference.file_id	
	File Location		cdb_file_reference.current_directory	
	File Name		cdb_file_reference .filename	
	File Creation Timestamp		cdb_file_reference.creation_time	
	File Status		cdb_file_reference.status	
	File Format Code		cdb_file_reference.sub_type	
	File Content Code		cdb_file_reference.file_type	
	Run Number		cdb_data_file.run_number	
	Run Type Code		cdb_data_file.run_type_code	
	Settlement Date		cdb_data_file.settlement_date	
	Settlement Code		cdb_data_file.sett_code	
	GSP Group Id		cdb_data_file.gsp_group_id	
Date Block		idb_clock_intervals		This entity has been merged into the “Clock Interval” entity and implemented by this table.
	Start Day		start_day	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Start Month		start_month	
	End Day		end_day	
	End Month		end_month	
Day Of The Week		cdb_ref_values		This entity is being managed by the cdb_ref_domains and cdb_ref_values tables as a domain.
	Day of the Week Id			
Day Type		cdb_ref_values		This entity is being managed by the cdb_ref_domains and cdb_ref_values tables as a domain.
	Day Type Id			
Distributor		idb_mkt_ppt_roles		This entity is a subtype of a "Market Participant Role".
	Market Participant Id		mkt_ppt_id	
	Market Participant Role Code		mkt_ppt_role_code	
File Location		cdb_file_reference		
	File Location		current_directory	
GSP Group		idb_gsp_groups		
	GSP Group Id		gsp_group_id	
	GSP Group Name		gsp_group_name	
	Effective From Date {GG}		eff_from_date	
	Effective To Date {GG}		eff_to_date	
	Scottish GSP Group flag		scottish_gsp_group_flag	
GSP Group Average EAC		idb_gsp_group_average_eacs		
	GSP Group Id		gsp_group_id	
	Profile Class Id		pfl_class_id	
	Profile Id		pfl_id	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Effective From Settlement Date {PSET}		eff_from_sett_date	
	Group Average Annual Consumption		group_average_annual_consum	
GSP Group Correction Scaling Factor		idb_gsp_group_cctn_sfs		
	Consumption Component Class Id		consum_comp_class_id	
	Effective From Settlement Date {GGCSF}		eff_from_sett_date	
	GSP Group Correction Scaling Factor		gsp_group_cctn_sf	
GSP Group Correction Scaling Factor used in SSR Runs		idb_gsp_group_cctn_sf_ssr_runs		
	SSR Run Number		ssr_run_number	
	Consumption Component Class ID		consum_comp_class_id	
	GSP Group Correction Scaling Factor		gsp_group_correction_sf	
GSP Group Distributor		idb_mkt_ppt_role_in_gsp_groups		This entity has been subtyped by this table.
	GSP Group Id		gsp_group_id	
	Effective From Date {GGD}		eff_from_date	
	Effective To Dat		eff_to_date	
	Distributor Market Participant Id		mkt_ppt_id	
	Distributor Market Participant Role Code		mkt_ppt_role_code	
GSP Group Take		idb_gsp_group_takes		

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	GSP Group Id		gsp_group_id	
	SSA Settlement Run Number		ssa_sett_run_number	
	SSA Settlement Date		sett_date	
	Settlement Period Id		sett_pd_id	
	GSP Group Take		gsp_group_take	
	Period GSP Group Purchases		pd_gsp_group_purchases	
Line Loss Factor Class		idb_llf_classes		
	Line Loss Factor Class Id		llf_class_id	
	Distributor Market Participant Id		dist_mkt_ppt_id	
	Distributor Market Participant Role Code		dist_mkt_ppt_role_code	
	Effective From Settlement Date {LLFC}		eff_from_sett_date	
	Effective To Settlement Date {LLFC}		eff_to_sett_date	
	Active Flag		active_flag	
Market Participant		idb_mkt_ppts		
	Market Participant Id		mkt_ppt_id	
	Market Participant Name		mkt_ppt_name	
Market Participant Role		idb_mkt_ppt_roles		
	Market Participant Id		mkt_ppt_id	
	Market Participant Role Code		mkt_ppt_role_code	
	Active Flag		active_flag	
Market Role		cdb_ref_values		This entity is being managed by the cdb_ref_domains and cdb_ref_values tables as a domain.

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Market Participant Role Code			
	Market Participant Role Description			
Measurement Quantity		cdb_ref_values		This entity is being managed by the cdb_ref_domains and cdb_ref_values tables as a domain.
	Measurement Quantity Id			
	Direction of energy flow			
Measurement Requirement		idb_measurement_requirements		
	Time Pattern Regime Id		tpr_id	
	Standard Settlement Configuration Id		ssc_id	
Non-Half Hourly BM Unit Allocation		idb_nhh_bm_unit_allocation		
	BM Unit Id		bm_unit_id	
	Profile Class Id		pfl_class_id	
	Standard Settlement Configuration Id		ssc_id	
	Effective From Settlement Date {BMUIGG}		eff_from_sett_date_bmuigg	
	Effective From Settlement Date {NHHBMUA}		eff_from_sett_date	
	Effective To Settlement Date {NHHBMUA} (O)		eff_to_sett_date	
Period Profile Class Coefficient		idf_pd_pfl_class_coefs		Not implemented as an Oracle database table. See chapters 2 and 4 on flat file implementation.
	Profile Class Id		pfl_class_id	
	GSP Group Id		gsp_group_id	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Time Pattern Regime Id		tpr_id	
	Standard Settlement Configuration Id		ssc_id	
	Settlement Date		sett_date	
	Settlement Period Id		N/A	Time-period denormalised in the flat file.
	Period Profile Coefficient Value		class_ppc_value_*nn*	
Period Regression Equation		idb_pd_pfl_regr_coefs		This entity has been merged with "Profile Regression Equation" and "Regression Coefficient" and all of these are managed by this table.
	Profile Class Id		pfl_class_id	
	Profile Id		pfl_id	
	Season Id		season_id	
	Day Type Id		day_type_id	
	Settlement Period Id		sett_pd_id	
	Effective From Settlement Date {PSET}		eff_from_Sett_date	
	Scottish Regression Flag		Scottish_reg_flag	
Period Supplier Purchase		idb_pd_sup_purchases		
	Supplier Market Participant Id		sup_mkt_ppd_id	
	Supplier Market Participant Role Code		sup_mkt_ppt_role_code	
	GSP Group Id		gsp_group_id	
	SSR Run Number		ssr_run_number	
	Settlement Date		sett_date	
	Settlement Period Id		sett_pd_id	
	Period Supplier Deemed Take		pd_sup_deemed_take	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Supplier Period Weighted Consumption		pd_sup_weighted_consum	
	Period Supplier Purchase Total		pd_sup_purchase_total	
	Unadjusted Supplier Deemed Take		unadj_sup_deemed_take	
Period Time Pattern State		idf_pd_time_pattern_states		Not implemented as an Oracle database table. See chapters 2 and 4 on flat file implementation.
	Time Pattern Regime Id		tpr_id	
	Standard Settlement Configuration Id		ssc_id	
	Settlement Date		sett_date	
	Settlement Period Id		N/A	Time-period denormalised in the flat file.
	Period Register On State Indicator		pd_register_on_state_ind_*nn*	
Profile		idb_pfls		
	Profile Id		pfl_id	
	Profile Class Id		pfl_class_id	
	Profile Settlement Periods		pfl_sett_pds	
	Effective From Settlement Date {PROF}		eff_from_sett_date	
	Effective To Settlement Date {PROF}		eff_to_sett_date	
	Profile Description		pfl_desc	
	Active Flag		active_flag	
Profile Class		idb_pfl_classes		
	Profile Class Id		pfl_class_id	
	Profile Class Description		pfl_class_desc	
	Switched Load Profile Class		switched_load_pfl_class_ind	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Ind			
	Active Flag		active_flag	
Profile Production Run		idb_pfl_production_runs		
	Profile Production Run Number		pfl_production_run_number	
	GSP Group Id		gsp_group_id	
	Settlement Date		sett_date	
	Profile Production Run Date		pfl_production_run_date	
	Profile Production Run Time		pfl_production_run_date	
	Tele-Switch Date		teleswitch_date	
Profile Regression Equation Set		idb_pd_pfl_regr_coefs		This entity has been merged with “Period Regression Equation” and “Regression Coefficient” and all of these are managed by this table.
	Profile Class Id		pfl_class_id	
	Profile Id		pfl_id	
	Season Id		season_id	
	Day Type Id		day_type_id	
	Effective From Settlement Date		eff_from_sett_date	
Profile Set		idb_pfl_sets		
	Profile Class Id		pfl_class_id	
	Profile Id		pfl_id	
	Effective From Settlement Date		eff_from_sett_date	
Profiled SPM		idf_pfld_spms		Not implemented as an Oracle database table. See chapters 2 and 4 on flat file implementation.

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	SSR Run Number		ssr_run_number	
	Profile Class Id		pfl_class_id	
	GSP Group Id		gsp_group_id	
	Line Loss Factor Class Id		llf_class_id	
	Standard Settlement Configuration Id		ssc_id	
	Time Pattern Regime Id		tpr_id	
	Settlement Period Id		N/A	Time-period denormalised in the flat file.
	Supplier Market Participant Id		sup_mkt_ppt_id	
	Supplier Market Participant Role Code		sup_mkt_ppt_role_code	
	Distributor Market Participant Id		dist_mkt_ppt_id	
	Distributor Market Participant Role Code		dist_mkt_ppt_role_code	
	Effective From Settlement Date {VSCPC}		N/A	Not carried down from parent.
	Profiled SPM Total Annualised Advance		pfld_spm_total_aa_*nn*	
	Profiled SPM Total EAC		pfld_spm_total_eac_*nn*	
	Profiled SPM Total Unmetered Consumption		pfld_spm_total_unmtd_consum_*nn*	
Regression Coefficient		idb_pd_pfl_regr_coefs		This entity has been merged with “Period Regression Equation” and “Profile Regression Equation Set” and all of these are managed by this table.
	Profile Class Id		pfl_class_id	
	Profile Id		pfl_id	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Season Id		season_id	
	Day Type Id		day_type_id	
	Regression Coefficient Type		regression_coef_type	
	Settlement Period Id		sett_pd_id	
	Effective From Settlement Date {PSET}		eff_from_sett_date	
	Regression Coefficient		regression_coef	
	Scottish Regression Flag		scottish_reg_flag	
Regression Coefficient Type		cdb_ref_values		This entity is being managed by the cdb_ref_domains and cdb_ref_values tables as a domain.
	Regression Coefficient Type			
	Regression Coefficient Type			
Settlement		idb_settlements		
	Settlement Code		sett_code	
	Settlement Date		sett_date	
	Planned SSR Run Date		planned_ssr_run_date	
	Payment_date		payment_date	
Settlement Class		None.		This entity has been eliminated since it has no attributes of its own. Its key values are managed in its child entities.
	GSP Group Id			
	Line Loss Factor Class Id			
	Distributor Market Participant Id			
	Distributor Market Participant Role Code			
	Profile Class Id			

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Time Pattern Regime Id			
	Standard Settlement Configuration Id			
	Effective From Settlement Date			
Settlement Day		idb_settlement_days		
	Settlement Date		sett_date	
	Season Id		season_id	
	Day Type Id		day_type_id	
	Scottish Day Type Id		scottish_day_type_id	
Settlement Period		None.		This entity has been eliminated since its only attribute is a period label used in reporting which will be generated by a function.
	Settlement Date			
	Settlement Period Id			
	Settlement Period Label			
Settlement Period Line Loss Factor		idb_sett_pd_llfs		
	Settlement Date		sett_date	
	Settlement Period Id		sett_pd_id	
	Line Loss Factor Class Id		llf_class_id	
	Distributor Market Participant Id		dist_mkt_ppt_id	
	Distributor Market Participant Role Code		dist_mkt_ppt_role_code	
	Effective From Settlement Date {LLFC}		N/A	Not carried down from parent.
	Line Loss Factor		llf	
Settlement Period		idb_ssr_run_llf_files		This entity has been

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Entity	Attribute	ISRA Database Table	Field name	Explanation
LLF used in SSR Run				implemented by recording the file ID of the line loss factor file used during the run on a GSP Group basis.
	SSR Run Number		N/A	
	Settlement Period ID		N/A	
	Line Loss Factor Class ID		N/A	
	Distributor Market Participant ID		N/A	
	Distributor Market Participant Role Code		N/A	
	Settlement Date		N/A	
	Line Loss Factor		N/A	
Settlement Period Prices		idb_sett_pd_prices		
	Settlement Date		sett_date	
	Settlement Period Id		sett_pd_id	
	SSA Settlement Run Number		ssa_sett_run_number	
	Pool Selling Price		pool_selling_price	
	Transmission Loss Multiplier		trans_loss_mult	
	Transmission Losses Reconciliation Multiplier		trans_losses_recon_mult	
Settlement Type		idb_sett_types		
	Settlement Code		sett_code	
	Settlement Sequence Number		sett_sequence_number	
	Settlement Code Description		description	
SSA Settlement GSP Group		idb_ssa_sett_gsp_groups		
	GSP Group Id		gsp_group_id	
	SSA Settlement Run Number		ssa_sett_run_number	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	SSA Settlement Date		sett_date	
	Daily GSP Group Purchases		daily_gsp_group_purchases	
	Period Purchases Valid		period_purchases_valid	
SSA Settlement Run		idb_ssa_sett_runs		
	SSA Settlement Run Number		ssa_sett_run_number	
	Settlement Date		sett_date	
	SSA Settlement Run Type Id		sett_run_type_id	
	CDCS Extract Number		cdcs_extract_number	
SSR Run		idb_ssr_runs		
	SSR Run Number		ssr_run_number	
	Settlement Date		sett_date	
	Settlement Code		sett_code	
	SSA Settlement Run Number		ssa_sett_run_number	
	SSA Settlement Date		ssa_sett_date	
	SSR Run Type Id		ssr_run_type_id	
	SSR Run Date		ssr_run_date	
	SSR Run Status		ssr_run_status	
SSR Run GSP Group		idb_ssr_run_gsp_groups		
	SSR Run Number		ssr_run_number	
	GSP Group ID		gsp_group_id	
	Profile Production Run Number		pfl_production_run_number	
SSR Run GSP Group Period		idb_ssr_run_gsp_group_pds		
	SSR Run Number		ssr_run_number	
	GSP Group ID		gsp_group_id	
	Settlement Period ID		sett_pd_id	
	Settlement Date			Derivable from idb_ssr_runs

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	GSP Group Correction Factor		gsp_group_cctn_factor	
	Total Period Weighted Consumption		total_pd_weighted_consum	
	Total Period NPG Spill		total_pd_npg_spill	
SSR Run LLF File		idb_ssr_run_llf_files		
	SSR Run Number		ssr_run_number	
	GSP Group ID		gsp_group_id	
	Data File Sequence Number		llf_file_id	The file that contains the distributor's line loss factors.
Standard Settlement Configuration		idb_sscs		
	Standard Settlement Configuration Id		ssc_id	
	Standard Settlement Configuration Desc		ssc_desc	
	Tele-Switch User Id		teleswitch_user_id	
	Tele-switch Group Id		teleswitch_group_id	
	Active Flag		active_flag	
	SSC Type		ssc_type	Value is "I" (Import) or "E" (Export)
Supplier		idb_mkt_ppt_roles		This entity is a subtype of a "Market Participant Role".
	Market Participant Id		mkt_ppt_id	
	Market Participant Role Code		mkt_ppt_role_code	
	Pool Member Id		pool_member_id	
Supplier Data Aggregation		idb_sup_data_agtns		
	Data Aggregation Run Number		data_agtn_run_number	
	Data Aggregation Type		da_mkt_ppt_role_code	
	GSP Group Id		gsp_group_id	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Data Aggregator Market Participant Id		da_mkt_ppt_id	
	Data Aggregator Market Participant Role Code		da_mkt_ppt_role_code	
	Supplier Market Participant Id		sup_mkt_ppt_id	
	Supplier Market Participant Role Code		sup_mkt_ppt_role_code	
	Settlement Date		sett_date	
	Settlement Code		sett_code	
	Effective From Settlement Date		N/A	Not carried down from parent.
Supplier Data Aggregation Used In SSR Run		idb_sup_data_agtn_in_ssr_runs		
	GSP Group Id		gsp_group_id	
	Data Aggregation Type		da_mkt_ppt_role_code	
	Data Aggregation Run Number		data_agtn_run_number	
	SSR Run Number		ssr_run_number	
	Data Aggregator Market Participant Id		da_mkt_ppt_id	
	Data Aggregator Market Participant Role Code		da_mkt_ppt_role_code	
	Supplier Market Participant Id		sup_mkt_ppt_id	
	Supplier Market Participant Role Code		sup_mkt_ppt_role_code	
Supplier In GSP Group		idb_mkt_ppt_role_in_gsp_groups		This entity has been subtyped by this table.
	GSP Group Id		gsp_group_id	
	Supplier Market Participant Id		mkt_ppt_id	
	Supplier Market Participant Role Code		mkt_ppt_role_code	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Effective From Settlement Date		eff_from_date	
	Effective To Settlement Date		eff_to_date	
Supplier Purchase Matrix		idf_sup_purchase_matrices		Not implemented as an Oracle database table. See chapters 2 and 4 on flat file implementation.
	GSP Group Id		gsp_group_id	
	Data Aggregation Run Number		data_agtn_run_number	
	Line Loss Factor Class Id		llf_class_id	
	Distributor Market Participant Id		dist_mkt_ppt_id	
	Distributor Market Participant Role Code		dist_mkt_ppt_role_code	
	Data Aggregator Market Participant Id		da_mkt_ppt_id	
	Data Aggregator Market Participant Role Code		da_mkt_ppt_role_code	
	Supplier Market Participant Id		sup_mkt_ppt_id	
	Supplier Market Participant Role Code		sup_mkt_ppt_role_code	
	Profile Class Id		pfl_class_id	
	Time Pattern Regime Id		tpr_id	
	Standard Settlement Configuration Id		ssc_id	
	Data Aggregation Type		da_mkt_ppt_role_code	
	SPM Total EAC		spm_total_eac	
	SPM Total Annualised Advance		spm_total_aa	
	SPM Total Unmetered Consumption		spm_total_unmtd_consum	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	SPM Total EAC MSID Count		spm_total_eac_msid_count	
	SPM Total AA MSID Count		spm_total_aa_msid_count	
	SPM Total Unmetered MSID Count		spm_total_unmtd_msid_count	
	SPM Default EAC MSID Count		spm_dflt_eac_msid_count	
	SPM Default Unmetered MSID Count		spm_dflt_unmtd_msid_count	
System Configuration		cdb_system_parameter		
	System Market Participant Id		N/A	
	System Market Participant Role Code		N/A	
	Settlement Day Archive Days		N/A	
Tele-switch Contact	Tele-switch contact code	cdb_ref_values		This entity is being managed by the cdb_ref_domains and cdb_ref_values tables as a domain.
Tele-Switch Contact Interval	Tele-switch Group Id	idb_tsw_contact_intervals	teleswitch_group_id	
	Tele-switch User Id		teleswitch_user_id	
	Tele-switch contact Code		teleswitch_contact_code	
	Tele-switch Start Date and time		teleswitch_start_date_time	
	Tele-switch End Date and time		teleswitch_end_date_time	
	Tele-switch Contact State		teleswitch_contact_state	
Tele-switch Contact Rule	Tele-switch Time Pattern Regime Id	idb_teleswitch_contact_rules	teleswitch_tpr_id	
	Tele-switch Register Rule Id		teleswitch_register_rule_id	
	Tele-switch Contact Code		teleswitch_contact_code	
	Tele-switch Contact Rule		teleswitch_contact_rule	
Tele-switch Register	Tele-switch Time Pattern			

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Entity	Attribute	ISRA Database Table	Field name	Explanation
Rule	Regime Id			
	Tele-switch register rule Id			This entity has been de-normalised into tele-switch contact rule id
Tele-switch Interval		idb_teleswitch_intervals		
	Time Pattern Regime ID		tpr_id	
	Start Time		teleswitch_start_time	
	Settlement Date		sett_date	
	End Time		teleswitch_end_time	
Tele-switch Time Pattern Regime		idb_tprs		This entity is a subtype of "Time Pattern Regime" and is implemented by this table.
	Time Pattern Regime Id		tpr_id	
	Tele-switch User Id		teleswitch_user_id	
	Tele-switch Group Id		teleswitch_group_id	
Time Block		idb_clock_intervals		This entity has been merged into the "Clock Interval" entity and implemented by this table.
	Start Time		start_time	
	End Time		end_time	
Time Pattern Regime		idb_tprs		
	Time Pattern Regime Id		tpr_id	
	GMT/Local Time Indicator		gmt_local_time_ind	
	Active Flag		active_flag	
Valid Measurement Requirement Profile Class		idb_vmr_pfl_classes		
	Standard Settlement Configuration Id		ssc_id	
	Time Pattern Regime Id		tpr_id	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Profile Class Id		pfl_class_id	
	Effective From Settlement Date {VSCPC}			Not carried down from parent.
	Switched Load Indicator		switched_load_ind	
Valid Settlement Configuration Profile Class		idb_vscpcs		
	Profile Class Id		pfl_class_id	
	Standard Settlement Configuration Id		ssc_id	
	Effective From Settlement Date		eff_from_sett_date	
	Effective To Settlement Date		eff_to_sett_date	
Aggregated Supplier DA Period Consumption Line Loss		idf_agtd_sup_da_pd_consums_llf		Not implemented as an Oracle database table. See chapters 2 and 4 on flat file implementation.
	GSP Group Id		gsp_group_id	
	Data Aggregation Run Number		data_agtn_run_number	
	Settlement Date		sett_date	
	Settlement Period Id		N/A	Time-period denormalised in the file.
	Consumption Component Class Id		consum_comp_class_id	
	Distributor Id		mkt_ppt_id	
	Line Loss Factor Class Id		llf_class_id	
	Data Aggregator Market Participant Id		da_mkt_ppt_id	
	Data Aggregator Market Participant Role Code		da_mkt_ppt_role_code	
	Supplier Market Participant Id		sup_mkt_ppt_id	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Supplier Market Participant Role Code		sup_mkt_ppt_role_code	
	Data Aggregation Type		da_mkt_ppt_role_code	Derivable.
	Data Aggregator HH MSID Count		da_hh_msid_count	
	Aggregated Supplier Consumption		agtd_sup_consum_*nn*	
	Aggregated Supplier Line Loss		agtd_sup_line_loss_*nn*	
Period Time Pattern State		idf_tpr_time_patterns		
	Time Pattern Regime Id		tpr_id	
	Standard Settlement Configuration Id		ssc_id	
	Number of Settlement Periods		NA	
	Time Pattern States		NA	
Line Loss Standard Settlement Configuration Mapping Data		idf_llf_ssc_mapn		
	Distributor Id		dist_id	
	Line Loss Factor		llffactid	
	Standard Settlement Configuration Id		stdsettconfid	
	Effective From Settlement Date{LLFSSC}		settdate	
	Standard Settlement Configuration Id		ssc_id	
	Standard Settlement Configuration Desc		NA	
	Effective from Settlement Date {SSC}		ssc_eff_from_date	

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Entity	Attribute	ISRA Database Table	Field name	Explanation
	Effective to Settlement Date {SSC}		ssc_eff_to_date	
	Standard Settlement Configuration Type		NA	
	Time Pattern Regime Id		tpr_id	
	Day of the Week Id		NA	
	Start Day		NA	
	Start Month		NA	
	End Day		NA	
	End Month		NA	
	Start Time		NA	
	End Time		NA	
Line Loss Factor		idb_llfdata		
	Distributor Id		dist_id	
	Line Loss Factor		llffactid	
	Standard Settlement Configuration Id		stdsettconfid	
	Effective From Settlement Date{LLFSSC}		settdate	
Standard Settlement Configuration		idb_ssc_tpr_data		
	Standard Settlement Configuration Id		ssc_id	
	Time Pattern Regime Id		tpr_id	
	Effective from Settlement Date {SSC}		ssc_eff_from_date	
	Effective to Settlement Date {SSC}		ssc_eff_to_date	
	Time Pattern Regime Type		tpr_type	Set to 'C'
	GMT Local Time indicator		gmt_local_time_ind	Set to 'Y'

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Entity	Attribute	ISRA Database Table	Field name	Explanation
Clock Interval		idb_cki_data		
	Time Pattern Regime Id		tpr_id	
	Standard Settlement Configuration Id		ssc_id	
	Day of the Week Id		day_of_the_week_id	
	Start Day		start_day	
	Start Month		start_month	
	End Day		end_day	
	End Month		end_month	
	Start Time		start_time	
	End Time		end_time	

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5 ISY Standing Data Maintenance Subsystem Specification

5.1 Introduction

The ISY Subsystem Specification is mainly concerned with the screens that are provided for maintenance of ISRA Standing Data. The document also provides details of the application menu that will drive all of the screens, regardless of whether they are standing data screens or not and for this reason references have been made to screens that are not detailed in this document but exist in other subsystem documents e.g. Data Load, Reports etc. In addition, the document outlines the general approach to Forms functionality, the tables maintained by each of the Forms and menu security before giving a detailed specification of each of the Forms.

5.2 Forms Behaviour

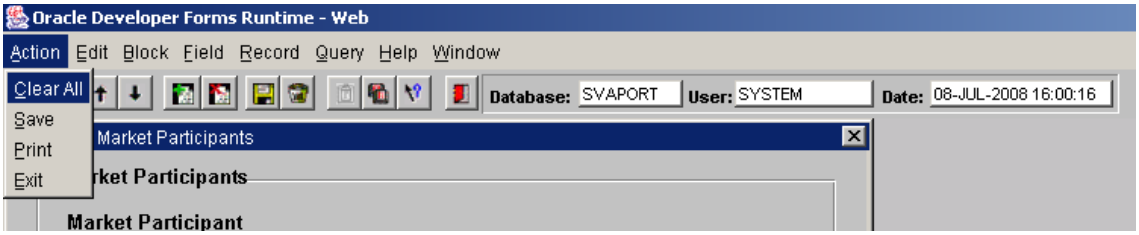
In general the ISRA screens adopt the behaviour that is documented in the sections that follow. Where this behaviour differs from the norm or is specific to the screen, then this is documented in the Screen Behaviour section of each of the Forms technical specifications.

5.2.1 The ISRA Forms Menu

Actions permitted on each block (querying, inserting, updating, deleting and navigation) are controlled via the toolbar and the ISRA Forms menu by greying out the relevant buttons on the toolbar and disabling the associated menu options. The toolbar is common across all three systems and is therefore defined in the Common Subsystems Technical Specification [CTSPEC] document. The ISRA Forms menu is detailed below.

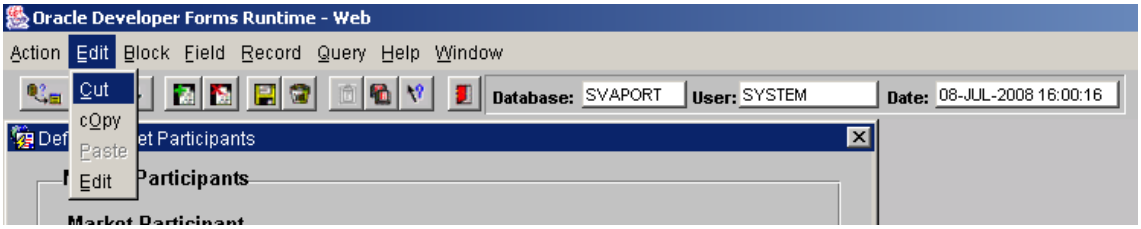
5.2.1.1 Action Menu

This provides form-level operations. Clear All carries out a global clear to the form, this is useful for rolling back any user modifications since the last Save. Save commits any new records, changes to existing records or deletes to the database. Print prints the current screen. Exit exits the form after first prompting the user to commit any outstanding changes.



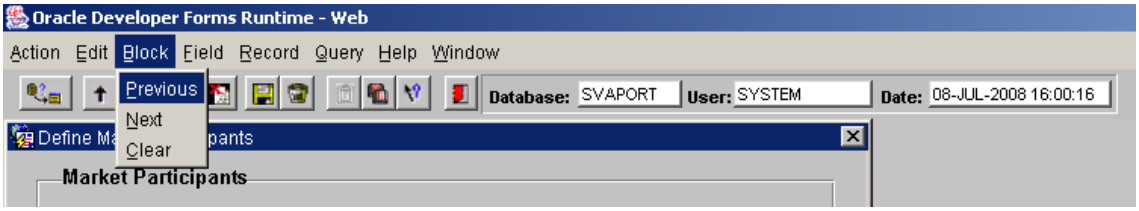
5.2.1.2 Edit Menu

This provides standard windows style cut, copy and paste functionality for the current field data.



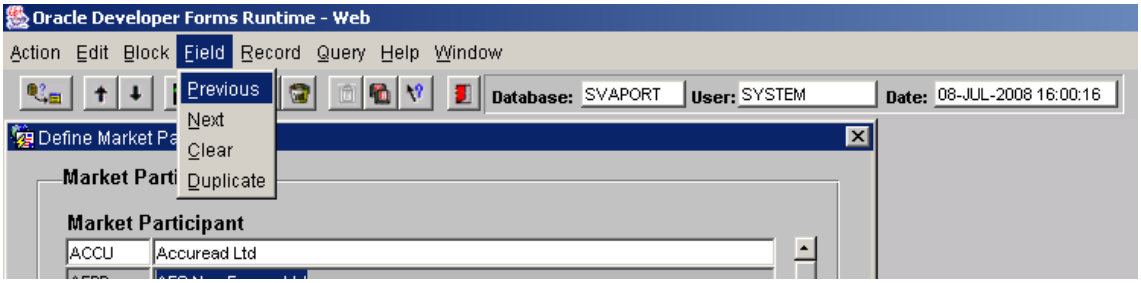
5.2.1.3 Block Menu

This allows navigation between blocks within the form and allows the User to Clear the current block.



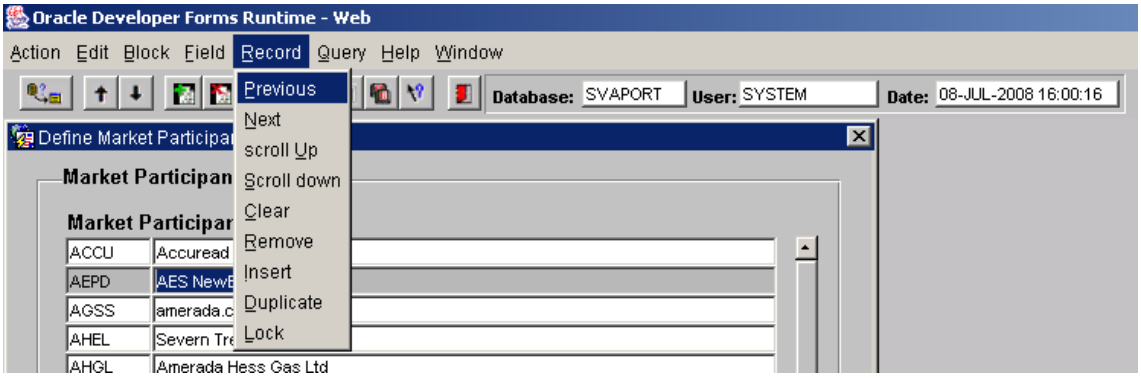
5.2.1.4 Field Menu

This provides field navigation (Previous, Next), duplication of a field value from a previous record and clearing of the current field.



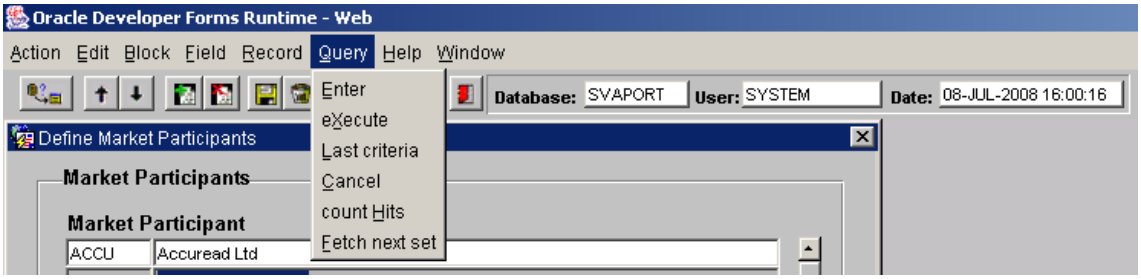
5.2.1.5 Record Menu

This allows record navigation and manipulation. Navigation to the previous and next record is carried out by selecting the Previous or Next menu option. Scroll Up and Scroll Down allows scrolling of records that have been retrieved from the database. Clear will clear the current record from the screen, it does not delete it from the database. Remove removes the record from the screen and deletes the record from the database. Insert creates an empty record ready for user input. Duplicate, copies record details from the previous record to the current one.



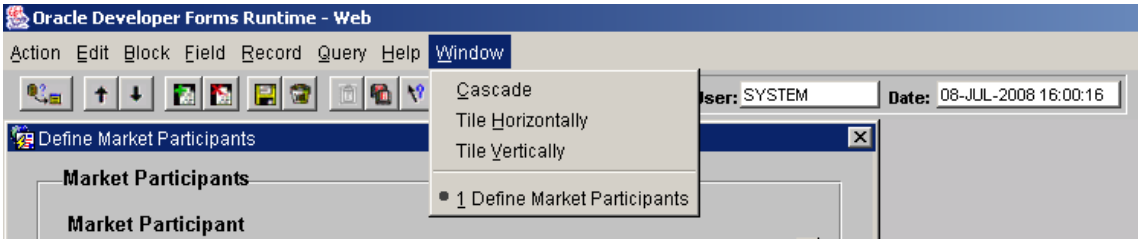
5.2.1.6 Query Menu

This provides the Querying facility for the form. Enter places the form into enter query mode. This mode passes control over to the user so that they can enter query criteria with which to perform a query. The Cancel option takes the user out of enter query mode, clearing any query criteria from the screen. Count Hits displays the expected number of records that will be returned if the query is executed. The Execute option actually carries out the query.



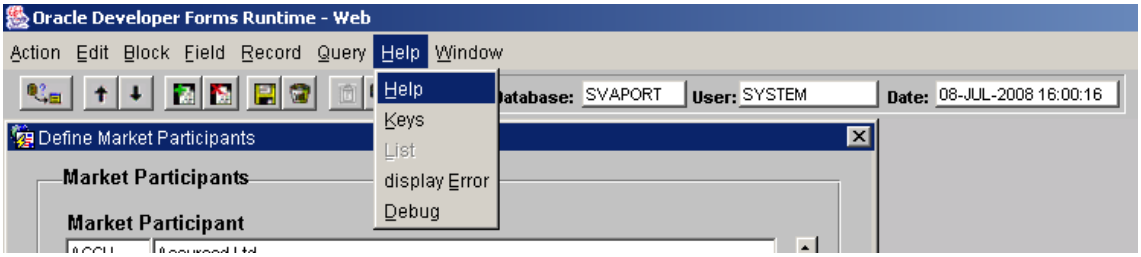
5.2.1.7 Window Menu

This provides standard Microsoft™ functionality to manipulate windows.



5.2.1.8 Help Menu

This provides a list of available keys (Keys), help text (Help), and the facility to popup a list of values where applicable (List).



5.2.2 Navigation

Navigation within Forms is handled at four levels; screen, block, record and field. Navigation to each screen is generally handled in two ways, either via the ISRA application menu where each screen is explicitly invoked from a menu option or from one screen to another via specific buttons. On entry to a screen the user is placed into the first enterable field of the first enterable block (some blocks are for display only purposes and therefore do not allow the user into them). Block, record and field navigation are handled via the mouse or via the Forms Menu (see Block, Record and Field menu options). In addition, all of the required fields within a block must be entered prior to navigating to the next block.

5.2.3 Querying

There are two types of queries that can be carried out by the user; a global query and a user defined query. A global query fetches all records that are applicable to the block from the database to the screen. A user defined query will fetch all records that meet the query criteria entered by the user. There are two functions that allow this to be carried out, an enter query function and an execute query function. Enter query function places the form into enter query mode. This mode passes control over to the user so that they can enter query criteria with which to perform a query - it differs from the form's normal mode of operation in that the only task that can be carried out is the entering of query criteria, no other processing is possible. The execute query function actually carries out the query with the criteria entered. A global query can be performed by invoking execute query without first invoking enter query. The number of records returned from the database to the screen is controlled internally and is invisible to the user, the perception is that all records retrieved from the database are available for viewing.

5.2.4 Commit Processing

When an operator uses a form, any modifications are not recorded in the database but are recorded in the form's own workspace. In order to make these modifications permanent the user must explicitly save the contents of the workspace to the database by issuing a save via the Oracle Forms menu (Action -> Save). The save command issues a commit to the database. When a commit is issued data that has been entered or modified is validated. Oracle Forms navigates to each block in sequence, validating data in each record that is new or has been modified. If the data is invalid, Oracle Forms displays an error message to the user and fails commit processing else if the data is valid it is saved to the database.

5.2.5 Validation

Validation within Forms is handled at three levels; entry of a value into a field, entry of a record and commit time. Field validation has generally been handled by displaying a valid list of values to the user in response to an incorrect entry. This is achieved by providing a list of values for the required fields and setting their LOV

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For Validation property to True, Forms then handles the rest. Record and commit time validation is handled programmatically and, if required, will be specified in the relevant sections of the Forms technical specification below (Forms Structure details field and record validation and Action on Insert / Update / Delete commit time validation).

The cdb_ref_values table, defined in the common sub system [CTSPEC], is designed to hold values for a particular domain. ISRA reference data that exists in these tables is used throughout the screens for lookup and validation purposes. A common ISRA routine will exist in the common Forms library, std_lib, that will populate pop lists based on fields that require lists and validation from values held in the cdb_ref_values table. This generic routine is called when a form is initially started for each of these fields. The routine accepts a domain code which is used to populate a pop list with values held in cdb_ref_values for the domain code passed. Pop lists only allow selection of a valid item and therefore by using this mechanism any values defined in cdb_ref_values can be validated generically. A full list of all domains held in cdb_ref_values can be found in section 4.3.3.

Some fields are subject to numeric range checks. The valid ranges are held in the cdb_ref_values table within the value_from and value_to fields. Each field requiring the range check has a domain associated with it, against which the range is specified. If a field requires such validation then it will be detailed in the Forms Structure section of the Forms technical specification below.

5.2.6 Error Handling

Errors are handled generically across all of the screens using a common error handling routine held in the standard Forms library (std_lib). This function will return from cdb_error_messages a predefined Information, Warning or Fatal message that is invoked programmatically from the Forms. Warning and Information messages display the error message to the user without failing processing whilst Fatal messages fail processing.

5.2.7 Logical Deletes

Some of the standing data cannot be physically deleted and is subject to a logical delete instead. This is implemented using an active_flag on the relevant table indicating whether the record is currently active or not - the user selects or de-selects the checkbox as required. The delete button on the toolbar will be greyed out so as to disable delete functionality. A record that is to be de-activated is subject to the same pre-delete checks that a physical delete entails. The following tables are subject to logical deletes:

idb_mkt_ppt_roles

idb_llf_classes

idb_pfls

idb_pfl_classes

idb_sscs

idb_tprs.

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On each of the forms which access these tables, the list of records is ordered so that all the active records appear first, followed by all the inactive records.

5.3 Forms Infrastructure

All of the ISRA Forms have a common infrastructure that enables code and Forms objects to be shared and standardised across the system. Common Forms objects such as the Toolbar and Object Classes are held in ref_form. Common code falls into two categories, code held on the server and code held on the client. Code held on the server will include PL/SQL that must access the database. Code held on the client will include Forms specific code that is not required to access the database. Code on the server will be located in a number of packages including the common package, pkg_common (see Procedure pkg_common below) where code common to all Forms will be held. Code on the client is held in the common library, std_lib, each form references the library in order to access the code.

5.4 Browse Functions

ORACLE Forms can be called in two modes, a maintenance mode and a query mode where access is restricted to query only. The browsing functions outlined in the ISRA User Interface Logical Design [IULD] will be handled at the physical level by calling the maintenance Forms in query only mode from the menu. For this reason no detailed specification of the ISRA Forms are provided for browse functions unless an associated maintenance form does not exist.

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5.5 Data Usage

5.5.1 System Data

The ISRA user interface maintains the following standing data tables with the following modules.

Table	Module
IDB_AFYC_SETS	ISY_AFYCMAIN
IDB_BM_UNIT_IN_GSP_GROUPS	ISY_BUGGMAIN
IDB_CLOCK_INTERVALS	ISY_TIPAMAIN
IDB_DAILY_PFL_PARAMETERS	ISY_TEMPMAIN
IDB_DA_IN_GSP_GROUPS	ISY_DAGGMAIN
IDB_GSP_GROUPS	ISY_GSPGMAIN
IDB_GSP_GROUP_CORRECTION_SFS	ISY_GCSFMAIN
IDB_NHH_BM_UNIT_ALLOCATION	ISY_NBMAMAIN
IDB_LLF_CLASSES	ISY_LLFCMAIN
IDB_MARKET_PPTS	ISY_MAPAMAIN
IDB_MARKET_PPT_ROLES	ISY_MAPAMAIN
IDB_MKT_PPT_ROLE_IN_GSP_GROUPS	ISY_MPGGMAIN
IDB_PFLS	ISY_PROFMAIN
IDB_PFL_CLASSES	ISY_PROFMAIN
IDB_PFL_PRODUCTION_RUNS	ISY_PROFUTIL
IDB_SETTLEMENTS	ISY_CALEMAIN
IDB_SETTLEMENT_DAYS	ISY_CLOCMAIN
IDB_DF_STANDING_DATA	ISY_DFSDMAIN
IDB_SENT_BY_MKT_PPTS	ISY_DFSDMAIN
IDB_MEASUREMENT_REQUIREMENTS	ISY_SSCTMAIN
IDB_SSCS	ISY_SSCTMAIN
IDB_SSR_RUNS	ISR_RSSRUTIL
IDB_SSR_RUN_GSP_GROUP	ISR_RSSRUTIL
IDB_SUP_DATA_AGTN_IN_SSR_RUNS	ISR_RSSRUTIL
IDB_TSW_CONTACT_INTERVALS	ISY_TSCIMAIN
IDB_TPRS	ISY_TIPAMAIN
IDB_TELESWITCH_CONTACT_RULES	ISY_TIPAMAIN
IDB_VMR_PFL_CLASSES	ISY_CONCMAIN
IDB_VSCPCS	ISY_CONCMAIN

5.5.2 Standing Data Audit

All inserts, updates and deletes to standing data are subject to auditing. This requirement is fulfilled with the use of database triggers that are associated with the standing data tables that write to audit tables (as defined in the Common Technical Specification [CTSPEC]). These audit tables can then serve as the basis from which the ISRA Standing Data Audit Reports can be run.

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The ability to modify standing data after it has been used in a Final Initial Settlement run is restricted to the ISRA Standing Data Manager only (see the STANMAN role detailed in Menu Security section below). A common ISRA function, f_ssr_exists - specified in pkg_common_spec, checks whether or not the standing data that is to be inserted, updated or deleted has been used in a Final Initial Settlement Run, if it has, then only the STANMAN role is permitted to modify the data. These changes are written to audit tables via the database triggers described above but, in addition, a report is initiated using the common function, f_audit_stanman, that submits a Standing Data Audit Report for the STANMAN user.

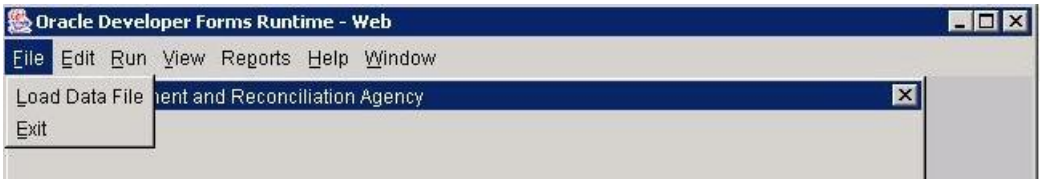
5.6 User Interface Details

5.6.1 ISRA Application Menu Structure

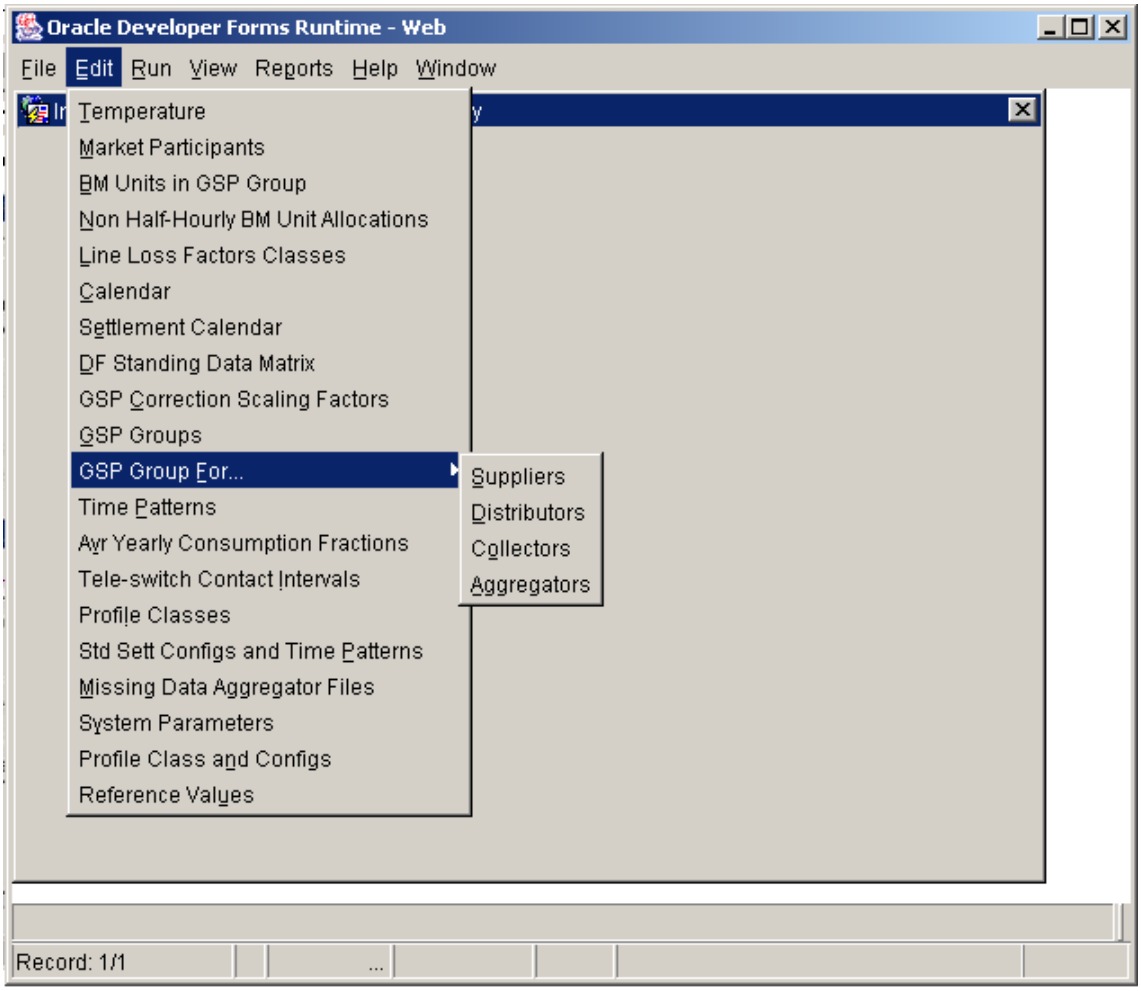
The following application menu will provide access to the ISRA sub systems.

Each of the above menu options will call a further sub-menu:

File

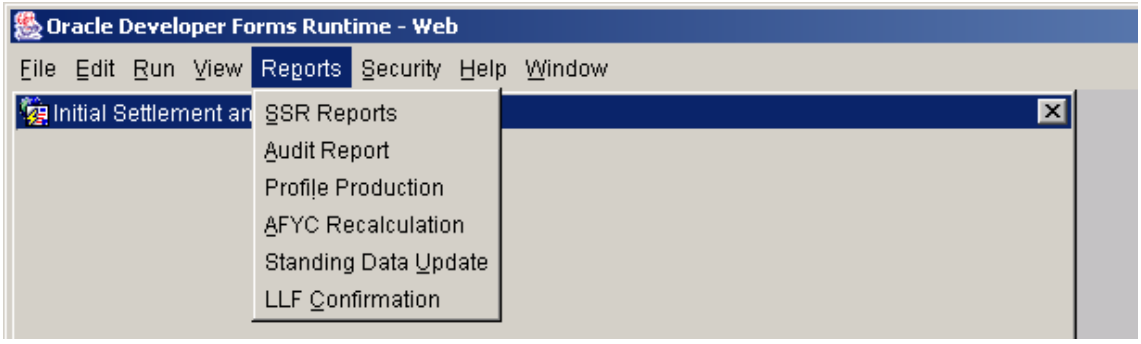


Edit

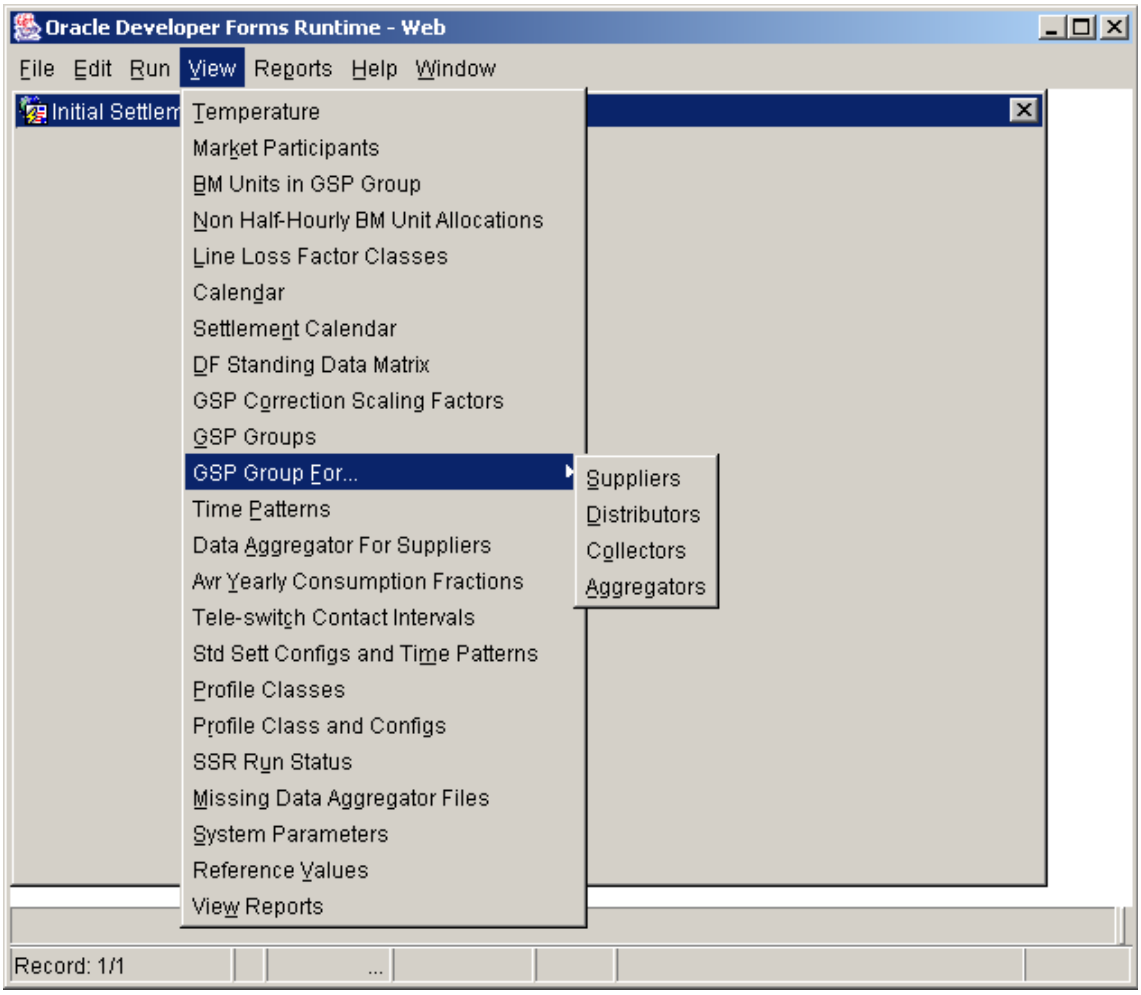


Run

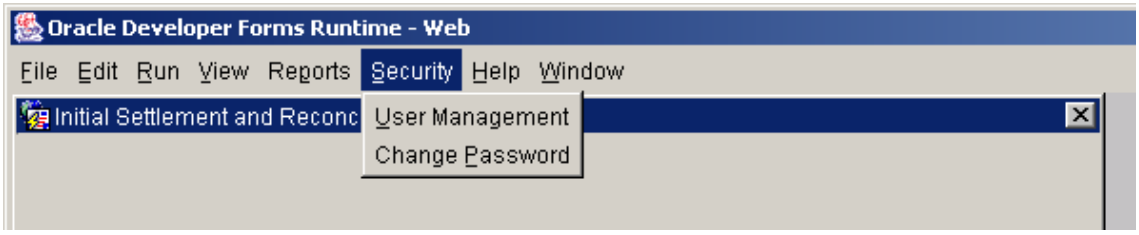
Reports



View



Security



Help

5.6.1.1 Menu Security

Access to the interface modules will be handled via database roles. These roles will be assigned to the relevant menu options. If the user does not have access to a particular option, then it will be greyed out. The following roles have been defined:

5.6.1.1.1 STANMAN - ISRA Standing Data Manager

The job will involve maintaining standing data for the system after the data has been used in a Final Initial Settlement Run.

5.6.1.1.2 OPSUPER - ISRA Operations Supervisor

The job will involve the maintaining of standing data for the system, monitoring and support of the operation of the system and monitoring and support of the interfaces.

5.6.1.1.3 OPERA - ISRA Operator

The job will involve the checking and collection of data for a run, the checking and collection of standing data, manually entering collected data, initiating Settlement and Reconciliation runs and initiating report runs.

5.6.1.1.4 SYSMAN - ISRS System Manager

The job will involve the monitoring of system performance, managing security and audit and managing backup and recovery.

5.6.1.1.5 Module Role Access

F - Full Access

Q - Query Only

SF - Update after a Final Initial Settlement Run permitted.

Blank - No Access

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MENU / Module	STANMAN	OPSUPER	OPERA	AUDI	MENU OPTION
					File
IDL_LOADUTIL	F	F	F		Load Data
					Edit
ISY_TEMPMAIN	F / SF	F	F		Temperature
ISY_MAPAMAIN	F / SF	F	Q		Market Participants
ISY_LLFCMAIN	F / SF	F	Q		Line Loss Factor Classes
ISY_NBMAMAIN	F/SF	F	Q		Non-Half Hourly BM Unit Allocations
ISY_CLOCMAIN	F / SF	F	Q		Calendar
ISY_CALEMAIN	F / SF	F			Settlement Calendar
ISY_DFSDMAIN	F / SF	F			DF Standing Data Control Matrix
ISY_GCSFMAIN	F / SF	F	Q		GSP Correction Scaling Factors
ISY_GSPGMAIN	F / SF	F	Q		GSP Groups
					GSP Group For…
ISY_MPGGMAIN	F / SF	F	Q		Suppliers Distributors Collectors
ISY_DAGGMAIN	F / SF	F	Q		Aggregators
ISY_BUGGMAIN	F / SF	F	Q		BM Units For Supplier In GSP Groups
ISY_TIPAMAIN	F / SF	F			Time Patterns
ISY_AFYCMAIN	F / SF	F	Q		Avr Yearly Consumption Fractions
ISY_TSCIMAIN	F / SF	F	F		Tele-switch Contact Intervals
ISY_SSCTMAIN	F / SF	F			Std Sett Config and Time Patterns
ISY_PROFMAIN	F / SF	F	Q		Profile Classes
ISY_CONCMAIN	F / SF	F	Q		Profile Class and Configs
CSL_REVAMAIN	F	F	Q		Reference Values
CSL_SYPAMAIN	F	F	Q		System Parameters
CSL_REPAQURY	Q	Q	Q		View Reports[14]
					Run
ISR_RSSRUTIL	F	F	F		Run SSR
IDP_PROFUTIL	F	F	F		Daily Profile Production Run
IRP_PROXUTIL	F	F	F		Extract Daily Profiles
IRP_EACXUTIL	F	F	F		Extract EAC Data
					Reports
MENU / Module	**STANMAN**	**OPSUPER**	**OPERA**	**AUDI**	**MENU OPTION**
IDP_SUSEREPT	F	F	F		SSR Reports

[14] NB: Access to particular report types is configurable according to the user role. See the Common Tech Spec 4.3.26 for further details.

IDP_GRINUTIL				F	Audit Report
IDP_PROFREPT	F	F	F		Profile Production
ISY_LLFC_REPT	Q	Q	Q		LLF Confirmation Report
IRP_AFYCREPT	F	F	F		AFYC Recalculation Report
IDP_GRINUTIL	F	F	F		Standing Data Update
					View
ISY_DASUQURY	Q	Q	Q		Data Aggregators For Suppliers
ISY_CALEQURY	Q	Q	Q		Settlement Calendar
ISY_SSRRQURY	Q	Q	Q		SSR Run
ISY_MDAGQURY	Q	Q	Q		Missing Data Aggregator Files
					Security
IUA_MSS		F			User Management
IUA_UPC	F	F	F		Change Password

5.6.2 Package pkg_common specification

This package will contain all functions and procedures that are not necessarily related to a specific table.

5.6.2.1 Function f_authorise_change specification

5.6.2.1.1 Inputs and Outputs

5.6.2.1.2 Parameters In

p_operation_type:

- I - Insert
- U - Update
- D - Delete

p_user_role

p_effective_from

p_old_effective_to

p_effective_to

5.6.2.1.3 Parameters Out

p_authorised

p_used_in_ssr

5.6.2.1.4 Procedure Functionality

Test whether or not change impacts an existing Final Initial Settlement Run.

If the ‘effective from settlement date’ is BEFORE the earliest final initial settlement

THEN

If change only affects the ‘effective to settlement date’

THEN

If (the old ‘effective to settlement date’ is BEFORE the earliest final initial settlement) OR (the new ‘effective to settlement date’ is BEFORE the earliest final initial settlement)

THEN

Stop the edit or generate IC003 report

ELSE

Let the change go ahead

ENDIF

ELSE

Stop the edit or generate IC0003 report

ENDIF

ELSE

Let the change go ahead

ENDIF

If the change impacts an existing SSR Run then only authorise the change if the user is a Standing Data Manager. If, however, there is no impact to an SSR Run then authorise the change regardless of the user.

If used_in_ssr = ‘Y’ then

If user = ‘STANMAN’ then

p_authorised = ‘Y’

Else

p_authorised = ‘N’

End if

Else

p_auhorised = ‘Y’

End if

5.6.2.2 Function f_validate_effective_from specification

5.6.2.2.1 Inputs and Outputs

5.6.2.2.2 Parameters In

p_effective_from

p_effective_to

5.6.2.2.3 Parameters Out

Return boolean.

5.6.2.2.4 Procedure Functionality

The effective_to should be greater than or equal to effective_from.

5.6.2.3 Function f_audit_stanman specification

5.6.2.3.1 Inputs and Outputs

5.6.2.3.2 Parameters In

none

5.6.2.3.3 Parameters Out

Return boolean.

5.6.2.3.4 Procedure Functionality

Initiate the Standing Data Audit Report using the CSC.Submit function, passing it the following character string :

'<user> | <dd-MON-yyyy hh:mi> | <tablename> | O | Insert, Delete or Update | <column,column,column etc…>'

Note: column information must be after image except in the case of deletes where only the prime key is used.

Return TRUE if the CSC.Submit function is initiated correctly, FALSE if not.

5.6.2.3.5 Function f_check_dates_overlap specification

5.6.2.3.6 Inputs and Outputs

5.6.2.3.7 Parameters In

p_table_name

5.6.2.3.8 Parameters Out

Return boolean.

5.6.2.3.9 Procedure Functionality

Check the date range on the values in the table specified to ensure that none of them overlap for the primary key of the table.

Return TRUE if there are overlapping dates, FALSE if not.

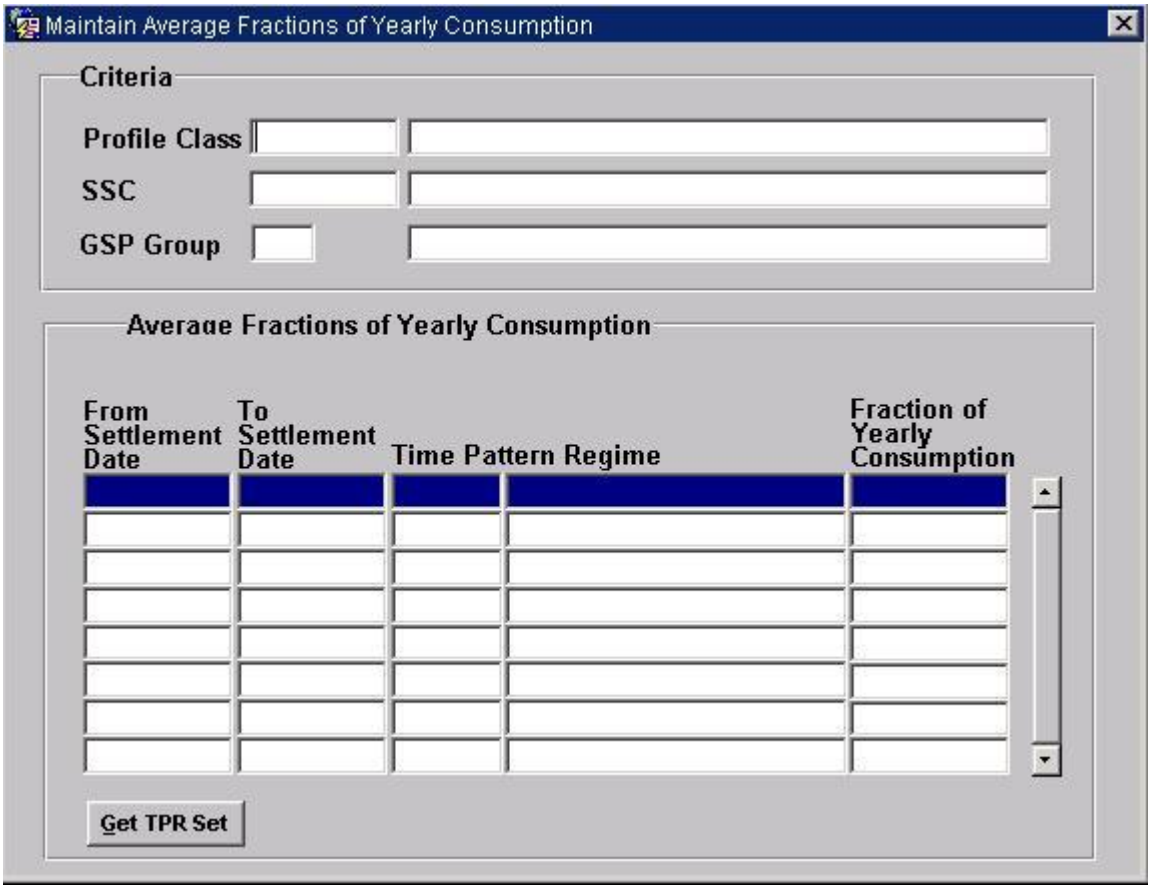
5.6.2.4 Tools

Oracle database package.

5.6.3 Form ISY_AFYCMAIN

The following describes the Maintain Average Fractions of Yearly Consumption form.

5.6.3.1 Screen layout



5.6.3.2 Screen behaviour

Functions Implemented	I0033 - Define Average Fractions of Yearly consumption I0033E - Browse Average Fractions of Yearly consumption
Block	Criteria
On Entry	Ready for user input.
List of Values	On Profile Class, displaying Profile Class and Profile Class Description. On SSC displaying SSC and SSC Description, which are related (as part of a Valid Measurement Requirement Profile Class) to the Profile selected in (1). On GSP Groups displaying GSP Group and GSP Group Name.
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A
Block	Average Fractions of Yearly Consumption
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A

Buttons	Get TPR Set Create one record in this block for each of the records which are defined as part of the Set of Consumption Fractions adding up to a total of 1.
Additional Behaviour	This block can only be updated. The relevant Set to be assigned to the Criteria block is obtained from the Get TPR Set button.

5.6.3.3 Description

This form will consist of one window. It will contain the following blocks:

CTRL - non-base table, non-queryable, insert/update/delete not allowed.

GSP Group will be a lookup to idb_gsp_groups. Profile Class and SSC will be a joint lookup to idb_vscpcs. GSP_group_name, pfl_class_desc and ssc_desc should all be shown as part of validation.

AFYC - base-table on idb_afycs, queryable, update only allowed. This block will always be within the context of the information in the context block and cannot be queried independently. The Time Pattern Regime in this block must be retrieved by using the ivpc_id key in idb_afycs.

5.6.3.4 Form structure

Object	**Description**
Form: *AFYCMAIN*	Title : Maintain Average Fractions of Yearly Consumption
Block: *CTRL*	non-base table. Insert, Update allowed. Join columns: ctrl.nbt_gspg_id = afyc.gsp_group_id ctrl.nbt_prof_class_id = idb_vscpcs.pfl_class_id through idb_vmr_pfl_classes to idb_afycs. ctrl_nbt_ssc_id = idb_vmr_pfl_classes.ssc_id to idb_afycs.
Nbt_prof_class_id	Label : Profile Class Display. Mandatory. User Enterable. Insert. Update. LoV on idb_vscpcs. A combination of pfl_class_id and ssc_id to be shown.
Nbt_prof_class_desc	Display only.
Nbt_ssc_id	Label : SSC Display. Mandatory. User Enterable. Insert. Update. LoV on idb_vscpcs. A combination of pfl_class_id and ssc_id to be shown.
nbt_ssc_desc	Display only.
Nbt_gspg_id	Label : GSP Group Display. Mandatory. User Enterable. Insert. Update. LoV on gsp_groups.

Object	Description
nbt_gspg_name	Display only.
Block: *AFYC*	Base table on idb_afycs. Query, Update, Delete allowed. Order by eff_from_sett_date.
eff_from_sett_date	Label : From Settlement Date Display. User Enterable. Query. Update. Delete. Format : DD-MON-YYYY.
eff_to_sett_date	Label : To Settlement Date Display. User Enterable. Query. Update. Delete. Format : DD-MON-YYYY
nbt_tpr_id	Label : Time Pattern Regime Display only.
nbt_tpr_desc	Display only.
Afyc	Label : Fraction of Yearly Consumption Display. User Enterable. Query. Update. Delete. Validation: Range check against cdb_ref_values where domain_code = 'AFYC'.

5.6.3.5 Action on Query

Automatically populate afyc.nbt_tpr_desc from afyc.tpr_id via the idp_tprs table.

5.6.3.6 Action on Update

Use function pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Use functions pkg_common.f_check_range to validate afyc values.

Ensure that the Effective From Date is less than or equal to the Effective To Date, and that the Effective period of the AFYC set does not overlap other sets. If an update to an Effective To Date will produce a gap between existing sets, pop up a warning that a gap between AFYC sets is being created.

If an update to an Effective To Date will leave an instance of Non-Half Hourly BM Unit Allocation (NHHBMUA) for the corresponding GSP Group, Profile Class and Standard Settlement Configuration without an AFYC for all the Settlement Days for which the NHHBMUA is effective, then pop up a warning.

5.6.3.7 Action on Insert

Insert processing only carried out under programmatic control.

5.6.3.8 Action on Delete

Use function pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

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If one record in a Set is validly deleted then all the other records within the Set must be deleted also.

If the deletion will leave an instance of Non-Half Hourly BM Unit Allocation (NHHBMUA) for the corresponding GSP Group, Profile Class and Standard Settlement Configuration without an AFYC for all the Settlement Days for which the NHHBMUA is effective, then pop up a warning.

5.6.3.9 Action on Post Commit.

Ensure that the sum(afyc) = 1.

If one Effective To Settlement Date in a AFYC set is updated, then all other records within the set must also be updated to the same date.

5.6.3.10 Action on button **Get TPR Set**.

Ensure that the previous Set of records has been closed off by the User. Pop up a dialogue box which will accept the new settlement date from the user. Retrieve the appropriate Set of records from the idb_vmr_pfl_classes table based on the Criteria entered, ie. Match on:

ctrl.nbt_prof_class_id = idb_vscpcs.pfl_class_id through idb_vmr_pfl_classes to idb_afycs.

ctrl_nbt_ssc_id = idb_vmr_pfl_classes.ssc_id to idb_afycs and insert these records into the idb_afycs table, using the new settlement date entered by the user.

For a given combination of Profile Class, GSP Group and Standard Settlement Configuration, if the eff_from_sett_date of a new set falls between the eff_from_sett_date and eff_to_sett_date of an existing set, produce an error and disallow the insert. Note that the eff_to_sett_date of the new set can be inserted whilst updating AFYC values and prior to committing to the database.

If the eff_from_sett_date of the new set is greater than 1 day after the most recent existing eff_to_sett_date, pop up a warning that a gap in AFYC sets is being created.

Insert these records into the idb_afycs table, setting each afyc column to zero. The records must then be updated so as to sum to 1 prior to committing to the database.

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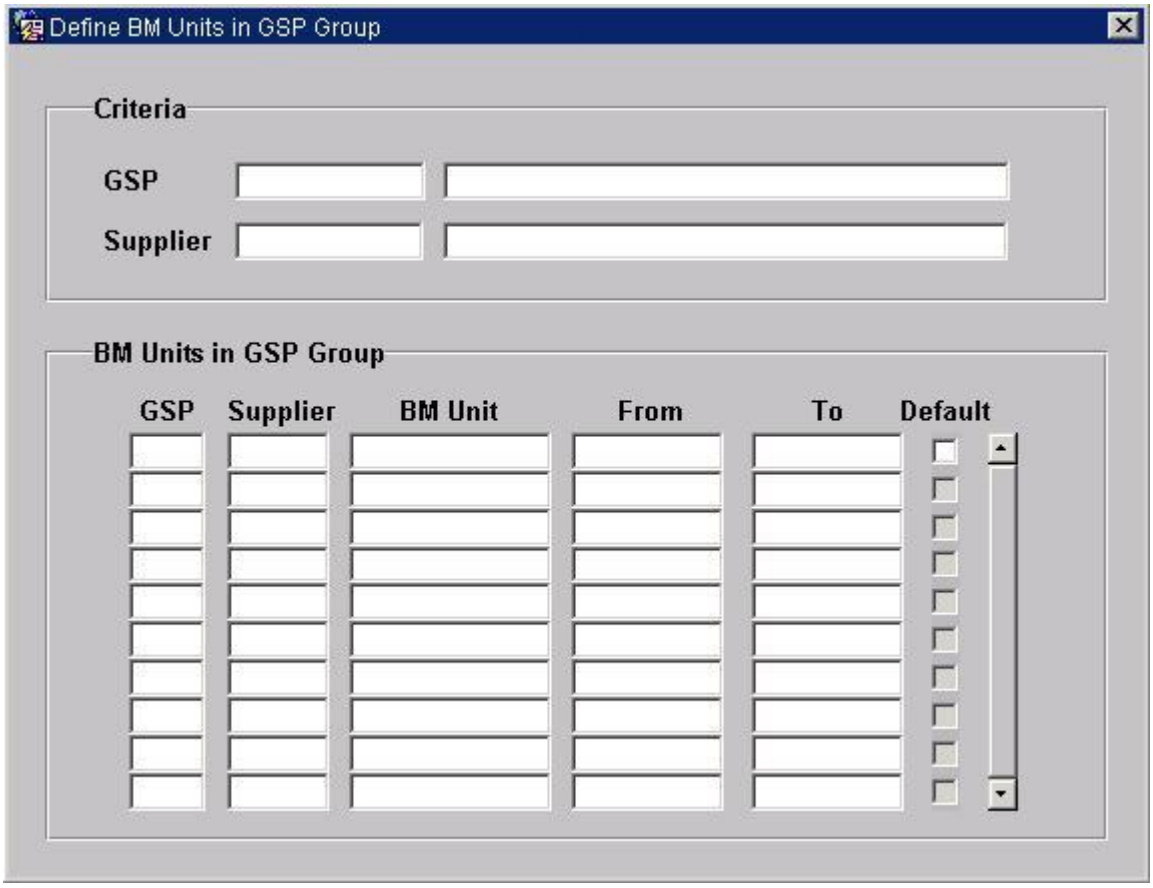
5.6.4 Form ISY_BUGGMAIN

The following describes the Maintain BM Units For Supplier In GSP Group form.

5.6.4.1 Screen layout



5.6.4.2 Screen behaviour

Functions Implemented	I0046 Define BM Units For Supplier In GSP Group I0046E Browse BM Units For Supplier In GSP Group
Block	Criteria
On Entry	Ready for user input.
List of Values	On Supplier, displaying Supplier and Supplier Name On GSP Groups displaying GSP Group and GSP Group Name.
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A
Block	BM Units
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A

5.6.4.3 Description

This form will consist of one window. It will contain the following blocks:

CTRL - non-base table block, non-queryable, insert/update/delete not allowed. GSP Group will be a lookup to idb_gsp_groups. Supplier will be a lookup to idb_mkt_ppt_roles. GSP_Group_Name and Supplier Name should be shown as part of validation.

BMUFSIGG - base-table idb_bm_unit_in_gsp_group, queryable, insert, update and delete allowed. This block will always be within the context of the information in the criteria block and cannot be queried independently.

5.6.4.4 Form structure

Object	Description
Form: *BUGGMAIN*	Title : Maintain BM Units For Supplier In GSP Group
Block: *CTRL*	non-base table. Query. Join columns: ctrl.nbt_gsp_group_id = bmufsigg.gsp_group_id ctrl.nbt_supplier_id = bmufsigg.mkt_ppt_id.
nbt_supplier_id	Label : Supplier Display. Mandatory. Query LoV on idb_mkt_ppts and idb_mkt_ppt_roles tables where mkt_ppt_role_code = 'X' and active_flag = 'Y'.
nbt_supplier_name	Display only.
nbt_gsp_group_id	Label : GSP Group Display. Mandatory. Query LoV on gsp_groups.
nbt_gsp_group_name	Display only.
Block: *BMUFSIGG*	Base table on idb_bm_unit_in_gsp_groups Query, Insert, Update, Delete Order by gsp_group_id, supplier_id, bm_unit_id, eff_from_sett_date.
gsp_group_id	Label : GSP_Group Id Display. User Enterable. Query. Insert. Update. Delete.
mkt_ppt_id	Label : Supplier Id Display. User Enterable. Query. Insert. Update. Delete.
m*kt_ppt_role_code*	Non display. Value : 'X'.
bm_unit_id	Label : BM Unit Id Display. User Enterable. Query. Insert. Update. Delete.
eff_from_sett_date	Label : From Settlement Date Display. User Enterable. Query. Insert. Update. Delete. Format : DD-MON-YYYY.

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Object	Description
eff_to_sett_date	Label : To Settlement Date Display. User Enterable. Query. Insert. Update. Delete. Format : DD-MON-YYYY
default_bm_unit_flag	Label : Default BM Unit Flag Checkbox. Display. User enterable. Query. Insert. Update. Delete

5.6.4.5 Action on Query

Automatically populate ctrl.nbt_supplier_name from ctrl.nbt_supplier_id using the idb_mkt_ppt_roles and idb_mkt_ppts tables.

Automatically populate ctrl.nbt_gsp_group_name from ctrl.gsp_group_id using the idb_gsp_group table.

5.6.4.6 Action on Update

Use function pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Ensure that the Effective From Date is less than or equal to the Effective To Date.

If the update is to BM Unit Id, GSP Group Id, Supplier Id or Effective From Date then ensure that there are no child instances of Non-Half Hourly BM Unit Allocation. If a child record exists, then the update is not permitted.

Ensure that an update to the Effective To Date does not leave a child instance of Non-Half Hourly BM Unit Allocation with an effective date range outside of the parent record.

Ensure that the Effective From Date for Scottish GSP Groups is on or after BETTA Start Date.

5.6.4.7 Action on Insert

Use function pkg_common.f_authorise_change(I) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Ensure that the Effective From Date is less than or equal to the Effective To Date.

Ensure that the Effective From Date for Scottish GSP Groups is on or after BETTA Start Date.

5.6.4.8 Action on Delete

Use function pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

5.6.4.9 If a delete is permitted then cascade delete any child Non-Half Hourly BM Unit Allocation records. A warning message is displayed to the user before the delete is carried out.

5.6.4.10 Action on Pre-Commit

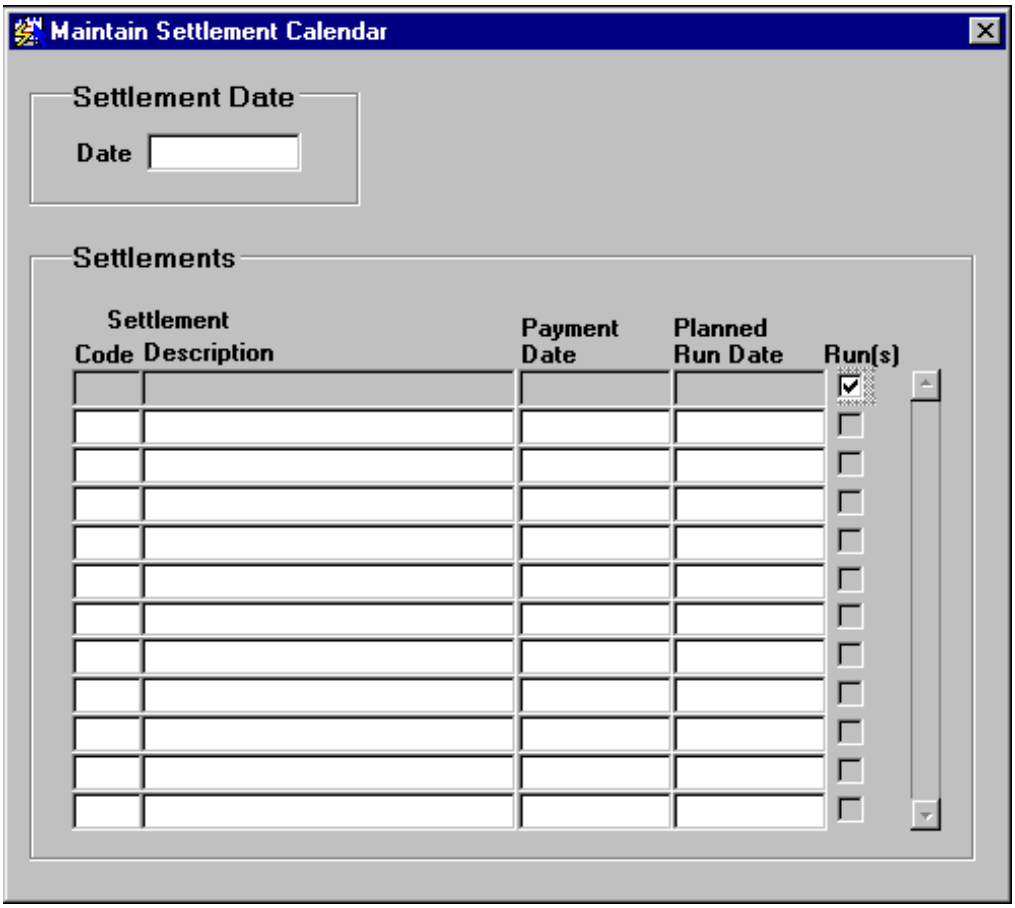
For each BM Unit ensure that the Effective period of the BM Unit set does not overlap other instances of the same BM Unit Id.

For each possible Supplier and GSP Group combination ensure that no more than one BM Unit has the Default BM Unit Flag set to 'Y' for any given Settlement Date.

5.6.5 Form ISY_CALEMAIN

The following describes the Maintain Settlement Calendar form.

5.6.5.1 Screen layout



5.6.5.2 Screen behaviour

Function Implemented	I0030 - Define Settlement Calendar.
Block	Settlement Date
On Entry	Ready for user input.
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A
Block	SSR Runs
On Entry	Automatically Query.
List of Values	On Settlement Code, displaying Settlement Code and Settlement Description
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A

5.6.5.3 Description

This form will be based on two blocks:

CTRL - non-base table, non queryable.

SETT - base table on idb_Settlements. Queryable, insert/delete/update allowed. Each record in this block will be linked directly to the settlement date in the top block, ie. Only records matching the settlement date above can be manipulated here.

5.6.5.4 Form structure

Object	Description
Form: *CALEMAIN*	Title : Maintain Settlement Calendar.
Block: *CTRL*	non-base table. Insert, Update allowed. Join columns: ctrl.nbt_sett_date = sett.sett_dt.
nbt_sett_date	Label : Date Display. Mandatory. User Enterable. Insert. Update.
Block: *SETT*	Base table on idb_settlements. Query, Update, Insert, Delete allowed. Order by settlement_code.
sett_code	Label : Code Display. User Enterable. Query. Insert. Delete. Must be unique for the nbt_sett_date. LoV on idb_sett_types.
nbt_sett_description	Label : Description Display only.
payment_date	Label : Payment Date Display. User Enterable. Query. Insert. Delete. Format : DD-MON-YYYY.
nbt_runs	Label : Run(s) Display only.
Planned_ssr_run_date	Label : Planned Run Date Display. User Enterable. Query. Insert. Update. Delete. Format : DD-MON-YYYY.

5.6.5.5 Action on Query

Populate the nbt_sett_description from idb_sett_types where idb_sett_types.sett_code = sett_code.

Set the nbt_runs checkbox to 'Y' if idb_ssr_runs.sett_date and sett_code = sett.sett_date and sett_code, 'N' if no record exists.

If sett_code ≠ DF, then planned run date and payment date set 'read only' if an SSR run has completed for this settlement date and code, or if an SSA run has completed for this settlement date.

5.6.5.6 Action on Update

If sett_code = DF, then planned run date and payment date are set 'read only' if an SSR run has completed for this settlement date and code. (Note that in contrast to "Action on Query" described above, completion of an SSA run for the Settlement Date has no bearing in this case.)

planned_ssr_run_date must be <= payment_date.

5.6.5.7 Action on Insert

planned_ssr_run_date must be <= payment_date.

5.6.5.8 Action on Delete

Deletion not allowed if:

idb_ssr_runs.sett_dt = sett.sett_dt and

idb_ssr_runs.sett_code = sett.sett_code. Basically if a record exists in idb_ssr_runs.

Additionally, if sett.sett_code≠DF deletion is not allowed if a record exists in idb_ssa_sett_runs for the settlement date.

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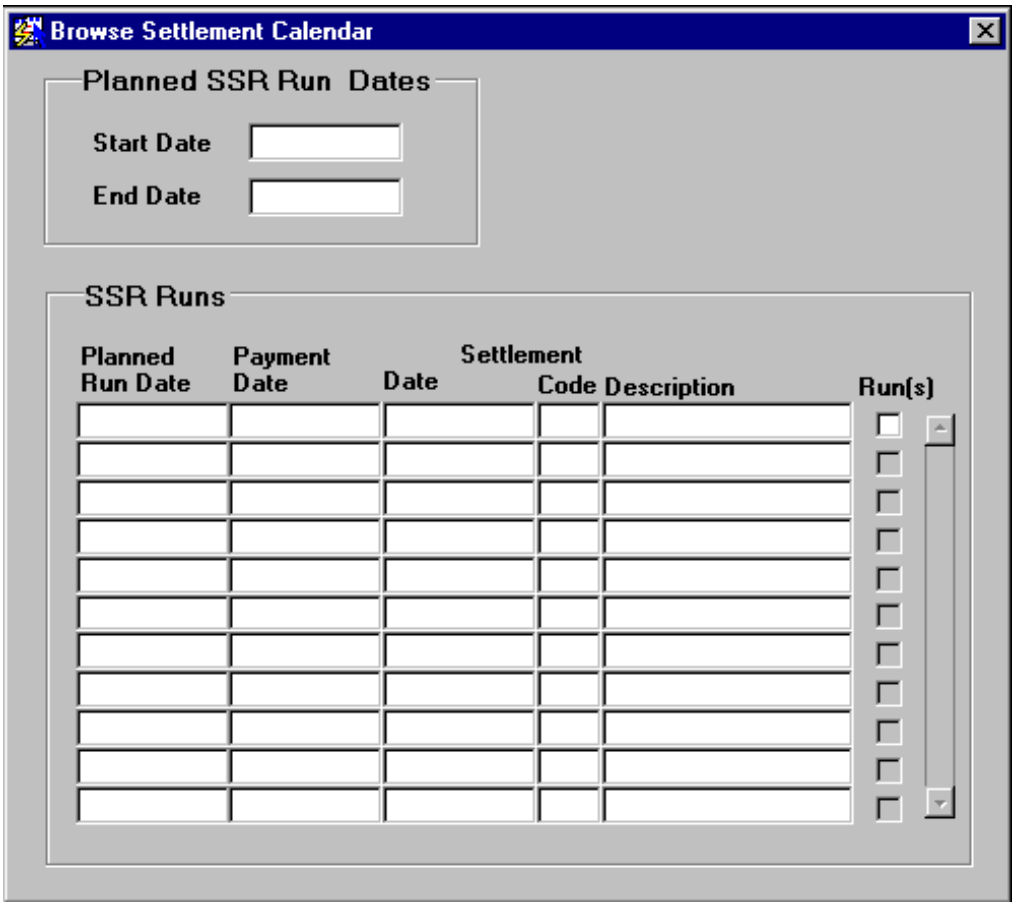
5.6.6 Form ISY_CALEQURY

The following describes the Browse Settlement Calendar form.

5.6.6.1 Screen layout



5.6.6.2 Screen behaviour

Function Implemented	I0030E - Browse Settlement Calendar
Block	Planned SSR Run Dates
On Entry	Ready for user input.
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	If the Start Date is left null then all records up to the End Date will be shown. If the End Date is left null then all records following the Start Date will be shown.
Block	SSR Runs
On Entry	Automatically Query.
List of Values	On Settlement Code, displaying Settlement Code and Settlement Description
Poplists	N/A
Buttons	N/A

Additional Behaviour	This block will only have querying options available. No changes to the database may be carried out here. Only records within the range of the Planned SSR Run date(s) in the Planned SSR Run Dates will be shown here.

5.6.6.3 Description

This form will be based on two blocks:

CTRL - non-base table, non queryable. This block should be restricted to only showing one record. The Start Date must be <= The End Date.

SETT - base table on idb_settlements. Queryable, insert/delete/update disallowed. Each record in this block will be linked directly to the Planned Run date(s) in the top block, ie. Only records matching the date(s) above can be viewed here.

5.6.6.4 Form structure

Object	Description
Form: *CALEQURY*	Title : Browse Settlement Calendar.
Block: *CTRL*	non-base table. Insert, Update allowed. Join columns: sett.planned_ssr_run_date between ctrl.nbt_start_date and ctrl.nbt_end_date. The ctrl.nbt_start_date must be <= ctrl.nbt_end_date.
Nbt_sett_start_date	Label : Start Date Display. Mandatory. User Enterable. Insert. Update.
Nbt_sett_end_date	Label : End Date Display. Mandatory. User Enterable. Insert. Update.
Block: *SETT*	Base table on idb_settlements. Query only allowed. Order by planned_ssr_run_date descending, payment_date descending, sett_date descending.
Sett_date	Label : Settlement Date Display. User Enterable. Query.
Sett_code	Label : Settlement Code Display. User Enterable. Query.
Nbt_Sett_description	Label : Settlement Description Display only.
Payment_date	Label : Payment Date Display. User Enterable. Query. Format : DD-MON-YYYY.

Object	Description
Planned_ssr_run_date	Label : Planned Run Date Display. User Enterable. Query. Format : DD-MON-YYYY.
Nbt_runs	Label : Run(s) Display only.

5.6.6.5 Action on Query

Populate the nbt_sett_description from idb_settlement_types where sett_code = sett.sett_code.

Set the nbt_runs checkbox to 'Y' if idb_ssr_runs.sett_date and sett_code = sett.sett_date and sett_code, 'N' if no record exists.

5.6.6.6 Action on Update

Disallowed.

5.6.6.7 Action on Insert

Disallowed.

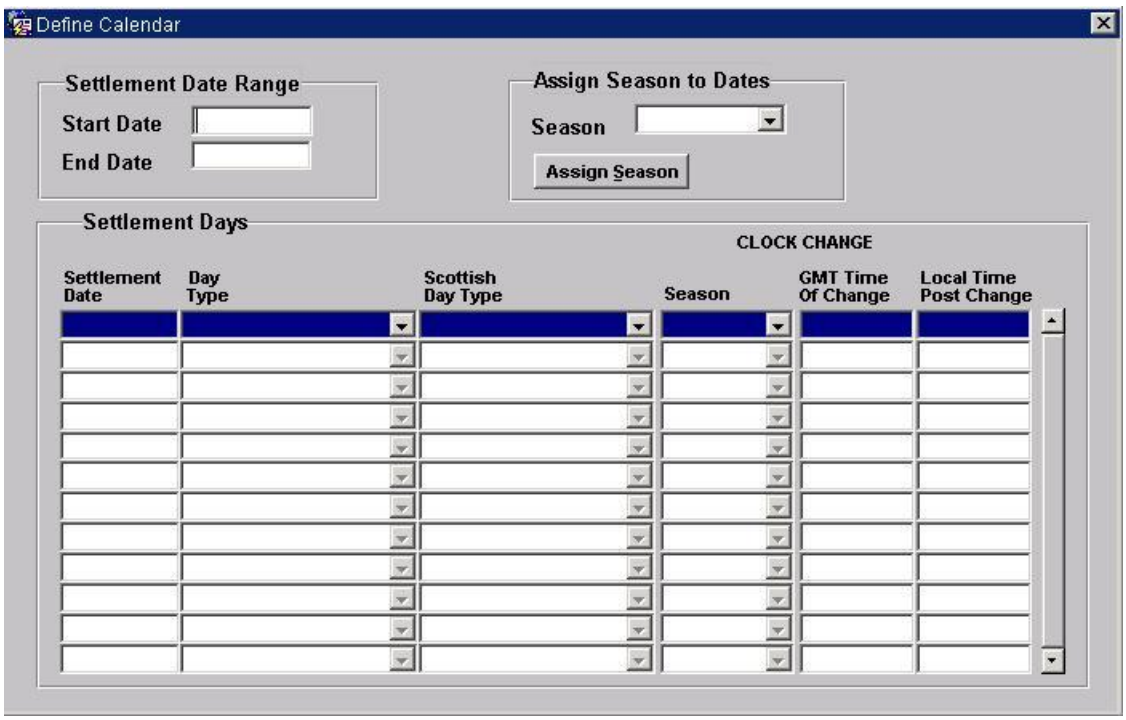
5.6.6.8 Action on Delete

Disallowed.

5.6.7 Form ISY_CLOCMAIN

The following describes the Maintain Calendar form.

5.6.7.1 Screen layout



5.6.7.2 Screen behaviour

Function Implemented	I0003 - Define Calendar
Block	Settlement Date Range
On Entry	Ready for user input.
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A
Block	Assign Season to Dates
On Entry	Ready for user input.
List of Values	N/A
Poplists	On Season, displaying the Season Description.
Buttons	Assign Season Create Settlement Days for the Season specified. This is done on-line with the cursor changing to a "busy" state for the duration of the processing.
Additional Behaviour	N/A
Block	Settlement Days
On Entry	Automatically Query.
List of Values	N/A
Poplists	On Day Type displaying the Day Type Description. On Scottish Day Type displaying the Scottish Day Type Description. On Season displaying the Season Description.
Buttons	N/A
Additional Behaviour	All of the Settlement Days (and any associated Clock Changes) will be displayed within the date range specified above. If the Start Date is null, then all Days up to the End Date will be shown. If the End Date is null, then all Days from the Start Date onwards will be shown.

5.6.7.3 Description

This form is based on one window consisting of two blocks.

CTRL - non-base table, no query, insert, update or delete allowed. Only one record can exist in this block, ie. No up/down record navigation allowed.

SETD - base-table on idb_settlement_days. Query/insert/update allowed. Querying will be within the context of the date range specified in the top block.

Pressing the **Assign Season** button will check to make sure that the date range and Season have been entered and then pop-up a dialogue window informing the User of the action that is about to be undertaken and allow them at this point to either Continue or Cancel the operation. If they Continue then the process will create a Settlement Day for each date within the date range and assign it to the Season Id entered, if a Settlement Day doesn't currently exist. The Day Type and Scottish Day Type must be calculated at the time the Settlement_date record is inserted and will be populated at this time.

To make updates to existing Settlement Days Seasons, the user explicitly updates the individual Settlement Day records using the Season pop list. This action will assign the chosen season to all settlement dates in the range selected on the form. Furthermore, any dates in this range for which settlement date records do not exist will be *created*.

Since the deletion of a clock change affects the meaning of all clock changes which follow it, the form allows the user to delete only the latest clock change. Multiple clock changes can be removed by deleting them in reverse order, that is, clock changes for latest settlement days first.

5.6.7.4 Form structure

Object	Description
Form: *CLOCMAIN*	Title : Maintain Calendar.
Block: *CTRL*	non-base table. Insert, Update allowed. Join columns: setd.sett_date between ctrl.nbt_start_date and ctrl.nbt_end_date
Nbt_start_date	Label : Start Date Display. Mandatory. User Enterable. Insert. Update.
Nbt_end_date	Label : End Date Display. Mandatory. User Enterable. Insert. Update.
Block: CTRL_SEAS	non-base table. Insert, Update allowed.
Nbt_season	Label : Season Display. User Enterable. Insert. Update. LoV on idb_ref_values where domain_code = 'SEAS'.
Block: *ISD*	Base table on idb_settlement_days. Query, Update, Insert allowed. Order by sett_date.
Sett_date	Label : Settlement Date Display. User Enterable. Query. Update. Insert. Format : DD-MON-YYYY.
Day_type	Label : Day Type Display. User Enterable. Query. Update. Insert. LoV on idb_ref_values where domain_code = 'DAYT'.
Scottish_day_type	Label : Scottish Day Type Display. User Enterable. Query. Update. Insert. LoV on idb_ref_values where domain_code = 'DAYT'.

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Object	Description
Season_id	Label : Season Display. User Enterable. Query. Update. Insert. LoV on idb_ref_values where domain_code = 'SEAS'.
Gmt_time	Label : GMT Time of Change Display. User Enterable. Query. Update. Insert. Format 9999. This will be in 24 hour clock format.
Post_change_local_time	Label : Local Time Post Change Display. User Enterable. Query. Update. Insert. Format 9999. This will be in 24 hour clock format.

5.6.7.5 Action on Query

Default forms behaviour.

5.6.7.6 Action on Update

Use function pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

If a gmt_time value is entered then a post_change_local_time must also be entered.

The clock change must not exceed one hour. This is determined by subtracting the GMT time from the post_change_local_time and comparing this with the same subtraction from the previous clock time change.

Only the latest clock change may be modified.

5.6.7.7 Action on Insert

Use function pkg_common.f_authorise_change(I) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

If a gmt_time value is entered then a post_change_local_time must also be entered.

The clock change must not exceed one hour. This is determined by subtracting the GMT time from the post_change_local_time and comparing this with the same subtraction from the previous clock time change.

A clock change may be inserted only if there are no clock changes for later settlement dates.

5.6.7.8 Action on Delete

Deletion of an idb_settlement_day is not permitted.

5.6.7.9 Action on button **Assign Season**

This button will create/update records within the idb_settlement_days table and populate the season_id for each record with the nbt_season field. The day_type_id and scottish_day_type_id should be set to the appropriate value depending on the sett_date created, eg. Saturday, Sunday or Weekday.

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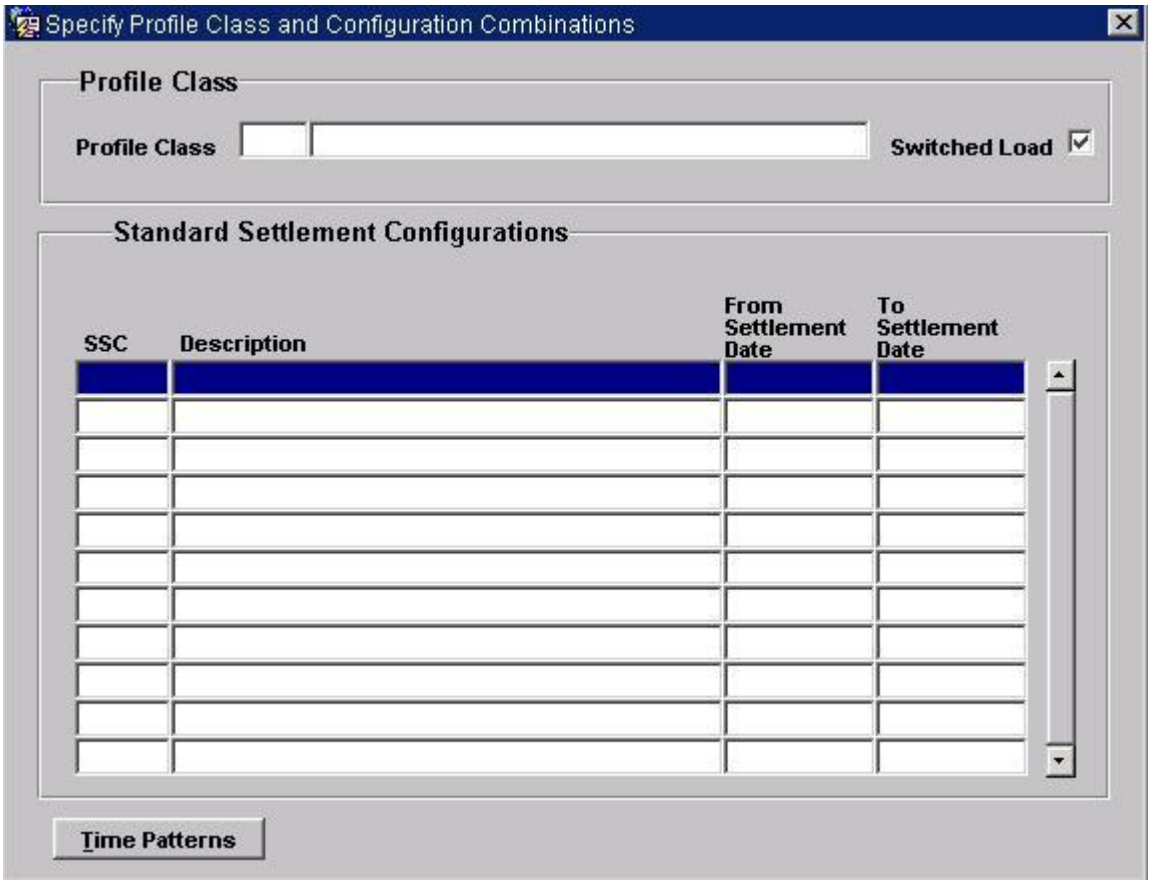
5.6.8 Form ISY_CONCMAIN

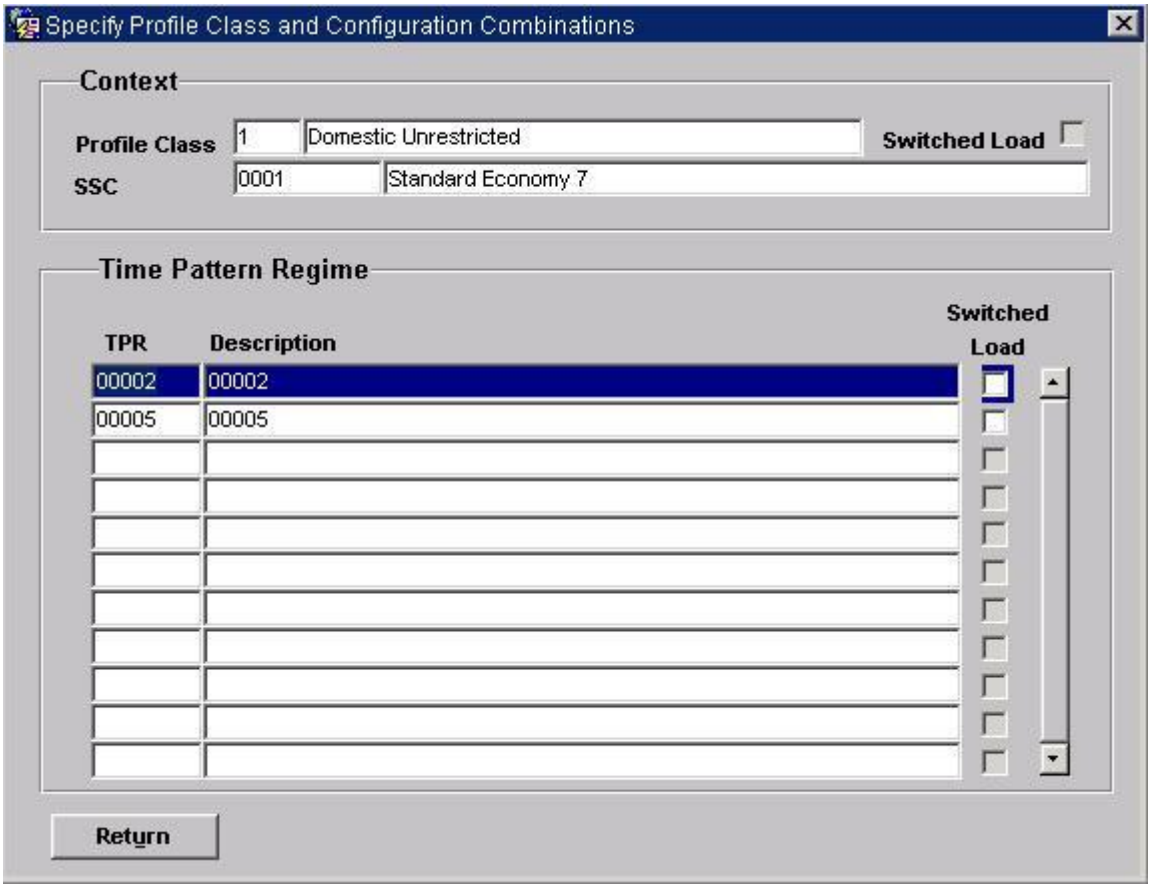
The following describes the Maintain Configuration Combinations and Time Pattern Regimes for a Profile Class form.

5.6.8.1 Screen layout

5.6.8.1.1 Specify Standard Settlement Configuration assignments to a Profile Class



5.6.8.1.2 Specify Time Pattern Combinations for an SSC



5.6.8.2 Screen behaviour

Functions Implemented	I0032 - Specify Profile Class and config. Combinations I0032E - Browse Profile Class and config. Combinations
Block	Profile Class
On Entry	Enter Query.
List of Values	On Profile Class, displaying Profile Class, Profile Description., and Switched Load indicator.
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A
Block	Standard Settlement Configurations
On Entry	Automatically Query.
List of Values	On SSC displaying the Standard Settlement Configuration and Standard Settlement Configuration Description.
Poplists	N/A
Buttons	Time Patterns Navigate to the Time Pattern Regime block.
Additional Behaviour	N/A
Block	Context
On Entry	N/A
List of Values	N/A
Poplists	N/A

Buttons	N/A
Additional Behaviour	This block is not enterable by the User. It displays the current Profile Class and SSC combination currently selected.
Block	Time Pattern Regimes
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Return Navigate to the Standard Settlement Configurations block.
Additional Behaviour	N/A

5.6.8.3 Description

This form will consist of two windows containing four blocks:

IPC - base table on idb_pfl_classes, query-only.

VSCPC - base table on idb_vscpcs, query/insert/update/delete allowed. The user must move to the second window before committing the SSC records.

CTRL - non-base table holding the context from the first window. Non-enterable by the User.

VMRPC - base table on idb_vmr_pfl_classes. User cannot perform query/insert/update/delete operations.

5.6.8.4 Form structure

Object	**Description**
Form: *CONCMAIN*	Title : Maintain Standard Settlement Configuration and Assign Time Patterns for a Profile Class
Block: *IPC*	Base table on idb_pfl_classes. Query only allowed. Join columns: pflc.pfl_class_id = vscpc.pfl_class_id active_flag = 'Y'.
pfl_class_id	Label : Profile Class Display. User Enterable. Query. LoV on idb_pfl_classes showing pfl_class_id, pfl_class_desc, and switch_load_pfl_class_ind.
pfl_class_desc	Display only.
Block: *VSCPC*	Base table on idb_vscpcs. Query, Insert, Update, Delete allowed. Join columns: ssc.ssc_id = vscpc.ssc_id Order by ssc_id.

Object	Description
ssc_id	Label : SSC Display. User Enterable. Query. Insert. Update. Delete. LoV on idb_sscs. The ssc_id and ssc_desc to be shown.
nbt_ssc_desc	Display only.
eff_from_sett_date	Label : From Date Display. User Enterable. Query. Insert. Delete. Format : DD-MON-YYYY.
eff_to_sett_date	Label : To Date Display. User Enterable. Query. Insert. Update. Delete. Format : DD-MON-YYYY.
Block: *CTRL*	non-base table. Display only.
Nbt_pfl_class_id	Label : Profile Class Display only.
Nbt_prof_class_desc	Display only.
Nbt_ssc_id	Label : SSC Display only.
nbt_ssc_desc	Display only.
Block: *VMRPC*	Base table on idb_vmr_pfl_classes. Query, Insert, Update, Delete allowed. Join columns: vmrpc.pfl_class_id = vscpcs.pfl_class_id vmrpc.ssc_id = vscpcs.ssc_id vmrpc.eff_from_sett_date_vscpc = vscpcs.eff_from_sett_date Order by tpr_id.
Tpr_id	Label : TPR Display. User Enterable. Query. Insert. Delete.
Nbt_tpr_desc	Label : Description Display only.
Switched_load_ind	Label : Switched Load. Display. User Enterable (see below). Query. Insert. Update. Delete. If the idb_pfl_class record has switched_load_pfl_clas_ind = 'Y' then this field may be amended, otherwise it will be non-enterable.

5.6.8.5 Action on Query

Automatically populate vscpc.nbt_ssc_desc from vscpc.ssc_id via the idp_sscs table.

Automatically populate vmrpc.nbt_tpr_desc from vmrpc.tpr_id via the idp_tprs table.

5.6.8.6 Action on Update

Use function pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

5.6.8.7 Action on Insert

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

VMRPC block records must be unique on tpr_id.

VSCPC block records must be unique on ssc_id and eff_from_sett_date.

If the idb_pfl_classes.switched_load_ind = 'Y' then at least one record in the VMRPC block must have idb_vmr_pfl_classes.switched_load_in = 'Y'.

If the idb_pfl_classes.switched_load_ind = 'N' then there must be no records in the VMRPC block which have idb_vmr_pfl_classes.switched_load_in = 'Y'.

Use function pkg_common.f_authorise_change(I) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

5.6.8.8 Action on Delete

Delete:

VSCPC block: idb_afycs via pfl_class_id

idb_vmr_pfl_classes via pfl_class_id, ssc_id, eff_from_sett_date

Use function pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

If a delete is permitted then cascade delete any child Non-Half Hourly BM Unit Allocation records. A warning message is displayed to the user before the delete is carried out.

The instance of VSCPC is physically deleted along with all dependent occurrences of Non-Half Hourly BM Unit Allocations, the AFYC and AFYC Set.

5.6.8.9 Action on button **Time Patterns**.

Ensure that an SSC record is selected before allowing navigation to the VMRPC block. If the SSC record is new, then TPR records are automatically inserted in the VMRPC block for all TPRs related to the selected SSC record, the relationship being defined by the table idb_measurement_requirements.

5.6.8.10 Action on button **Return**.

Ensure that the User has committed or Cancelled all changes on the VMRPC block before allowing navigation back to the VSCPCS block.

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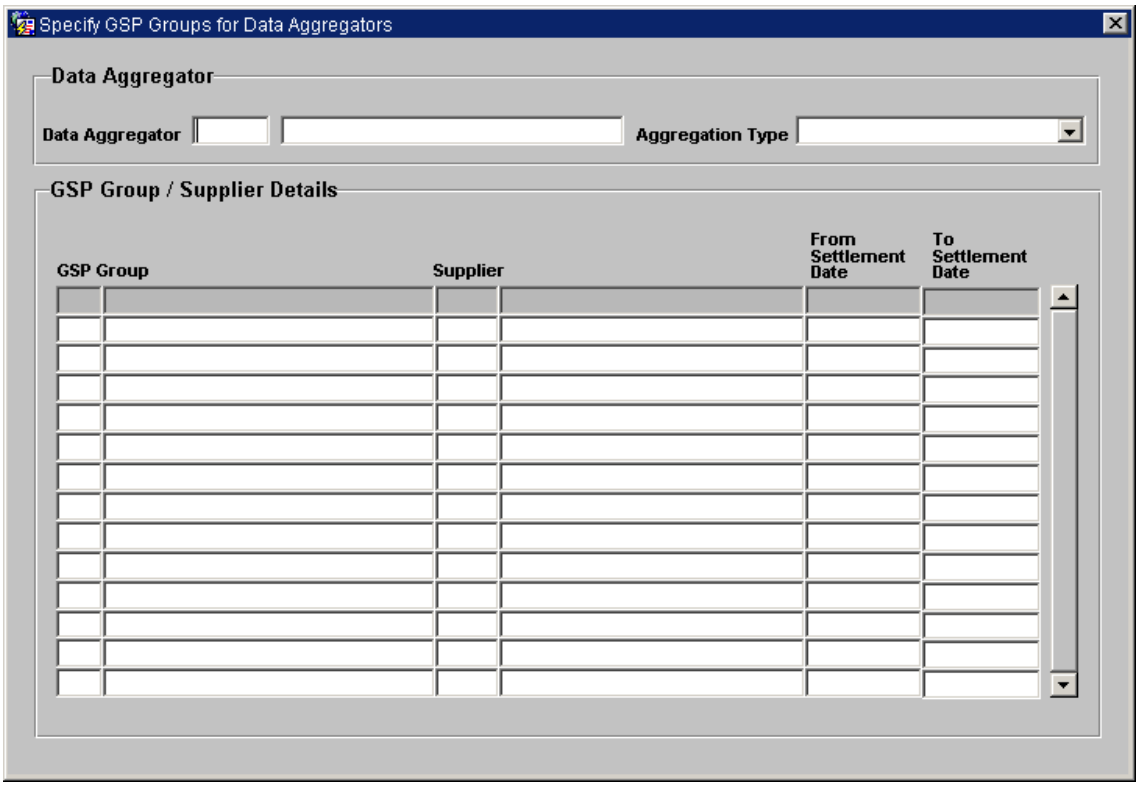
5.6.9 Form ISY_DAGGMAIN

The following describes the Specify GSP Groups for Data Aggregators form.

5.6.9.1 Data Aggregator for GSP Group



5.6.9.2 Screen behaviour

Functions Implemented	I0010 - Specify GSP Group for Aggregators I0010E - Browse GSP Group for Aggregators
Block	Data Aggregator. Used to select a Data Aggregator for which GSP Group / Supplier Details can be viewed and maintained.
On Entry	Block is put into Enter Query mode ready for user input of query criteria.
List of Values	On Data Aggregator displaying Data Aggregator Id and Name.
Poplists	On Aggregation Type displaying the Aggregation Type.
Buttons	N / A
Additional Behaviour	N / A
Block	GSP Group / Supplier Details. Used to maintain GSP Group / Supplier associations for a Data Aggregator.
On Entry	Records automatically queried based on the Data Aggregator selected in the top block.
List of Values	On GSP Group displaying the GSP Group Id and GSP Group Name. On Supplier displaying the Supplier Id and the Supplier Name.
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A

5.6.9.3 Description

The form is based on two blocks, a Market Participant Roles block - MPRO and a GSP Group / Suppliers block - DAGG.

The MPRO block is based on the idb_market_ppt_roles table. Only query is allowed in this block. Restrict records returned from this block to Active Data Aggregators only, i.e. where the mkt_ppt_role_code in (‘A’, ‘ B’) - Half Hourly and Non Half Hourly Data Aggregators and active_flag = ‘Y’.

The DAGG block is based on the idb_da_in_gsp_groups table and manages the assignment of GSP Group / Supplier combinations for different Settlement date ranges. Query, insert, update and delete is allowed.

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5.6.9.4 Form structure

Object	Description
Form: *DAGGMAIN*	Title : Define GSP Groups For Data Aggregators.
Block: *MPRO*	Data Aggregator block, based on idb_mkt_ppt_roles table Query only. Where Condition : mkt_ppt_role_code in ('B','A') and active_flag = 'Y' Order by mkt_ppt_id. Join columns : mpro.mkt_ppt_id = dagg.da_mkt_ppt_id mpro.mkt_ppt_role_code = dagg.da_mkt_ppt_role_code
mkt_ppt_id	Label : Data Aggregator Display. Query only. LOV driven from idb_mkt_ppt_roles, idb_mkt_ppts tables where mkt_ppt_role_code in ('B','A') and active_flag = 'Y'
nbt_da_name	Label : Data Aggregator Display only.
mkt_ppt_role_code	Label : Role Display. List Item. Query only. Pop list driven from cdb_ref_values code where domain_code = 'MAPR' and value in ('B','A').
Block *: DAGG*	Data Aggregator In GSP Groups block, based on idb_da_in_gsp_groups. Query, insert, update, delete allowed. Order by gsp_group_id, sup_mkt_ppt_role_id, eff_from_date desc.
gsp_group_id	Label : GSP Group Display. Query, insert allowed. LOV / Validation driven from idb_mkt_ppt_role_in_gsp_groups table where mkt_ppt_role_code = 'X' (Suppliers only).
nbt_gsp_group_name	Label : Name Display only.
da_mkt_ppt_id	Non display. Provides link back to MPRO block.
da_mkt_ppt_role_code	Non display. Provides link back to MPRO block.
sup_mkt_ppt_id	Label : Supplier Display. Query, insert allowed. LOV / Validation driven from idb_mkt_ppt_role_in_gsp_groups table where mkt_ppt_role_code = 'X' (Suppliers only).
sup_mkt_ppt_role_code	Non display.
nbt_supp_name	Label : Name Display only.

Object	Description
mkt_ppt_role_in_gsp_group_id	Non display. Provides link back to idb_mkt_ppt_role_in_gsp_groups.
eff_from_sett_date	Label : From Settlement Date Display. User Enterable. Mandatory. Query, insert allowed. Format : DD-MON-YYYY
eff_to_sett_date	Label : To Settlement Date Display. User Enterable. Optional. Query, insert, update allowed. Format : DD-MON-YYYY

5.6.9.5 Action on Query

Automatically populate mpro.nbt_da_name using the mpro.mkt_ppt_id from idb_mkt_ppt_roles and idb_mkt_ppts tables.

Automatically populate dagg.nbt_gsp_group_name using the dagg.gsp_group_id from the idb_gsp_groups table.

Automatically populate dagg.nbt_supp_name using the dagg.supp_mkt_ppt_id and dagg.sup_mkt_ppt_role_code from the idb_mkt_ppts table.

5.6.9.6 Action on Update

Use function pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

Use function f_validate_within_supplier_range to validate dates are within supplier date range.

If a change prevents Supplier Data Aggregation data from being used, the user is warned of this and requested for confirmation. If the user confirms, the change is made, but the Supplier Data Aggregation data is not modified in any way. If the change additionally affects a completed Final Initial SSR run, then as elsewhere, only the Standing Data Manager can make the change. User confirmation is required, and a standing data audit report is generated.

Changes made through this form are checked against any relevant uncleared Standing Data Update log records with matching Data Aggregator ID & Role Code, Supplier ID and GSP Group ID, to see whether they can be cleared. The set of Standing Data Update log records checked varies depending on the type of change being made to the data through the form as follows:

For Insert type changes (ie. inserting a new appointment span, or changing an existing appointment span so that the effective-to date is increased), Standing Data Update log records are cleared where they have Action 'I' and Settlement dates overlapping those of the new or updated appointment span's (new) effectiveness dates.

For Delete type changes (ie. deleting an existing appointment span, or changing an existing appointment span so that the effective-to date is decreased), the action varies again, depending on the type of Delete action. If the Delete action is deleting an existing appointment span, Standing Data Update log records are cleared where they have Action 'D' and Settlement dates that butt up to the original effective-from or effective-to dates of the deleted appointment span. If the Delete action is changing an existing appointment span so that the effective-to date is decreased, Standing Data Update log records are cleared where they have Action 'D' and an effective-from Settlement date that butt up to the amended record's original effective- to date.

5.6.9.7 Action on Insert

Use function pkg_common.f_authorise_change(I) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

Use function f_validate_within_supplier_range to validate dates are within supplier date range.

5.6.9.8 Action on Delete

Use function pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

If the user role is not equal to STANMAN (Standing Data Manager) then prevent deletion of a record if child idb_sup_data_agtns records exist, otherwise allow deletion regardless.

If a change prevents Supplier Data Aggregation data from being used, the user is warned of this and requested for confirmation. If the user confirms, the change is made, but the Supplier Data Aggregation data is not modified in any way. If the change additionally affects a completed Final Initial SSR run, then as elsewhere, only the Standing Data Manager can make the change. User confirmation is required, and a standing data audit report is generated.

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5.6.9.8.1 Forms Functions

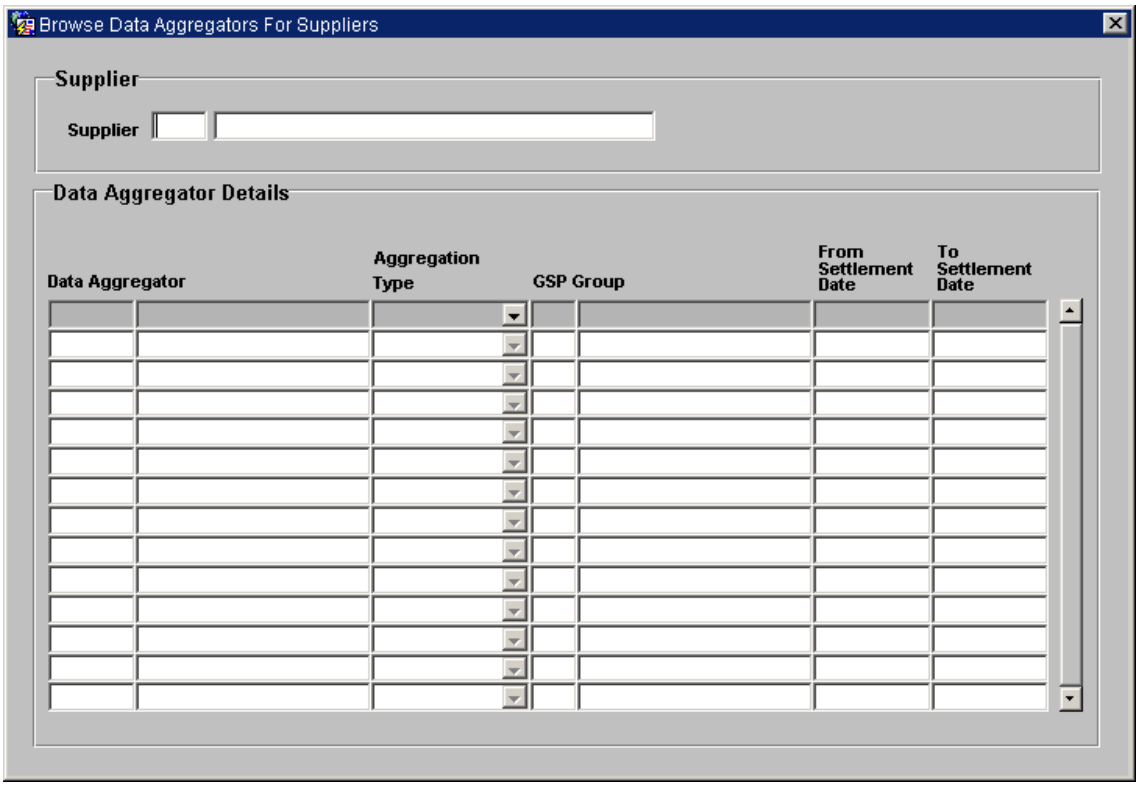
f_validate_within_supplier_range:

Validate that the DAGG effective date range falls within the effective date range of the master Supplier record. This is achieved by checking the date range of the idb_mkt_ppt_role_in_gsp_groups record that matches the dagg.mkt_ppt_role_in_gsp_groups value. Fail update if date range is invalid.

5.6.10 Form ISY_DASUQURY

The following describes the Browse Suppliers and associated Data Aggregators in GSP Groups form.

5.6.10.1 Data Aggregator for Suppliers



5.6.10.2 Screen behaviour

Functions Implemented	I0010E - Browse Data Aggregators For Suppliers
Block	Supplier. Used to select a Supplier for which Data Aggregators In GSP Group associations can be maintained.
On Entry	Enter query.
List of Values	On Supplier displaying Supplier Id and Supplier Name.
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A
Block	Data Aggregator Details.
On Entry	Records automatically queried based on the Supplier selected in the top block.
List of Values	On Data Aggregator displaying Data Aggregator Id and Data Aggregator Name. On GSP Group displaying the GSP Group Id and GSP Group Name.
Poplists	Aggregation Type, displaying the Aggregation Type.
Buttons	N / A
Additional Behaviour	N / A

5.6.10.3 Description

The form is based on two blocks, a Market Participant Roles block - MPRO and the Data Aggregator in GSP Groups block - DAGG.

The MPRO block is based on the idb_market_ppt_roles table. Only query is allowed, restrict records to market_ppt_role_code = 'X' (Supplier) and active_flag = 'Y'.

The DAGG block is based on the idb_da_in_gsp_groups table and displays all Data Aggregators in GSP Groups that are for the Supplier held in the MPRO block.

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5.6.10.4 Form structure

Object	Description
Form: *DASUQURY*	Title: Browse Data Aggregators For Suppliers.
Block: *MPRO*	Supplier block, based on idb_mkt_ppt_roles table. Query only allowed. Order by mpro.mkt_ppt_id. Where Clause: where mkt_ppt_role_code = 'X' (Supplier) and active_flag = 'Y'. Join Columns: mpro.mkt_ppt_id = dagg.sup_mkt_ppt_id. mpro.mkt_ppt_role_code = dagg.sup_mkt_ppt_role_code
mkt_ppt_role_code	Non display. Restrict value to 'X' (Supplier).
mkt_ppt_id	Label : Supplier Display. User enterable. Query only. LOV driven from idb_mkt_ppts and idb_mkt_ppt_roles tables used to populate mkt_ppt_id and nbt_mkt_ppt_name fields. Select values where active_flag = 'Y' and mkt_ppt_role_code = 'X'.
nbt_mkt_ppt_name	Label : Supplier Display only.
Block *: DAGG*	Data Aggregator Details block, based on idb_da_in_gsp_groups table. Query only allowed. Order by da_mkt_ppt_id, da_mkt_ppt_role_code, gsp_group_id, eff_from_sett_date.
da_mkt_ppt_id	Label : Data Aggregator Display. User enterable. Query only. LOV driven from idb_mkt_pps and idb_mkt_ppt_roles tables where mkt_ppt_role_code in ('A','B') (1/2hrly, non 1/2hrly).
nbt_da_mkt_ppt_name	Label : Name Display only.
da_mkt_ppt_role_code	Label : Aggregation Type Display. User enterable. Query only. Pop list provided driven from cdb_ref_values table where domain = 'MAPR' and value_from in ('A','B') (1/2hrly, non 1/2hrly).
gsp_group_id	Label : GSP Group Display. User enterable. Query only. LOV driven from idb_gsp_groups table.
nbt_gsp_group_name	Label : Name Display only.

Object	Description
eff_from_sett_date	Label : From Settlement Date Date. User enterable. Query only. Format : DD-MON-YYYY
eff_to_sett_date	Label : To Settlement Date Date. User enterable. Query only. Format : DD-MON-YYYY
sup_mkt_ppt_id	Non display. Provides link back to mpro.mkt_ppt_id.
sup_mkt_ppt_role_code	Non display Provides link back to mpro.mkt_ppt_role_code.

5.6.10.5 Action on Query

Automatically populate mpro.nbt_mkt_ppt_name using mpro.mkt_ppt_id from idb_mkt_ppts table.

Automatically populate dagg.nbt_da_mkt_ppt_name using dagg.da_mkt_ppt_id from idb_mkt_ppts table.

Automatically populate dagg.nbt_gsp_group_name using dagg.gsp_group_id from idb_gsp_groups table.

5.6.10.6 Action on Update

None.

5.6.10.7 Action on Insert

None.

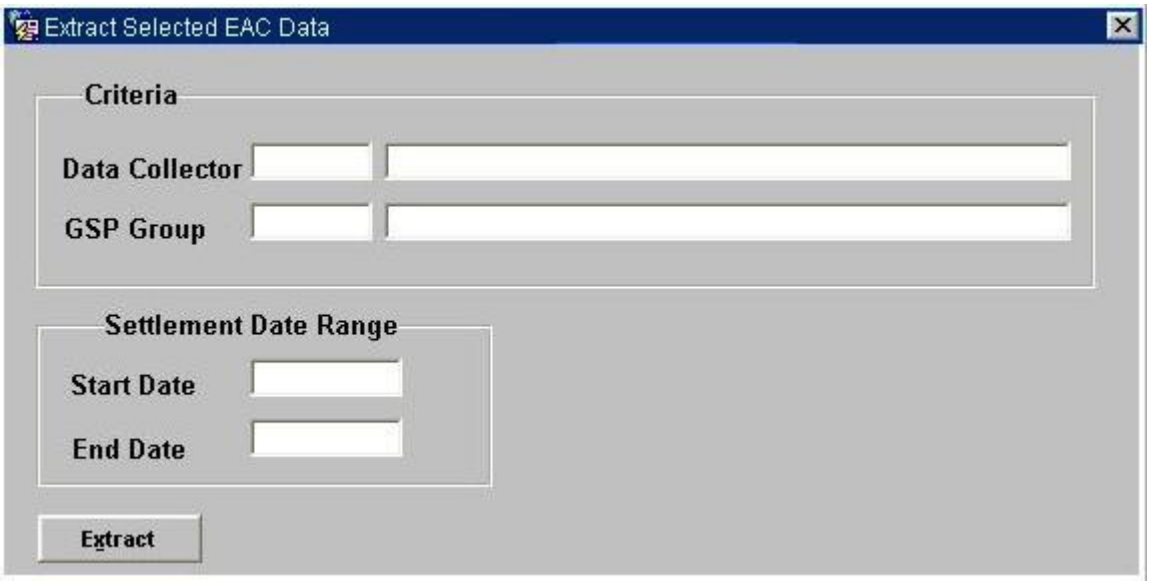
5.6.10.8 Action on Delete

None.

5.6.11 Form ISY_EACXUTIL

The following describes the Extract Selected EAC Data front-end form.

5.6.11.1 Screen layout



5.6.11.2 Screen behaviour

Function Implemented	I0039 - Extract Selected EAC Data
Block	Criteria
On Entry	Ready for user input.
List of Values	On Data Collector displaying Data Collector and Data Collector Name. On GSP Group, displaying GSP Group and GSP Group Name.
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A
Block	Settlement Date Range
On Entry	Ready for user input.
List of Values	N/A
Poplists	N/A
Buttons	Extract Call the batch EAC Extraction routine.
Additional Behaviour	N/A

5.6.11.3 Description

This form will consist of one window, containing one block.

CTRL - non-base table. Non-queryable. No scrolling allowed within this block, ie. No up/down etc. record navigation.

If the Settlement End Date is left blank, then default in the Start Date before processing begins so that only one day is selected.

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5.6.11.4 Form structure

Object	Description
Form: *EACXUTIL*	Title : Extract Selected EAC data.
Block: ***CTRL***	non-base table. Insert, Update allowed.
Nbt_datacoll_id	Label : Data Collector Display. Mandatory. User Enterable. Insert. Update. LoV on idb_mkt_ppts/idb_mkt_ppt_roles using mtk_ppt_role_code = 'D'. The mkt_ppt_id and mkt_ppt_name to be shown. Validate against idb_mkt
Nbt_datacoll_name	Display only.
Nbt_gspg_id	Label : GSP Group Display. Mandatory. User Enterable. Insert. Update. LoV on idb_gsp_groups. The gsp_group_id and gsp_group_name to be shown. Validate against idb_gsp_groups.
nbt_gspg_name	Display only.
Nbt_start_date	Label : Start Date Display. Mandatory. User Enterable. Insert. Update. Format : DD-MON-YYYY.
Nbt_end_date	Label : End Date Display. User Enterable. Insert. Update. Format : DD-MON-YYYY.

5.6.11.5 Action on Query

Query disallowed.

5.6.11.6 Action on Update

Update disallowed.

5.6.11.7 Action on Insert

Insert disallowed.

5.6.11.8 Action on Delete

Delete Disallowed.

5.6.11.9 Action on button **Extract**.

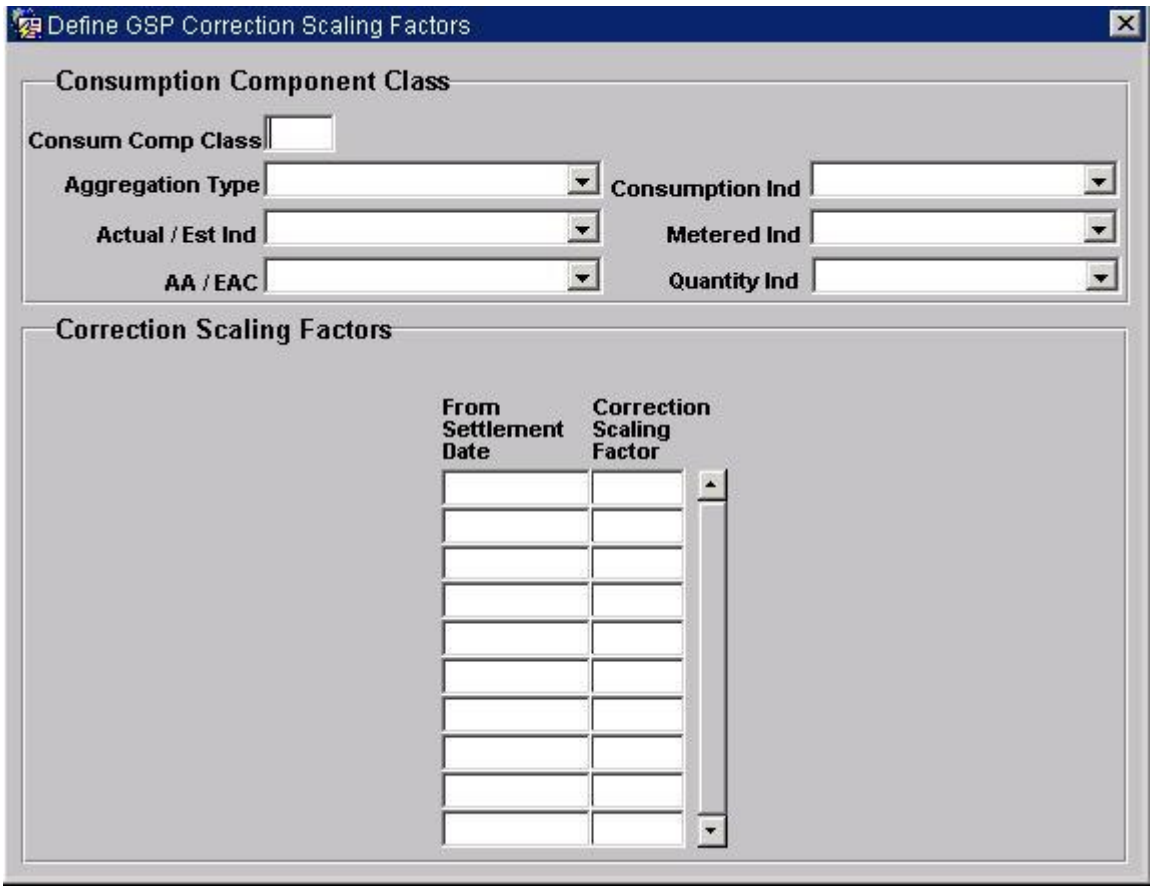
Ensure that nbt_datacoll_id, nbg_gspg_id and nbt_start_date have been populated.

Call the batch Extraction routine using the CSC.Submit procedure, passing Nbt_datacoll_id, nbg_gspg_id, Nbt_start_date and nbt_end_date.

5.6.12 Form ISY_GCSFMAIN

The following describes the GSP Correction Scaling Factors form.

5.6.12.1 Screen layout



5.6.12.2 Screen behaviour

Functions Implemented	I0004 - Define GSP Group I0004E - Browse GSP Group
Block	Consumption Component Class. Used to select a Consumption Component Class for which Correction Scaling Factors can be maintained.
On entry	Block placed into Enter Query mode ready for user input of query criteria.
List of Values	N / A
Poplists	Aggregation Type. Displays the Aggregation Type e.g. Hourly, Non Half Hourly. Actual Estimated Ind. Displays a choice of Actual or Estimated. AA / EAC. Displays a choice of AA or EAC. Consumption Ind. Displays a choice of Metering Specific Line Loss, Class Specific Line Loss and Consumption Generation. Metered Ind. Displays a choice of Metered or Unmetered. Quantity Ind. Displays a choice of Import or Export.
Buttons	N / A
Additional Behaviour	N / A
Block	Correction Scaling Factors. Allows maintenance of Correction Scaling Factors for Consumption Component Class selected in the top block.
On Entry	Records automatically queried based on the Consumption Component Class selected in the top block.
List of Values	N / A
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A

5.6.12.3 Description

The gcsfmain form is based on two blocks, a Consumption Component Class block - CCCL, based on the idb_consum_comp_classes table and a GSP Correction Scaling Factors block - GCSF, based on the idb_gsp_group_correction_sfs table. The CCCL block will allow a Consumption Component Class to be selected by the user, no updates, deletes or inserts are allowed in this block. Pop lists, driven from cdb_ref_values table, are provided to aid selection of a idb_consum_comp_classes record. On entry to the second block, GCSF, the user is permitted to insert, update and delete a list of Correction Scaling Factors that are associated with the Consumption Component Class, selected in the top block.

5.6.12.4 Form structure

Object	**Description**
Form: *GCSFMAIN*	Title : Define GSP Correction Scaling Factors.

Object	Description
Block: *CCCL*	Consumption Component Classes block. Based on idb_consum_comp_classes table. Query only. Join Columns : cccl.consum_comp_class_id = gcsf.consum_comp_class_id
consum_comp_class_id	Label : Consumption Component Class Display. User enterable. Query only.
data_agtn_type	Label : Aggregation Type List Item. Display. User enterable. Query only. LOV / Validation based on a pop list that is driven from idb_ref_codes where domain_code = 'AGTY'.
mtd_unmtd_ind	Label : Metered Ind List Item. Display. User enterable. Query only. LOV / Validation based on a pop list that is driven from idb_ref_codes where domain_code = 'MTUN'.
consum_comp_ind	Label : Consumption Ind List Item. Display. User enterable. Query only. LOV / Validation based on a pop list that is driven from idb_ref_codes where domain_code = 'COCO'.
imq_measurement_quantity_id	Label : Quantity Ind List Item. Display. User enterable. Query only. LOV / Validation based on a pop list that is driven from idb_ref_codes where domain_code = 'MEQU'.
actual_estimated_ind	Label : Actual / Estimated Ind List Item. Display. User enterable. Query only. LOV / Validation based on a pop list that is driven from idb_ref_codes where domain_code = 'ACES'.
aa_eac_ind	Label : AA / EAC List Item. Display. User enterable. Query only. LOV / Validation based on a pop list that is driven from idb_ref_codes where domain_code = 'AAEA'.
Block : *GCSF*	GSP Correction Scaling Factors. Based on idb_gsp_group_cctn_sfs table. Query, Insert, Update, Delete allowed. Order by eff_from_sett_date desc, gsp_group_correction_sf
eff_from_sett_date	Label : From Settlement Date Display. User enterable. Query. Insert. Update. Format : DD-MON-YYYY
eff_to_sett_date	Non display.

Object	Description
gsp_group_correction_sf	Label : Correction Scaling Factor Display. User enterable. Query. Insert allowed. Validation : Numeric date range checking against cdb_ref_values table where domain_code = 'GCSF'.

5.6.12.5 Action on Query

Default forms functionality.

5.6.12.6 Action on Update

Use function pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Validate deletion using f_check_for_non_zero_gcsf, display warning message if function returns true.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

Make sure date range is contiguous using p_manage_gcsf_date_range.

5.6.12.7 Action on Insert

Use function pkg_common.f_authorise_change(I) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

Make sure date range is contiguous using p_manage_gcsf_date_range.

5.6.12.8 Action on Delete

Use function pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Validate deletion using f_check_for_non_zero_gcsf, display warning message if function returns true.

5.6.12.9 Form Level Functions / Procedures

5.6.12.9.1 f_check_for_non_zero_gcsf

Validate that there is at least one idb_gsp_group_cctn_sfs record where gsp_group_correction_sf ≠ 0 for every settlement day that falls between the gcsf.eff_from_sett_date and gcsf.eff_to_sett_date.

Return True if non zero correction scaling factors exist.

5.6.12.9.2 p_manage_gcsf_date_range

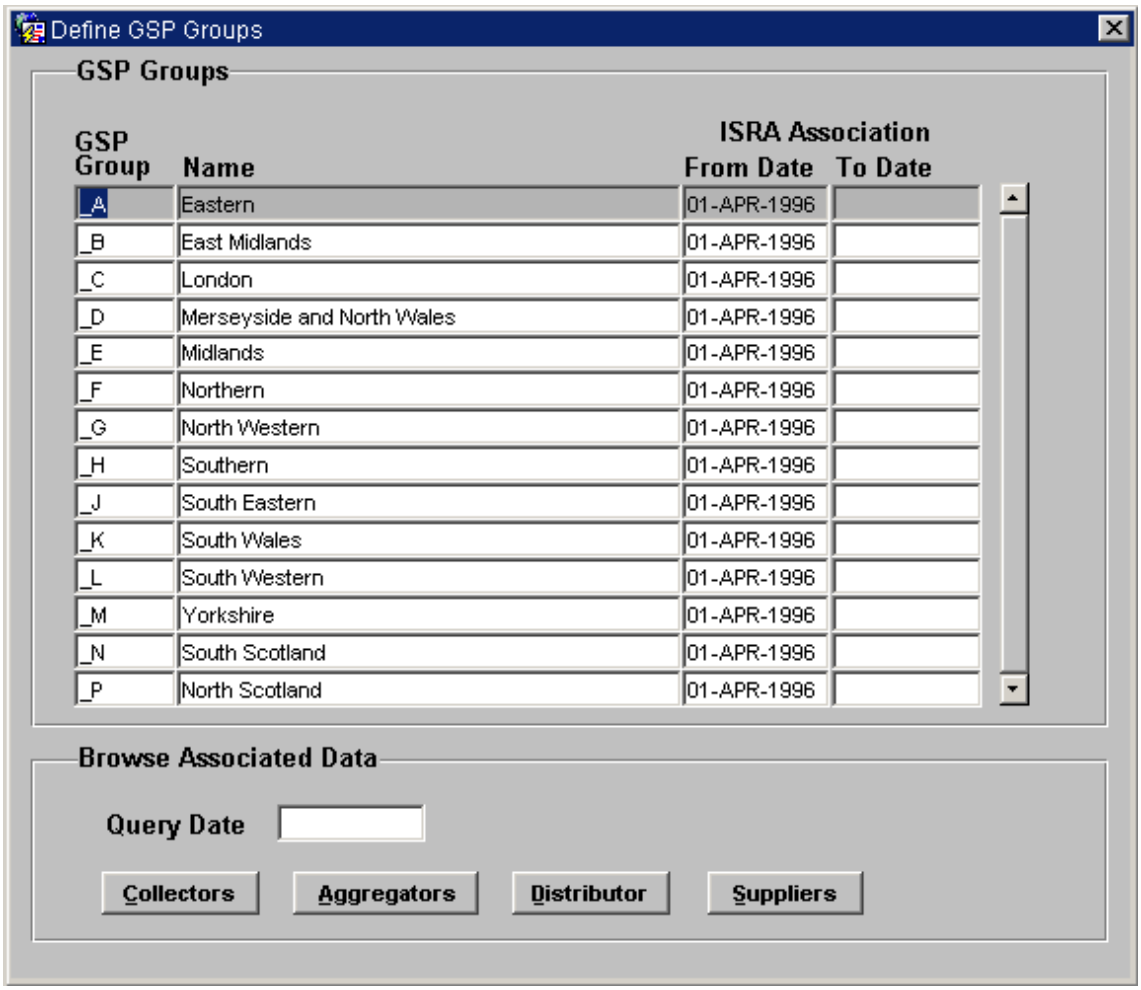
Manage the effective settlement dates such that a set of idb_gsp_group_cctn_sfs that relate to a given consum_comp_class_id exist contiguously, with the latest idb_gsp_group_cctn_sfs record having an open ended eff_to_sett_date.

5.6.13 Form ISY_GSPGMAIN

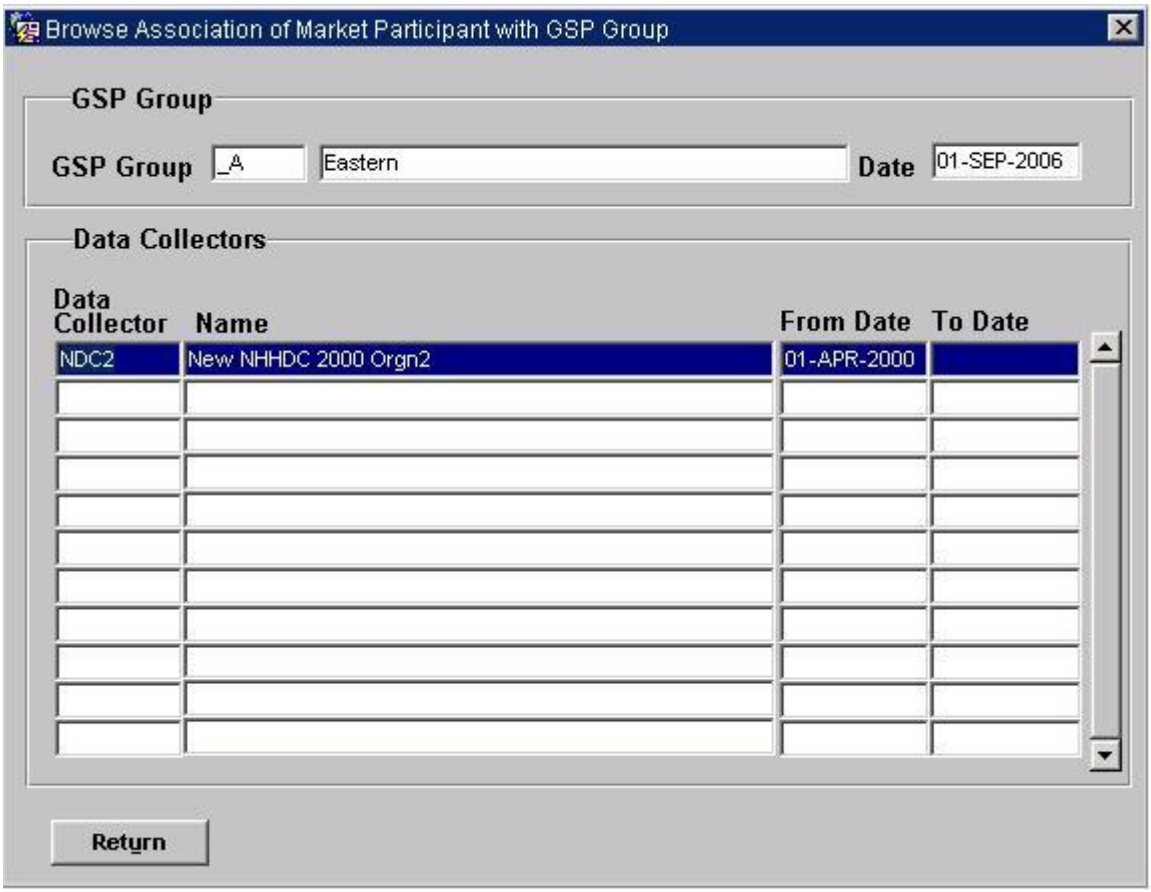
The following describes the maintenance of GSP Groups and the viewing of their associated Market Participants.

5.6.13.1 Screen Layout

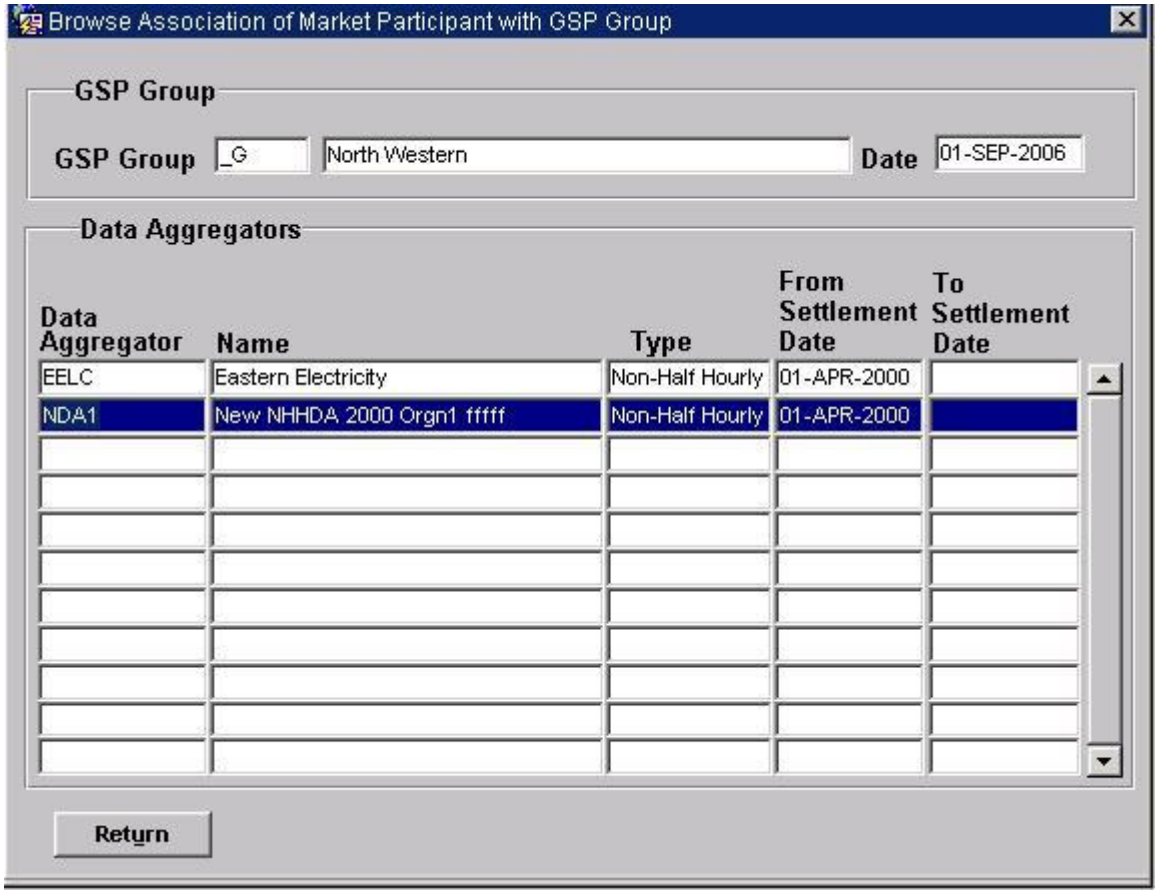
5.6.13.1.1 GSP Group Maintenance



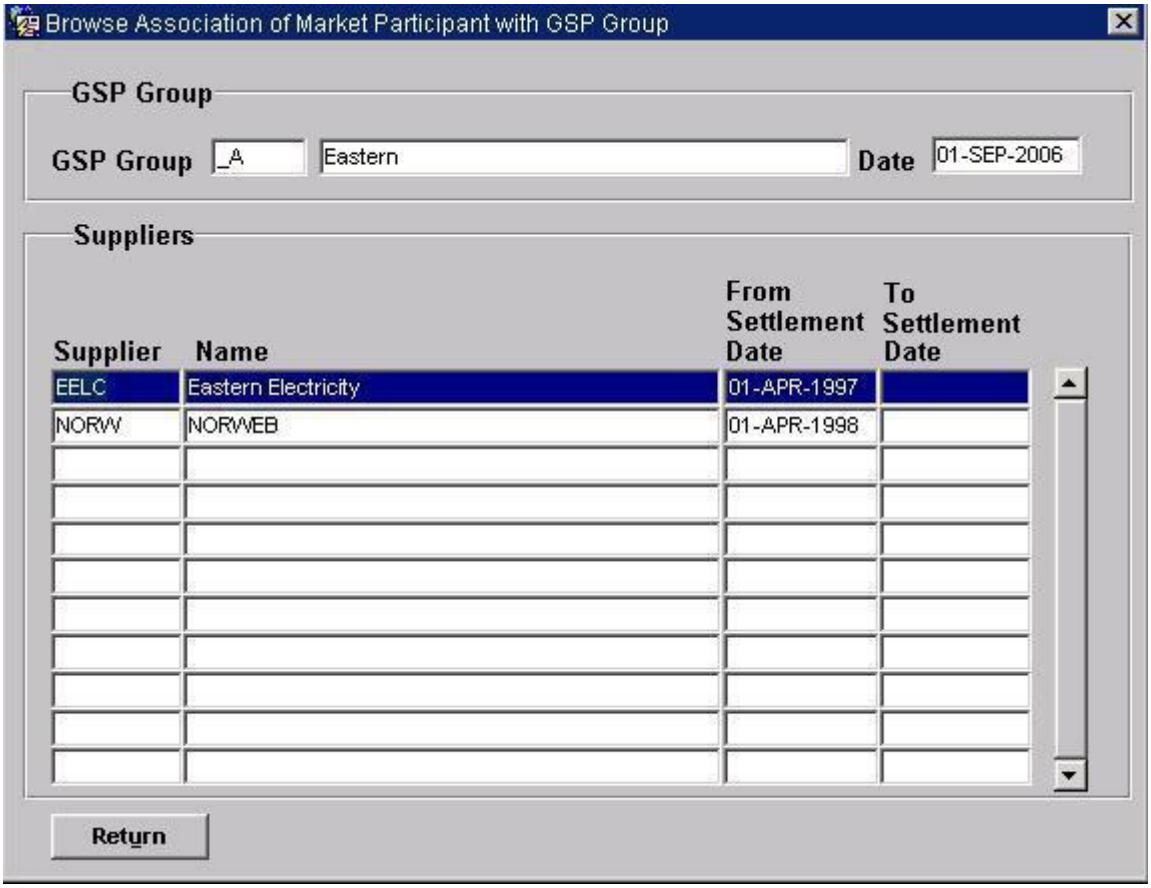
5.6.13.1.2 View Data Collectors



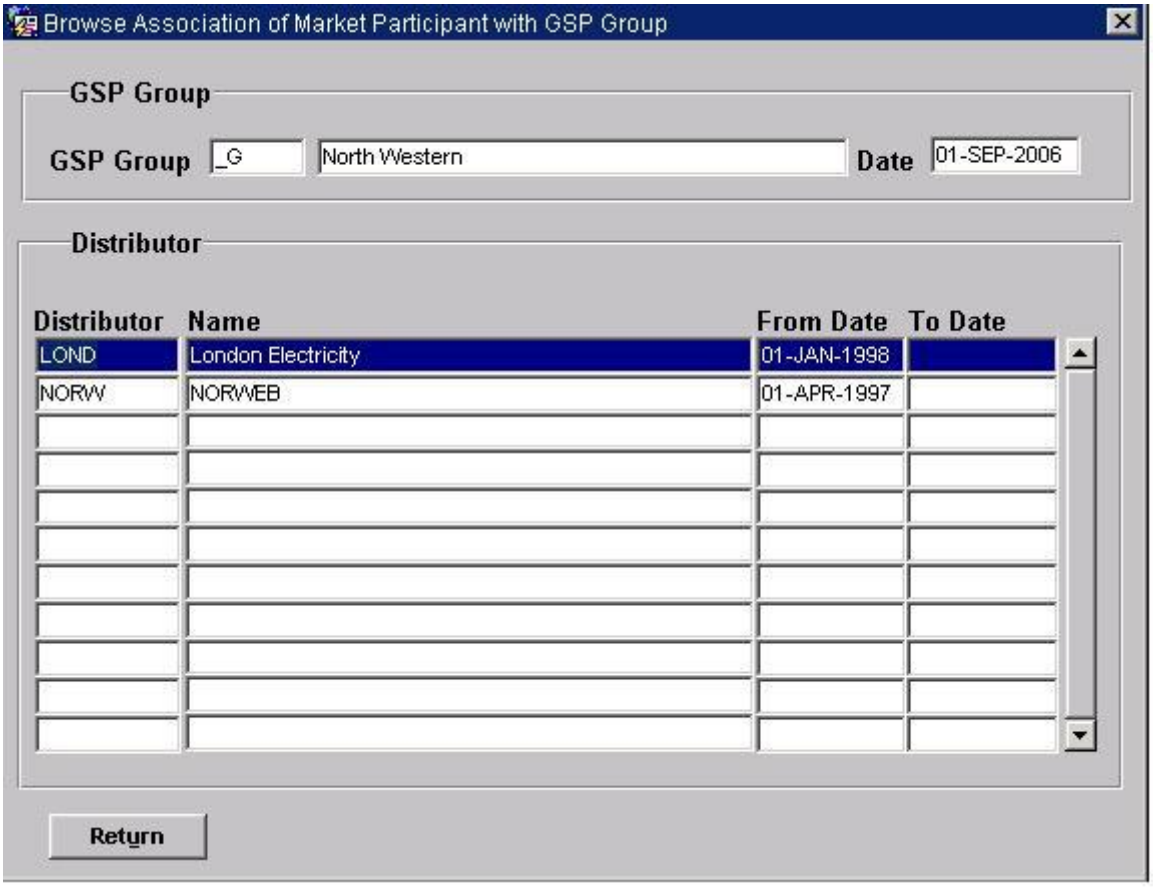
5.6.13.1.3 View Data Aggregators



5.6.13.1.4 View Suppliers



5.6.13.1.5 View Distributor



5.6.13.2 Screen behaviour

Functions Implemented	I0002 - Define GSP Group I0002E - Browse GSP Group
Block	GSP Groups
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A
Block	Browse Associated Data
On Entry	Ready for user input.
List of Values	N/A
Poplists	N/A
Buttons	Collectors Navigate to the Data Collectors block. Aggregators Navigate to the Data Aggregators block. Distributor Navigate to the Distributor block. Suppliers Navigate to the Suppliers block.
Additional Behaviour	N/A
Block	GSP Group
On Entry	N/A
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	Holds the current record selected from the GSP Groups block. For informational purposes only.
Block	Data Collectors
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Return Navigate to the GSP Groups block.
Additional Behaviour	N/A
Block	Data Aggregators
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Return Navigate to the GSP Groups block.
Additional Behaviour	The period encompassing the earliest and latest Settlement Dates will be shown for each distinct Data Aggregator within a GSP Group.
Block	Suppliers

On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Return Navigate to the GSP Groups block.
Additional Behaviour	N/A
Block	Distributor
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Return Navigate to the GSP Groups block.
Additional Behaviour	N/A

5.6.13.3 Description

GSP Groups are maintained within a multi-record block based on the idb_gsp_groups table - IGG. The block will allow insertion/deletion/updating and querying of gsp groups.

The CTRL_NAV block on the main window defines the criteria by which the user may browse associated Gsp group information ie. Market Participants.

The CTRL block holds the details of the Gsp group that the user currently has active, including the Effective_Date the User has entered in the first window.

The Market Participants blocks (as below) will allow the user to query the details of the suppliers/data aggregators/data collectors and distributors assigned to the gsp_group_id that the user currently has active. These blocks are all base-table and will be implemented as a stacked canvas within one window.

Data Aggregators - DASU_DA

This block is based on the idb_da_summary view.

Data Collectors - MPRIGG_DC

This block is based on the idb_mkt_ppt_role_in_gsp_groups table.

Suppliers - MPRIGG_SU

This block is based on the idb_mkt_ppt_role_in_gsp_groups table.

Distributor - MPRIGG_DI

This block is based on the idb_mkt_ppt_role_in_gsp_groups table.

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5.6.13.4 Form structure

Object	Description
Form: *GSPGMAIN*	Title : Maintain GSP Groups.
Block: *GSPG*	base table on gsp_groups. Query, Insert, Update, Delete allowed. Join columns: gspg.gsp_group_id = idb_mkt_ppt_role_in_gsp_group.gsp_group_id
gsp_group_id	Label : GSP Group Display. User Enterable. Query. Insert. Delete.
Gsp_group_name	Label : Name Display. User Enterable. Query. Insert. Update. Delete.
eff_from_date	Label : From Date Display. User Enterable. Query. Insert. Delete. Format : DD-MON-YYYY.
eff_to_date	Label : To Date Display. User Enterable. Query. Insert. Update. Delete. Format : DD-MON-YYYY.
Block: *CTRL_NAV*	Non-Base table. Insert, Update allowed.
Nbt_query_date	Label : Query Date Display. User Enterable. Insert. Update. Format : DD-MON-YYYY.
Block: *CTRL*	Non-Base table. Display Only.
Nbt_gsp_group_id	Label : GSP Group Display only.
Nbt_gsp_group_name	Display only.
Nbt_query_date	Display only. Format : DD-MON-YYYY.
Block: *MPRIGG_DC*	Base table on idb_mkt_ppt_role_in_gsp_group. Query allowed. Where mkt_ppt_role_code = 'D', ctrl_nav.nbt_query_date between eff_from_date and eff_to_date and exists (idb_mkt_ppt_roles.mkt_ppt_id = mkt_ppt_id where active_flag = 'Y') and igg.gsp_group_id = gsp_group_id Order by mkt_ppt_id.
Mkt_ppt_id	Label : Data Collector Display. Query.

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Object	Description
Nbt_data_collector_name	Label : Name Display. Query.
Eff_from_date	Label : From Date Display. Query. Format : DD-MON-YYYY.
Eff_to_date	Label : To Date Display. Query. Format : DD-MON-YYYY.
Block: *MPRIGG_DI*	Base table on idb_mkt_ppt_role_in_gsp_group. Query only. Where mkt_ppt_role_code = 'R', ctrl_nav.nbt_query_date between eff_from_date and eff_to_date and exists (idb_mkt_ppt_roles.mkt_ppt_id = mkt_ppt_id where active_flag = 'Y') and igg.gsp_group_id = gsp_group_id Order by mkt_ppt_id.
Mkt_ppt_id	Label : Distributor Display. Query.
Nbt_distributor_name	Label : Name Display. Query.
Eff_From_date	Label : From Settlement Date Display. Query. Format : DD-MON-YYYY.
Eff_To_date	Label : To Settlement Date Display. Query. Format : DD-MON-YYYY.
Block: *DASU*	Base table on idb_da_summaries view. Query allowed. Where mkt_ppt_role_code in 'B','A' and exists (idb_mkt_ppt_roles.mkt_ppt_id = da_mkt_ppt_id where active_flag = 'Y') and igg.gsp_group_id = gsp_group_id Order by mkt_ppt_id, mkt_ppt_role_code
da_Mkt_ppt_id	Label : Data Aggregator Display. Query.
Nbt_aggregator_name	Label : Name Display. Query.

Object	Description
nbt_role_name	Label : Type Display. Query. Source: cdb_ref_values.description where value_from = da_mkt_ppt_role_code and domain_code = 'MAPR'.
Eff_From_sett_date	Label : From Settlement Date Display. Query. Format : DD-MON-YYYY.
Nbt_Eff_To_sett_date	Label : To Settlement Date Display only. Format : DD-MON-YYYY.
Block: *MPRIGG_SU*	Base table on idb_mkt_ppt_role_in_gsp_group. Where mkt_ppt_role_code = 'X', ctrl_nav.nbt_query_date between eff_from_date and eff_to_date and exists (idb_mkt_ppt_roles.mkt_ppt_id = mkt_ppt_id where active_flag = 'Y') and igg.gsp_group_id = gsp_group_id Query Only. Order by mkt_ppt_id.
Mkt_ppt_id	Label : Supplier Display. Query.
Nbt_supplier_name	Label : Name Display. Query.
Eff_From_date	Label : From Settlement Date Display. Query. Format : DD-MON-YYYY.
Eff_To_date	Label : To Settlement Date Display. Query. Format : DD-MON-YYYY.

5.6.13.5 Action on Query

Populate mpprigg_su.nbt_supplier_name from idb_mkt_ppts.mkt_ppt_name.

Populate mpprigg_di.nbt_distributor_name from idb_mkt_ppts.mkt_ppt_name.

Populate dasu_da.nbt_aggregator_name from idb_mkt_ppts.mkt_ppt_name.

Populate max(dasu.nbt_eff_to_date) from idb_da_in_gsp_groups where dasu.gsp_group_id = idigg.gsp_group_id and

dasu.da_mkt_ppt_id = idigg.da_mkt_ppt_id and

dasu.da_mkt_ppt_role_code = idigg. da_mkt_ppt_role_code and

dasu.sup_mkt_ppt_id = idigg. sup_mkt_ppt_id and

dasu.sup_mkt_ppt_role_code = idigg. sup_mkt_ppt_role_code.

Populate mpprigg_da.nbt_role_name from idb_ref_values.description where idb_ref_values.domain_code = idb_mkt_ppt_role_in_gsp_group.mkt_ppt_role_code and domain_code = 'MAPR'.

Populate mpprigg_dc.nbt_collector_name from idb_mkt_ppts.mkt_ppt_name.

5.6.13.6 Action on Update

Update only permitted on GSPG block on Name/ISRA Association dates fields.

Gspg.gsp_group_id must be unique.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

5.6.13.7 Action on Insert

Insert only permitted on GSPG block.

Gspg.gsp_group_id must be unique.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

User is informed that the new GSP Group is for England and Wales only.

5.6.13.8 Action on Delete

Delete only permitted on GSPG block.

Disallow deletion if child records found as follows:

GSPG block:

- idb_gsp_group_takes
- idb_mkt_ppt_role_in_gsp_groups
- idb_ssa_sett_gsp_group
- idb_pfl_production_runs
- idb_daily_pfl_parameters
- idb_afycs
- idb_bm_unit_in_gsp_groups

If no child records then if gsp_group_average_eacs.gsp_group_id = gspg.gsp_group_id then display alert allowing User to Continue or Cancel the cascade delete of these records.

5.6.13.9 Action on button **Collectors**

Ensure nbt_query_date has been entered.

Ensure that the User has Committed/Cancelled any changes to the GSPG block.

Go to MPRIGG_DC block.

5.6.13.10 Action on button **Suppliers**

Ensure nbt_query_date has been entered.

Ensure that the User has Committed/Cancelled any changes to the GSPG block.

Go to MPRIGG_SU block.

5.6.13.11 Action on button **Distributor**

Ensure nbt_query_date has been entered.

Ensure that the User has Committed/Cancelled any changes to the GSPG block.

Go to MPRIGG_DI block.

5.6.13.12 Action on button **Aggregators**

Ensure nbt_query_date has been entered.

Ensure that the User has Committed/Cancelled any changes to the GSPG block.

Go to DASU block.

5.6.13.13 Action on button **Return**

Go to GSPG block.

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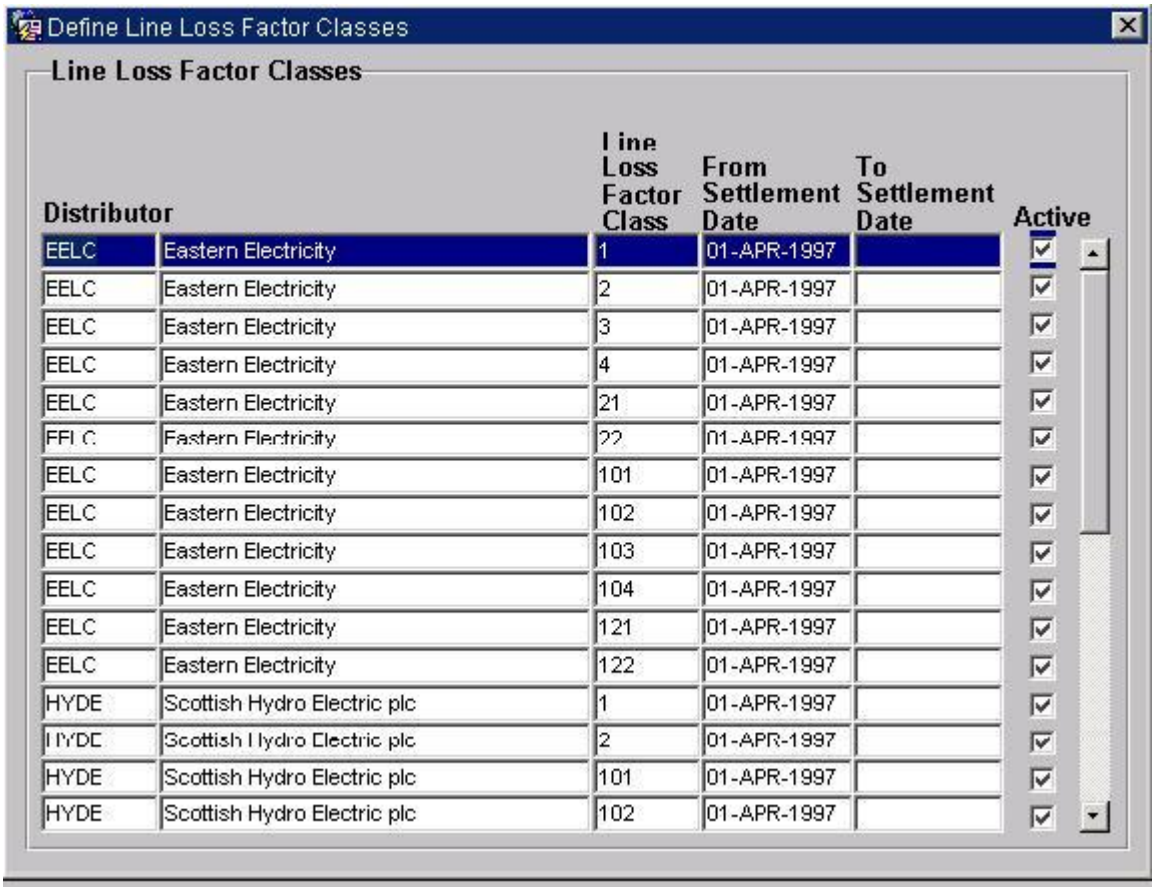
5.6.14 Form ISY_LLFCMAIN

The following describes the Line Loss Factor Classes form.

5.6.14.1 Screen layout



5.6.14.2 Screen behaviour

Functions Implemented	I0001 - Specify Line Loss Factor Classes. I0001E - Browse Line Loss Factor Classes.
Block	Line Loss Factor Classes. Allows maintenance of Line Loss Factor Classes.
On Entry	Records automatically queried on entry to the block.
List of Values	On Distributor. Displays the Distributor Id and Distributor Name.
Poplists	N / A
Buttons	N / A
Additional Behaviour	Physical deletes are not permitted, logical deletes are carried out selecting / deselecting the active flag.

5.6.14.3 Description

Form will consist of a single block - LLFC, which will be based on the idb_llf_classes table. Select, insert, and update are permitted on the block.

5.6.14.4 Form structure

Object	Description
Form: *LLFCMAIN*	Title : Define Line Loss Factor Classes
Block: *LLFC*	Line Loss Factors Block. Based on idb_llf_classes table. Query, Insert, Update allowed. Order by dist_mkt_ppt_id, llfc_class_id and eff_from_sett_date.
dist_mkt_ppt_id	Label : Distributor Display. User Enterable. Query. Insert. LOV driven from idb_market_ppts, idb_market_ppt_roles where mkt_ppt_role_code = 'R' and active_flag = 'Y'.
dist_mkt_ppt_role_code	Non display.
llf_class_id	Label : Line Loss Factor Class Display. User Enterable. Query. Insert. Validation : Numeric range check against cdb_ref_values where domain_code = 'LLFC'.
nbt_dist_name	Label : Name Display only.
eff_from_sett_date	Label : From Settlement Date Display. User Enterable. Query. Insert. Format : DD-MON-YYYY
eff_to_sett_date	Label : To Settlement Date Display. User Enterable. Query. Insert. Update. Format : DD-MON-YYYY.
active_flag	Label : Active Display. User Enterable. Query. Insert. Update.

5.6.14.5 Action on Query

Automatically populate llfc.nbt_dist_name from llfc.dist_mkt_ppt_id via the idb_mkt_ppt_roles and idb_mkt_ppts tables.

5.6.14.6 Action on Update

Use function pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

If the new LLFC date range does not enclose related child idb_sett_pd_llfs.sett_date then display warning message to the user but do not fail processing.

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5.6.14.7 Action on Insert

Use function pkg_common.f_authorise_change(I) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

llfc.dist_mkt_ppt_id - validate against the idb_mkt_ppt_roles table.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

5.6.14.8 Action on Logical Delete

Use function pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

If logical delete is permitted and related child idb_sett_pd_llfs records exist, display a warning message to the user and request confirmation. If the user proceeds, the logical delete is performed, but the child records are not deleted.

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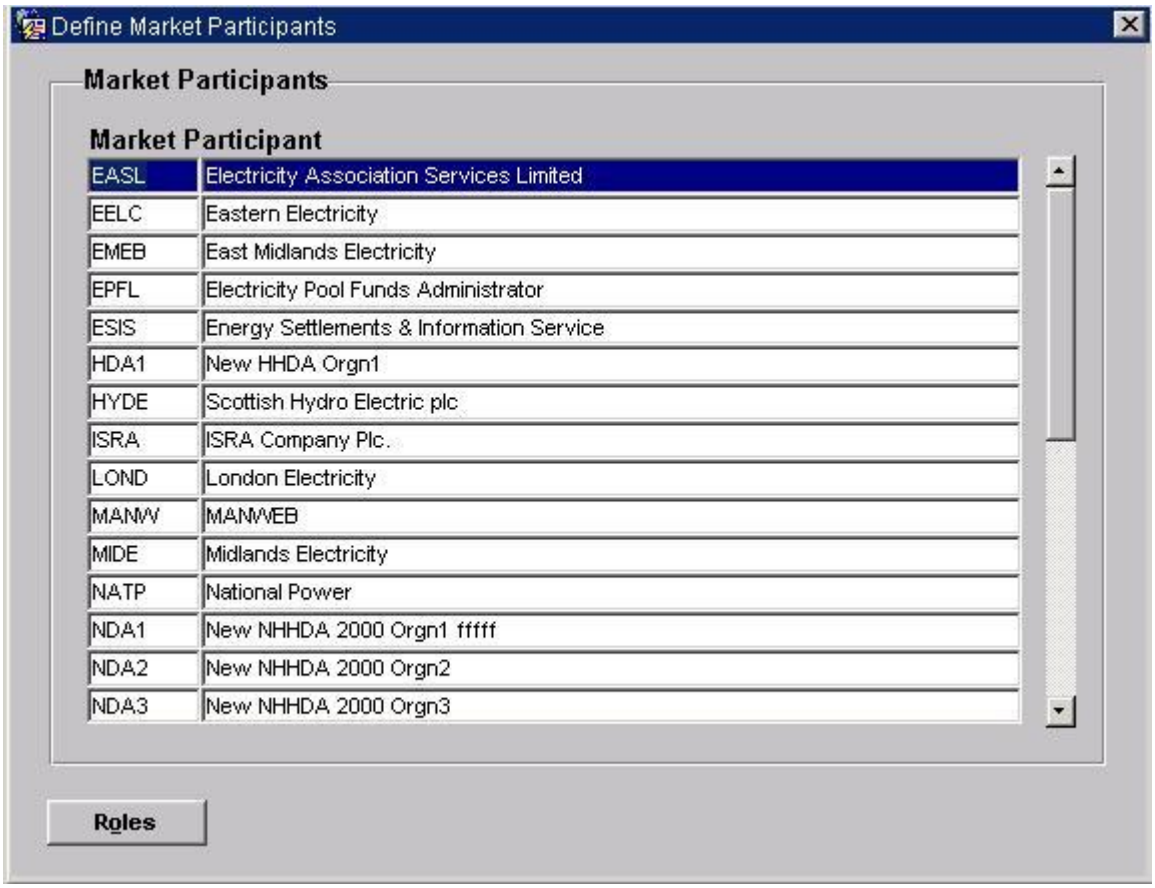
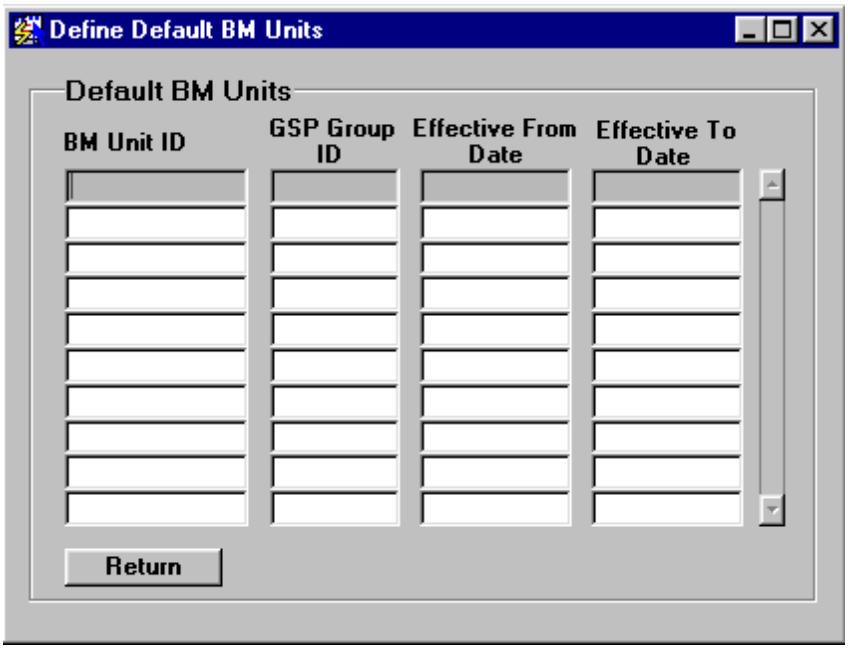
5.6.15 Form ISY_MAPAMAIN

The following describes the Market Participants form.

5.6.15.1 Screen layouts





5.6.15.2 Screen behaviour

Functions Implemented	I0005 - Specify Supplier I0005E - Browse Supplier I0006 - Specify Distributor I0006E - Browse Distributor I0009 - Specify Data Collector I0009E - Browse Data Collector I0010 - Specify Aggregator I0010E - Browse Aggregator
Block	Market Participants. Allows maintenance of Market Participants.
On entry	Ready for user input.
List of Values	N / A
Poplists	N / A
Buttons	Roles Navigates to the Market Roles block.
Additional Behaviour	Physical deletes are permitted to Market Participants but only if Market Roles have not been assigned yet.
Block	Market Roles. Allows association of Market Roles (Suppliers, Distributors, Data Collectors, Data Aggregators etc.) to the Market Participants selected in the previous block.
On Entry	Market Roles automatically queried for the Market Participant selected in the previous block.
List of Values	N / A
Poplists	On Market Role. Displays all available Market Roles.
Buttons	Return Takes the user back to the Market Participant block.

	Default BM Units Navigates to the Default BM Units block if BM Units have not been entered for a new Supplier. This button will not be active if the market participant is not a Supplier or data already exists in the idb_bm_unit_in_gsp_groups table for the Supplier.
Additional Behaviour	Physical deletes are not permitted to Market Roles and are subject to a logical delete - the user either activates or deactivates the role via the Active flag.
Block	Default BM Units. Defines the association of Default BM Units to participants defined as a Supplier for GSP Groups.
On Entry	Ready for user input.
List of Values	On GSP Group Id.
Poplists	N / A
Buttons	Return Takes the user back to the Market Participant block.
Additional Behaviour	A BM Unit may only be assigned to one GSP Group and Supplier combination on any one Settlement Day. Once any inserts are committed, no updates may be performed.

5.6.15.3 Description

Form consists of three blocks:

The MAPA block is based on the idb_mkt_ppts table. Query, insert, update and delete are permitted.

The MAPR block is based on the idb_mkt_ppt_roles table. Query, insert, update are permitted.

The MABM block is based on the idb_bm_unit_in_gsp_groups table. Query and insert are permitted.

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5.6.15.4 Form structure

Object	Description
Form: *MAPAMAIN*	Title : Maintain Market Participants
Block: *MAPA*	Market Participants block, based on the idb_mkt_ppts table. Query, insert, update delete allowed. Order by mkt_ppt_id, mkt_ppt_name. Join Columns : mapa.mkt_ppt_id = mapr.mkt_ppt_id
mkt_ppt_id	Label : Market Participant Display. User enterable. Query. Insert. Delete.
mkt_ppt_name	Label : Name Display. User enterable. Query. Insert. Update. Delete.
Block *: MAPR*	Market Participant Roles block, based on idb_mkt_ppt_roles table. Query, insert, update allowed. Order by mkt_ppt_role_code.
mkt_ppt_id	Non display. Provides link back to *MAPA* block.
Mkt_ppt_role_code	Label : Market Role List item. Display. User enterable. Query. Insert. Pop list provided, driven from cdb_ref_values table where domain = 'MAPR'. Entry of a mkt_ppt_role_code = 'X' (Supplier), then set pool_member_id = enterable else set to non-enterable.
Pool_member_id	Label : Pool Member Id Display. If mapr.mkt_ppt_role_code = 'X' (Supplier) then field is user enterable. Query. Insert. Update.
Active_flag	Label : Active List Item. Display. User enterable. Query. Insert. Update.
Block *: MABM*	BM Unit For Supplier In GSP Group block, based on idb_bm_unit_in_gsp_groups table. Query, insert allowed.
mkt_ppt_id	Non display. Provides link back to *MAPA* block.
m*kt_ppt_role_code*	Non display. Value : 'X'.
gsp_group_id	Label : GSP Group Id Display. User Enterable. Insert. LOV. On idb_gsp_groups
bm_unit_id	Label : BM Unit Id Display. User Enterable. Insert.

Object	Description
eff_from_sett_date	Label : From Settlement Date Display. User Enterable. Insert. Format : DD-MON-YYYY
eff_to_sett_date	Label : To Settlement Date Display. User Enterable. Insert. Format : DD-MON-YYYY
default_bm_unit_flag	Non display. Value : 'Y'

5.6.15.5 Action on Query

None.

5.6.15.6 Action on Update

Ensure that each Default BM Unit is only assigned to one Supplier and GSP Group combination on any one Settlement Day.

Ensure that the Effective From Date for Scottish GSP Groups is on or after BETTA Start Date.

5.6.15.7 Action on Insert

The mapa.mkt_ppt_id_id must be unique.

The combination of mapr.mkt_ppt_id and mapr.mkt_ppt_role_code must be unique.

Ensure that each Default BM Unit is only assigned to one Supplier and GSP Group combination on any one Settlement Day.

Ensure that the Effective From Date for Scottish GSP Groups is on or after BETTA Start Date.

5.6.15.8 Action On Delete

When deleting a idb_mkt_ppts record carry out pre-delete child check to the idb_mkt_ppt_roles table, disallow delete if child record exist.

5.6.15.9 Action on Logical Delete

When carrying out logical delete on a idb_mkt_ppt_roles records (active_flag deselection) carry out the following :

When deactivating the Suppliers use function pkg_common.f_authorise_change (D) to carry out SSR Run validation for all related child records. These will include idb_mkt_ppt_role_in_gsp_groups, idb_bm_units_in_gsp_groups and idb_da_in_gsp_groups. If logical deletion is permitted then cascade delete the associated child records after first displaying a warning message to the user. Audit any potential Standing Data modifications using pkg_common.f_audit_stanman.

Distributors can only be deactivated if no child records exist in the idb_llf_classes table that are themselves deactivated. If deactivation is permitted then use function pkg_common.f_authorise_change(D) to carry out SSR Run validation. If logical deletion is possible then cascade delete associated idb_mkt_ppt_role_in_gsp_groups

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records after first displaying a warning message to the user. Audit any potential Standing Data modifications using pkg_common.f_audit_stanman.

Logical deletion of Data Collectors is not allowed.

When deactivating Data Aggregators use function pkg_common.f_authorise_change (D) to check for SSR Run validation for child idb_da_in_gsp_groups records. If logical deletion is possible then cascade delete associated idb_da_in_gsp_groups records after displaying a warning message to the user. Audit any potential Standing Data modifications using pkg_common.f_audit_stanman.

If the deletion of a Data Aggregator or Supplier role prevents Supplier Data Aggregation data from being used, the user is warned of this and requested for confirmation. If the user confirms, the change is made, but the Supplier Data Aggregation data is not modified in any way. If the change additionally affects a completed Final Initial SSR run, then as elsewhere, only the Standing Data Manager can make the change. User confirmation is required, and a standing data audit report is generated.

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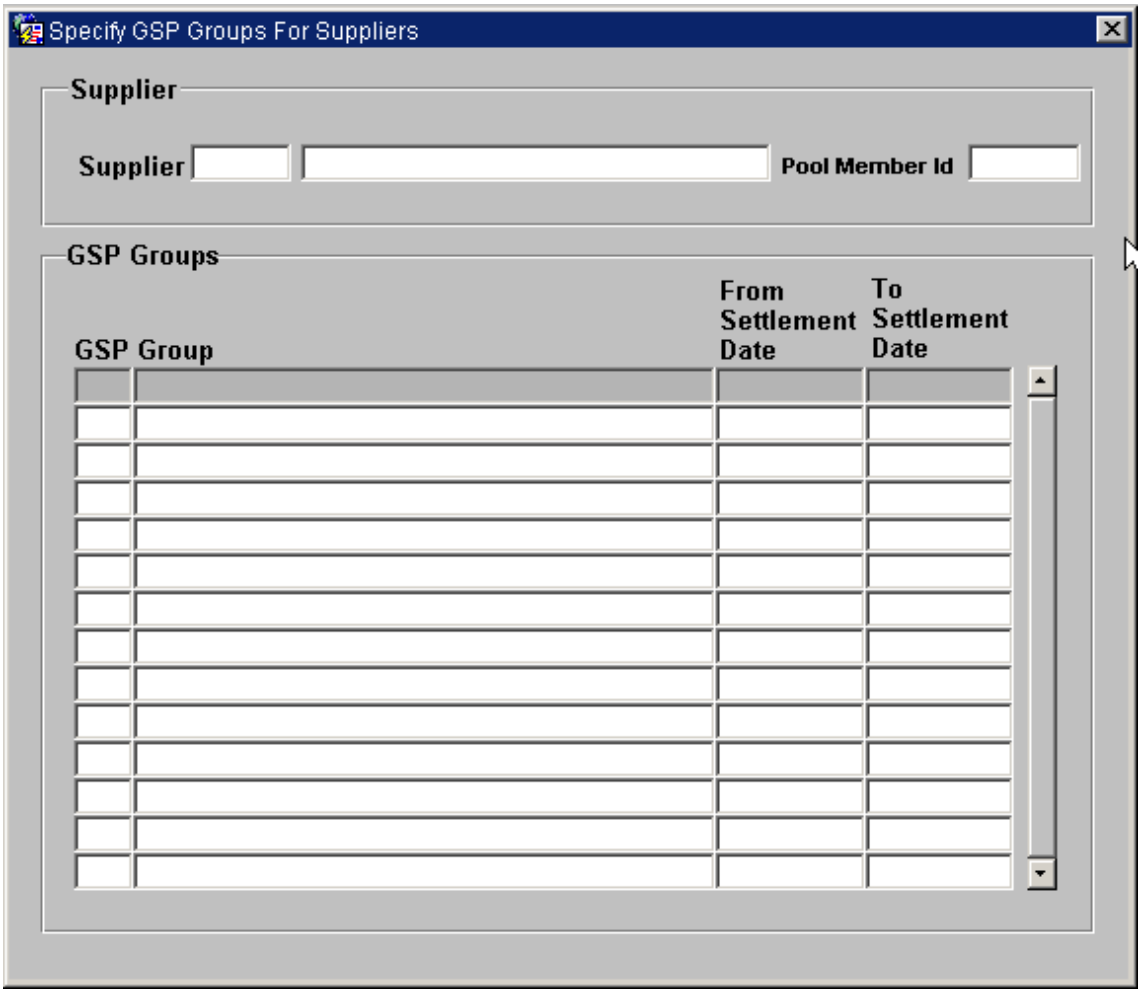
5.6.16 Form ISY_MPGGMAIN

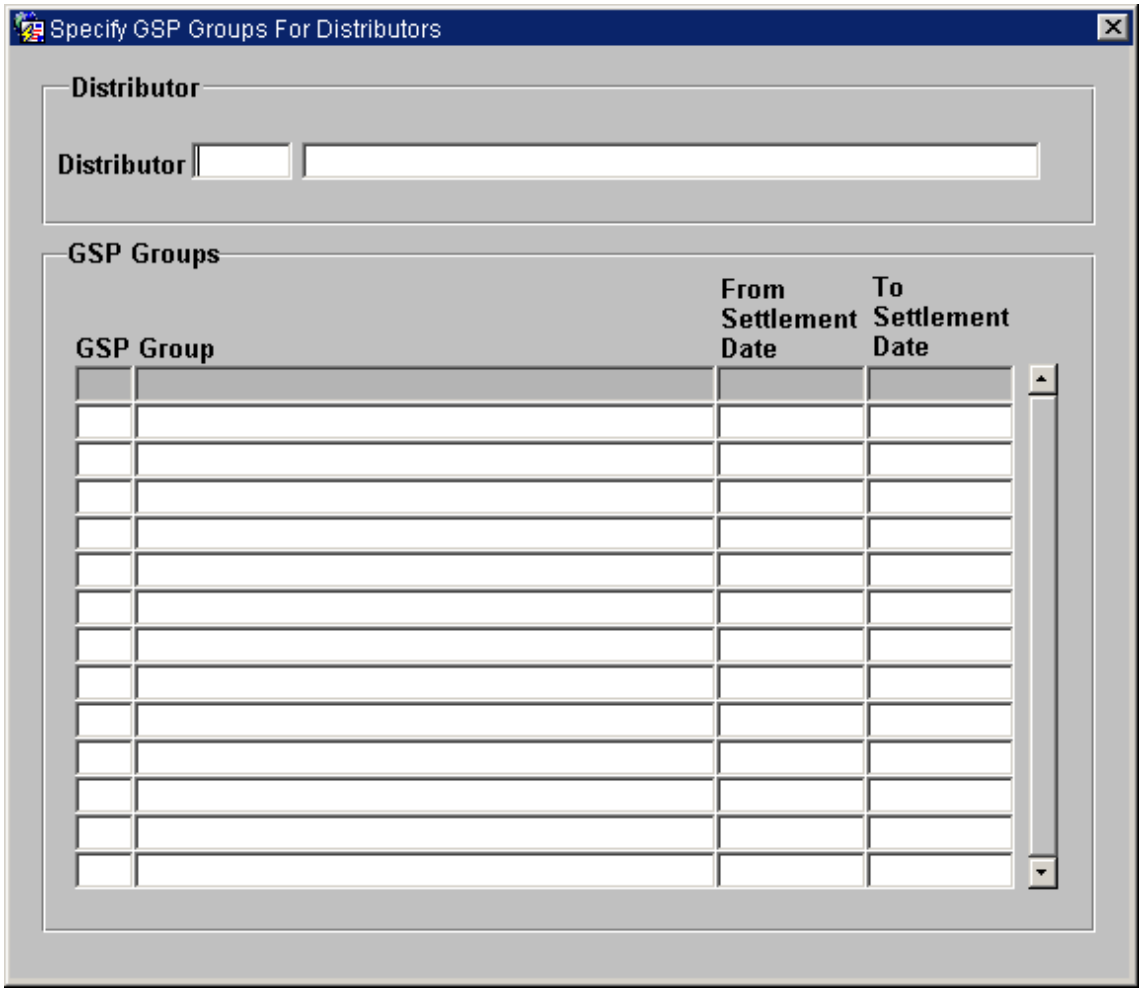
The following describes the Specify GSP Groups for Market Participant form.

5.6.16.1 Screen Layouts

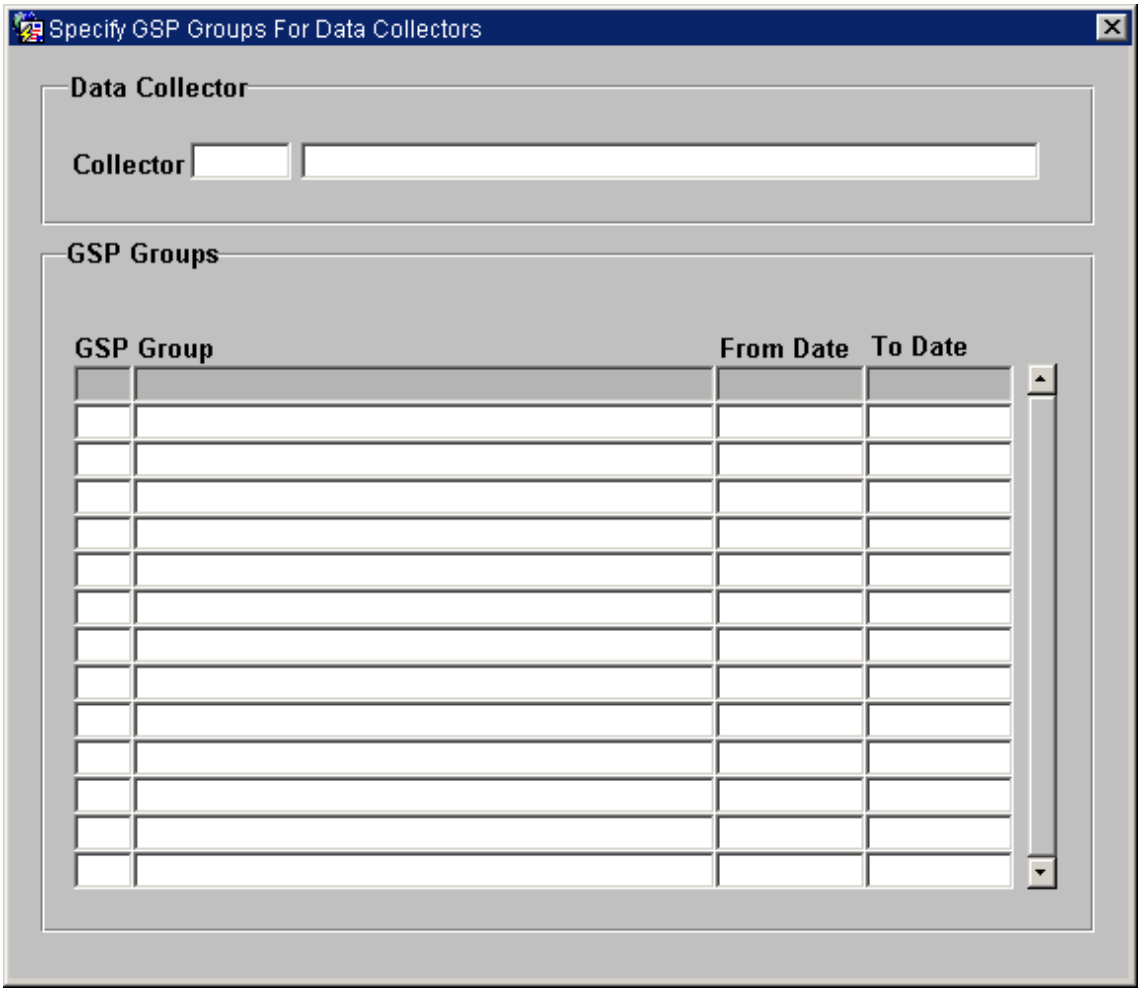
5.6.16.1.1 Supplier In GSP Groups



5.6.16.1.2 Distributor In GSP Groups



5.6.16.1.3 Data Collector In GSP Group



5.6.16.2 Screen behaviour

Functions Implemented	I0005 - Specify Supplier in GSP Group I0005E - Browse Supplier in GSP Group I0006 - Specify Distributor in GSP Group I0006E - Browse Distributor in GSP Group I0009 - Specify Data Collector in GSP Group I0009E - Browse Data Collector in GSP Group
Screen Initiation	The form will be called from one of three menu options which will dictate whether the form is to be used in the context of a Supplier, Distributor or a Data Collector.
Block	Supplier, Distributor or Data Collector. Block allows selection of a Supplier, Distributor or Data Collector.
On Entry	Block is put into enter query mode ready for selection of a Supplier, Distributor or Data Collector.
List of Values	On the Supplier, Distributor or Data Collector field. Displays the Id and the Name and in the case of a Supplier the Pool Member Id.
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A
Block	GSP Groups.

	Block allows association of a GSP Group to a Supplier, Distributor or Data Collector selected in the previous block.
On Entry	All GSP Groups that are associated with the Supplier, Distributor or Data Collector are automatically queried.
List of Values	On GSP Group. Displays the GSP Group Id and Name.
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A

5.6.16.3 Description

The form is called from the ISRA Application menu from one of three menu options, each menu option passing a parameter to the form in order to indicate whether or not the form is running in the context of a Distributor, Data Collector or Supplier. The parameter is used programmatically to modify titles and screen fields and in addition will be used to restrict manipulation of records to a particular Market Role. Thus, if the form is being called in the context of a Supplier, then only Supplier / GSP Group details can be maintained.

The form is based on two blocks, a Market Participant Roles block - MPRO and the GSP Groups block - MPRG.

The MPRO block is based on the idb_market_ppt_roles table. Only query is allowed. Restrict access to a given mkt_ppt_role_code, depending on the menu parameter passed to the form where active_flag = 'Y'.

The MPRG block is based on the idb_mkt_ppt_role_in_gsp_groups table and manages the assignment of GSP Groups for different settlement date ranges to a Market Participant Role, selected in the MPRO block. Query, insert, update and delete is allowed.

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5.6.16.4 Form structure

Object	Description
Form: *MPGGMAIN*	Title : Specify GSP Groups For <Market Role Name>
Parameters	P1 - The Market Role, allowable values… D - Data Collector R - Distributor X - Supplier
Block: *MPRO*	Supplier, Distributor or Data Collector block (depending on P1). Based on idb_mkt_ppt_roles table. Query only. Where Condition : mkt_ppt_role_code = P1 and active_flag = 'Y'. Order by mkt_ppt_id. Join Columns : mpro.mkt_ppt_id = mprg.mkt_ppt_id and mpro.mkt_ppt_role_code = mprg.mkt_ppt_role_code
mkt_ppt_id	Label : Supplier, Distributor or Data Collector depending on P1. Display. Query. LOV driven from idb_mkt_ppt_roles and idb_mkt_ppts tables where mkt_ppt_role_code = P1 and active_flag = 'Y'.
nbt_mkt_ppt_name	Label : Supplier, Distributor or Data Collector depending on P1. Display only.
pool_member_id	Label : Pool Member Display. Query. (True if P1 = 'X')
*Block : **MPRG***	GSP Groups block. Based on idb_mkt_ppt_role_in_gsp_groups. Query, insert, update, delete allowed. Order by gsp_group_id, eff_from_date desc.
mkt_ppt_role_in_gsp_groups_id	Non-Display. Derived from Sequence No. mrp_in_gsp_group_id_seq
gsp_group_id	Label : GSP Group Display. User Enterable. Query. Insert. LOV / Validation driven from idb_gsp_groups table. If P1 = 'R' then only display GSP Groups that have an effective date range that does not overlap the effective date range of an existing assignment.
nbt_gsp_group_name	Label : Name Display only.
eff_from_date	Label : From Settlement Date Display. User Enterable. Query. Insert. Format : DD-MON-YYYY

Object	Description
eff_to_date	Label : To Settlement Date Display. User Enterable. Query. Insert. Update. Format : DD-MON-YYYY

5.6.16.5 Action on Form Load

When-New-Form-Instance Trigger should…

If P1 = 'X' (Supplier), then set the length of mpro.nbt_mkt_ppt_name so that mpro.pool_member_id is visible and set the item to enterable and queriable. Set relevant boilerplate = 'Supplier' and Form Title = 'Specify GSP Groups For Suppliers' and date boilerplate text = 'To Settlement Date' and 'From Settlement Date'.

If P1 = 'D' then set the mpro.pool_member_id to non-enterable and non-queriable - do not resize the length of mpro.nbt_mkt_ppt_name. Set relevant boilerplate = 'Data Collector', Form Title = 'Specify GSP Groups For Data Collector' and date boilerplate text = 'To Date' and 'From Date'.

If P1 = 'R' then set the mpro.pool_member_id to non-enterable and non-queriable - do not resize the length of mpro.nbt_mkt_ppt_name. Set relevant boilerplate = 'Distributor' and Form Title = 'Specify GSP Groups For Distributors' and date boilerplate text = 'To Settlement Date' and 'From Settlement Date'. Read the Multiple Distrib Start Date value from cdb_system_parameter, into a Ctrl variable. If this cannot be retrieved an error is returned.

5.6.16.6 Action on Query

Automatically populate mpro.nbt_mkt_ppt_name from mpro.mkt_ppt_id via the idb_mkt_ppt_roles and idb_mkt_ppts tables.

Automatically populate the mprg.nbt_gsp_group_name from mprg.gsp_group_id table.

5.6.16.7 Action on Update

If P1 in ('X','R') (Supplier, Distributor) then use pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

If P1 = 'X' (Supplier) and eff_to_date has been updated, then the related child record end dates (idb_da_in_gsp_groups.eff_to_sett_date) must also be updated so that they stay within the new MPRG date range after first displaying a warning message to the user. Child records can be found via the surrogate key, mkt_ppt_role_in_gsp_group_id. If a change prevents Supplier Data Aggregation data from being used, the user is warned of this and requested for confirmation. If the user confirms, the change is made, but the Supplier Data Aggregation data is not modified in any way. If the change additionally affects a completed Final Initial SSR run, then as elsewhere, only the Standing Data Manager can make the change. User confirmation is required, and a standing data audit report is generated. If the change

so made causes related Data Aggregator links to fall outside the supplier's effective date range, these links are deleted.

Changes made through this form are checked against any relevant uncleared Standing Data Update log records with matching, Supplier ID and GSP Group ID (and Data Aggregator ID & Role Code both NULL), to see whether they can be cleared. The set of Standing Data Update log records checked varies depending on the type of change being made to the data through the form as follows:

For Insert type changes (ie. inserting a new appointment span, or changing an existing appointment span so that the effective-to date is increased), Standing Data Update log records are cleared where they have Action 'I' and Settlement dates overlapping those of the new or updated appointment span's (new) effectiveness dates.

For Delete type changes (ie. deleting an existing appointment span, or changing an existing appointment span so that the effective-to date is decreased), the action varies again, depending on the type of Delete action. If the Delete action is deleting an existing appointment span, Standing Data Update log records are cleared where they have Action 'D' and Settlement dates that butt up to the original effective-from or effective-to dates of the deleted appointment span. If the Delete action is changing an existing appointment span so that the effective-to date is decreased, Standing Data Update log records are cleared where they have Action 'D' and an effective-from Settlement date that butt up to the amended record's original effective- to date.

If P1 = 'R' (Distributor) then use f_mprg_unique, fail if function returns true.

5.6.16.8 Action on Insert

If P1 in ('X','R') (Supplier, Distributor) then use pkg_common.f_authorise_change(I) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_dates_overlap for date validation.

If P1 = 'R' (Distributor) then use f_mprg_unique and f_check_dist_gsp_entity_insert, and fail if either function returns true.

5.6.16.9 Action on Delete

If P1 in ('X','R') (Supplier, Distributor) then use pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

If P1 = 'X' (Supplier) and delete is permitted then cascade delete any related idb_da_in_gsp_groups records where the MPRG date ranges are within the range of the Supplier. A warning message is displayed to the user before the delete is carried out.

If P1 = 'X' (Supplier) and a change prevents Supplier Data Aggregation data from being used, the user is warned of this and requested for confirmation. If the user confirms, the change is made, but the Supplier Data Aggregation data is not modified

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in any way. If the change additionally affects a completed Final Initial SSR run, then as elsewhere, only the Standing Data Manager can make the change. User confirmation is required, and a standing data audit report is generated.

5.6.16.10 Form Functions / Procedures

f_mprg_unique

If P1 = 'R' (Distributor) then validate that the effective date range does not overlap the effective date range of an existing assignment for any GSP Group. This check is only used before the Multiple Distrib Start Date.

Return True if GSP Group is already assigned.

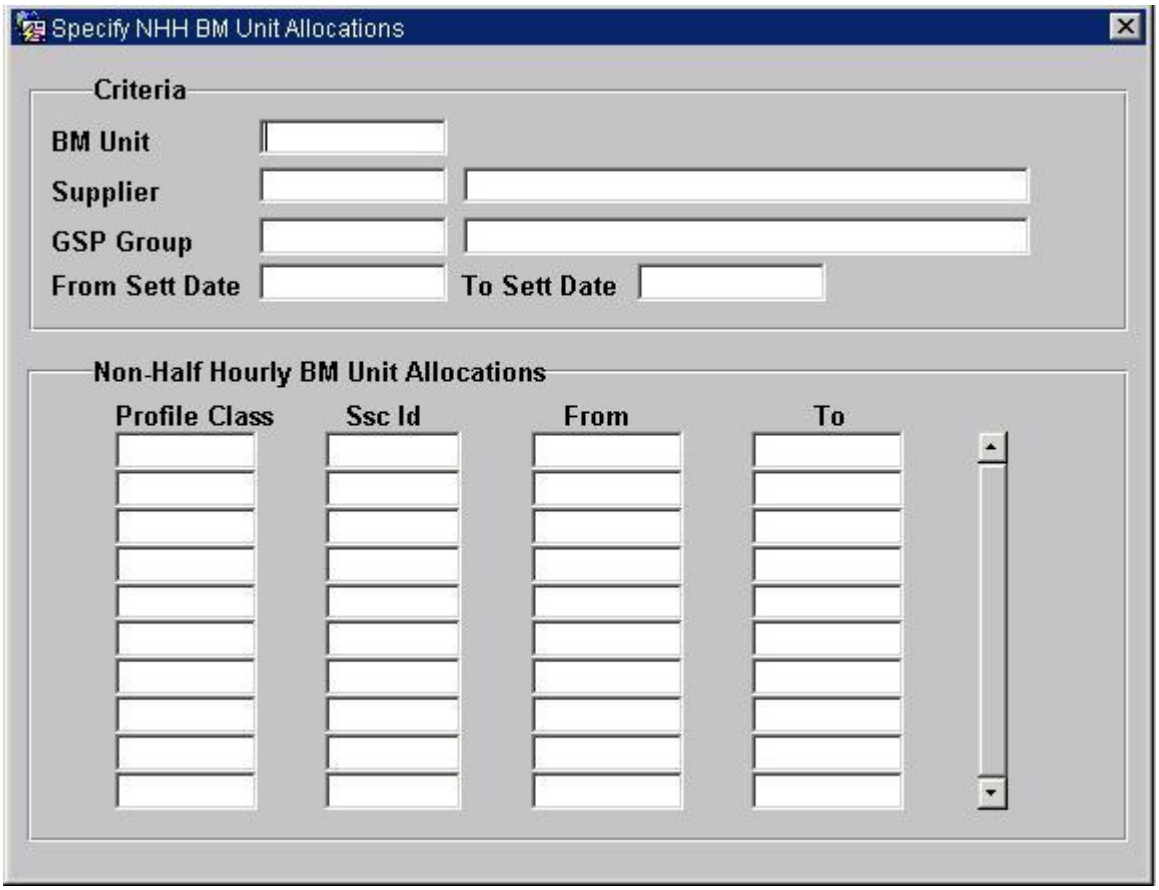
f_check_dist_gsp_entity_insert

Multiple distributors can only be assigned to a GSP group after the 'Multiple Distrib Start Date' (a non-maintainable system parameter set to 01-AUG-2003). If P1= 'R' (Distributor) then validate that effective date range does not overlap that of another distributor in the same GSP group before the multiple distributor date.

5.6.17 Form ISY_NBMAMAIN

The following describes the Specify Non-Half Hourly BM Unit Allocations form

5.6.17.1 Screen layout



5.6.17.2 Screen behaviour

Functions Implemented	I0047 Specify Non-Half Hourly BM Unit Allocation I0047E Browse Non-Half Hourly BM Unit Allocation
Block	Criteria
On Entry	Ready for user input.
List of Values	On BM Unit, displaying BM Unit Id from BM Unit for Supplier in GSP Group On Supplier, displaying Supplier and Supplier Name from BM Unit for Supplier in GSP Group On GSP Groups displaying GSP Group and GSP Group Name from BM Unit for Supplier in GSP Group. On BM Unit Effective From Settlement Date from BM Unit for Supplier in GSP Group.
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A
Block	Non-Half Hourly BM Unit Allocations
On Entry	Automatically Query.
List of Values	On Profile Class, displaying Profile Class from Valid Settlement Configuration Profile Class.

	On Standard Settlement Configuration, displaying SSC from Valid Settlement Configuration Profile Class.
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A

5.6.17.3 Description

This form will consist of one window. It will contain the following blocks:

CTRL - non-base table block, non-queryable, insert/update/delete not allowed. BM Unit Id will be a lookup to idb_bm_unit_in_gsp_group. GSP Group will be a lookup to idb_bm_unit_in_gsp_group. Supplier will be a lookup to idb_bm_unit_in_gsp_group. BM Unit for Supplier in GSP Group Effective From Settlement Date will be a lookup to idb_bm_unit_in_gsp_group. BM Unit Effective To Settlement Date, GSP_Group_Name and Supplier Name should be shown as part of validation.

NBMA - base-table idb_nhh_bm_unit_allocation, queryable, insert, update and delete allowed. This block will always be within the context of the information in the criteria block and cannot be queried independently. Profile Class Id will be a lookup to idb_vscpcs. Standard Settlement Configuration will be a lookup to idb_vscpcs.

5.6.17.4 Form structure

Object	**Description**
Form: ***NBMAMAIN***	Title : Specify Non-Half Hourly BM Unit Allocations
Block: ***CTRL***	non-base table. Query. Join columns: ctrl.nbt_bm_unit_id = nbma.bm_unit_id ctrl.nbt_gsp_group_id = nbma.gsp_group_id ctrl.nbt_supplier_id = nbma.mkt_ppt_id ctrl.nbt_eff_from_sett_date_bmuigg = nbma. eff_from_sett_date_bmuigg.
nbt.eff_from_sett_date_bmuigg	Label : BM Unit for Supplier in GSP Group Effective From Settlement Date Display. Mandatory. Query LoV on idb_bm_unit_in_gsp_group.
nbt.eff_to_sett_date_bmuigg	Display only.
nbt_supplier_id	Label : Supplier Display. Mandatory. Query LoV on idb_bm_unit_in_gsp_group.
nbt_supplier_name	Display only.
nbt_gsp_group_id	Label : GSP Group Display. Mandatory. Query LoV on idb_bm_unit_in_gsp_group.

Object	Description
nbt_gsp_group_name	Display only.
nbt.bm_unit_id	Label: BM Unit Id. Display. Mandatory. Query LoV on idb_bm_unit_in_gsp_group.
Block: *NBMA*	Base table on idb_nhh_bm_unit_allocation Query, Insert, Update, Delete Order by profile class id, standard settlement configuration id, eff_from_sett_date.
bm_unit_id	Non display, Value: ctrl.nbt_bm_unit_id
gsp_group_id	Non display, Value: ctrl.nbt_gsp_group_id
sup_mkt_ppt_id	Non display, Value: ctrl.nbt_supplier_id
eff_from_sett_date_bmuigg	Non display, Value: ctrl.nbt_eff_from_sett_date_bmuigg
pfl_class_id	Label : Profile Class Id Display. User Enterable. Query. Insert. Delete LoV on idb_vscpcs.
ssc_id	Label : Standard Settlement Configuration Id Display. User Enterable. Query. Insert. Delete LoV on idb_vscpcs.
eff_from_sett_date	Label : From Settlement Date Display. User Enterable. Query. Insert. Update. Delete. Format : DD-MON-YYYY.
eff_to_sett_date	Label : To Settlement Date Display. User Enterable. Query. Insert. Update. Delete. Format : DD-MON-YYYY

5.6.17.5 Action on Query

Automatically populate ctrl.nbt_supplier_name from ctrl.nbt_supplier_id using the idb_mkt_ppt_roles and idb_mkt_ppts tables.

Automatically populate ctrl.nbt_gsp_group_name from ctrl.gsp_group_id using the idb_gsp_group table.

Automatically populate ctrl.nbt_eff_to_sett_date_bmuigg from ctrl.nbt_bm_unit_id and ctrl.nbt_eff_from_sett_date_bmuigg using the idb_bm_unit_in_gsp_groups table.

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5.6.17.6 Action on Update

Use function pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Ensure that the Effective From Date is less than or equal to the Effective To Settlement Date.

Ensure that the Effective From Date is greater than or equal to the Effective From Date of the parent BM Unit for Supplier in GSP Group record and that the Effective To Date is less than or equal to the Effective To Date of the parent BM Unit for Supplier in GSP Group record.

Ensure that there exists one or more sets of Average Fraction of Yearly Consumption in idb_afycs for the GSP Group, Profile Class and Standard Settlement Configuration whose effective date range cover every settlement day for which the Non-Half Hourly BM Unit Allocation is effective.

Ensure that the effective date range of the Non-Half Hourly BM Unit Allocation for a combination of GSP Group, Supplier and VSCPC does not overlap any other Non-Half Hourly BM Unit Allocation for the same GSP Group, Supplier and VSCPC (i.e. the combination of GSP Group, Supplier and VSCPC is assigned to only one BM Unit on any one settlement day).

5.6.17.7 Action on Insert

Use function pkg_common.f_authorise_change(I) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Ensure that the Effective From Date is less than or equal to the Effective To Settlement Date.

Ensure that the Effective From Date is greater than or equal to the Effective From Date of the parent BM Unit for Supplier in GSP Group record and that the Effective To Date is less than or equal to the Effective To Date of the parent BM Unit for Supplier in GSP Group record.

Ensure that there exists one or more sets of Average Fraction of Yearly Consumption in idb_afycs for the GSP Group, Profile Class and Standard Settlement Configuration whose effective date range cover every settlement day for which the Non-Half Hourly BM Unit Allocation is effective.

Ensure that the effective date range of the Non-Half Hourly BM Unit Allocation for a combination of GSP Group, Supplier and VSCPC does not overlap any other Non-Half Hourly BM Unit Allocation for the same GSP Group, Supplier and VSCPC (i.e. the combination of GSP Group, Supplier and VSCPC is assigned to only one BM Unit on any one settlement day).

5.6.17.8 Action on Delete

Use function pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

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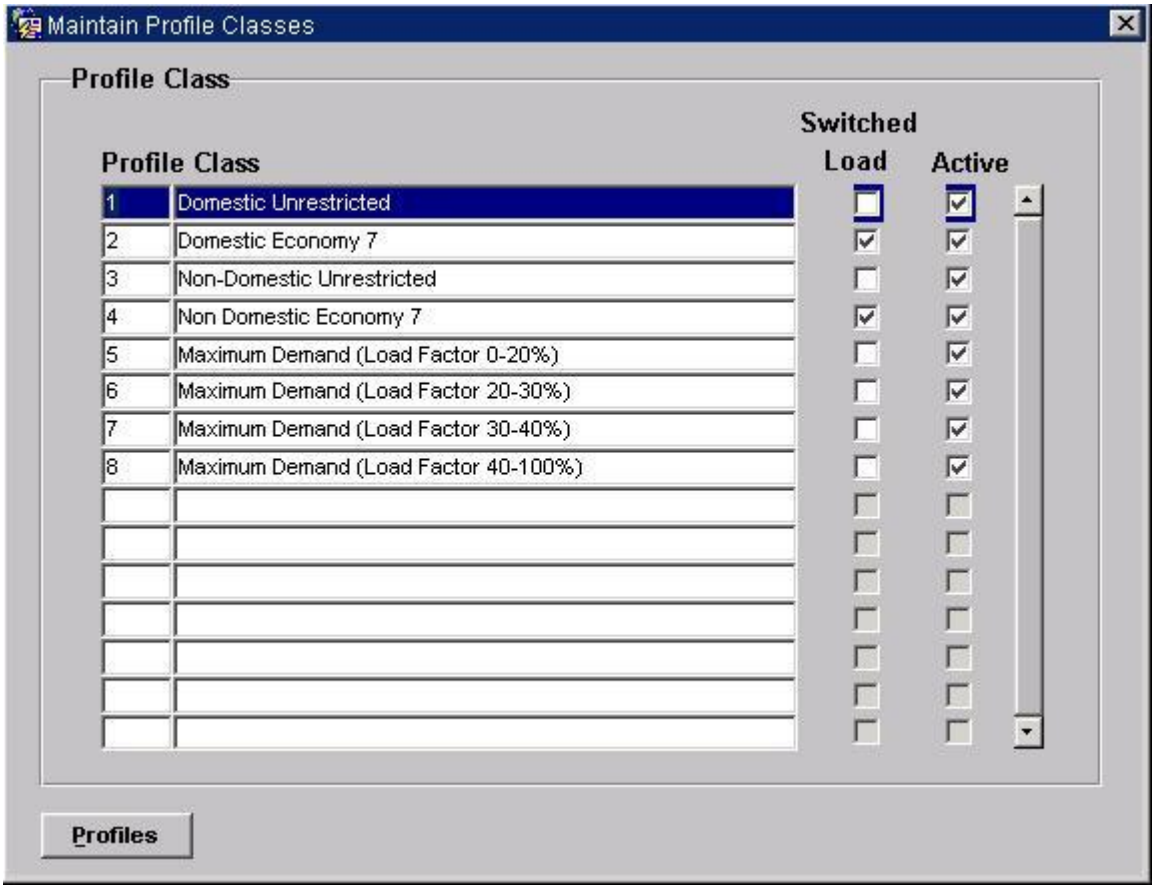
5.6.18 Form ISY_PROFMAIN

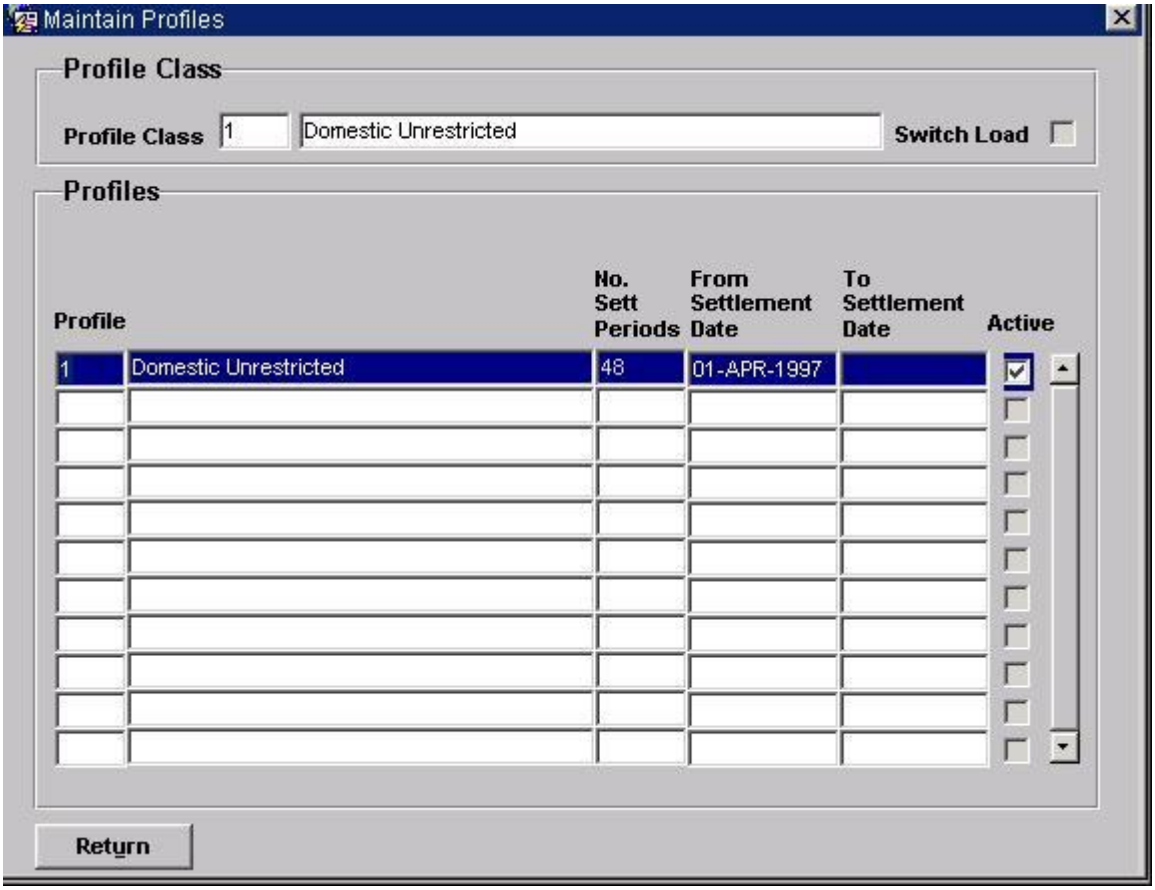
The following describes the Maintain Profiles form.

5.6.18.1 Screen layout

5.6.18.1.1 Maintain Profile Classes



5.6.18.1.2 Maintain Profiles for a Profile Class



5.6.18.2 Screen behaviour

Functions Implemented	I0007 - Define Profiles I0007E - Browse Profile Classes
Block	Profile Class
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Profiles Navigate to the Profiles block if Profile Class id Active.
Additional Behaviour	The Active Indicator will be updateable by the User and will denote whether a particular record is Active (Checked) ie. Currently in use within the system, or Inactive (Unchecked) ie. Logically Deleted and therefore not currently being used within the system. The Profile Class maintenance has been separated from the Profile maintenance to allow viewing of all Profile Classes at one time and to make it consistent with the other maintenance screens.
Block	Profile Class
On Entry	N/A
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	This block provides the Context showing the Profile that the User has selected from the Profile Class block.

Block	Profiles
On Entry	Automatically Query all Profiles for the associated Profile Class.
List of Values	N/A
Poplists	N/A
Buttons	Return Navigate to the Profile Class block.
Additional Behaviour	The Active Indicator will be updateable by the User and will denote whether a particular record is Active (Checked) ie. Currently in use within the system, or Inactive (Unchecked) ie. Logically Deleted and therefore not currently being used within the system.

5.6.18.3 Description

This forms consists of three blocks in two windows:

PROC block - base table on idb_pfl_classes.

This block allows Profile Classes to be queried/updated/deleted or inserted.

The **Profiles** button from this block will call the second window containing the context and Profile maintenance. Ensure that the User has committed/cancelled any changes to the Profile Class before allowing them to move to the Profiles.

CTRL_CONTEXT block - Holds the details of the Profile Class being worked on. This block is non-enterable and the fields within it are display-only.

PROF block - base table on idb_pfls.

This block allows Profiles to be queried/updated/deleted or inserted within the context of a profile class.

5.6.18.4 Form structure

Object	**Description**
Form: *PROFMAIN*	Title : Maintain Profile Classes and associated Profiles
Block: *PROC*	Base table on idb_pfl_classes. Insert, Query, Update. Order by pfl_class_id.
Pfl_class_id	Label : Profile Class. Display. User Enterable. Insert. Query.
Pfl_class_desc	Display. User Enterable. Insert. Update. Query.
Switched_load_pfl_class_ind	Label : Switched Load. Display. User Enterable. Insert. Update. Query.
Active_flag	Label : Active. Display. User Enterable. Insert. Update. Query.

Object	Description
Block: *CTRL_CONTEXT*	non-base table. Display only. Join columns: ctrl.nbt_prof_class_id = proc.pfl_class_id ctrl.nbt_prof_class_id = prof.pfl_class_id
Nbt_prof_class_id	Label : Profile Class Display only.
Nbt_prof_class_desc	Display only.
Nbt_Switched_load_pfl_class_ind	Display only.
Block: *PROF*	Base table on idb_pfls. Query, Insert, Update allowed. Order by pfl_id.
Pfl_id	Label : Profile. Display. User Enterable. Insert.
Pfl_desc	Label : Description. Display. User Enterable. Insert. Update.
Pfl_sett_pds	Label : No. Sett. Periods Display only. Valid values: 1 - 48.
Eff_from_sett_date	Display. User Enterable. Insert. Format : DD-MON-YYYY.
Eff_to_sett_date	Display. Insert. Update. Format : DD-MON-YYYY.
Active_flag	Label : Active. Display. User Enterable. Insert. Update.

5.6.18.5 Action on Query

Default Forms behaviour.

5.6.18.6 Action on Update

Use pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Use functions pkg_common.f_validate_effective_from and pkg_common.f_check_date_overlap for date validation.

Switched_load_pfl_class_ind = 'Y':

Use function pkg_common.f_check_date_overlap to validate effective dates if the pfl_sett_periods = 48.

One record must have a pfl_sett_periods = 48.

Only one record may have a pfl_sett_periods = 48 between eff_from_sett_date and eff_to_sett_date within pfl_class_id, basically only 1 record with 48 Settlement Periods may be active at any one time. Also, it is not possible to have two active records with the same number of settlement periods.

Switched_load_pfl_class_ind = 'N':

All records must have a pfl_sett_periods = 48.

Use function pkg_common.f_check_date_overlap to validate effective dates. Only 1 record with 48 Settlement Periods may be active at any one time.

5.6.18.7 Action on Insert

proc.pfl_class_id must be unique.

prof.pfl_class_id, prof.pfl_id must be unique.

The eff_to_sett_date must be > the max(sett_date) in idb_ssr_runs.

Use function pkg_common.f_validate_effective_from to validate the dates.

Switched_load_pfl_class_ind = 'Y':

Use function pkg_common.f_check_date_overlap if the pfl_sett_periods = 48.

One record must have a pfl_sett_periods = 48 and the eff_from_set_date and eff_to_sett_date must be contiguous for these records.

Only one record may have a pfl_sett_periods = 48 between eff_from_sett_date and eff_to_sett_date within pfl_class_id, basically only 1 record with 48 Settlement Periods may be active at any one time. Also, it is not possible to have two active records with the same number of settlement periods.Switched_load_pfl_class_ind = 'N':

All records must have a pfl_sett_periods = 48. If the eff_to_sett_date is null then set eff_to_sett_date = eff_from_set_date-1 (from the new profile). Eff_from_set_date and eff_to_sett_date must be contiguous for these records. Only 1 record with 48 Settlement Periods may be active at any one time.

5.6.18.8 Action on Logical Delete

Do not actually delete the record, instead update the active_flag = 'N'.

Use pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

Before logical deletion of a PROC record is allowed perform child checks on idb_vscpcs, fail if records exist. If logical delete is permitted then logically delete all associated idb_pfls and physically delete related idb_pfl_sets, idb_pd_pfl_regr_eqs, idb_gsp_group_average_eacs idb_gsp_group_average_eacs.

5.6.18.9 Action on button **Profiles**.

Ensure that the User has committed or cancelled all changes on the PROC block before allowing navigation to the PROF block.

This button should not be available if the Active field is unchecked.

5.6.18.10 Action on button **Return**.

Ensure that the User has committed or cancelled all changes on the PROF block before allowing navigation back to the PROC block.

5.6.19 Form ISY_PROXUTIL

The following describes the Extract Daily Profile data front-end form.

5.6.19.1 Screen layout

5.6.19.2 Screen behaviour

Function Implemented	I0008A - Initiate Extract Daily Profile Data
Block	Report Request.
On Entry	Ready for user input.
List of Values	N/A
Poplists	N/A
Buttons	Extract This will first validate to ensure that a Settlement Date has been entered and the latest Profile Production Run Number has been retrieved. The form will then call the batch extract process. An informational alert will appear informing the User that the Extract has been initiated successfully or an error alert will appear informing the User that the process has failed, and will display the reason for that failure.
Additional Behaviour	N/A

5.6.19.3 Description

This is a one-block form based on the CTRL control block.

The latest profile_production_run_number can be obtained from profile_production_runs matching on the settlement_date entered by the User.

Initiate the batch process using the CSC.Submit routine.

5.6.19.4 Form structure

Object	Description
Form: *profxcrt*	Title : Extract Daily Profile data front-end.
Block: ***CTRL***	non-base table. Insert, Update allowed.

Object	Description
Nbt_sett_date	Label : Settlement Date Display. Mandatory. User Enterable. Insert. Update. Format : DD-MON-YYYY.
Nbt_pfl_prod_run_no	Label : Profile Production Run Number Display. Mandatory. User Enterable. Insert. Update. On entry to this field, retrieve the max(pfl_production_run_number) from idb_pfl_production_runs where sett_date = nbt_sett_date. Validate this date using the above criteria.

5.6.19.5 Action on Query

Query not allowed.

5.6.19.6 Action on Update

5.6.19.7 Update not allowed.

5.6.19.8 Action on Insert

Insert not allowed.

5.6.19.9 Action on Delete

5.6.19.10 Delete not allowed.

5.6.19.11 Action on button **Extract**.

Ensure that the nbt_sett_date field has been populated.

Ensure that the nbt_pfl_prod_run_no has been retrieved.

Call the batch extraction routine using the CSC.Submit procedure, passing the nbt_sett_date and nbt_pfl_prod_run_no.

Display an alert to the User showing the result of the call to the batch routine - Success or Failure.

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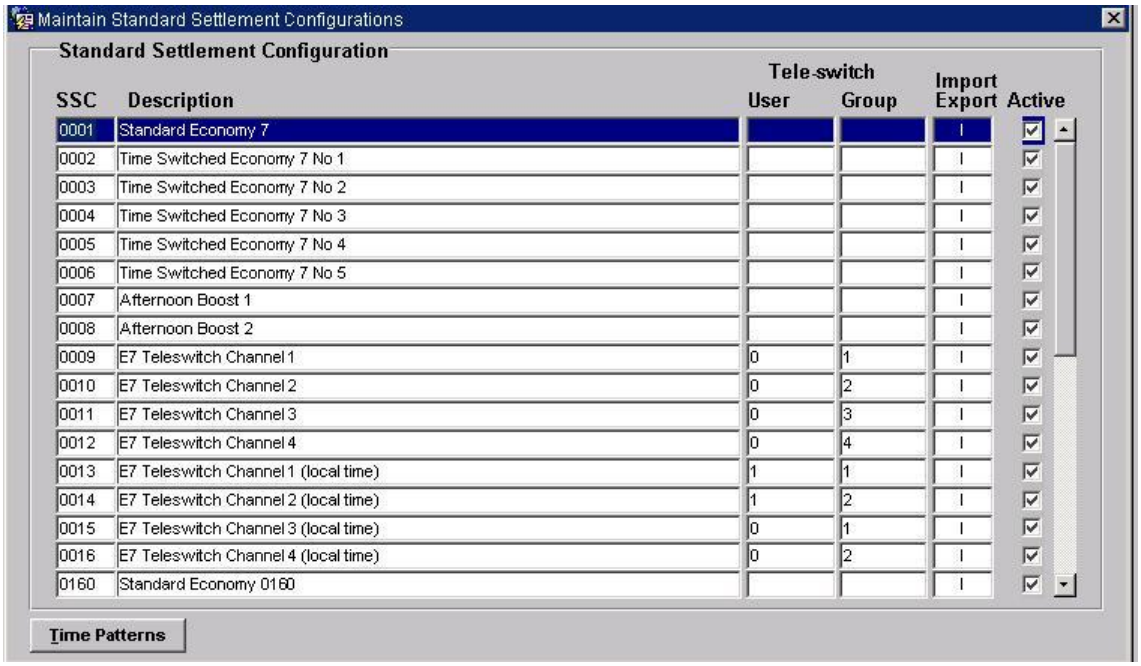
5.6.20 Form ISY_SSCTMAIN

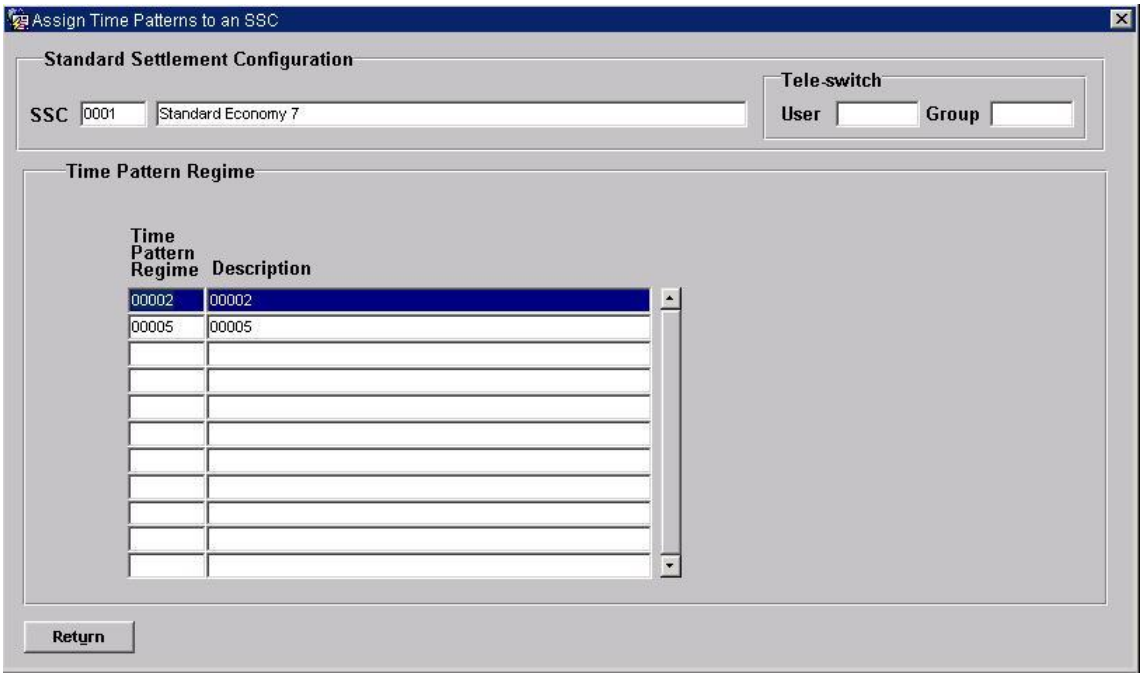
The following describes the Maintain Standard Settlement Configurations and Time Patterns form.

5.6.20.1 Screen layout

5.6.20.1.1 Maintain SSC's



5.6.20.1.2 Assign Time Patterns



5.6.20.2 Screen behaviour

Function Implemented	I0031 - Define Standard Settlement Configurations and Time Pattern Regimes.
Block	Standard Settlement Configuration
On Entry	Automatically Query.
List of Values	On Tele-switch User Id, showing existing distinct values from idb_sscs. On Tele-switch Group Id, showing existing values for the specified Tele-switch User from idb_sscs. On SSC Type, showing cdb_ref_values for domain SSCT. Currently allowed values are E or I.
Poplists	N/A
Buttons	Time Patterns Navigate to the Time Pattern Regime block.
Additional Behaviour	The Active Indicator will be updateable by the User and will denote whether a particular record is Active (Checked) ie. Currently in use within the system, or Inactive (Unchecked) ie. Logically Deleted and therefore not currently being used within the system. For Tele-switched Standard Settlement Configurations, a Tele-switch User Id and Group Id must be specified. The User must specify both Tele-switch Group and User. For clock-switched Standard Settlement Configurations, neither Tele-switch User Id nor Tele-switch Group Id must be entered. The User may enter new values for Tele-switch User and Group, or select existing values from the respective LoVs. The Standard Settlement Configuration maintenance has been separated from the maintenance of Measurement Requirements in order that a full list of SSC's can be viewed and maintained. This is consistent with the other maintenance screens. The SSC Type will be updateable by the User and will indicate if the SSC is Import or Export. This will initially default to Import. Only values I and E are valid. If the User changes the value of the SSC Type flag, then on selecting Save, a warning message is output to inform the User that the results of future SSR runs or reruns will be affected.
Block	Standard Settlement Configuration (context)
On Entry	N/A
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	This block is not enterable by the User and contains the context from the SSC block, ie. The SSC that is currently selected by the User.
Block	Time Pattern Regime
On Entry	Automatically Query.
List of Values	On Time Pattern Regime displaying Time Pattern Regime and Time Pattern Regime Description. For Tele-switched configurations, only Tele-switched Time Pattern Regimes with the same combination of Tele-switch User and Group as the selected Standard Settlement Configuration will be displayed.
Poplists	N/A
Buttons	Return

	Navigate to the Standard Settlement Configuration (1st) block.
Additional Behaviour	When assigning a Tele-switched Time Pattern Regime to a Standard Settlement Configuration, the Tele-switch User Id and Group Id must be the same for the Tele-switched Time Pattern Regime and Standard Settlement Configuration. All Time Pattern Regimes assigned to a Standard Settlement Configuration must either all be local time or all GMT.

5.6.20.3 Description

The form will consist of two windows. The first window will consist of one block:

ISC - base-table on idb_sscs. This block is queryable and may be inserted/deleted or updated. For Tele-switched SSCs, a Tele-switch User and Group must be specified. It is the existence of these fields that define a SSC as tele-switched. For clock-switched Standard Settlement Configurations, neither Tele-switch User Id nor Tele-switch Group Id must be entered.

The User must Commit or Cancel any transactions on this screen before moving to the next block.

The second window will consist of two blocks:

CTRL - non-base table, non-queryable. Non-enterable by the User. This block will hold the contextual information of the SSC record that the User is currently viewing (from the SSCS block).

IMR - base-table on idb_measurement_requirements. This block is queryable and insert/delete are allowed, but no updating is available. This block will always operate in terms of the current SSC being viewed, ie. The contextual information in the ctrl_context block. A List of Values will be available showing details of the Existing Time Patterns which may be added to the SSC. For Tele-switched configurations, only Tele-switched Time Patterns with the same combination of Tele-switch User and Group as the selected SSC will be displayed

5.6.20.4 Form structure

Object	**Description**
Form: *SSCTMAIN*	Title : Maintain Standard Settlement Configurations and assign Time Patterns.
Block: ISC	Base table on idb_sscs Query, Update, Delete, Insert allowed. Join columns: sscs.ssc_id = mear.ssc_id Order by ssc_id
ssc_id	Label : SSC Display. User Enterable. Query. Insert. Delete.
Ssc_desc	Label : Description Display. User Enterable. Query. Insert. Update. Delete.

Object	Description
Teleswitch_User_Id	Label : Tele-switch User Display. User Enterable. Query. Insert. Update. Delete. LoV available based on distinct values from idb_sscs. Validation: Range check against cdb_ref_values where domain_code = 'TSUI'.
Teleswitch_Group_Id	Label : Tele-switch Group Display. User Enterable. Query. Insert. Update. Delete. LoV available based on idb_sscs where sccs.teleswitch_user_id = specified Tele-switch User. Validation: Range check against cdb_ref_values where domain_code = 'TSGI'.
SSC Type	Label : SSC Type Display. User Enterable. Query. Insert. Update. LoV available, currently only E or I. Validation: Must be in cdb_ref_values where domain_code = 'SSCT'.
Active_flag	Label : Active. Display. User Enterable.. Query. Insert. Update. Delete.
Block: *CTRL*	non-base table. Display only. Join columns: ctrl.nbt_ssc_id = sscs.ssc_id ctrl.nbt_ssc_desc = sscs.ssc_desc
Nbt_ssc_id	Label : SSC Display only.
Nbt_ssc_desc	Label : Description Display only.
Nbt_ts_user_id	Label : User Display only.
Nbt_ts_group_id	Label : Group Display only.
Block: *IMR*	Base table on idb_measurement_requirements Query, Delete, Insert allowed. Order by tpr_id.
Tpr_id	Label : Time Pattern Regime. Display. User Enterable. Query. Insert. Delete. LoV on tprs.tpr_id showing the tpr_id, tpr_desc, tpr_type, gmt_local_time_ind where active_flag = 'Y' and (for Tele-switched TPRs) where tprs.ts_user_id = sscs.ts_user_id and tprs.ts_group_id = sscs.ts_group_id.

Object	Description
Nbt_tpr_desc	Label : Description. Display only.

5.6.20.5 Action on Query

Populate mear.nbt_tpr_desc from idb_tprs where idb_tprs.tpr_id = tpr.tpr_id.

5.6.20.6 Action on Update

When updating Tele-switch User or Tele-switch Group for a Tele-switched Standard Settlement Configuration, validate that there are no associated Tele-switch Time Pattern Regimes with the same combination of Tele-switch User or Tele-switch Group. If validation fails, do not allow update.

Use pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

No update allowed on IMR block.

5.6.20.7 Action on Insert

Each occurrence of mear.tpr_id must be unique for each sscs.ssc_id.

Each occurrence of sscs.ssc_id must be unique.

Tele-switched SSCs must have a Tele-switch User **and** Group specified.

Tele-switched Time Pattern Regimes must have the same Tele-switch User and Group as the Tele-switched Standard Settlement Configurations.

If idb_vscpcs.ssc_id = sscs.ssc_id then raise an error, disallow insert.

5.6.20.8 Action on Logical Delete

Do not actually delete the SSC record, instead update the active_flag = 'N'. Use pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

A SSC record cannot be deleted if child records exist in:

- idb_vscpcs
- idb_measurement_requirements

Additionally, Tele-switched SSC records cannot be deleted if there are existing Tele-switch Contact Intervals records with the same combination of Tele-switch User and Group.

If idb_vscpcs.ssc_id = sscs.ssc_id then raise an error, disallow delete.

5.6.20.9 Action on button **Time Patterns.**

Ensure that the User has Committed/Cancelled any changes to the ISC block before going to the IMR block.

This button should not be available if the Active field is unchecked for the current record.

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5.6.20.10 Action on button **Return.**

Ensure that the User has Committed/Cancelled any changes to the IMR block before returning to the ISC block.

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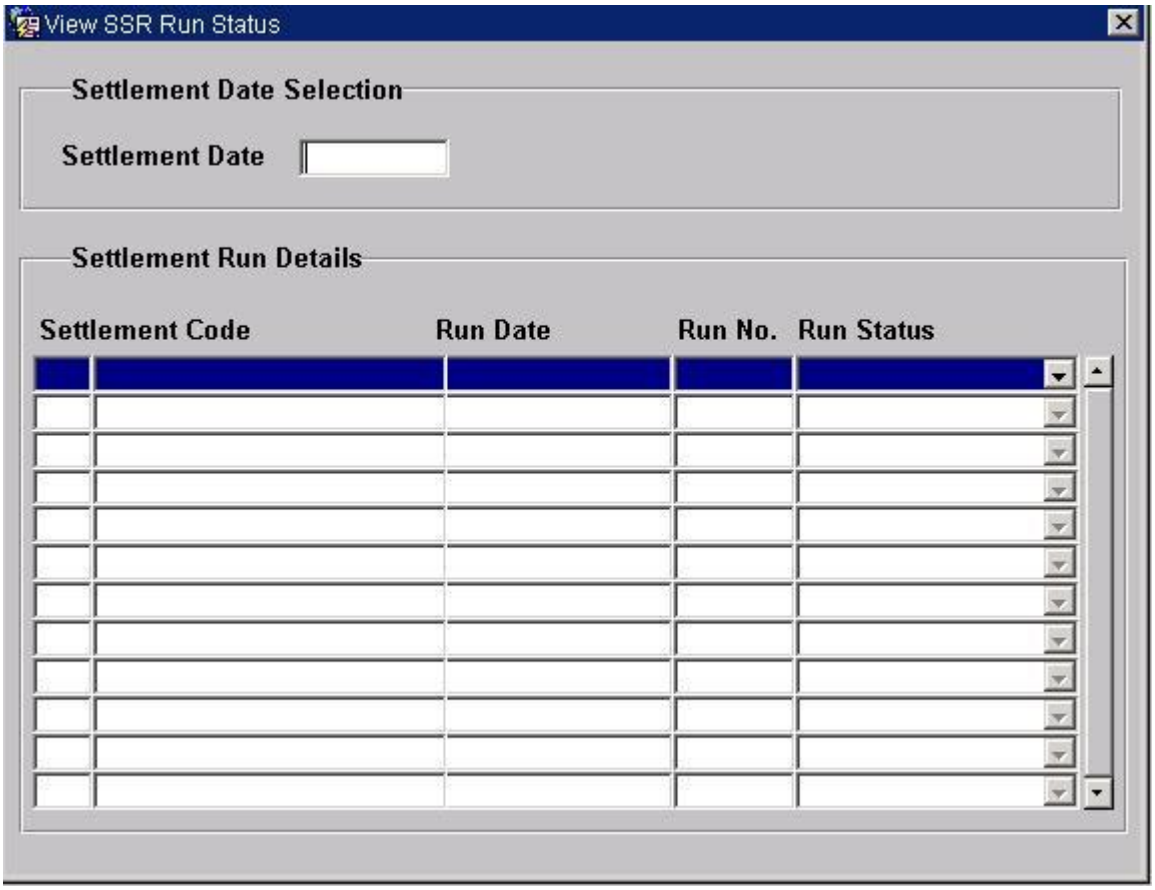
5.6.21 Form ISY_SSRRQURY

The following describes the View SSR Run Status form.

5.6.21.1 Screen Layout



5.6.21.2 Screen behaviour

Functions Implemented	I0034 - View SSR Run Status.
Block	Settlement Date Selection
On Entry	Ready for user input.
List of Values	On settlement date, showing settlement date.
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A
Block	Settlement Run Details.
On Entry	Settlement Run details for the Settlement Date automatically queried on entry.
List of Values	On Settlement Code. Displays Settlement Code and Description.
Poplists	Run Status. Displays choice of Run Statuses.
Buttons	N / A
Additional Behaviour	N / A

5.6.21.3 Description

The form will be based on the following two blocks :

CTRL - non base table block allowing selection of a Settlement Date and GSP Group. Insert and update allowed.

SSRR - based on the idb_ssr_runs table. Query only allowed. Records returned restricted to the Settlement Date entered in the CTRL block.

5.6.21.4 Form structure

Object	Description
Form: *SSRRQURY*	Title : View SSR Run Status.
Block: *CTRL*	GSP Group / Settlement Date Selection block. Non base table. Insert, update allowed. Join columns : ctrl.nbt_gsp_group_id = sssr.gsp_group_id trunc(ctrl.nbt_sett_date) = trunc(sssr.sett_date)
nbt_sett_date	Label : Settlement Date Display. Date. User enterable. Insert, update allowed. Format : DD-MON-YYYY
Block*: SSRR*	Settlement Run Details block. Based on idb_ssr_runs table. Query only allowed. Order by ssr_run_date desc, ssr_run_number desc, sett_code.
sett_date	Non display. Date. Use copy value from to restrict access to the Settlement Date, selected in the CTRL block.
run_date	Label : Run Date Display. Query. Format : DD-MON-YYYY
ssr_run_number	Label : Run Number Display. Query.
sett_code	Label : Settlement Code Display. Query. LOV / Validation driven from idb_sett_types table.
nbt_sett_code_desc	Label : Settlement Code Display only.
ssr_run_status	Label : Run Status Display. List item. Query. Pop list driven from cdb_ref_values table where domain = 'RUST'.

5.6.21.5 Action on Query

Automatically populate nbt_sett_code_desc using sett_code via the idb_sett_types table.

5.6.21.6 Action on Update

None.

5.6.21.7 Action on Insert

None.

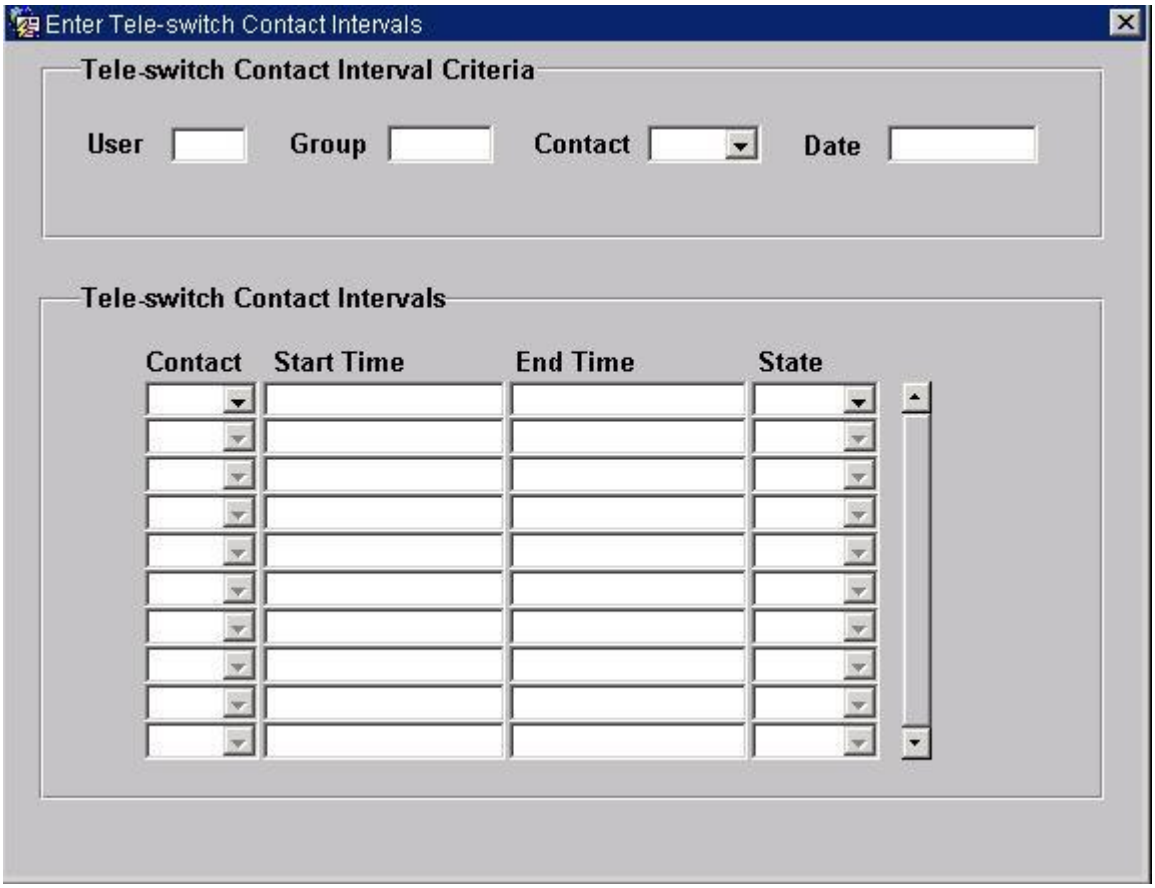
5.6.21.8 Action on Delete

None.

5.6.22 Form ISY_TSCIMAIN

The following describes the Maintain Tele-switch Contact Intervals form.

5.6.22.1 Screen layout



5.6.22.2 Screen behaviour

Function Implemented	Enter Tele-switch Contact Intervals
Block	Tele-switch Contact Interval Criteria
On Entry	Ready for User input
List of Values	On User Id, displaying list of distinct Tele-switch Users defined in idb_sscs. On Group Id, displaying list of existing Tele-switch User/Group combinations for the specified Tele-switch User from idb_sscs.
Poplists	On Contact Code, displaying list of valid values from cdb_ref_values where domain_code is 'TSWC.'
Buttons	N/A
Additional Behaviour	A Tele-switch User and Group, and Date must be specified before navigating to or querying the Tele-switch Contact Intervals block. The Tele-switch User should be specified before the Tele-switch Group. A Tele-switch Contact Code may optionally be specified in the criteria. The Tele-switch User and Group combination must exist in idb_sscs. If a query is executed from this block, the Tele-switch Contact Intervals block will be queried, and cursor moved to first record of data retrieved, if any.

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Block	Tele-switch Contact Intervals
On Entry	Automatically query
List of Values	N/A
Poplists	On Contact Code, displaying list of valid values from cdb_ref_values where domain_code is 'TSWC'. On Contact State, displaying values 'ON', 'OFF' which map to boolean values T, F respectively.
Buttons	Exit Exit from form. First prompt User to save or discard any outstanding changes.
Additional Behaviour	If Contact Code criteria not specified, retrieve all Tele-switch Contact Intervals for specified Tele-switch User and Group on specified Date, ordered by Contact Code and ascending Start Time. If Contact Code criteria specified, retrieve all Tele-switch Contact Intervals for specified Tele-switch User, Group and Contact Code on specified Date, ordered by ascending Start Time.

5.6.22.3 Description

This form consists a single window for browsing and maintaining Tele-switch Contact Intervals.

The window consists of two blocks:

The first block, **TSCI_CRIT**, allows the User to specify criteria for which to retrieve Tele-switch Contact Interval data. The User must specify a Date, Tele-switch User and Group. The User may additionally specify a Tele-switch Contact to further filter the Tele-switch Contact Interval data retrieved.

The User should specify the Tele-switch User first, then the Tele-switch Group. The Tele-switch User and Group combination must exist in idb_sscs. A Tele-switch User and Group, and Date must be specified before navigating to, or querying the Tele-switch Contact Interval block.

If at least a Tele-switch User, Group and Date has been specified, the User will be able to execute a query on the Tele-switch Contact Interval block from the TSCI_CRIT block.

The second block, **TSCI**, displays the Tele-switch Contact Interval data for the specified criteria, and enables the User to browse and maintain this data. This multi-record block is based on the table idb_tsw_contact_intervals. The User can query, insert, update and delete records in this block, subject to validation. The data displayed in this block will be ordered by Tele-switch Contact (if not specified in criteria), then by ascending Start time.

For all changes to Tele-switch Contact Intervals data, validate that the User is an Authorised User if the corresponding Settlement Date has already had a Final Initial Settlement Run performed. When adding a new, or modifying an existing Contact Interval, validate that it does not overlap any existing Contact Intervals for the same Date, Tele-switch User, Group and Contact. If it does, an error message should be displayed, and the change disallowed. The User can update an existing Tele-switch Contact Interval by changing the State, and End Time only.

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Any changes made to the Tele-switch Contact Interval data in this block must be committed or discarded before leaving the Form.

5.6.22.4 Form structure

Object	Description
Form: *TSCIMAIN*	Title: Enter Tele-switch Contact Intervals
Block: *TSCI_CRIT*	non-base table Insert, Update allowed. Join columns: crit.user_id = tsci.user_id crit.group_id = tsci.group_id crit.contact_code = tsci.contact_code
Nbt_user_id	Label: User Display. Mandatory. User Enterable. Insert. Update LoV based on distinct values from idb_sscs. Format : 99 Validation: value must exist in LoV; range check against cdb_ref_values where domain_code = 'TSUI'.
Nbt_group_id	Label: Group Display. Mandatory. User Enterable. Insert. Update. LoV based on idb_sscs where ssc.user_id = crit.user_id. Validation: value must exist in LoV; range check against cdb_ref_values where domain_code = 'TSGI'..
Nbt_date	Label: Date Display. Mandatory. User Enterable. Insert. Update. Format: 'DD-MON-YYYY'
Nbt_contact_code	Label: Contact Display. Optional. User Enterable. Insert. Update Poplist on cdb_ref_values where domain_code is 'TSWC'. Format : X
Block: *TSCI*	Base table on idb_tsw_contact_intervals Query, Insert, Update, Delete allowed. Order by contact_code, start_time ascending.
Contact_code	Label: Contact Display. User Enterable. Query. Insert. Delete. Poplist on cdb_ref_values where domain_code is 'TSWC'.

Object	Description
Start_time	Label: Start Time Display. User Enterable. Query. Insert. Delete. Format: 9999 (24 hour clock format) Validation: If Tele-switch TPR is for local time, start_time must be valid local time.
Stop_time	Label: End Time Display. User Enterable. Query. Insert. Update. Delete. Format: 9999 (24 hour clock format) Validation: If Tele-switch TPR is for local time, stop_time must be valid local time. Also, stop_time must be later than start_time. Interval must not overlap an existing interval for same date and Tele-switch User, Group and Contact.
State	Label: State Display. User Enterable. Query. Insert. Update. Delete. Poplist containing values 'ON', 'OFF' which map to valid values T, F respectively. Format : Boolean

5.6.22.5 Action on Query

If in the criteria block (TSCI_CRIT), navigate to the corresponding base data block (TSCI), and perform query there.

5.6.22.6 Action on Update

Use function pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman, else if not authorised fail processing completely.

If tsci.start_time or tsci.stop_time is updated, validate that the modified interval does not overlap any existing intervals for the same date, tele-switch user, group and contact.

5.6.22.7 Action on Insert

Use function pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman, else if not authorised fail processing completely.

For each new record in the tele-switch contact interval block, validate that the interval does not overlap any existing intervals for the same date, tele-switch user, group and contact.

5.6.22.8 Action on Delete

Use function pkg_common.f_authorise_change(D) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman, else if not authorised fail processing completely.

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5.6.22.9 Action on button **Exit**

Ensure that any outstanding changes to Tele-switch Contact Intervals data has been saved or discarded, before exiting from the Form.

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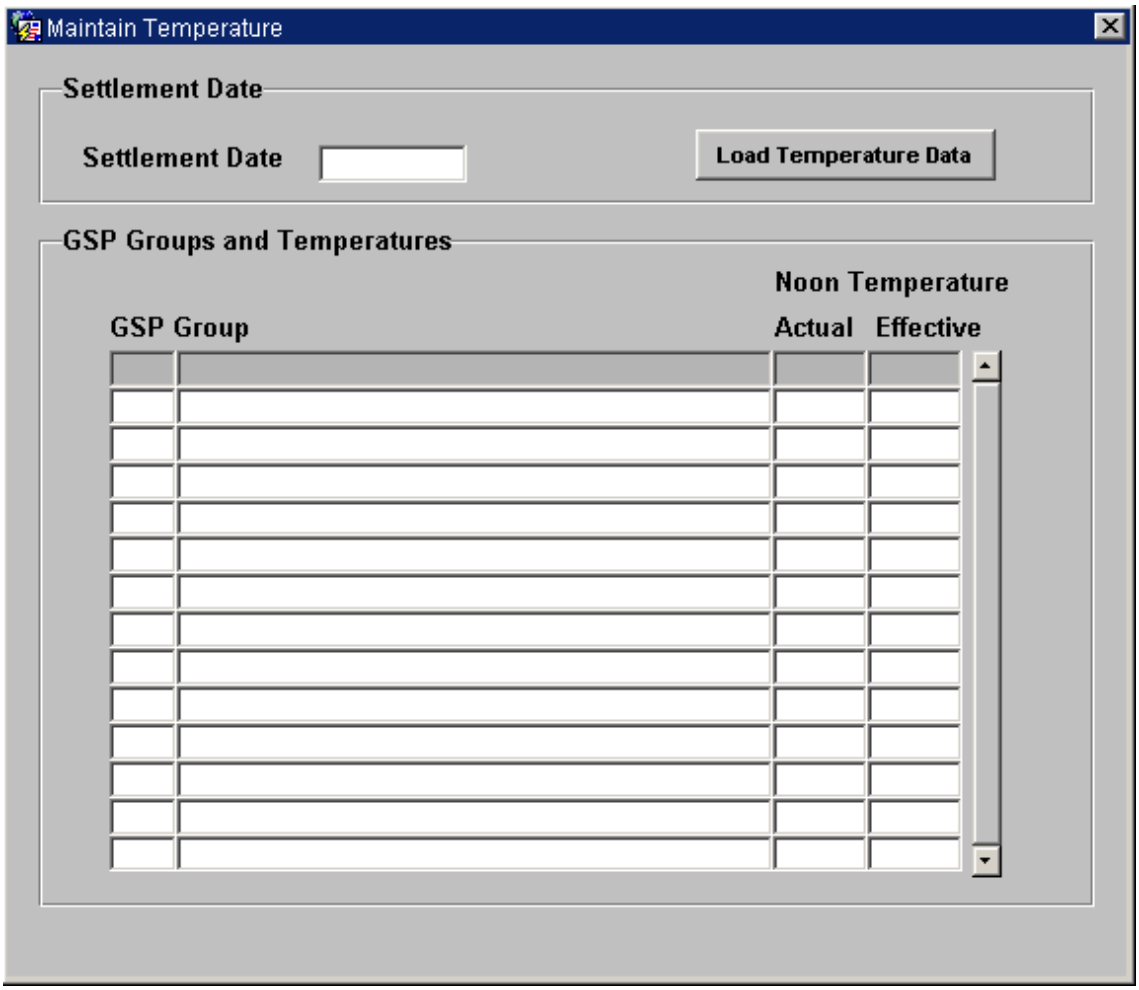
5.6.23 Form ISY_TEMPMAIN

The following describes the Maintain Temperatures form.

5.6.23.1 Screen layout



5.6.23.2 Screen behaviour

Function Implemented	I0011 - Enter Temperature
Block	Settlement Date
On Entry	Ready for user input.
List of Values	N/A
Poplists	N/A
Buttons	Load Temperature Data
Additional Behaviour	When Load Temperature Data button is pressed user can browse to the directory to locate the file with Temperature data for the day which is stored as a text file in User's computer. After selecting the file form Loads Temperature Data from input text file
Block	GSP Groups & Temperatures
On Entry	Automatically Query.
List of Values	On Settlement Code, displaying Settlement Code and Settlement Description
Poplists	N/A

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Buttons	N/A
Additional Behaviour	When entering a new set of data for a Settlement Date, this form will default into the second block all of the GSP Groups currently on the system. This block will be queryable and update only. Sunset data must be loaded before the temperatures can be entered against records in this block.

5.6.23.3 Description

This form consists of two blocks within one window:

CTRL - non-base table block.

This block is non-queryable and should be restricted to one record only, ie. No functions for scrolling up/down through records should be allowed.

DPRP - base table block

This block is based on the idb_Daily_pfl_parameters table. This block is queryable. The GSP_group name will be retrieved from the idb_gsp_groups table.

The Actual Noon Temperature column (Today) will be base-table/enterable.

5.6.23.4 Form structure

Object	Description
Form: *TEMPMAIN*	Title : Maintain Temperatures.
Block: ***CTRL***	non-base table. Insert. Update. Join columns: ctrl.nbt_sett_date = dprp.sett_date.
nbt_sett_date	Label : Settlement Date Display. Mandatory. User Enterable. Insert. Update. Format : DD-MON-YYYY.
Block: ***DPRP***	Base table on idb_daily_pfl_parameters. Query. Update. Order by gsp_group_id.
Gsp_group_id	Label : GSP Group Display. User Enterable. Query.
Nbt_Gspg_name	Display only.
actual_noon_temperature	Label : Actual. Display. User Enterable. Query. Update. Validation: Range check against cdb_ref_values where domain_code = 'DPPA'.
Noon_eff_temperature	Label : Effective. Display only.

5.6.23.5 Action on Query

Automatically query the DPRP block on User entry to this block. If there are no DPRP records for this sett_date then display a message informing the User that "The Sunset Data has not been loaded for this Settlement Date so cannot enter Temperatures yet.", and don't allow entry to the DPRP block.

Populate the nbt_gspg_name from the gsp_groups table where gspg.gsp_group_id = dprp.gsp_group_id.

5.6.23.6 Action on Update

Update is the only function allowed by the User in the DPRP and it is only available on the actual_noon_temperature field.

When the User updates the actual_noon_temperature field then calculate the noon_eff_temperature as follows:

.57 * actual_noon_temperature where (sett_date = ctrl.nbt_sett_date

and gsp_group_id = dprp.gsp_group_id)

\+ .28 * actual_noon_temperature where (sett_date = ctrl.nbt_sett_date - 1

and gsp_group_id = dprp.gsp_group_id)

\+ .15 * actual_noon_temperature where (sett_date = ctrl.nbt_sett_date - 2

and gsp_group_id = dprp.gsp_group_id)

= noon_eff_temperature.

Analogous algorithms are then used to calculate noon_eff_temperature for the following two Settlement Days since these figures both rely on actual_noon_temperature for sett_date = ctrl.nbt_sett_date.

Use pkg_common.f_authorise_change(U) for authorisation of change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

The noon_eff_temperature will not be calculated if data for ctrl.nbt_sett_date - 1 or ctrl.nbt_sett_date - 2 (or analogous dates) does not exist.

5.6.23.7 Action on Insert

Insert disallowed.

5.6.23.8 Action on Delete

Deletion disallowed.

5.6.23.9 Action on button Load Temperature Data

User can browse through the client desktop to locate the data file received for temperature loading for the day. Once the file is selected the temperature data for 14 GSP groups will be stored in the temporary table which will be created dynamically through the form and gets dropped after processing the temperature data for the readings at 11:00, 12:00 and 13:00 for both site and backup site. Process will load the data from site at 12:00 into idb_daily_pfl_parameters table. If all the readings are not present for the readings from site at 12:00, then the readings for the missing data will be taken from the readings in the below order of priority.

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- Site Reading at 13:00
- Site Reading at 11:00
- Backup Site Reading at 12:00
- Backup Site Reading at 13:00
- Backup Site Reading at 11:00

If some of the readings are missing after scanning all the data then an error message will be shown stating that the readings are missing and user needs to enter the missing reading manually.

The above functionality of reading the data from client desktop is implemented by using the below webutil library utilities.

- CLIENT_GET_FILE_NAME function – To browse through directories and select a file for temperature loading
- CLIENT_TEXT_IO package – To read the contents of the file

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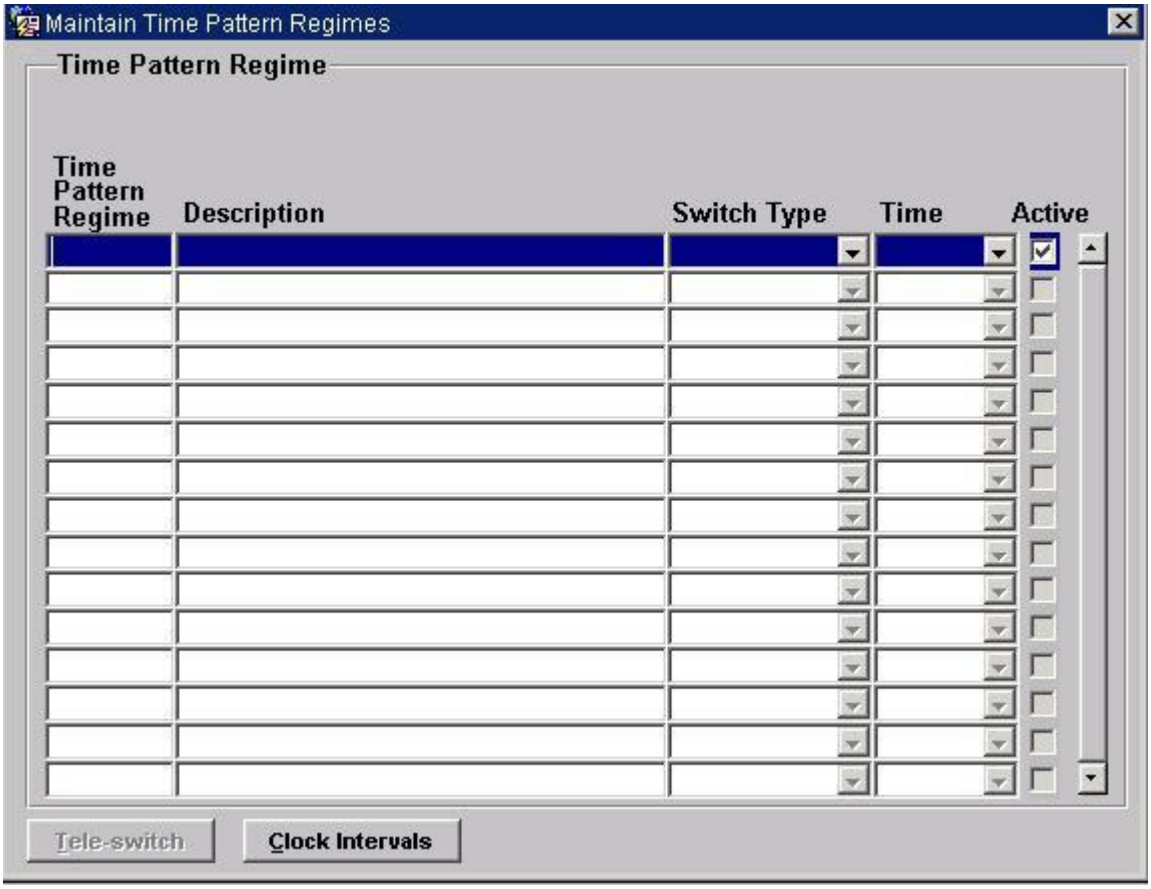
5.6.24 Form ISY_TIPAMAIN

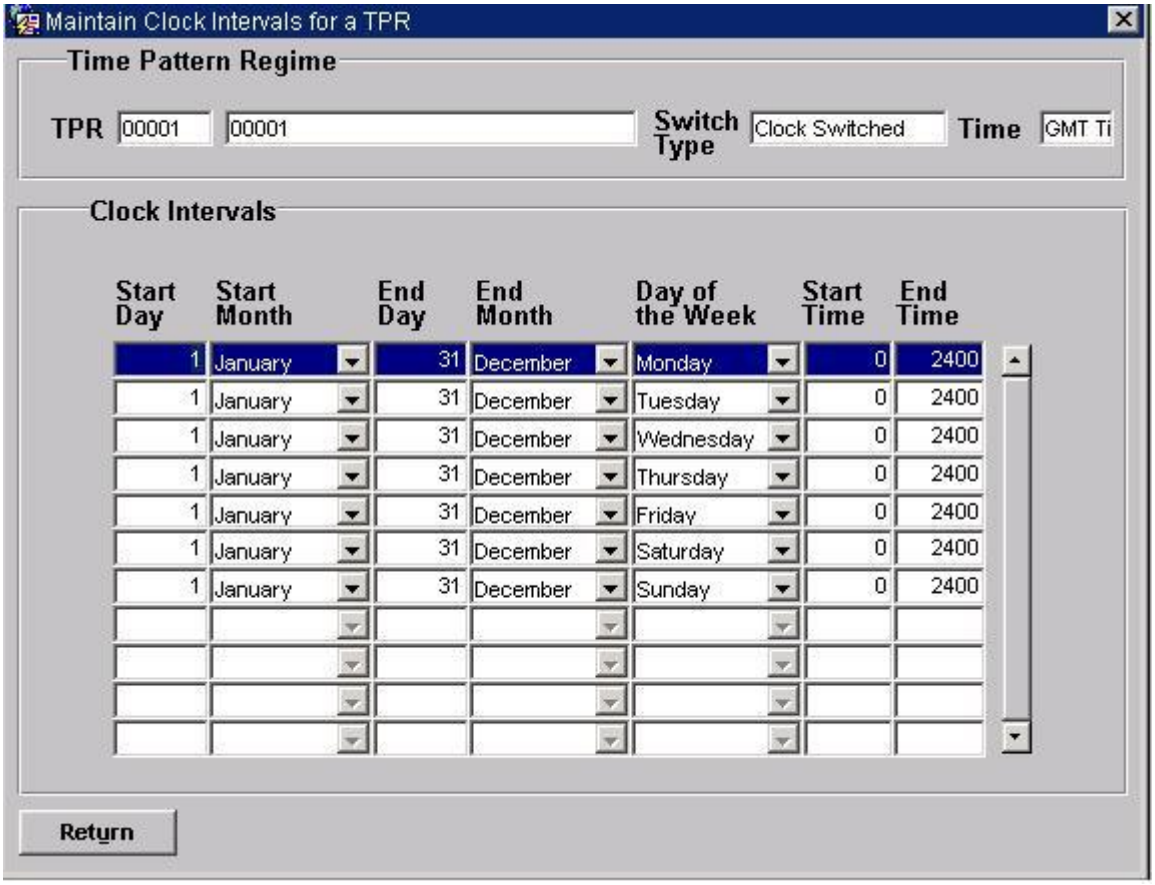
The following describes the Maintain Time Patterns and Clock Intervals form.

5.6.24.1 Screen layout

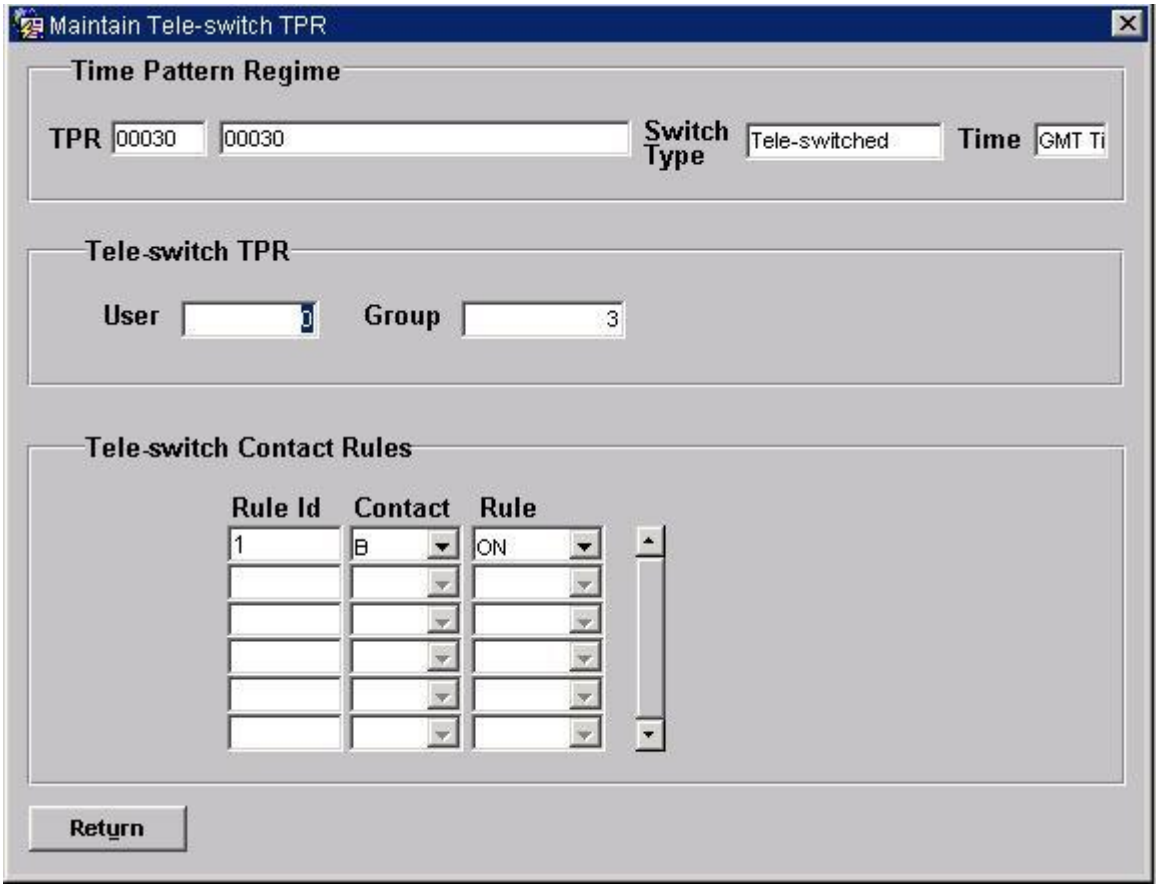
5.6.24.1.1 Maintenance of Time Pattern Regimes



5.6.24.1.2 Maintain Clock Intervals



5.6.24.1.3 Maintain Tele-switch TPR



5.6.24.2 Screen behaviour

Function Implemented	I0040 - Define Time Patterns
Block	Time Pattern Regime
On Entry	Enter Query.
List of Values	N/A
Poplists	On Switch Type, displaying Switch Type Description On Time, displaying Time Types
Buttons	Tele-switch This button will be enabled if the User has entered "Tele Switched" in the Switch Type field and will take the user to the second window to maintain/query Tele-switch information. The Clock Intervals button will be disabled. Clock Intervals This button will be enabled if the User has entered "Clock Switched" in the Switch Type field and will take the user to the second window to maintain/query Clock Interval information. The Tele-switch button will be disabled.
Additional Behaviour	The Active Indicator will be updateable by the User and will denote whether a particular record is Active (Checked) ie. Currently in use within the system, or Inactive (Unchecked) ie. Logically Deleted and therefore not currently being used within the system. The User will not be able to move to the second or third windows unless the Active Flag is checked, ie. Set to True.

	The Time Pattern Regime maintenance has been separated from the Switching data maintenance so that a full view of the Time Patterns may be seen and maintained. This is also consistent with the other maintenance screens.
Block	Time Pattern Regime (context, window2)
On Entry	N/A
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	This block is not enterable by the User, it holds the contextual information from the first block, ie. The current TPR selected.
Block	Clock Intervals
On Entry	Automatically Query.
List of Values	N/A
Poplists	On Start Month, displaying Month Name. On End Month, displaying Month Name. On Day of the Week, displaying Day Name.
Buttons	Return This button will navigate back to the Time Pattern Regime (1st) block.
Additional Behaviour	N/A
Block	Time Pattern Regime (context, window3)
On Entry	N/A
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	This block is not enterable by the User, it holds the contextual information from the first block, ie. The current TPR selected.
Block	Tele-switch TPR
On Entry	Automatically Query.
List of Values	On Tele-switch User, showing existing distinct values from idb_sscs. On Tele-switch Group, showing existing groups for the specified Tele-switch User from idb_sscs.
Poplists	N/A
Buttons	N/A
Additional Behaviour	User can only update the current record in this block. The Tele-switch User Id and Group Id cannot be updated if the Tele-switch TPR is linked to a Standard Settlement Configuration by a Measurement Requirement. Only existing Tele-switch User/Group combinations from the Tele-switch User and Group LoVs can be entered. Any changes made in this block must be saved or discarded before navigating to the Tele-switch Contact Rules block.
Block	Tele-switch Contact Rules
On Entry	Automatically Query.
List of Values	N/A
Poplists	On Teleswitch Contact Code, based on cdb_ref_values for domain_code ‘TSWC’. On Teleswitch Contact Rule, based on cdb_ref_values for domain_code ‘TSCS’.

Buttons	Return This button will navigate back to the Time Pattern Regime (1st) block. It will first prompt the User to save or discard any outstanding changes to the Tele-switch Group details or Tele-switch Contact Rules block.
Additional Behaviour	At least one Tele-switch Contact Rule record must exist for a Tele-switched Time Pattern Regime. The switching rules for a Tele-switched TPR consists of one or more Register Rule, each of which can have one or more associated Contact Rules.

5.6.24.3 Description

This form will consist of three windows.

The first window will contain one block:

ITP - base-table on idb_tprs. Query/update/delete/insert allowed. The Switch Type and GMT/local time indicator cannot be amended if the Time Pattern Regime is linked to a Standard Settlement Configuration.

The second window will contain two blocks.

CTRL_CLOC - the context carried over from the first block.

ICI - base table on idb_clock_intervals, query/delete/insert allowed. This block should be automatically queried on entry.

The third window will contain three blocks.

CTRL_TELE - the context carried over from the first block.

ITP - base table on idb_tprs. Only one record to be maintained here. Only update is allowed here as this is the same table as used within the TPR block. This block should be automatically queried on entry. The Tele-switch User and Group cannot be updated if the Time Pattern Regime is linked to a Standard Settlement Configuration. The User can only specify a Tele-switch User and Group combination which exists in the table idb_sscs. ICR - base table on idb_teleswitch_contact_rules. There is a master-detail relationship between the ITP block and this block. This block should be automatically queried on entry. Query, update, delete and insert is allowed. When updating records, only the Contact Code and Contact Rule may be modified. When deleting records, there must always remain at least one Tele-switch Contact Rule for a Tele-switched TPR. Each combination of Tele-switch Register Rule Id and Tele-switch Contact Code in this block must be unique. A set of switching rules for a tele-switched TPR can consist of one or more Tele-switch Register Rules, each of which can consist of one or more Tele-switch Contact Rules.

Either (ICI) or (ITP and ICR) will be shown depending on the User selection from the list in the first window.

5.6.24.4 Form structure

Object	Description
Form: *TIPAMAIN*	Title : Define Time Pattern Regimes.

Object	Description
Block: *ITP*	Base table on idb_tprs. Query, Update, Delete, Insert allowed. Order by tpr_id.
Tpr_id	Label : Time Pattern Regime. Display. User Enterable. Query. Insert. Delete.
tpr_desc	Label : Description. Display. User Enterable. Query. Insert. Update. Delete.
Tpr_type	Label : Switch Type. Display. User Enterable. Query. Insert. Update. Delete. LoV available on cdb_ref_values where domain_code = 'TPRT'
tpr_gmt_local_time_ind	Label : Time Display. User Enterable. Query. Insert. Update. Delete. LoV available on cdb_ref_values where domain_code = 'GMTT'
teleswitch_user_id	Label : User Display. User Enterable. Update only. LoV available based on existing distinct values from idb_sscs. Format : 99 Validation : by LoV; range check against cdb_ref_values where domain_code = 'TSUI'.
Teleswitch_group_id	Label : Group Display User Enterable. Update only. LoV available based on existing Tele-switch User/Group combinations in idb_sscs for specified Tele-switch User. Format : 9999 Validation : by LoV; range check against cdb_ref_values where domain_code = 'TSGI'.
Block: *CTRL_CLOC*	non-base table. Display only. Join columns: ctrl_cloc.nbt_tpr_id = tpr.tpr_id ctrl_cloc.nbt_tpr_desc = tpr.tpr_desc ctrl_cloc_nbt_switch_type = tpr.tpr_type ctrl_cloc.nbt_time_type = tpr.gmt_local_time_ind
Nbt_tpr_id	Label : TPR Display only.
Nbt_tpr_desc	Display only.
Nbt_switch_type	Label : Switch Type. Display only.

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Object	Description
Nbt_time_type	Label : Time. Display only.
Block: *ICI*	Base table on idb_clock_intervals. Query, Delete, Insert allowed. Order by start_day, start_month.
Start_day	Label : Start Day Display. User Enterable. Query. Insert. Delete. Format: 99 - values 1 - 31
Start_Month	Label : Start Month. Display. User Enterable. Query. Insert. Delete. LoV available on cdb_ref_values where domain_code = 'MONT' Format: 99 - values 1 - 12
End_day	Label : End Day. Display. User Enterable. Query. Insert. Delete. Format: 99 - values 1 - 31
end_Month	Label : End Month. Display. User Enterable. Query. Insert. Delete. LoV available on cdb_ref_values where domain_code = 'MONT' Format: 99 - values 1 - 12
Day_of_the_week_id	Label : Day of the Week. Display. User Enterable. Query. Insert. Delete. LoV available on cdb_ref_values where domain_code = 'DAYW'
start_time	Label : Start Time Display. User Enterable. Query. Insert. Delete. Format 9999 - validate as per 24 hour clock. Ie. 1300 = 1pm.
end_time	Label : End Time Display. User Enterable. Query. Insert. Update. Delete. Format 9999 - validate as per 24 hour clock. Ie. 1300 = 1pm.
Block: *CTRL_TELE*	non-base table. Non user-enterable. Display only. Join columns: ctrl_tele.nbt_tpr_id = itp.tpr_id ctrl_tele.nbt_tpr_id = icr.tpr_id ctrl_tele.nbt_tpr_desc = itp.tpr_desc ctrl_tele_nbt_switch_type = itp.tpr_type ctrl_tele.nbt_time_type = itp.gmt_local_time_ind

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Object	Description
Nbt_tpr_id	Label : TPR Display only.
Nbt_tpr_desc	Display only.
Nbt_switch_type	Label : Switch Type. Display only.
Nbt_time_type	Label : Time. Display only.
Block: ICR	Base table on idb_teleswitch_contact_rules Query, Update Delete Insert allowed. Order by Tele-switch Register Rule Id, Contact Code.
Register_Rule_Id	Label: Rule Id. Display. User Enterable. Query. Insert. Delete. Format: 99 - values 1-9
Contact_Code	Label: Contact. Display. User Enterable. Query. Update. Insert. Delete. Format: X - values 'A', 'B', 'C', 'D'. Poplist containing valid values from cdb_ref_values where domain_code is 'TSWC'
Contact_Rule	Label: Rule. Display. User Enterable. Query. Update. Insert. Delete. Format: poplist values Poplist containing valid values from cdb_ref_values where domain_code is 'TSCS'.

5.6.24.5 Action on Query

Populate itp.tpr_type from cdb_ref_values where domain_code = 'TPRT'.

Populate itp.gmt_local_time_ind from cdb_ref_values where domain_code = 'GMTT'.

Populate ici.start_month and ici.end_month from cdb_ref_values where domain_code = 'MONT'.

Populate ici.day_of_the_week_id from cdb_ref_values where domain_code = 'DAYW'.

Populate icr.contact_rule from cdb_ref_values where domain_code = 'TSCS'.

5.6.24.6 Action on Update

If itp.tpr_type is updated then check for existing switching data for this tpr_id for this tpr_type. If existing switching data exists then check for occurrences of records with this tpr_id in:

- idb_measurement_requirements

- idb_vmr_pfl_classes

If matching records exist, then disallow the update, otherwise delete the existing set of switching data either by:

- deleting the idb_clock_intervals records (for tpr_type of "C"); or
- setting the teleswitch_user_id, teleswitch_group_id to null (for tpr_type of "T") , and deleting the idb_teleswitch_contact_rules records corresponding to the tpr_id.

Validate that the combination of icr.rule_id and icr.contact_code is unique for the current tele-switch user and group.

For any other updates check to see whether idb_measurement_requirements exist and if so display an alert asking the User if they wish to continue with the update.

Use pkg_common.f_authorise_change(U) for authorisation of changes to Time Pattern Regimes, Tele-switch Register Rules and Clock Intervals. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

5.6.24.7 Action on Insert

Each occurrence of tpr.tpr_id must be unique.

Each occurrence of a record in the CLOC block must be unique.

Each combination of icr.rule_id and icr.contact_code in the ICR block must be unique.

Each occurrence of a new tpr.tpr_id of tpr_type "T" must have corresponding values for tpr.teleswitch_user_id and tpr.teleswitch_group_id, and at least one associated new Tele-switch Contact Rule record in the ICR block.

No insert allowed on ITP block in second window.

Use pkg_common.f_authorise_change(I) for authorisation of Time Pattern Regimes, Tele-switch Register Rules and Clock Intervals change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

5.6.24.8 Action on Logical Delete

Do not actually delete the ITP record, instead update the active_flag = 'N'.

If a ITP record is deleted then first raise an Alert informing the User that the following data is about to be deleted and allow them to Continue or Cancel:

- idb_clock_intervals
- idb_teleswitch_intervals
- idb_teleswitch_contact_rules

A TPR record cannot be deleted if associated records in the following tables exist:

- idb_measurement_requirements

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5.6.24.9 Action on Delete

Use pkg_common.f_authorise_change(D) for authorisation of Time Pattern Regimes, Tele-switch Register Rules and Clock Intervals change. If authorised and the user role = 'STANMAN' then call function pkg_common.f_audit_stanman else if not authorised fail processing completely.

An ICR record cannot be deleted if there would be no remaining ICR records for the parent Tele-switched TPR.

5.6.24.10 Action on button **Tele-switch.**

This button will only be enabled if tpr.tpr_type = 'T'.

This button should not be available if the Active field is unchecked.

5.6.24.11 Action on button **Clock Intervals.**

This button will only be enabled if tpr.tpr_type = 'C'.

Ensure that the User has Committed/Cancelled any changes to the ITP block before going to the ICI block.

This button should not be available if the Active field is unchecked.

5.6.24.12 Action on button **Return.**

Ensure that the User has Committed/Cancelled any changes to the ICI block or the ICR block and fields in the second window before returning to the ITP block.

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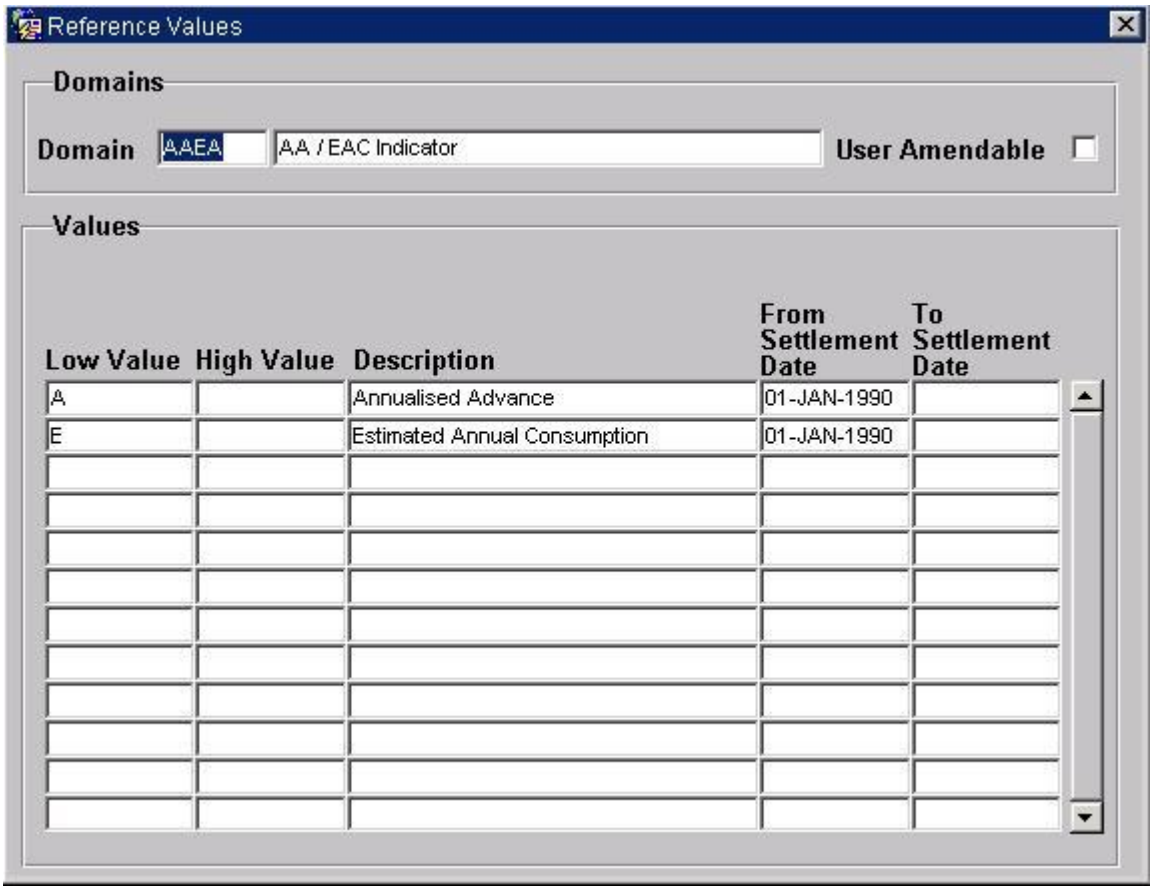
5.6.25 Form ISY_REVAMAIN

The following describes the Reference Values form.

5.6.25.1 Screen layout



5.6.25.2 Screen behaviour

Requirement	6.17
Block	Domains
On Entry	Automatically query domains on entry.
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	None
Block	Values
On Entry	Automatically query Values associated with the Domain.
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	Only allow insert, update or delete of Values if the associated domain user amendable flag has been set to 'Y'.

5.6.25.3 Description

The form consists of two blocks, REDO - based on table cdb_ref_domains, that allows maintenance of domains and a second block REVA - based on table cdb_ref_values, that allows associated values to be maintained.

The REDO block consists of three fields, a domain_code, an associated description and a user_amendable flag. The user_amendable flag is provided because some of the domains' associated values can never be modified. These values are effectively hard coded and are used throughout the system so it is important that they do not change. Only update of the domain description is permitted, no inserts or deletes are allowed.

The REVA block consists of six fields, a low_value, a high_value, a description, an eff_from_sett_date, an eff_to_sett_date and a value_to. Discrete reference values are held in the low_value field only. Where a value is actually a range of values, then the high_value field is also specified. A description provides the meaning for the value or range. The eff_from_sett_date and eff_to_sett_date provide the means to hold a range of values over time. Thus, low_value plus date range (eff_from_sett_date to eff_to_sett_date) must be unique, ensuring that only one range is applicable at any given point in time. Discrete values are treated exactly the same except the eff_from_sett_date is defaulted to a constant value in the past and the eff_to_sett_date is left null to imply a range to infinity. Query on the REVA block is always permitted but inserts, updates and deletion of values depend on whether the user amendable_flag is set. An unchecked user amendable_flag specifies that no updates or deletes are permitted on the REVA block, whereas a checked value allows updates and deletes to the block.

5.6.25.4 Form structure

Object	**Description**
Form: *REVAMAINT*	Title : Reference Values
Block: *REDO*	Based on table cdb_ref_domains. Select, Insert, Update, Delete allowed. Order by domain_code Join columns : redo.domain_code = reva.domain_code
domain_code	Label : Domain Display. Mandatory. User enterable. Insert and query allowed.
Description	Label : Display. Mandatory. User enterable. Insert, update query allowed.
User_amendable	Label : User amendable Display only.
Block: *REVA*	Based on cdb_ref_values. Select allowed. Insert, Update, Delete permitted if redo.user_amendable = 'Y'. Order by value_from

Object	Description
domain_code	Non display. Provides link back to REDO block.
value_from	Label : Low Value Display. User enterable. Insert, delete, query allowed.
Description	Label : Description Display. User enterable. Insert, update, delete, query allowed.
value_to	Label : High Value Display. User enterable. Insert, update, delete, query allowed.
eff_from_sett_date	Label : From Settlement Date Display. User enterable. Insert, delete, query allowed. Format : DD-MON-YYYY Default Value : 01-JAN-1990
eff_to_sett_date	Label : To Settlement Date Display. User enterable. Insert, update, delete query allowed. Format : DD-MON-YYYY

5.6.25.5 Action on Query

Default.

5.6.25.6 Action on Update

Validate that combination of redo.domain_code, redo.value_from and date range (redo.eff_from_sett_date to redo.eff_to_sett_date) is unique.

5.6.25.7 Action on Insert

Validate that reva.domain_code is unique.

Validate that combination of redo.domain_code, redo.value_from and date range (redo.eff_from_sett_date to redo.eff_to_sett_date) is unique.

5.6.25.8 Action on Delete

Default.

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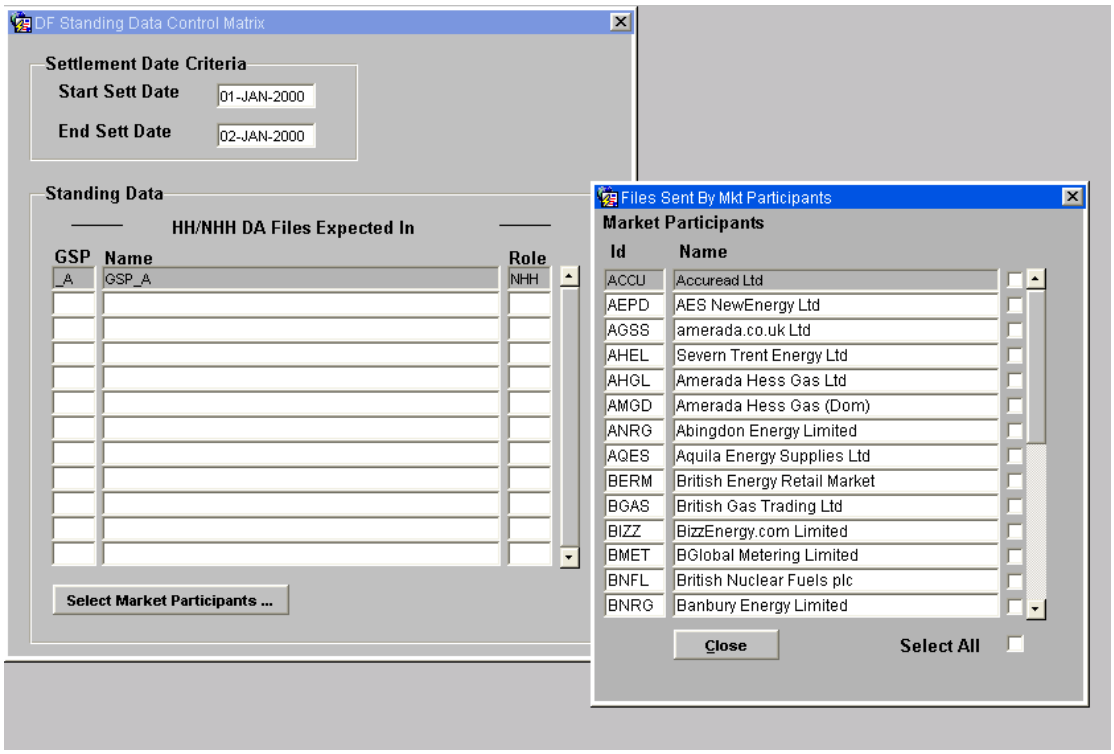
5.6.26 Form ISY_DFSDMAIN

The following describes the DF Standing Data Matrix form.

5.6.26.1Screen layout



5.6.26.2 Screen behaviour

Function Implemented	Define DF Standing Data Matrix
Block	NHH / HH DA Files expected
On Entry	Automatically Query
List of Values	On GSP Group Id, Role Code
Poplists	N/A
Buttons	**Select Market Participants** This button triggers the Market Participant selection pop-up window
Additional Behaviour	N/A

5.6.26.3 Description

This form will be based on four blocks:

CTRL - non-base table, queryable. This block specifies the criteria, for which DF Standing Data is selected. On screen start-up, this block will default to 'ENTER-QUERY' mode. The LoVs for 'Start Sett Date' and 'End Sett Date' will be based on the 'start_sett_date' and 'end_sett_date' columns in the 'idb_df_standing_data' table. When in 'INSERT' mode, the LoVs for 'Start Sett Date' and 'End Sett Date' will be based on the 'sett_date' column in the 'idb_settlement_days' table. Validation on the Settlement Date items, will prevent creation of Standing Data that crosses existing defined Settlement Date boundaries.

NHH_HH_DA_GSPS - base table on idb_df_standing_data. Queryable, for a specified Settlement Date range. Insert/delete/update allowed, for a specified Settlement Date range. Each record in this block will be linked directly to the Settlement Date range in the top block, i.e. Only records matching the Settlement Date range above can be manipulated here. GSP Groups for file_types of 'A' (aliased to 'HH') & 'B' (aliased to 'NHH'), will be displayed in this block.

SENT_BY_MKT_PPTS_DIS – base table on idb_mkt_ppt_roles. This block will form a 'pop-up window', through which Market Participants can be associated with GSP Groups (sender of files). An LoV will be available on Market Participant Id, based on the idb_mkt_ppt_roles table, for the currently selected GSP Group/Role. Insert and Deletions will be made 'manually' in the idb_sent_by_mkt_ppts table (through the 'sent_by_mkt_ppts' block) via checkboxes. Participant Name will be populated from the idb_mkt_ppts table.

SENT_BY_MKT_PPTS – base table on idb_sent_by_mkt_ppts. This is the manually maintained base table for the 'sent_by_mkt_ppts_dis' display block. Market Participants will be linked to GSP groups in the 'NHHDA_GSPS' and 'NHH_GSPS' blocks by a unique sequence number.

5.6.26.4 Form structure

Object	**Description**
Form: *DFSDMAIN*	Title : DF Standing Data Control Matrix
Block: *CTRL*	non-base table. Insert, Update allowed.
sett_date_from	Label : Start Sett Date Display. Mandatory. User Enterable. Insert. Update. LoV on idb_df_standing_data (ENTER-QUERY mode) / idb_settlement_days (INSERT mode)
sett_date_to	Label : End Sett Date Display. Mandatory. User Enterable. Insert. Update. LoV on idb_df_standing_data (ENTER-QUERY mode) / idb_settlement_days (INSERT mode)
select_mkt_ppts_but	Label: Select Market Participants …
select_all_cb	Label: Select All Display. Optional. Check/Un-check
close_but	Label: Close
Block: *NHH_HH_DA_GSPS*	Base table on idb_sf_standing_data. Query, Update, Insert, Delete allowed. Join columns: nhh_hh_da_gsps.start_sett_date > = ctrl.sett_date_from. nhh_hh_da_gsps.end_sett_date <= ctrl.sett_date_to Order by role_code, gsp_group_id.

Object	Description
gsp_group_id	Label : GSP Display. User Enterable. Query, Insert & Delete. Must be unique for the Settlement Date range. LoV on idb_gsp_groups.
gsp_group_name	Label : Name Display only. Populated from idb_gsp_groups
role_code	Label : Role LoV – role_code 'A' (alias to 'HH'), role_code 'B' (alias to 'NHH')
sent_by_mkt_ppts_id	Label : <*none*> Not displayed
Block: *SENT_BY_MKT_PPTS_DIS*	Base table on idb_mkt_ppts. Join columns: <*none*> Order by mkt_ppt_id.
mkt_ppt_id	Label : Id Display. User Enterable. Query, Insert & Delete. LoV on idb_mkt_ppt_roles
mkt_ppt_name	Label : Name Display only.
mkt_ppt_select_cb	Label : <*none*> Display. Check/un-check
db_record	Label : <*none*> Not displayed
Block: *SENT_BY_MKT_PPTS*	Base table on idb_sent_by_mkt_ppts Join columns: nhh_hh_da_gsps.sent_by_mkt_ppts_id = sent_by_mkt_ppts.sent_by_mkt_ppts_id Order by : <*none*>
sent_by_mkt_ppts_id	Label : <*none*> Non-display
mkt_ppt_id	Label : <*none*> Non-display

5.6.26.5 Action on Query

Populate the nhh_hh_da_gsps block from the idb_df_standing_data table for the specified Settlement Date range.

Disable the 'Select Market Participants …' button, where no data found.

5.6.26.6 Action on Update

Validate GSP Group and Role. Update the idb_sent_by_mkt_ppts table, based on selections made in the Select Market Participant window.

5.6.26.7 Action on Insert

Validate Settlement Date range does not cross existing DF Standing Data records in idb_df_standing_data.

Validate GSP Group and Role. Update the idb_sent_by_mkt_ppts table, based on selections made in the Select Market Participant window.

5.6.26.8 Action on Delete

Update idb_df_standing_data and idb_sent_by_mkt_ppts appropriately.

5.6.26.9 Action on Select Market Participants button

Display the Select Market Participants 'pop-up' window. Default checkbox states according to the idb_sent_by_mkt_ppts table.

5.6.26.10 Action on Close button

Return to the nhh_hh_da_gsps block

5.6.26.11 Action on Select All checkbox

Enable all Market Participant checkboxes and update the 'in-memory state of checkboxes' accordingly

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6 IDL Data Loading Subsystem Specification

6.1 Introduction

The ISRA Data Loading Subsystem comprises a set of programs which perform the data loads specified for the ISRA System and a set of Oracle Forms which are used to initiate data loads. Each loading program is written in Pro*C. Most of the programs write to the ISRA database but where logical entities are implemented as flat files, the programs write to these files. File formats for files loaded by the Data Loading Subsystem are defined in the External Interfaces section of the Interface Specification.

The following files are loaded into the database:

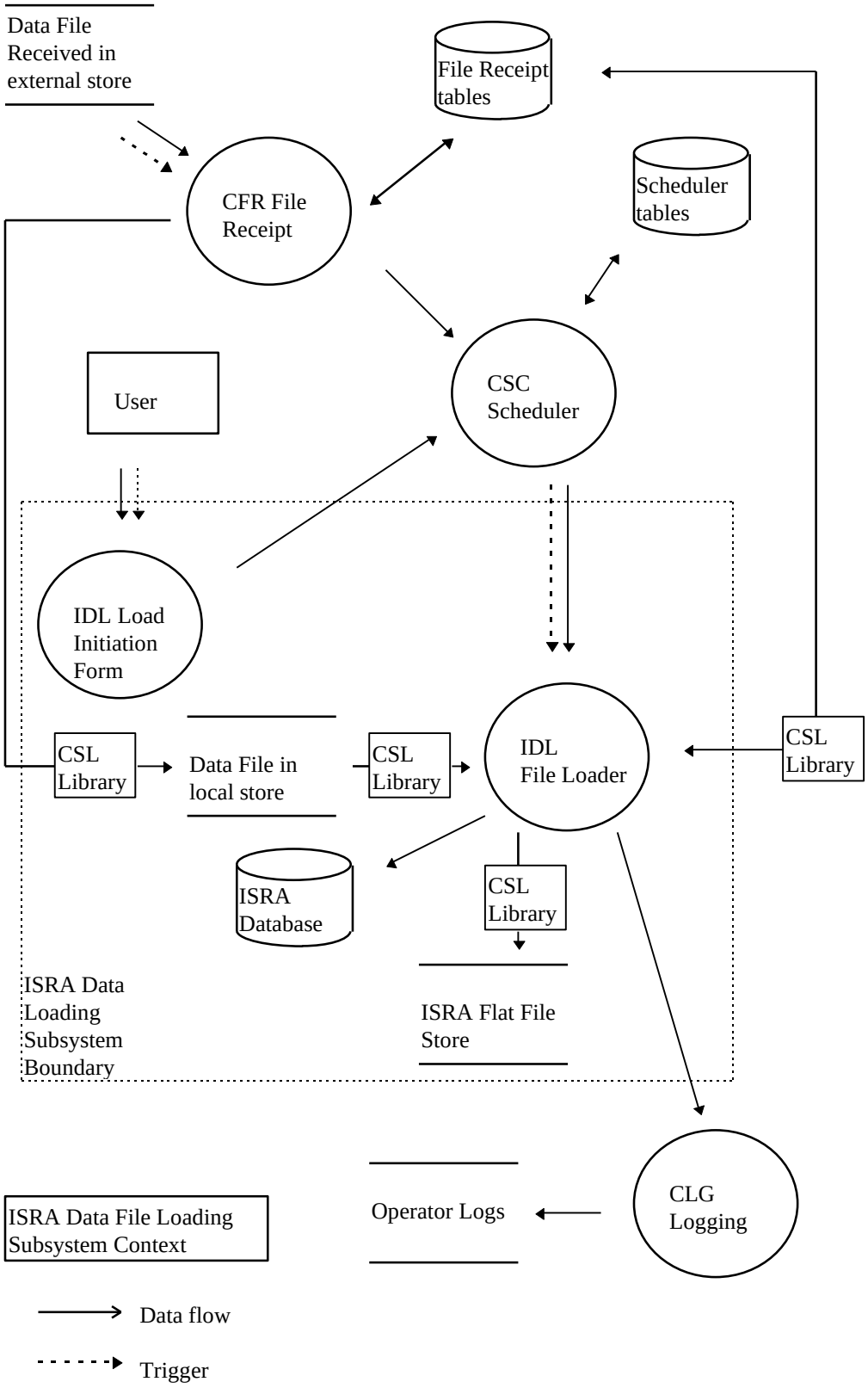
1. GSP Group Take Data File,
2. Line Loss Factor Data File,
3. Pool Market Domain Data File,
4. Regression Equations Data File,
5. Scottish Regression Equations Data File,[15]
6. Settlement Price Data File,
7. Sunset Data File,
8. Tele-switch Contact Intervals,
9. Data Aggregation and Settlements Timetable File,
10. Market Domain Data Complete Set File,
11. BM Unit Registration Data File.
12. Aggregated Disconnected DUoS Report
13. Demand Control Instructions

The following files are loaded into the ISRA flat file store:

1. Aggregated Half-Hour Data File,
2. BM Unit Aggregated Half-Hour Data File,
3. Supplier Purchase Matrix Data File.
4. Supplier's Demand Disconnection Volume Data File
5. Disconnection Purchase Matrix Data File
6. BM Unit Aggregated Half Hour Demand Disconnection Data File

[15] This functionality is disabled as a result of LCR235.

6.2 Subsystem Context



Data files are received in ‘external’ directories; the CFR Subsystem detects them, records them in the database and moves them to local directories.

The data file load programs which make up the Data Load Subsystem may be initiated automatically by the CFR Subsystem or by a User. Where they are initiated by a User, the initiating process is an Oracle Form. In both cases the initiating process submits the activity using the CSC.SUBMIT stored procedure which is the interface to the Scheduler.

The file identifier (file_id) parameter to individual data load processes is derived by the initiating process and references a row in the cdb_file_reference table. Where the initiating process is an Oracle Form, file identifiers and information about file contents will have been retrieved from the cdb_file_reference table for display to the User. The file_id parameter is passed to the individual data load processes by the Scheduler using the ‘C’ argc, argv mechanism. The load process is a child of the scheduler to which it returns a status when it completes. The scheduler records the exit status of load processes in the cdb_activity table.

The data load processes read from textual data files, which have the format defined for external files in the Common Subsystems Technical Specification, and write to the ISRA Database or ISRA Flat File Store.

The input files are read using CSL library calls which take care of the separator character and which keep a running checksum. A library is used because the format of all input and output files for the ISRA System is common.

After loading, the status of the file in the cdb_file_reference table is updated using the CSL_update_file library call.

The data load programs write to:

1. the Oracle database using SQL,
2. the ISRA Flat File Store using the CSL Library,
3. exception reports, using the CSL Library, which are for return to data suppliers.

Failures, errors and exceptions are handled as follows:

1. If the CSC Subsystem fails then when the system is restarted, the scheduler detects that the activity did not finish and marks its status as ‘unknown’ in the cdb_activity table. The ISRA Exception Administrator can query this table for information about processes whose status is unknown in order that they can be investigated and if necessary re-run.
2. If the load process fails, the scheduler does not receive a successful status and marks the activity as failed in the cdb_activity table. The ISRA Exception Administrator can query this table for information about processes which have failed in order that they can be investigated and re-run.
3. Where validation described in the relevant Function Definition fails, the file is not loaded, errors which describe the failure are logged to an exception report, the process returns a failure status and the cdb_file_reference table is updated to show load failure using the CSL_update_file library call.
4. Where the relevant Function Definition indicates that warning messages should be logged, these are logged to the exception report but processing of the file continues.

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5. Exception errors and warnings indicate the record in the file being processed at the time the error was detected. If the error is at file level, record number 0 is reported.
6. Expected Oracle exceptions, for example a query returning no data, when this is allowed in the database, are handled by the loading process and do not cause the Oracle transaction or the load process to fail.
7. Unexpected Oracle exceptions, for example a constraint violation, are handled by the loading process but cause the transaction to fail.

Wherever possible, a load is handled as a single Oracle transaction. However where a load is of such a size that there is not sufficient rollback space, interim commits are made through the load file. If the load needs to be repeated because of a process or system failure, it can handle this by first deleting data previously inserted or by inserting data where data does not already exist. Where a load program writes to the ISRA Flat File Store, any files written by processes which fail are removed when the data load program next runs. The way in which individual loads handle transactions is described in the Procedure Details section below.

Interfaces between the Data Loading Subsystem and other subsystems are summarised as follows:

1. The data load programs are called with parameters defined in the procedure specifications below.
2. CSL Server Library calls, eg: CSL_extract_file_header are used for file read access. The input file formats are defined in the External Interface Specification.
3. CSL Server Library calls, eg: CSL_write_file_header are used for file write access to the ISRA Flat File Store. The flat file formats are defined in the Database Technical Specification.
4. Data is inserted by the data load processes into the ISRA Database using SQL as described in the following procedure details.
5. The CLG Logging Subsystem is used to produce audit and operator logs. The CLG_write_log procedure is used to access the CLG Logging Subsystem to produce operator logs. The audit logs are produced automatically by triggers which call the CLG.online_audit() procedure.
6. The cdb_file_reference table is updated with the status of the file load using the CSL_update_file library call.
7. Wherever an audited table has data modified, the online audit log is automatically written to via database triggers. These triggers fire automatically when data is modified in the table with no application action.

There are no specific performance requirements relating to individual loading processes, but the ISRA System must be able to meet the Settlement Timetable. The implementation of some logical entities as flat files and the denormalisation of some logical entities is intended to facilitate performance of the ISRA System and therefore of data loads.

6.3 Subsystem Processing

Each of the data loading processes has the same basic decomposition. In each case, the IDL_LOADUTIL Form submits the activity. Each data loading process interacts

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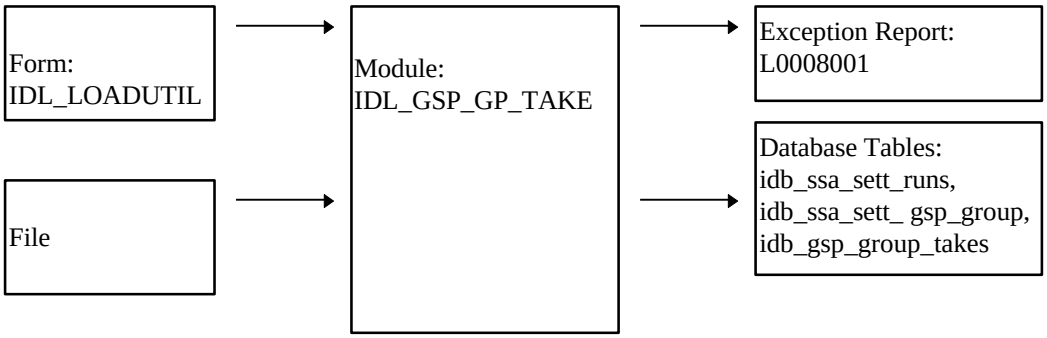
with the CSC Scheduler and CLG Logger. The file identifier parameter is passed down by the CSC Scheduler, the process reads the data file using CSL library calls and writes to the ISRA Database or ISRA Flat File Store. The formats of the input files and where relevant output files are hard-coded in the data load program. The following diagram is an example for Load GSP Group Take Data File.



The following table summarises the inputs for the IDL Processes. The database outputs are summarised in the System Data section below.

IDL Process	Initiating Form	Input File Type
IDL_AGG_HHD	IDL_LOADUTIL	D0040 D0298
IDL_GSP_GP_TAKE	IDL_LOADUTIL	P0012
IDL_LLF	IDL_LOADUTIL	D0265
IDL_PFL	IDL_LOADUTIL	P0015
IDL_PL_MKT_DOM	IDL_LOADUTIL	D0278
IDL_REGN_EQN	IDL_LOADUTIL	P0014 P0214[16]
IDL_SETT_PRICE	IDL_LOADUTIL	P0013
IDL_SPM	IDL_LOADUTIL	D0041
IDL_SUNSET	IDL_LOADUTIL	P0011
IDL_TSW_CONTACT	IDL_LOADUTIL	D0277
IDL_SETT_CALENDAR	IDL_LOADUTIL	D0286
IDL_MDD_COMP_SET	IDL_LOADUTIL	D0269
IDL_BM_UNIT	IDL_LOADUTIL	D0299

The Data Loading Subsystem produces Exception Reports using the CSL Library. The format of these Exception Reports is given in Section 3.1.21.

6.4 Data Usage

6.4.1 System Data

System tables which are important in the loading of data files are used indirectly, that is they are hidden by library and stored procedure calls. Each loading process writes to ISRA database tables which are listed in the individual specifications below and

[16] Loading of the P0214 is disabled as a result of LCR235.

summarised in the following table. Access Types are I - insert, S - select, U - update, W - write.

IDL process	Table or Flat File	Access Type
IDL_AGG_HHD	idb_sup_data_agtns	I
IDL_AGG_HHD	idf_agtd_sup_da_pd_consums	W
IDL_AGG_HHD	idb_consum_comp_classes	S
IDL_AGG_HHD	idb_da_in_gsp_groups	S
IDL_GSP_GP_TAKE	idb_gsp_group_takes	I
IDL_GSP_GP_TAKE	idb_ssa_sett_gsp_group	I
IDL_GSP_GP_TAKE	idb_gsp_groups	S
IDL_GSP_GP_TAKE	idb_sett_pd_prices	S,I
IDL_GSP_GP_TAKE	idb_settlement_days	S
IDL_GSP_GP_TAKE	idb_ssa_sett_runs	S,I
IDL_LLF	idb_llf_classes	S
IDL_LLF	idb_mkt_ppt_roles	S
IDL_LLF	idb_settlement_days	S
IDL_LLF	idb_ssr_runs	S
IDL_LLF	idb_sett_pd_llfs	S,I,U
IDL_PFL	idb_pfl_classes	I
IDL_PFL	idb_pfls	I
IDL_PL_MKT_DOM	idb_afycs	I,U,S
IDL_PL_MKT_DOM	idb_clock_intervals	I,S
IDL_PL_MKT_DOM	idb_measurement_requirements	I,S
IDL_PL_MKT_DOM	idb_sscs	I,U,S
IDL_PL_MKT_DOM	idb_tprs	I,U,S
IDL_PL_MKT_DOM	idb_vmr_pfl_classes	I,U,S
IDL_PL_MKT_DOM	idb_vscpcs	I,U,S
IDL_PL_MKT_DOM	idb_teleswitch_contact_rules	I,U,S
IDL_PL_MKT_DOM	idb_gsp_groups	S
IDL_PL_MKT_DOM	idb_pfl_classes	S
IDL_PL_MKT_DOM	idb_ssr_runs	S
IDL_REGN_EQN	idb_gsp_group_average_eacs	I, U
IDL_REGN_EQN	idb_pd_pfl_regr_eqs	I, S
IDL_REGN_EQN	idb_pfl_sets	I,S,U
IDL_REGN_EQN	idb_gsp_groups	S
IDL_REGN_EQN	idb_pfl_classes	S
IDL_REGN_EQN	idb_pfls	S
IDL_REGN_EQN	idb_ssr_runs	S
IDL_SETT_PRICE	idb_sett_pd_prices	I
IDL_SETT_PRICE	idb_ssa_sett_gsp_group	M
IDL_SETT_PRICE	idb_settlement_days	S

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IDL process	Table or Flat File	Access Type
IDL_SETT_PRICE	idb_ssa_sett_runs	S,I
IDL_SPM	idb_sup_data_agtns	I
IDL_SPM	idf_sup_purchase_matrices	W
IDL_SPM	idb_da_in_gsp_groups	S
IDL_SPM	idb_llf_classes	S
IDL_SPM	idb_pfl_classes	S
IDL_SPM	idb_sett_pd_llfs	S
IDL_SUNSET	idb_daily_pfl_parameters	I
IDL_SUNSET	idb_gsp_groups	S
IDL_SUNSET	idb_settlement_days	S
IDL_SUNSET	idb_ssr_runs	S
IDL_TSW_CONTACT	idb_sscs	S
IDL_TSW_CONTACT	idb_tsw_contact_intervals	S,I,U
IDL_SETT_CALENDAR	idb_settlements	S,I,U
IDL_SETT_CALENDAR	idb_ssr_runs	S
IDL_SETT_CALENDAR	idb_ssa_sett_runs	S
IDL_MDD_COMP_SET	idb_llf_classes	S,I,U
IDL_MDD_COMP_SET	idb_settlement days	S,I,U
IDL_MDD_COMP_SET	idb_sett_pd_llfs	S
IDL_MDD_COMP_SET	idb_ssr_runs	S
IDL_MDD_COMP_SET	idb_gsp_groups	S
IDL_MDD_COMP_SET	idb_mkt_ppt_role_ in_gsp_groups	S
IDL_BM_UNIT	idb_bm_unit_in_gsp_groups	S,I,U
IDL_BM_UNIT	idb_gsp_groups	S
IDL_BM_UNIT	idb_mkt_ppt_roles	S
IDL_BM_UNIT	idb_nhh_bm_unit_allocation	S
IDL_ AGG_HHD_DD	idf_agtd_sup_da_pd_discon_vol ume	W
IDL_DPM	idf_discon_purchase_matrices	W
IDL_DCI	idb_demand_control_instruction	W
IDL_DCE	idb_demand_control_event	W
IDL_DIS_MS_HH_VOL	idf_discon_msi_hh_dd_volume	W

6.5 Procedure Details

6.5.1 General Validation

All of the data loads described below include the following general validation:

1. Files with invalid checksums are rejected,
2. All numbers are checked against maximum and minimum range limits which are held in the database, a list of the relevant domains is provided in the Database Specification describing Use of Common Database Tables.

Errors and warnings to indicate failures of these and other general validation checks can appear in Exception reports, as follows.

In the message descriptions, the "%" symbol is used to indicate that the text at that point is inserted when the message is generated (to give more information about the cause of the condition being reported). "%d" indicates that an integer is inserted (eg Aggregation Run Number), while %s indicates that text will be inserted (eg a filename). (See a definition of the printf C function for a complete list on the meaning of the characters after the "%" symbol.).

Exception report errors

1. Record %d, Error found in file format. Field: %s
2. Record %d, CDCS Number in file different to table value %d.
3. Record %d, checksum invalid
4. Record %d, failure to INSERT INTO %s, Oracle error code %d %s. *
5. Record %d, failure to update %s, Oracle error code %d %s. *
6. Record %d, GSP Group %s unknown
7. Record %d, incorrect number of Settlement Periods %d.
8. Record %d, Incorrect record ordering
9. Record %d, Invalid record sequence in data file.
10. Record %d, Load Data is same or earlier version than that previously loaded.
11. Record %d, Oracle Error %d %s. *
12. Record %d, Record type %s unknown
13. Record %d, Run Type Id in file different to table value of %s.
14. Record %d, Unable to authorise modification of standing data.
15. Record %d, Unable to validate file header. Further information may appear in the error log.
16. Record %d, Value of %d for %s is outside valid range %d to %d.
17. Record %d,%s Oracle error %d %.*s *
18. Record %d, File Creation Timestamp of this file is earlier than the latest successfully loaded file.
19. Record %d: Error in record type. Expected record type: %s.

Exception report warnings

1. Daily GSP Group Purchases validation failed for GSP Group %s. Discrepancy exceeded value of %.3lf.
2. Discrepancy in Period Purchase for GSP Group %s, Period %d. Calculated value %.3lf. Expected value %.3lf.
3. Load affects Final Initial Settlement Run. Standing Data Audit Report produced detailing changes.

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4. Period Purchase validation failed for GSP GSP %s, Period %d. Discrepancy exceeded value of %.3lf.
5. Record %d, Discrepancy in Daily GSP Group Purchases for GSP Group %s. Calculated value %.3lf, Expected value %.3lf.
6. Record %d, Discrepancy in Period Purchase for GSP Group %s, Period %d. Calculated value %.3lf. Expected value %.3lf.

Errors and warnings specific to the individual data loaders are given separately in the sections below.

6.5.2 Procedure IDL_GSP_GP_TAKE

Function Definition Ref: I0013B Load GSP Group Take

Event Description: GSP Group Take Available

```
Function Name:      IDL_GSP_GP_TAKE()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.2.1 Inputs

The input file format is described in the External Interface: GSP Group Take Data File section of the Interface Specification.

6.5.2.2 Outputs

This program writes to the operators log, an exception report if there are exceptions and database tables.

Operators log:

1. 'Load GSP Group Take: Load of <filename> started',
2. 'Load GSP Group Take: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load GSP Group Take Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Unable to process file for Settlement Date %s as sending Market Participant defined as %s when %s was expected.
2. Record %d, Cannot load Scottish GSP Group %s for Settlement Date before BETTA.

Exception Report Warnings:

1. Dummy Settlement Period Price data has been inserted for Settlement Date %s as this date is after the NETA Start Date.

See list of general exceptions.

Database Tables accessed for insert:

1. idb_ssa_sett_runs,
2. idb_ssa_sett_gsp_group,

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3. idb_gsp_group_takes.
4. idb_sett_pd_prices (for Settlement Days from the start of the NETA).

6.5.2.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each GSP Group Take Data file is handled as one Oracle transaction.

6.5.3 Procedure IDL_LLF

Function Definition Ref: I0014 Load Line Loss Factor Data

Event Description: Line Loss Factors Available

```
Function Name:      IDL_LLF()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.3.1 Inputs

The input file format is described in the External Interface: Line Loss Factor Data File section of the Interface Specification.

6.5.3.2 Outputs

This program writes to the operators log an exception report, if there are exceptions, and database tables.

Operators log:

1. 'Load Line Loss Factor Data: Load of <filename> started',
2. 'Load Line Loss Factor Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Line Loss Factor Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Distributor %s in ZHD field does not match Distributor %s in DIS field.
2. Line Loss Factor Class %ld missing from data file.
3. Record %d, Line Loss Factor value of %.3f for Class %d, date %s, period %d is outside range %.3f to %.3f
4. Record %d, Distributor %s not known.
5. Record %d, Settlement Period %d invalid for %s.

Exception Report Warnings:

1. Line Loss Factor Class %ld missing for Settlement Date %s from data file.
2. Record %d, Line Loss Factor Class NOT active.

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3. Record %d, Line Loss Factor Class not valid for this Distributor or Factor outside of Class effective date range.
4. Record %d, Line Loss Factor periods %d to %d missing.
5. Record %d, Data not loaded. The LLF Class %d does not exist for Distributor %s.

Database Table accessed for insert:

idb_sett_pd_llfs.

6.5.3.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

The logical entity Settlement Period Line Loss Factor Used In SSR Run is not physically implemented as a table. A new attribute llf_file_id has been added to idb_sett_pd_llfs to identify the file from which the line loss factors were supplied by the distributor. The idb_ssr_run_llf_files table has an llf_file_id column to identify the set of settlement period line loss factors used in the SSR Run for that GSP Group.

When performing an SSR run, the file with the latest creation timestamp which has been successfully loaded, and contains any settlement period line loss factors for the settlement day and distributor in question is identified. This file is recorded in idb_ssr_run_llf_files and only data from that file is used for that GSP Group. If the data from the file has missing line loss factor classes, then these values are defaulted to 1, even if they are available from an earlier file.

All line loss factors that have been successfully loaded are retained in the database until archived, even if they are superseded by newer data. This ensures a full audit trail is maintained.

On loading, the range of settlement dates for the file is calculated by determining the earliest and latest settlement date for which data is supplied. The following validation rules are then applied:

- If the file has an earlier timestamp than a previous line loss file from the same distributor it is rejected.
- Any settlement period line loss factors which do not have a line loss factor class effective for that distributor on that settlement day are rejected with a warning.
- If any line loss factor classes are effective for the distributor during the settlement data range of the file, but do not have data supplied, then a warning is generated.

Each Line Loss Factor Data file is handled as a number of Oracle transactions. The data in the input file is grouped by Line Loss Factor Class, therefore it is possible to treat each group of data relating to a Line Loss Factor Class as an Oracle transaction. If the load fails the partially loaded data will not be used. The process which repeats the load deletes the partially loaded version of LLFs before it reloads the file.

6.5.4 Procedure IDL_AGG_HHD

Function Definition Ref: I0017B Load Aggregated Half Hour Data

Event Description: Aggregated Half Hour Data Available

```
Function Name:      IDL_AGG_HHD()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.4.1 Inputs

The input file format is described in the External Interface: Aggregated Half Hour Data File section of the Interface Specification. For Settlement Days before the start of the NETA, the input file must be an Aggregated Half-Hour Data File. For Settlement Days from the start of the NETA, the input file is either an Aggregated Half-Hour Data File or a BM Unit Aggregated Half-Hour Data File.

6.5.4.2 Outputs

This program writes to the operators log, an exception report, if there are exceptions, and database tables.

Operators log:

1. 'Load Aggregated Half Hour Data: Load of <filename> started',
2. 'Load Aggregated Half Hour Data: Load of <filename> completed with status <exit status>',
3. 'Load BM Unit Aggregated Half Hour Data: Load of <filename> started',
4. 'Load BM Unit Aggregated Half Hour Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Aggregated Half Hour Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, Incorrect number of Settlement Periods %d
2. Record %d, Invalid Consumption Component Class, ccc id %d
3. No data provided for Supplier %s in data file from Data Aggregator %s for GSP group %s, standing data update not allowed
4. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, standing data update not allowed
5. Aggregated Half Hourly data file received from unexpected Data Aggregator %s for GSP Group %s, standing data update not allowed
6. BM Unit Aggregated Half-Hour data cannot be loaded for Settlement Day %s, which is before the start of NETA
7. Record %d, cannot load Scottish GSP Group %s for Settlement Date %s before BETTA.
8. Record %d, Invalid Line Loss Factor Class, dist id %s

Exception Report Warnings:

1. Record %d, An SSR run has been completed for Settlement Date %s, Settlement Code %s

2. Record %d, No Default BM Unit defined for combination of GSP Group %s and Supplier %s for Settlement Day %s
3. Record %d, BM Unit %s is not valid for GSP Group %s and Supplier %s on Settlement Day %s - GSP Group %s and Supplier %s expected
4. Record %d, BM Unit %s has multiple GSP Group and Supplier combinations defined for Settlement Day %s - only 1 allowed
5. Record %d, More than 1 Default BM Unit defined for combination of GSP Group %s and Supplier %s for Settlement Day %s
6. Record %d, BM Unit %s is not valid for any combinations of GSP Group and Supplier on Settlement Day %
7. Record %d,Invalid combination of dist id %s
8. Record %d, Invalid Line Loss Factor Class, dist id %s

Data Load Standing Data Update Report Warnings:

1. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, existing association extended to settlement day
2. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, association added on settlement day
3. No data provided for Supplier %s in data file from Data Aggregator %s for GSP group %s, association removed for settlement day
4. Aggregated Half Hourly data file received from unexpected Data Aggregator %s for GSP Group %s, existing association extended to settlement day
5. Aggregated Half Hourly data file received from unexpected Data Aggregator %s for GSP Group %s, association will be added on settlement day
6. Record %d, No Supplier/GSP Group association for Supplier %s and GSP Group %s, existing association extended to settlement day
7. Record %d, No Supplier/GSP Group association for Supplier %s and GSP Group %s, association added on settlement day

Database table accessed for insert:

idb_sup_data_agtns;

idb_mkt_ppt_role_in_gsp_groups;

idb_da_in_gsp_groups;

idb_sup_gsp_da_auto_st_data;

idb_llf_classes;

idb_mkt_ppt_roles.

Flat file accessed for insert:

idf_agtd_sup_da_pd_consums;

idf_agtd_sup_da_pd_consums_llf.

For Settlement Days before the start of the NETA, version one of this flat file will be created. For Settlement Days from the start of the NETA, version two of this flat file will be created (see Volume Two of this document). If the BM Unit is not specified (because an Aggregated Half Hour Data file was received) then the BM Unit Id in the flat file will be NULL.

6.5.4.3 Functionality

The functionality of this program is described in the Function Definition.

Each Aggregated Half Hour Data file is handled as one Oracle transaction. Where the load fails, a file of type idf_agtd_sup_da_pd_consums and idf_agtd_sup_da_pd_consums_llf will have been created. The process which repeats the load removes this file before it reloads the file.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

Multiple standing data update warnings are reported in a single Data Load Standing Data Update report.

All standing data updates are additionally recorded into the database (into table idb_sup_gsp_da_auto_st_data) for subsequent reporting, examination and clearing.

6.5.5 Procedure IDL_PL_MKT_DOM

Function Definition Ref: I0018 Load Tele-Switch Pool Market Domain Data

Event Description: Tele-Switch Pool Market Domain Data Loaded

```
Function Name:      IDL_PL_MKT_DOM()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.5.1 Inputs

The input file format is described in External Interface: Tele-switch Pool Market Domain Data File section of the Interface Specification.

6.5.5.2 Outputs

This program writes to the operators log an exception report, if there are exceptions, and database tables.

Operators log:

1. ‘Load Pool Market Domain Data: Load of <filename> started’,
2. ‘Load Pool Market Domain Data: Load of <filename> completed with status <exit status>’.

Exception Report Header:

Indicates Date and Time, User Id, the function ‘Load Pool Market Domain Data File’ and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, AFYC value %.6f is outside the range %.6f to %.6f

2. Record %d, Average Fractions of Yearly Consumption for VSCPC: Profile Class %d, SSC %s, GSP Group %s, Effective From Date %s do not sum to 1
3. Record %d, Clock Interval dates %d/%d - %d/%d are invalid
4. Record %d, Clock Interval Day of Week field has value %d. This is invalid
5. Record %d Effective To Date of new AFYCS data for Profile Class %d SSC %s GSP Group %s Effective Date %s overlaps an existing set.
6. Record %d, Effective To date is before the Effective From date
7. Record %d, Final Initial Settlement Run has already taken place for VSCPC %s / %d.
8. Record %d, Final Initial Settlement Run has already taken place for SSC %s.
9. Record %d, Final Initial Settlement Run has already taken place for Measurement Requirement - SSC %s TPR %s.
10. Record %d, Final Initial Settlement Run has already taken place for VMR Profile Class - SSC %s Profile Class %d TPR %s
11. Record %d, Final Initial Settlement Run has already taken place for AFYC Details - Profile Class %d SSC %s; GSP Group % TPR %s
12. Record %d, Final Initial Settlement Run has already taken place for Time Pattern Regime details %s
13. Record %d, Final Initial Settlement Run has already taken place for Tele-switch Contact Rule - Register Rule %s, Contact Code %s, Contact Rule %s
14. Record %d, Final Initial Settlement Run has already taken place for Clock Interval - day of week %s, start day %s, start month %s, start time %s, end day %s, end month %s, end time %
15. Record %d, cannot change Tele-switch User/Group for SSC %s as MR requires Tele-switch User/Group for TPR %s to have same combination.
16. Record %d, Profile Class %d unknown.
17. Record %d, Switched Load Indicator is not set for any Measurement Requirement for Switched Load VSCPC: Profile Class %d SSC %s
18. Record %d, Switched Load Indicator is set for one or more Measurement Requirements for non-Switched Load VSCPC: Profile Class %d SSC %s
19. Record %d, Time Pattern Regime %s has an invalid GMT/Local Time indicator.
20. Record %d, Time Pattern Regime %s is not in the file or in the ISRA system database
21. Record %d, Time Pattern Regime Type field has value %s. This is invalid
22. Record %d, There are no Contact-Register switching rules defined for Time Pattern Regime %s.
23. Record %d, Time Pattern Regimes for SSC %s have inconsistent GMT/ local time indicators.
24. Record %d, Tele-switch User Id %d and Tele-switch Group Id %d for TPR %s do not match those for SSC %s with Tele-switch User Id %d and Tele-switch Group Id %d.

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25. Record %d, Tele-switch User Id value %.6f is outside the range %.6f to %.6f
26. Record %d, Tele-switch Group Id value %.6f is outside the range %.6f to %.6f
27. Record %d, Duplicate Register Rule Id %d and Tele-switch Contact code %s combinations exist for TPR %s
28. File does not contain a Valid Measurement Requirement Profile Class for every TPR associated with SSC %s.
29. File does not contain a valid set of AFYCs for Valid Settlement Configuration Profile Class - SSC %s Profile Class %d Effective From Date %s.
30. Record %d, TPR type update is prohibited for TPR %s
31. Record %d, Duplicate record type %s details found in file
32. Record %d, cannot change Tele-switch User or Group for TPR %s as User and Group combination does not exist for any SSC.
33. Record %d, Tele-switch Register Rule must be in range 1 – 9
34. Record %d, SCC Id: %s has invalid type of %s. Must be I or E.

Exception Report Warnings:

1. Record %d, Unrecognised record type %s found.
2. Record %d, AFYC value %.6f being updated to %.6f for AFYC Set - SSC %s Profile Class %d TPR %s, GSP Group %s, Effective From Date %s.
3. Record %d, Switched Load Indicator %s being updated to %s for Valid Measurement Requirement Profile Class - Profile Class %d SSC %s TPR %s
4. Record %d, Effective To Date %s being updated to %s for Valid Settlement Configuration Profile Class - Profile Class %d SSC %s Effective From Date %s
5. Record %d, Teleswitch User Id %d and Group %d being updated to Tele-switch User Id %d and Group %d for SSC %s
6. Record %d, Teleswitch User Id %d and Group %d being updated to Tele-switch User Id %d and Group %d for TPR %s
7. Record %d, GMT Indicator %s being updated to %s for TPR %s
8. Record %d, Tele-switch Contact Rule %s being updated to %s for TPR %s, Tele-switch Register Rule %s, Contact Code %s
9. Record %d, SSC %s Description %s being updated to %s
10. AFYC Details: %d rows inserted, %d rows updated
11. Switched Load Measurement Requirement Details: %d rows inserted, %d rows updated
12. VSCPC Details: %d rows inserted, %d rows updated
13. Measurement Requirements: %d rows inserted
14. Standard Settlement Configuration Details: %d rows inserted, %d rows updated
15. Time Pattern Regime Details: %d rows inserted, %d rows updated
16. Tele-switch Contact Rule: %d rows inserted, %d rows updated

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17. Clock Interval: %d rows inserted
18. Record %d, AFYC Set Effective To Date %s being updated to %s for AFYC set - SSC %s, Profile Class %d, GSP Group %s, Effective From Date %s.
19. Average Fraction of Yearly Consumption Details for Profile Class %d SSC %s TPR %s GSP Group %s Effective Date %s exists in the ISRA system database but is missing from file.
20. Clock Interval details day of week %s, start day %s, start month %s, start time %s, end day %s, end month %s, end time %s for TPR %s exist in the ISRA system database but are missing from the file
21. Measurement Requirement - SSC %s TPR %s exists on the ISRA system database but is missing from file.
22. Standard Settlement Configuration %s exists in ISRA system database but is missing from file.
23. Time Pattern Regime details for TPR %s exist in ISRA system database but do not appear in file.
24. VMR Profile Class entity pfl_class: %d, ssc: %s, tpr: %s exists in the ISRA system database but is missing from file.
25. VSCPC - SSC %s, Profile Class %d, Effective From Settlement Date %s exists in the ISRA system database but is missing from file
26. Tele-switch Contact Rule details - Register Rule %d Contact Code %s for TPR %s exist on the ISRA system database but are missing from file.
27. Record %d, Average Fraction of Yearly Consumption Details for Profile Class %d SSC %s GSP Group %s Effective Date %s may produce a gap between effective dates for AFYCs
28. Record %d, Average Fraction of Yearly Consumption Details for Profile Class %d SSC %s GSP Group %s Effective Date %s has left a Non-Half Hourly BM Unit Allocation without complete AFYC coverage.
29. Record %d, SCC Type changed for SSC id: %s. This may cause any SSR re-runs to produce different results.

Database tables accessed for insert and update:

1. idb_tprs,
2. idb_clock_intervals,
3. idb_sscs,
4. idb_measurement_requirements,
5. idb_vscpcs,
6. idb_vmr_pfl_classes,
7. idb_afycs.
8. idb_teleswitch_contact_rules

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6.5.5.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Exception Report Errors relating to Initial Settlement already having taken place, as described in the section above, are in addition to those errors and warnings produced as a result of IC003 Authorise & Produce Standing Data Audit. They will be invoked when a user other than the Standing Data Manager (SDM) attempts to amend relevant data that affects a Final Initial Settlement Run.

Most validation of the file load will take place either on a row by row basis or after a batch of records, except for cases where complex updates that depend on information held later in the file are performed. In this case, validation will be invoked at the end of the file.

Specific batch record validation will be performed:

- After receiving all SLM records associated with a particular VSCPC record during file processing. This will validate that at least one Switched Load Indicator is set for a Switched Load Profile Class, or no Switched Load Indicators are set for a non-Switched Load Profile Class.
- After receiving all AFD records associated with a particular ASD record during file processing. This will validate that for each valid combination of VSCPC and GSP group, the AFYC values sum to one.

The following end of file validation will be performed:

- If a Standard Settlement Configuration amends Tele-switch User Id/Group Id, all TPRs associated with the SSC (via a Measurement Requirement) must have matching values of Tele-switch User Id/Group Id;
- If a Time Pattern Regime that has no association with an SSC (no Measurement Requirements) amends the Tele-switch User Id/Group Id, the new Tele-switch User Id/Group Id combination must exist for an SSC after the file has been processed;
- If a Time Pattern Regime that has an association with an SSC (via a Measurement Requirement) amends the Tele-switch User Id/Group Id, all TPRs associated with that SSC, **and** the SSC itself, must have matching values of Tele-switch User Id/Group Id;
- If a Time Pattern Regime that has an association with an SSC (via a Measurement Requirement) amends the GMT/Local Time Indicator, all TPRs associated with that SSC must have matching values of GMT/Local Time Indicators.

Following end of file processing, a single warning will be issued if a Standard Settlement Configuration or Time Pattern Regime and associated data is completely missing from the file. Otherwise, individual warning messages are produced for all missing associated data. These warning messages will be written to the Exception Report.

Each Tele-Switch Pool Market Domain Data file is loaded into the ORACLE database within a single ORACLE commit transaction. This is to ensure that the file

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either loads in its entirety or fails completely leaving the database unchanged. This guarantees that the database data is consistent.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

6.5.6 Procedure IDL_REGN_EQN

Function Definition Ref: I0019 Load Regression Equations and I0019B Load Scottish Regression Equations[17]

Event Description: Regression Equation Set File Available

```
Function Name:      IDL_REGN_EQN()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.6.1 Inputs

The input file format is described in the External Interface: Regression Equations Data File and Scottish Equation Data File sections of the Interface Specification.

6.5.6.2 Outputs

This program writes to the operators log an exception report, if there are exceptions, and database tables.

Operators log:

1. 'Load Regression Equations: Load of <filename> started',
2. 'Load Regression Equations: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Regression Equation Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, Day Type %s unknown
2. Record %d, Effective Date %s of Profile Set falls outside of Effective Period %s - %s for Profile Class %d Profile %d
3. Record %d, Profile Class %d Profile %d unknown
4. Record %d, Profile Class %d unknown
5. Record %d, Regression Coefficient Type %d unknown

[17] Loading of Scottish Regression Equations is disabled as a result of LCR235.

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6. Record %d, Regression Coefficients for Profile %d, Profile Class %d, Effective From Date %s do not include data for every Settlement Period
7. Record %d, Regression Coefficients for Profile %d, Profile Class %d, Effective From Date %s are not included for every coefficient type
8. Record %d, Attempt to load non-Scottish GSP Group %s in Scottish Flow.

Exception Report Warnings:

1. File Creation Timestamp of this file is earlier than the latest successfully loaded file
2. Record %d, Annual Consumption updated for GSP Group %s, Profile Id %d Profile Class %d

Database tables accessed for insert:

1. idb_pfl_sets,
2. idb_gsp_group_average_eacs,
3. idb_pd_pfl_regr_coefs.

6.5.6.3 Functionality

The functionality of this program is described in the Function Definition and the Event Description.

Each Regression Equation Data file or Scottish Regression Equation Data file is handled as a number of Oracle transactions. The data in the input file is grouped by Profile Set, therefore it is possible to treat each group of data relating to a Profile Set as an Oracle Transaction.

If a Regression Equation Data file or Scottish Regression Equation Data file load fails, the data which has been successfully loaded into the ISRA database cannot be easily identified. Profile Sets are always processed with an insert or update logic and so can be ignored here. GSP Group Average EACs are processed individually, that is each is inserted and exceptions which are due to duplicate keys are ignored. Regression Equation Sets can be processed as a set because they are necessarily complete sets before they are written to the ISRA database. That is each Regression Equation Set in the input file which is not found in the database is inserted.

6.5.7 Procedure IDL_SETT_PRICE

Function Definition Ref: I0020B Load Settlement Price Data

Event Description: Settlement Price Data Available

```
Function Name:      IDL_SETT_PRICE()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.7.1 Inputs

The input file format is described in the External Interface: Settlement Price Data File section of the Interface Specification.

6.5.7.2 Outputs

This program writes to the operators log an exception report, if there are exceptions and database tables.

Operators log:

1. 'Load Settlement Price Data: Load of <filename> started',
2. 'Load Settlement Price Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Settlement Price Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Unable to process file for Settlement Date %s as this file type is not valid after the NETA Start Date.
2. Record %d, Settlement Price Data is same or earlier version than previously loaded

Exception Report Warnings:

See list of general exceptions.

Database tables accessed for insert:

1. idb_ssa_sett_runs,
2. idb_sett_pd_prices.

6.5.7.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each Settlement Price Data file is handled as one Oracle transaction.

6.5.8 Procedure IDL_SUNSET

Function Definition Ref: I0021 Load Sunset Data

Event Description: Sunset Data Loaded

```
Function Name:      IDL_SUNSET()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.8.1 Inputs

The input file format is described in the External Interface: Sunset Data File section of the Interface Specification.

6.5.8.2 Outputs

This program writes to the operators log an exception report, if there are exceptions, and database tables.

Operators log:

1. 'Load Sunset Data: Load of <filename> started',

2. 'Load Sunset Data: Load of <filename> completed with status <exit status>'.

Exceptions Report Header:

Indicates Date and Time, User Id, the function 'Load Sunset Data File' and the information from the ZHD header contained in the input file.

Exceptions Report Errors:

1. Record %d, error reading GSP Group id %s
2. Record %d, error reading Settlement date %4d%02d%02d
3. Record %d, error reading time of Sunset %02d%02d
4. Record %d, failure to INSERT INTO idb_daily_pfl_parameters Oracle error code %d %.*s *
5. Record %d, failure to update idb_daily_pfl_parameters Oracle error code %d %.*s *

Exceptions Report Warnings:

See list of general exceptions.

Database table for insert:

idb_daily_pfl_parameters.

6.5.8.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each Sunset Data file is handled as one Oracle transaction.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

6.5.9 Procedure IDL_SPM

Function Definition Ref: I0022B Load Supplier Purchase Matrix Data

Event Description: SPM Data Available

```
Function Name:      IDL_SPM()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.9.1 Inputs

The input file format is described in the External Interface: Supplier Purchase Matrix Data File section of the Interface Specification.

6.5.9.2 Outputs

This program writes to the operators log an exception report, if there are exceptions and database tables.

Operators log:

1. 'Load Supplier Purchase Matrix Data: Load of <filename> started',

2. 'Load Supplier Purchase Matrix Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Supplier Purchase Matrix Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, Distributor/LLFC %s/%d unknown.
2. Record %d, Distributor id %s is not assigned to GSP Group %s.
3. Record %d, Line Loss Factor Class %d unknown.
4. Record %d, Profile Class %d, SSC %s, TPR %s is an invalid Profile Class/Measurement Requirement combination.
5. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, standing data update not allowed.
6. No data provided for Supplier %s in data file from Data Aggregator %s for GSP group %s, standing data update not allowed.
7. Supplier Purchase Matrix data file received from unexpected Data Aggregator %s for GSP Group %s, standing data update not allowed
8. Record %d, Aggregation data from Data Aggregator %s with Aggregation Run Number %d has either been loaded for a different Settlement Date/Code to %s/%s, or for this Settlement Date/Code and GSP Group %s combination.
9. Record %d, No Data Aggregator/GSP Group association for GSP Group %s.
10. Record %d, No settlement calendar entry can be found for Settlement Date %s, Settlement Code %s
11. Record %d, Cannot load Scottish GSP Group %s for Settlement Date %s before BETTA.

Exception Report Warnings:

1. Record %d, Missing Settlement Period Line Loss Factor for LLFC %d.
2. Record %d, An SSR run has been completed for Settlement Date %s, Settlement Code %s.
3. Record %d, No Default BM Unit defined for combination of GSP Group %s and Supplier %s for Settlement Day %s.
4. Record %d, More than 1 Default BM Unit defined for combination of GSP Group %s and Supplier %s for Settlement Day %s.
5. No data provided for Supplier %s in data file from Data Aggregator %s for GSP group %s, standing data update not allowed.

Data Load Standing Data Update Report Warnings:

1. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, existing association extended to settlement day.

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2. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, association added on settlement day.
3. Supplier Purchase Matrix data file received from unexpected Data Aggregator %s for GSP Group %s, existing association extended to settlement day.
4. Supplier Purchase Matrix data file received from unexpected Data Aggregator %s for GSP Group %s, association will be added on settlement day.
5. No data provided for Supplier %s in data file from Data Aggregator %s for GSP group %s, association removed for settlement day.
6. Record %d, No Supplier/GSP Group association for Supplier %s and GSP Group %s, existing association extended to settlement day
7. Record %d, No Supplier/GSP Group association for Supplier %s and GSP Group %s, association added on settlement day

Database table accessed for insert:

idb_sup_data_agtns;

idb_mkt_ppt_role_in_gsp_groups;

idb_da_in_gsp_groups;

idb_sup_gsp_da_auto_st_data.

Flat file accessed for insert:

idf_sup_purchase_matrices.

6.5.9.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each Supplier Purchase Matrix Data file is handled as one Oracle transaction. Where the load fails, a file of type idf_sup_purchase_matrices will have been created. The process which repeats the load removes this file before it reloads the file.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

Multiple standing data update warnings are reported in a single Data Load Standing Data Update report.

All standing data updates are additionally recorded into the database (into table idb_sup_gsp_da_auto_st_data) for subsequent reporting, examination and clearing.

6.5.10 Procedure IDL_PFL

Function Definition Ref: I0041 Load Profile Data

Event Description: Profile Data Loaded

```
Function Name:      IDL_PFL()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.10.1 Inputs

The input file format is described in the External Interface: Profile Data File section of the Interface Specification.

6.5.10.2 Outputs

This program writes to the operators log an exception report, if there are exceptions and database tables.

Operators log:

1. 'Load Profile Data: Load of <filename> started',
2. 'Load Profile Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Profile Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, attempted to load Switched Load Profile Class Indicator with %s - rather than Y or N
2. Record %d, Profile %d for non-Switched Load Profile Class %d - existing Profile has 48 Settlement Periods
3. Record %d, Profile %d for non-Switched Load Profile Class %d has %d Settlement Periods, not 48
4. Record %d, Profile %d for Switched Load Profile Class %d - existing Profile already has 48 Settlement Periods
5. Record %d, Profile %ld for Switched Load Profile Class already exists
6. Record %d, Profile %ld, Profile Class %ld has %d Settlement Periods which should be in the range 1 - 48
7. Record %d, Profile Class %ld unknown
8. Record %d, update of Switched Load Profile Class Indicator not possible - Profile already exist for Profile Class %ld
9. Switched Profile Class %ld is missing a profile with 48 periods.
10. Switched Profile Class %ld only has a profile with 48 periods

Exception Report Warnings:

See list of general exceptions.

Database tables accessed for insert:

1. idb_pfl_classes,
2. idb_pfls.

6.5.10.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each Profile Data file is handled as one Oracle transaction.

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6.5.11 Procedure IDL_TSW_CONTACT

Function Definition Ref: I0028B Load Tele-Switch Contact Switching Times

Event Description: Tele-Switch Switching Times Available

```
Function Name:      IDL_TSW_CONTACT()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.11.1 Inputs

The input file format is described in the External Interface Tele-Switch Contact Switching Times File section of the Interface Specification.

6.5.11.2 Outputs

This program writes to the operators log an exception report, if there are exceptions and database tables.

Operators log:

1. 'Load Tele-Switch Contact Switching Times Data: Load of <filename> started',
2. 'Load Tele-Switch Contact Switching Times Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Tele-Switch Contact Switching Times Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, Final Initial settlement has already taken place for date %s
2. Record %d, Tele-switch User Id value %.6f is outside the range %.6f to %.6f
3. Record %d, Tele-switch Group Id value %.6f is outside the range %.6f to %.6f
4. Record %d, There are no contact intervals defined for Tele-switch User %d, Tele-switch Group %d
5. Record %d, Duplicate start time of %s for teleswitch date %s, user %d, group %d, contact code %s

Exception Report Warnings:

1. Record %d, Tele-switch Contact Intervals defined for Group %d with no SSC linked
2. No Tele-switch User Groups defined for Settlement Date %s

Database table accessed for insert:

idb_tsw_contact_interval.

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6.5.11.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each Tele-switch Contact Switching Times Data file is handled as one Oracle transaction with any pre-existing data for the same date first deleted.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately as these prevent any meaningful continuation

Other errors are reported but processing continues though none of the data from the file is committed.

If any record generates a warning the data is still loaded into the database.

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6.5.12 Procedure IDL_SETTLEMENT_CALENDAR

Function Definition Ref: I0044 Load Settlement Calendar Data

Event Description: Settlement Calendar Data Loaded

```
Function Name:      IDL_SETT_CALENDAR()
Arguments:          file id (IN)
```
Return: success/failure

6.5.12.1 Inputs

The input file format is described in the External Interface: Settlement Calendar Data File section of the Interface Specification.

6.5.12.2 Outputs

This program writes to the operators log, an exception report if there are exceptions, and database tables. In addition to any exceptions produced through validation, warnings will be written detailing all updates to existing Settlements. Furthermore, totals for the number of Settlement records created and updated will be written to the exception report as warnings.

Operators log:

1. 'Load Settlement Calendar: Load of <file id> started',
2. 'Load Settlement Calendar: Load of <file id> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Settlement Calendar Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

See list of general exceptions.

Exception Report Warnings:

1. Record %d, Planned SSR Run Date %s is later than Payment Date %s for Settlement Date %s Settlement Code %s. Record rejected.
2. Record %d, Cannot update Settlement for Settlement Date %s Settlement Code %s as a corresponding SSR Run has already been performed. Record rejected.
3. Record %d, Cannot update Settlement for Settlement Date %s Settlement Code %s as corresponding SSA Data has already been loaded. Record rejected.
4. Record %d, Invalid Settlement Code %s for Settlement Date %s. Record rejected.
5. Record %d, Payment Date %s outside range specified for file (%s - %s) for Settlement Date %s Settlement Code %s. Record rejected.
6. Record %d, Payment Date updated from %s to %s for Settlement Date %s Settlement Code %s.
7. Record %d, Planned SSR Run Date. updated from %s to %s for Settlement Date %s Settlement Code %s.
8. Total Number of Settlement records inserted: %d
9. Total Number of Settlement records updated: %d

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Database Tables accessed for insert:

1. idb_settlements

6.5.12.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each Data Aggregation and Settlements Timetable File is handled as a single Oracle transaction.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

6.5.13 Procedure IDL_MDD_COMP_SET

Function Definition Ref: I0043 Load Market Domain Data Complete Set

Event Description: Market Domain Data Complete Set Available

```
Function Name:      IDL_MDD_COMP_SET()
Arguments:          file id (IN)
Return:             success/failure
```

6.5.13.1 Inputs

The input file format is described in the External Interface: Market Domain Data Complete Set File section of the Interface Specification.

6.5.13.2 Outputs

This program writes to the operators log, an exception report if there are exceptions and database tables.

Operators log:

1. 'Load of Market Domain Data Complete Set: Load of <file id> started',
2. 'Load Market Domain Data Complete Set: Load of <file id> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Market Domain Data Complete Set File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, Day Type Id %s for Settlement Day %s is invalid, or is outside valid range.
2. Record %d, Season Id %d for Settlement Day %s is invalid, or is outside valid range.
3. Record %d, LLF Class %d and Distributor Id %s Effective From Date %s combination in file overlaps existing combination in ISRA system database for Effective From date %s.
4. Record %d, Market Participant Role Code %s is not a valid Distributor Role Code

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5. Record %d, Line Loss Factor Class Id %d is invalid.
6. Record %d, MS Specific LLF Class Indicator %s is invalid.
7. Record %d, Effective To date of LLF Class is before Effective From date
8. Final Initial Settlement run has already taken place for LLF Class %d.
9. Final Initial Settlement run has already taken place on %s for Season type %d and day type %s.
10. Record %d, Duplicate Record type %s details found in file.

Exception Report Warnings:

1. Record %d, Season Id %d being updated with value %d for Settlement Day %s
2. Record %d, Day Type %s being updated with value %s for Settlement Day %s
3. Record %d, No GSP Group is assigned to Distributor %s for LLF Class %d
4. Record %d, Effective To date %s being updated to value %s for LLF Class Id %d , Distributor %s, Effective From Date %s.
5. Record %d, existing Settlement Period LLF falls outside effective period of LLF Class on update to Effective To date
6. Record %d, LLF Class has a MS Specific Indicator %s and will not be loaded.
7. Settlement Day records: %d rows inserted, %d rows updated.
8. Line Loss Factor Class records: %d rows inserted, %d rows updated.
9. Settlement Day Details for %s exist on the ISRA system database but are missing from file
10. Line Loss Factor Class details for LLF Class id %d, Distributor id %s, Effective From Date %s exist on the ISRA system database but are missing from file
11. Record %d, Distributor Id %s does not exist on the system database

Database Tables accessed for insert:

1. idb_settlement_days,
2. idb_llf_classes.

6.5.13.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Exception Report Errors relating to Initial Settlement already having taken place, as described in the section above, are in addition to those errors and warnings produced as a result of IC003 Authorise & Produce Standing Data Audit. They will be invoked when a user other than the Standing Data Manager (SDM) attempts to amend relevant data that affects a Final Initial Settlement Run.

Each Market Domain Data Complete Set data file is loaded into the ORACLE database within a single ORACLE commit transaction. This is to ensure that the file

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either loads all relevant data in the file or fails completely leaving the database unchanged. This guarantees that the database data is consistent.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

6.5.14 Procedure IDL_BM_UNIT

Function Definition Ref: I0048 Load BM Unit Registration Data

Event Description: BM Unit Registration Data Loaded

```
Function Name:       IDL_BM_UNIT()
Arguments:           file id (IN)
Return:              success/failure
```

6.5.14.1 Inputs

The input file format is described in the External Interface: BM Unit Registration Data File section of the Interface Specification.

6.5.14.2 Outputs

This program writes to the operators log, an exception report if there are exceptions and database tables.

Operators log:

1. 'Load BM Unit Registration Data: Load of <file id> started',
2. 'Load BM Unit Registration Data: Load of <file id> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load BM Unit Registration Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, Supplier Id %s is invalid.
2. Record %d, Unable to perform update as a Non-Half Hourly BM Unit Allocation child record exists.
3. BM Unit %s, GSP Group %s, Supplier %s, Effective From Settlement Date %s overlaps another instance of this BM Unit.
4. BM Unit %s, GSP Group %s, Supplier %s, Effective From Settlement Date %s has a child Non-Half Hourly BM Unit Allocation with a greater effective date range.
5. Record %d, Effective To date is before the Effective From date.
6. More than 1 Default BM Unit defined for combination of Supplier %s and GSP Group %s for Settlement Day %s.
7. Record %d, Cannot load Scottish GSP Group %s for Settlement Date %s before BETTA.

Exception Report Warnings:

1. GSP Group %s has BM Units on database, but GSP Group is not in file.
2. GSP Group %s, Supplier %s has BM Units on database but combination is not in file.
3. BM Unit %s, GSP Group %s, Supplier %s, Effective From Settlement Date %s on database but not in file.

Database Tables accessed for insert:

1. idb_bm_unit_in_gsp_group

6.5.14.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each BM Unit Registration Data file is loaded into the ORACLE database within a single ORACLE commit transaction. This is to ensure that the file either loads all relevant data in the file or fails completely leaving the database unchanged. This guarantees that the database data is consistent.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

6.5.15 Procedure IDL_LSDM

Function Definition Ref: I0053 Load LLF/SSC Mapping Data

Event Description: LLF/SSC Mapping Data Available

```
Function Name:        IDL_LSDM()
Arguments:            file_id (IN)
Return:               success/failure
```

6.5.15.1 Inputs

The input file format is described in the External Interface: LLF/SSC Mapping Data File section of the Interface Specification.

6.5.15.2 Outputs

This program writes to the operators log, an exception report, if there are exceptions, and database tables.

Operators log:

1. 'Load LLF/SSC Mapping Data: Load of <filename> started',

2. 'Load LLF/SSC Mapping Data: Load of <filename> status <exit status>',

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load LLF/SSC Mapping Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Line Loss SSC Mapping Data load failed

Data Load Standing Data Update Report Warnings:

1. Line Loss SSC Mapping Data load failed

Database table accessed for insert:

idb_ssc_tpr_data;

idb_llfdata;

idb_cki_data.

Flat file accessed for insert:

idf_llf_ssc_mapn.

6.5.15.3 Functionality

The functionality of this program is described in the Function Definition.

Each LLF/SSC Data Mapping file is handled as one Oracle transaction. Where the load completes, a file of type idf_llf_ssc_mapn will have been created.

The input file is received from Distributor with Distributor Id and Line Loss Factor Class Id combination and dummy Standard Settlement Configuration details. The file is used in validation of the Distributor id and Line Loss Factor class id data items in the BM Unit Aggregated Half Hour Data File and Aggregated Half Hour Data File. It is also used to determine Time Pattern States which are further used in the reporting module of the DUoS report.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

Multiple standing data update warnings are reported in a single Data Load Standing Data Update report

6.5.16 Procedure IDL_AGG_HH_DD

Function Definition Ref: I0055 – Supplier's Demand Disconnection Volume Data

Event Description: Aggregated Half Hour Data Available

Function Name:	IDL_AGG_HHD_DD()
Arguments:	file_id (IN)
Return:	success/failure

6.5.16.1 Inputs

The input file format is described in the External Interface: Aggregated Half Hour Demand Disconnection Data File section of the Interface Specification.

6.5.16.2 Outputs

This program writes to the operators log, an exception report, if there are exceptions, and database tables.

Operators log:

1. 'Load Aggregated Half Hour Demand Disconnection Data: Load of <filename> started',
2. 'Load Aggregated Half Hour Demand Disconnection Data: Load of <filename> completed with status <exit status>',

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3. 'Load BM Unit Aggregated Half Hour Demand Disconnection Data: Load of <filename> started',
4. 'Load BM Unit Aggregated Half Hour Demand Disconnection Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Aggregated Half Hour Demand Disconnection Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, Incorrect number of Settlement Periods %d
2. Record %d, Invalid Consumption Component Class, ccc id %d
3. No data provided for Supplier %s in data file from Data Aggregator %s for GSP group %s, standing data update not allowed
4. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, standing data update not allowed
5. Aggregated Half Hourly Demand Disconnection data file received from unexpected Data Aggregator %s for GSP Group %s, standing data update not allowed

Exception Report Warnings:

1. Record %d, An SSR run has been completed for Settlement Date %s, Settlement Code %s
2. Record %d, No Default BM Unit defined for combination of GSP Group %s and Supplier %s for Settlement Day %s
3. Record %d, BM Unit %s is not valid for GSP Group %s and Supplier %s on Settlement Day %s - GSP Group %s and Supplier %s expected
4. Record %d, BM Unit %s has multiple GSP Group and Supplier combinations defined for Settlement Day %s - only 1 allowed
5. Record %d, More than 1 Default BM Unit defined for combination of GSP Group %s and Supplier %s for Settlement Day %s
6. Record %d, BM Unit %s is not valid for any combinations of GSP Group and Supplier on Settlement Day %

Data Load Standing Data Update Report Warnings:

1. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, existing association extended to settlement day
2. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, association added on settlement day
3. No data provided for Supplier %s in data file from Data Aggregator %s for GSP group %s, association removed for settlement day
4. Aggregated Half Hourly data file received from unexpected Data Aggregator %s for GSP Group %s, existing association extended to settlement day

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5. Aggregated Half Hourly Demand Disconnection data file received from unexpected Data Aggregator %s for GSP Group %s, association will be added on settlement day
6. Record %d, No Supplier/GSP Group association for Supplier %s and GSP Group %s, existing association extended to settlement day
7. Record %d, No Supplier/GSP Group association for Supplier %s and GSP Group %s, association added on settlement day

Database table accessed for insert:

idb_demandsup_data_agtns;

idb_mkt_ppt_role_in_gsp_groups;

idb_da_in_gsp_groups;

idb_sup_gsp_da_auto_st_data;

Flat file accessed for insert:

idf_agtd_sup_da_pd_consums;

idf_agtd_sup_da_pd_discon_volume

6.5.16.3 Functionality

The functionality of this program is described in the Function Definition.

Each Aggregated Half Hour Demand Disconnection Data file is handled as one Oracle transaction. Where the load fails, a file of type idf_agtd_sup_da_pd_discon_volume will have been created. The process which repeats the load removes this file before it reloads the file.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

Multiple standing data update warnings are reported in a single Data Load Standing Data Update report.

6.5.17 Procedure IDL_DPM

Function Definition Ref: I0054 Load Disconnection Purchase Matrix Data

Event Description: DPM Data Available

```
Function Name:      IDL_DPM()
Arguments:          file_id (IN)
Return:             success/failure
```

6.5.17.1 Inputs

The input file format is described in the External Interface: Disconnection Purchase Matrix Data File section of the Interface Specification.

6.5.17.2 Outputs

This program writes to the operators log an exception report, if there are exceptions and database tables.

Operators log:

3. 'Load Disconnection Purchase Matrix Data: Load of <filename> started',

4. 'Load Disconnection Purchase Matrix Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Disconnection Purchase Matrix Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, Distributor/LLFC %s/%d unknown.

2. Record %d, Distributor id %s is not assigned to GSP Group %s.

3. Record %d, Line Loss Factor Class %d unknown.

4. Record %d, Profile Class %d, SSC %s, TPR %s is an invalid Profile Class/Measurement Requirement combination.

5. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, standing data update not allowed.

6. No data provided for Supplier %s in data file from Data Aggregator %s for GSP group %s, standing data update not allowed.

7. Disconnection Purchase Matrix data file received from unexpected Data Aggregator %s for GSP Group %s, standing data update not allowed

8. Record %d, Aggregation data from Data Aggregator %s with Aggregation Run Number %d has either been loaded for a different Settlement Date/Code to %s/%s, or for this Settlement Date/Code and GSP Group %s combination.

9. Record %d, No Data Aggregator/GSP Group association for GSP Group %s.

10. Record %d, No settlement calendar entry can be found for Settlement Date %s, Settlement Code %s

Exception Report Warnings:

1. Record %d, Missing Settlement Period Line Loss Factor for LLFC %d.

2. Record %d, An SSR run has been completed for Settlement Date %s, Settlement Code %s.

3. Record %d, No Default BM Unit defined for combination of GSP Group %s and Supplier %s for Settlement Day %s.

4. Record %d, More than 1 Default BM Unit defined for combination of GSP Group %s and Supplier %s for Settlement Day %s.

5. No data provided for Supplier %s in data file from Data Aggregator %s for GSP group %s, standing data update not allowed.

Data Load Standing Data Update Report Warnings:

1. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, existing association extended to settlement day.

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2. Record %d, No Data Aggregator/GSP Group association for Supplier %s, Data Aggregator %s and GSP Group %s, association added on settlement day.
3. Disconnection Purchase Matrix data file received from unexpected Data Aggregator %s for GSP Group %s, existing association extended to settlement day.
4. Disconnection Purchase Matrix data file received from unexpected Data Aggregator %s for GSP Group %s, association will be added on settlement day.
5. No data provided for Supplier %s in data file from Data Aggregator %s for GSP group %s, association removed for settlement day.
6. Record %d, No Supplier/GSP Group association for Supplier %s and GSP Group %s, existing association extended to settlement day
7. Record %d, No Supplier/GSP Group association for Supplier %s and GSP Group %s, association added on settlement day

Database table accessed for insert:

idb_demandsup_data_agtns;

idb_mkt_ppt_role_in_gsp_groups;

idb_da_in_gsp_groups;

idb_sup_gsp_da_auto_st_data.

Flat file accessed for insert:

idf_discon_purchase_matrices.

6.5.17.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each Disconnection Purchase Matrix Data file is handled as one Oracle transaction. Where the load fails, a file of type idf_discon_purchase_matrices will have been created. The process which repeats the load removes this file before it reloads the file.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

Multiple standing data update warnings are reported in a single Data Load Standing Data Update report.

6.5.18 Procedure IDL_DCI

Function Definition Ref: I0057 Load Demand Control Instructions

Event Description: DCI Data Available

```
Function Name:        IDL_DCI()
Arguments:            file id (IN)
Return:               success/failure
```

6.5.18.1 Inputs

The input file format is described in the External Interface: Demand Control Instruction Data File section of the Interface Specification.

6.5.18.2 Outputs

This program writes to the operators log an exception report, if there are exceptions and database tables.

Operators log:

1. 'Load Demand Control Instruction Data: Load of <filename> started',
2. 'Load Demand Control Instruction Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Demand Control Instruction Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, Distributor/LLFC %s/%d unknown.
2. Record %d, Distributor id %s is not assigned to GSP Group %s.
3. Record %d, Line Loss Factor Class %d unknown.
4. Record %d, Profile Class %d, SSC %s, TPR %s is an invalid Profile Class/Measurement Requirement combination.

Database table accessed for insert:

idb_demand_control_instruction

6.5.18.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each Demand Control Insruction Data file is handled as one Oracle transaction. The process which repeats the load removes this file before it reloads the file.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

Multiple standing data update warnings are reported in a single Data Load Standing Data Update report.

6.5.19 Procedure IDL_DCE

Function Definition Ref: I0056 Load Demand Control Event

Event Description: DCE Data Available

```
Function Name:      IDL_DCE()
Arguments:          file_id (IN)
Return:             success/failure
```

6.5.19.1 Inputs

The input file format is described in the External Interface: Demand Control Event Data File section of the Interface Specification.

6.5.19.2 Outputs

This program writes to the operators log an exception report, if there are exceptions and database tables.

Operators log:

1. 'Load Demand Control Event Data: Load of <filename> started',
2. 'Load Demand Control Event Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Demand Control Event Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

~~Record %d, Distributor/LLFC %s/%d unknown.~~

~~Record %d, Distributor id %s is not assigned to GSP Group %s.~~

~~Record %d, Line Loss Factor Class %d unknown.~~

1. ~~Record %d, Profile Class %d, SSC %s, TPR %s is an invalid Profile Class/Measurement Requirement combination.~~Record %d,Duplicate MSD %s found for Demand Control Event ID %s.

Exception Report Warnings:

1. Record %d,Demand Control Event ID %s already exist on the database; hence deleted from database.

Database table accessed for insert:

idb_demand_control_event

6.5.19.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each Demand Control Event Data file is handled as one Oracle transaction. The process which repeats the load removes this file before it reloads the file.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

Multiple standing data update warnings are reported in a single Data Load Standing Data Update report.

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6.5.20 Procedure IDL_DIS_MS_HH_VOL

Function Definition Ref: I0058 Load Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes

Event Description: DCE Data Available

```
Function Name:        IDL_DIS_MS_HH_VOL()
Arguments:            file_id (IN)
Return:               success/failure
```

6.5.20.1 Inputs

The input file format is described in the External Interface: Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes Data File section of the Interface Specification.

6.5.20.2 Outputs

This program writes to the operators log an exception report, if there are exceptions and database tables.

Operators log:

1. 'Load Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes Data: Load of <filename> started',
2. 'Load Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes Data: Load of <filename> completed with status <exit status>'.

Exception Report Header:

Indicates Date and Time, User Id, the function 'Load Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes Data File' and the information from the ZHD header contained in the input file.

Exception Report Errors:

1. Record %d, Duplicate DCE id %s found.
2. Record %d, End date and Time is earlier than the Start Date and Time.
3. Record %d, Duplicate MSID %s found.
4. Record %d, Unexpected no. of settlement period found.

6.5.20.3 Functionality

The functionality of this program is described in the Function Definition and Event Description.

Each Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes Data file is handled as one Oracle transaction. The process which repeats the load removes this file before it reloads the file.

Multiple error and warning exceptions are reported in a single exception report. Any exception indicating a problem with the structure of the file or format of the data in the file causes the load to stop immediately. If there are errors none of the data from the file is committed.

Multiple standing data update warnings are reported in a single Data Load Standing Data Update report.

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6.6 Form Details

6.6.1 Form IDL_LOADUTIL

The following describes the generic file loading front-end form.

This form has been structured to implement the following logical functions into one physical module:

I0013A - Load GSP Group Take

I0014 - Load Line Loss Factor data

I0017A - Load Aggregated Half-Hour data

I0018 - Load Tele-switch Pool Market Domain Data

I0019 - Load Regression Equations

I0019B - Load Scottish Regression Equations1510

I0020A - Load Settlement Price Data

I0021 - Load Sunset Data

I0022A - Load Supplier Purchase Matrix Data

I0028A- Initiate Load Tele-Switch Contact Switching Times

I0041 - Load Profile Data

I0043 - Load Market Domain Data Complete Set

I0044 - Load Settlement Calendar Data

I0048 - Load BM Unit Registration Data

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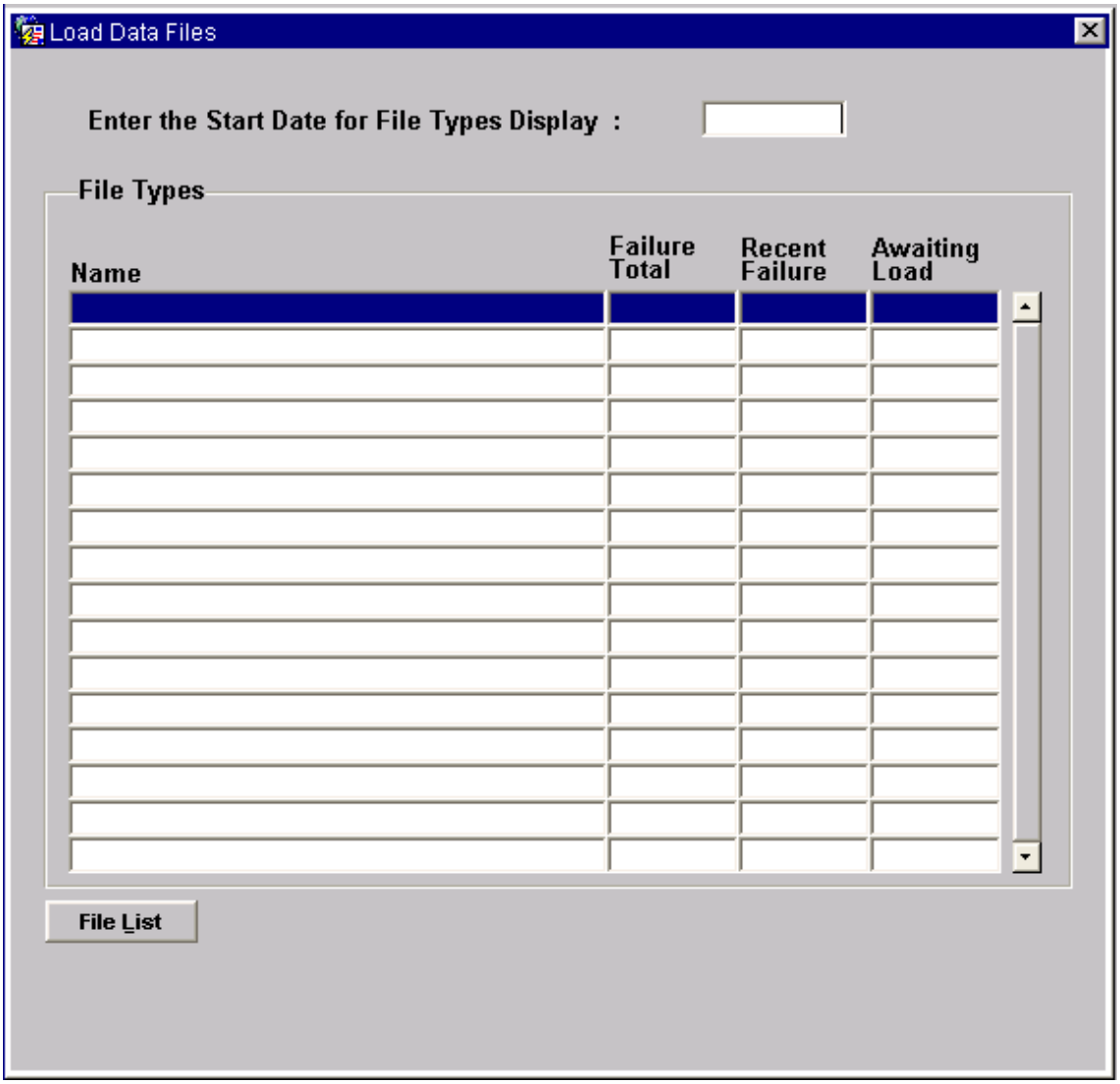
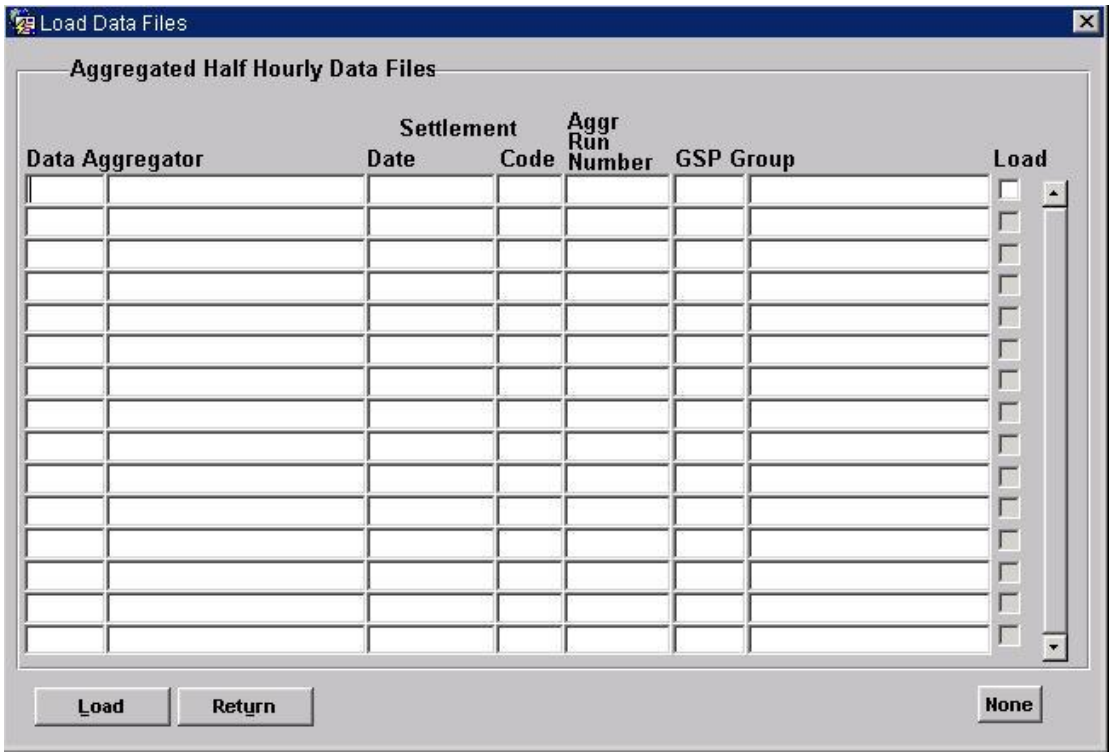
6.6.1.1.1 Select file type

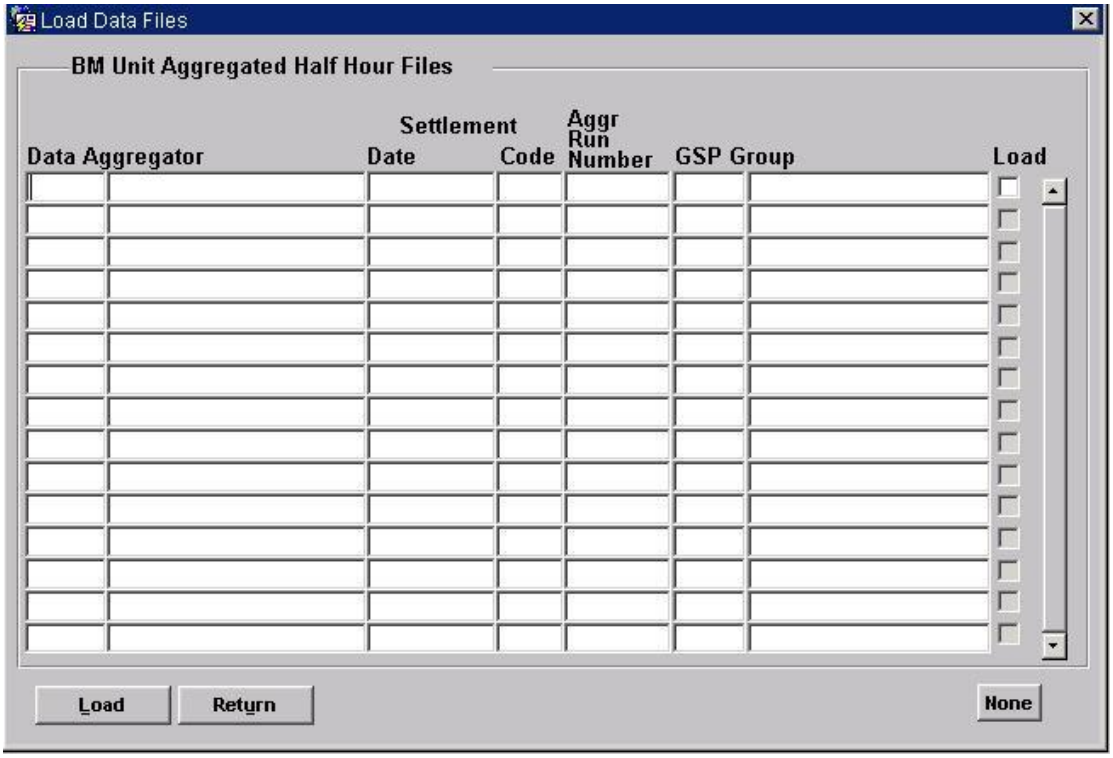


6.6.1.1.2 Load Supplier Purchase Matrix Data

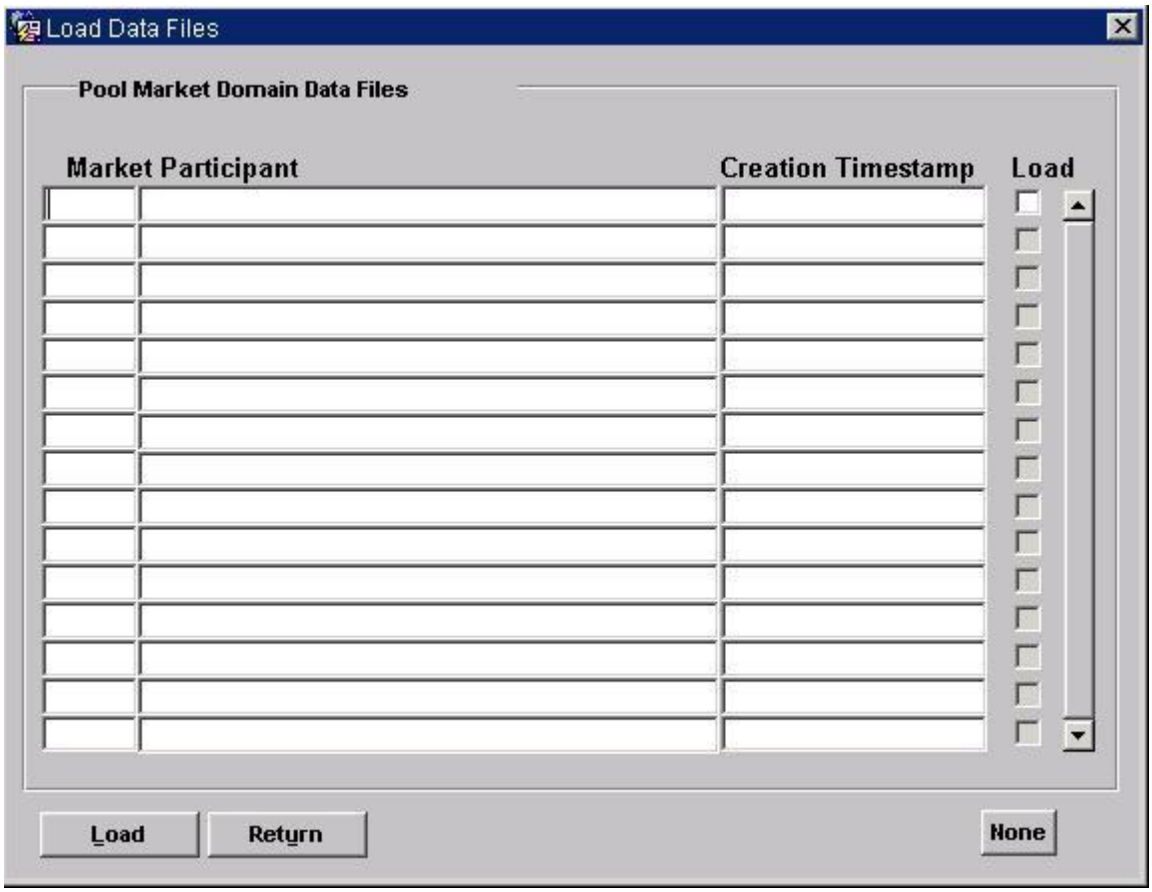
6.6.1.1.3 Load Aggregated Half Hour Data



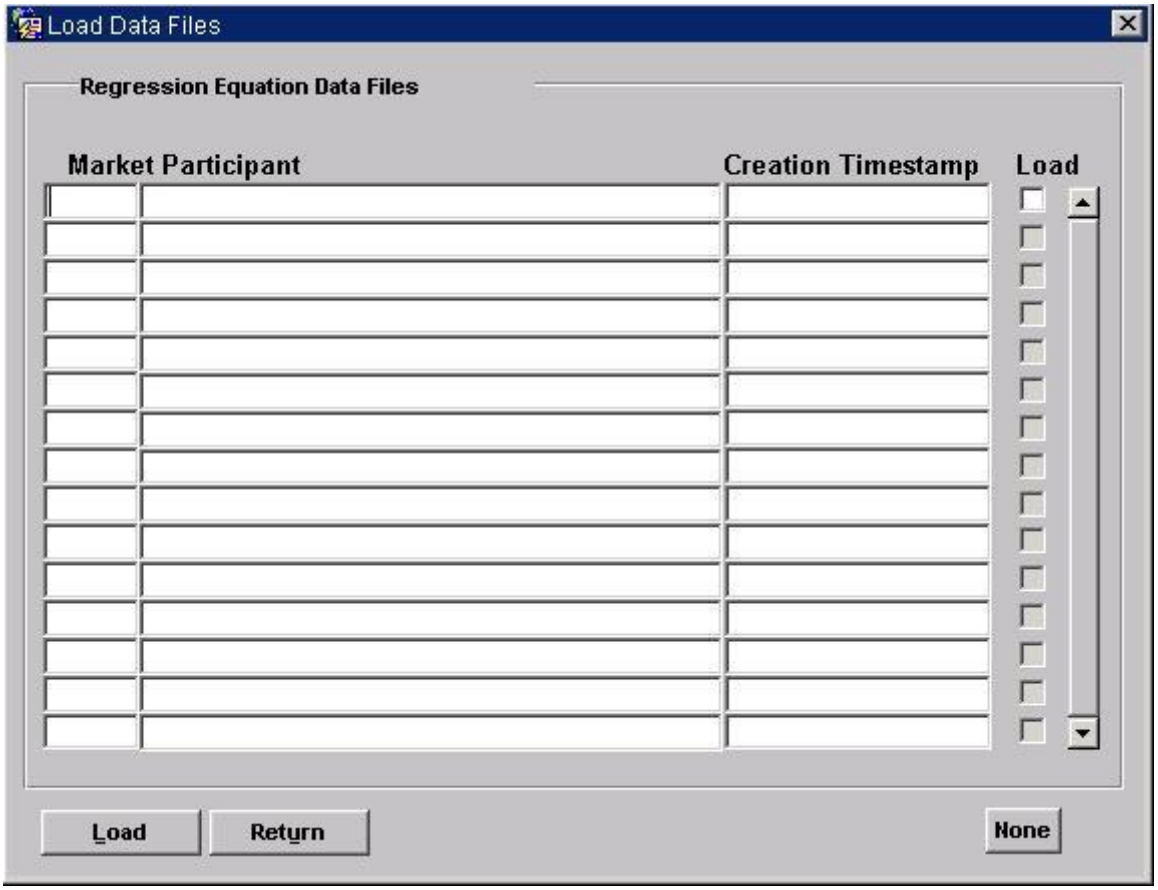
6.6.1.1.4 Load BM Unit Aggregated Half-Hour Data



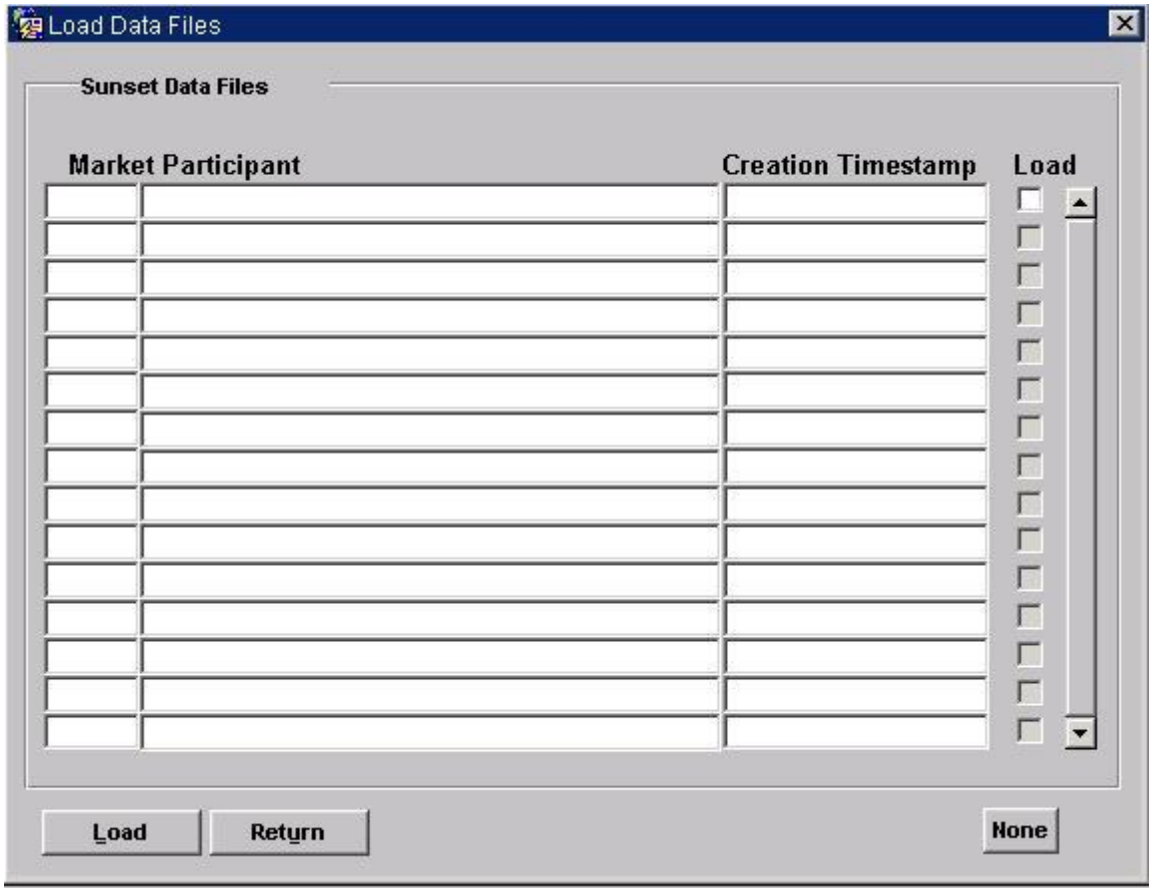
6.6.1.1.5 Load Tele-switch Pool Market Domain Data



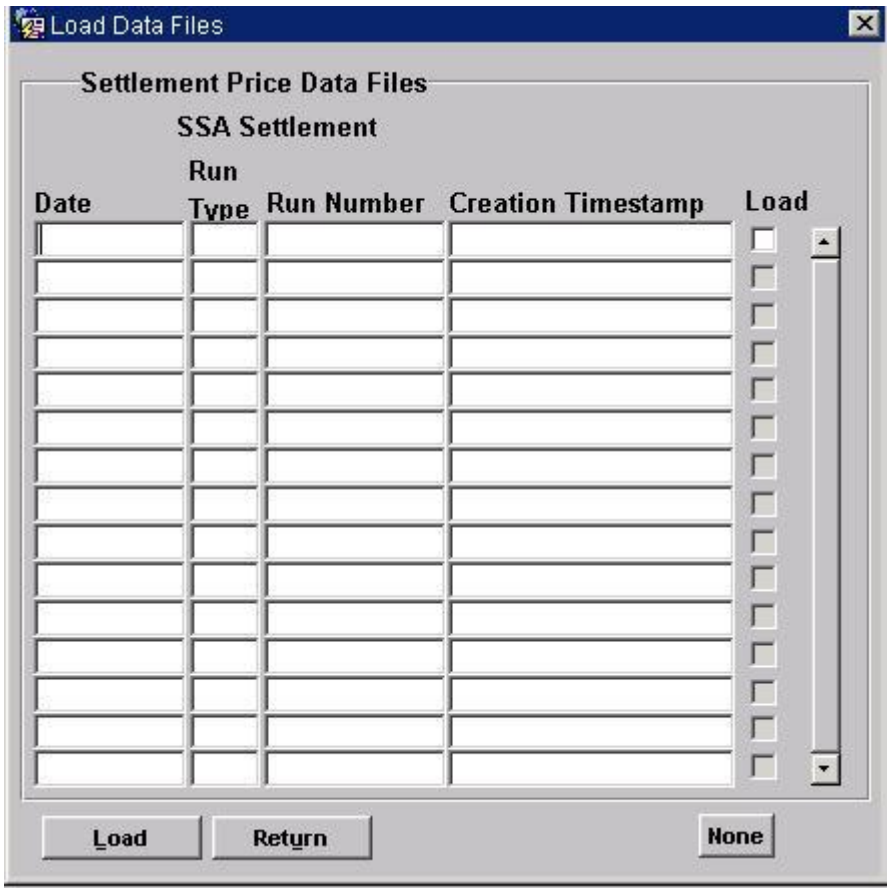
6.6.1.1.6 Load Regression Equations



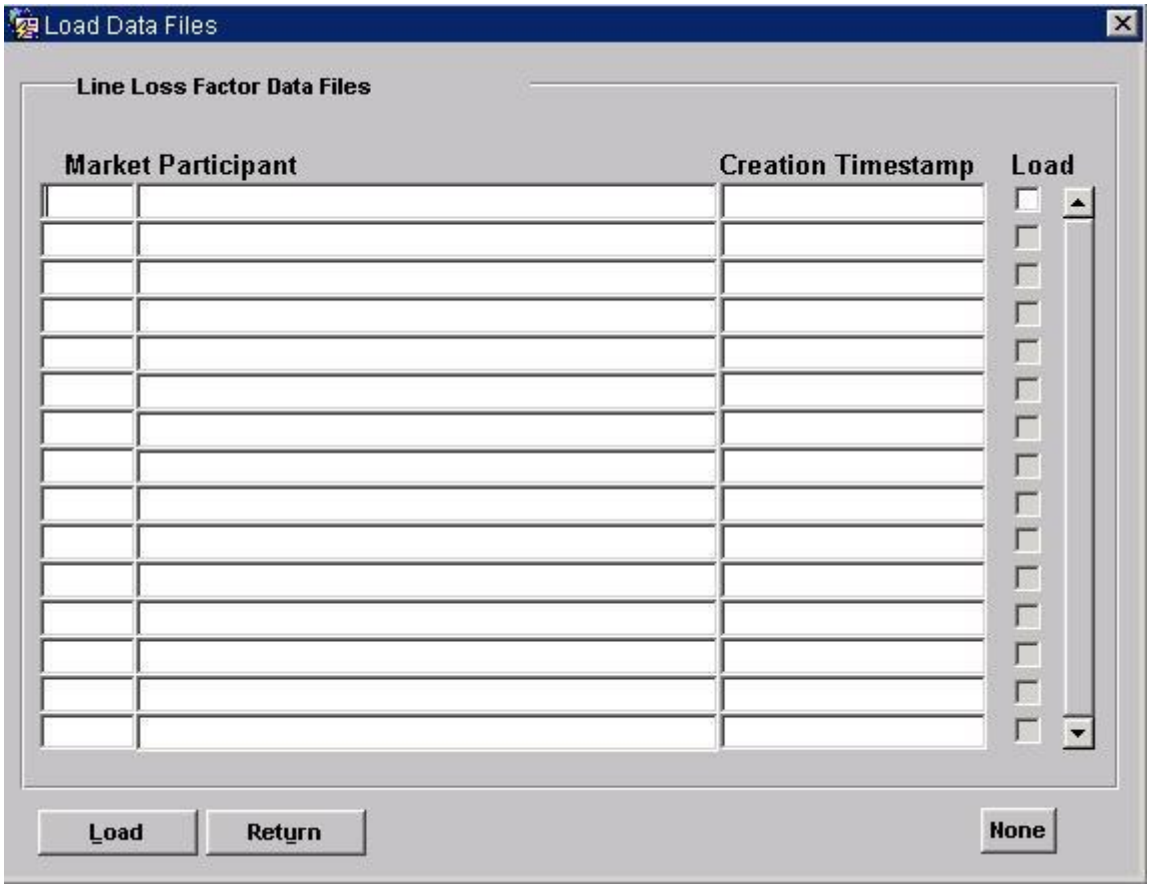
6.6.1.1.7 Load Sunset Data



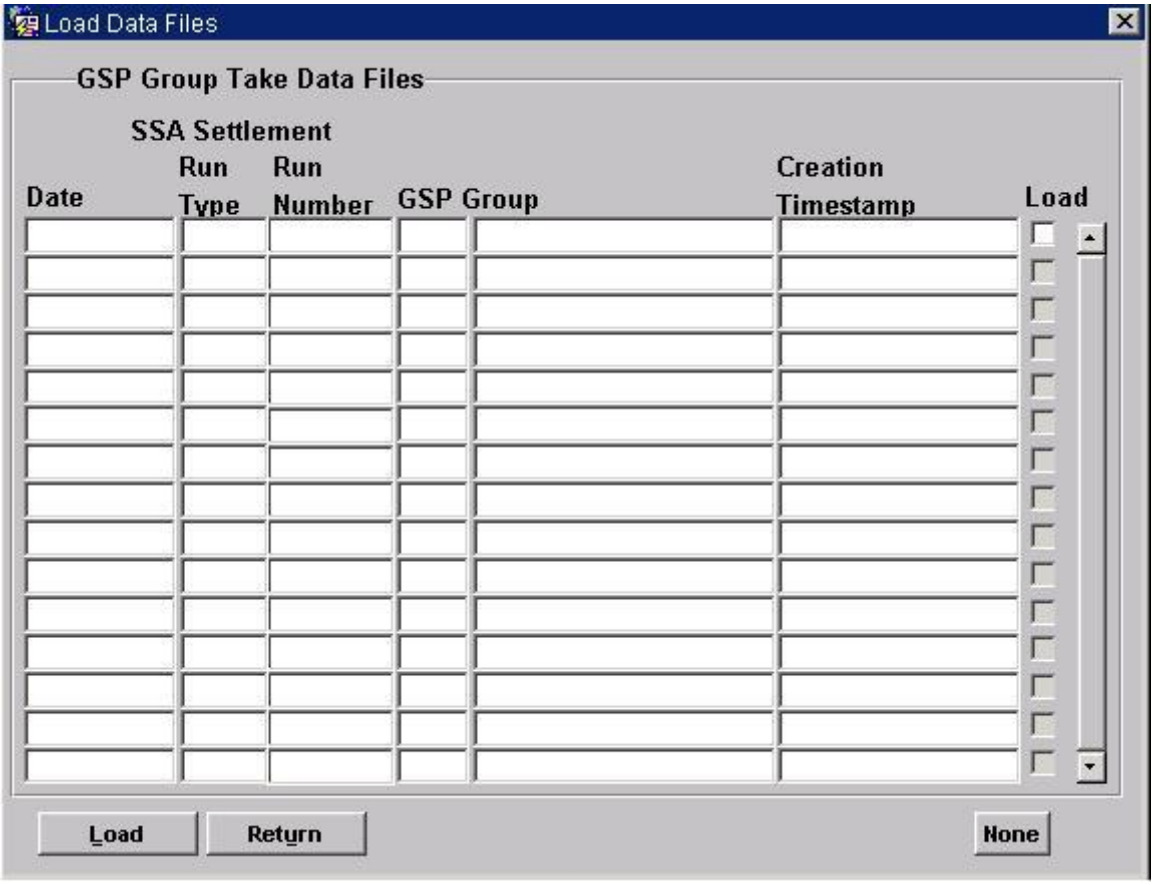
6.6.1.1.8 Load Settlement Price Data Files



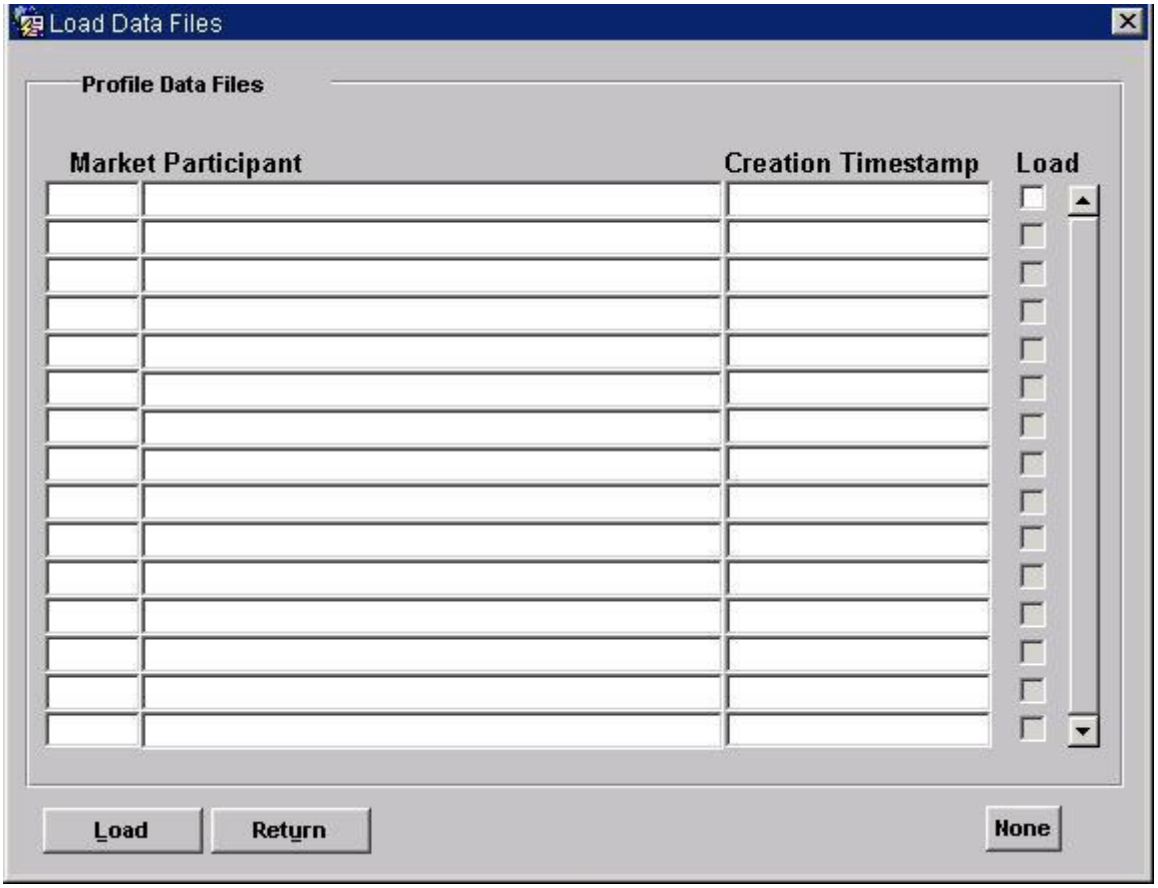
6.6.1.1.9 Load Line Loss Factor files



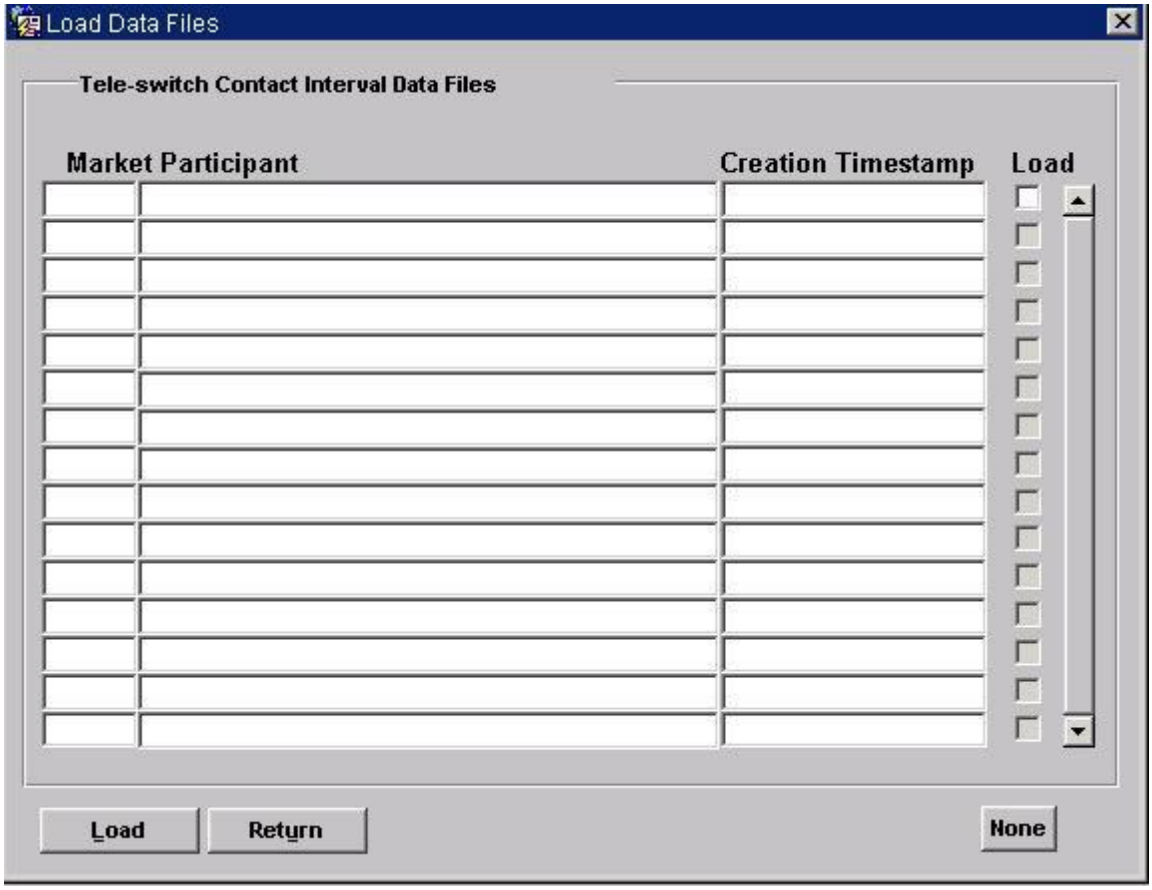
6.6.1.1.10 Load GSP Group Take



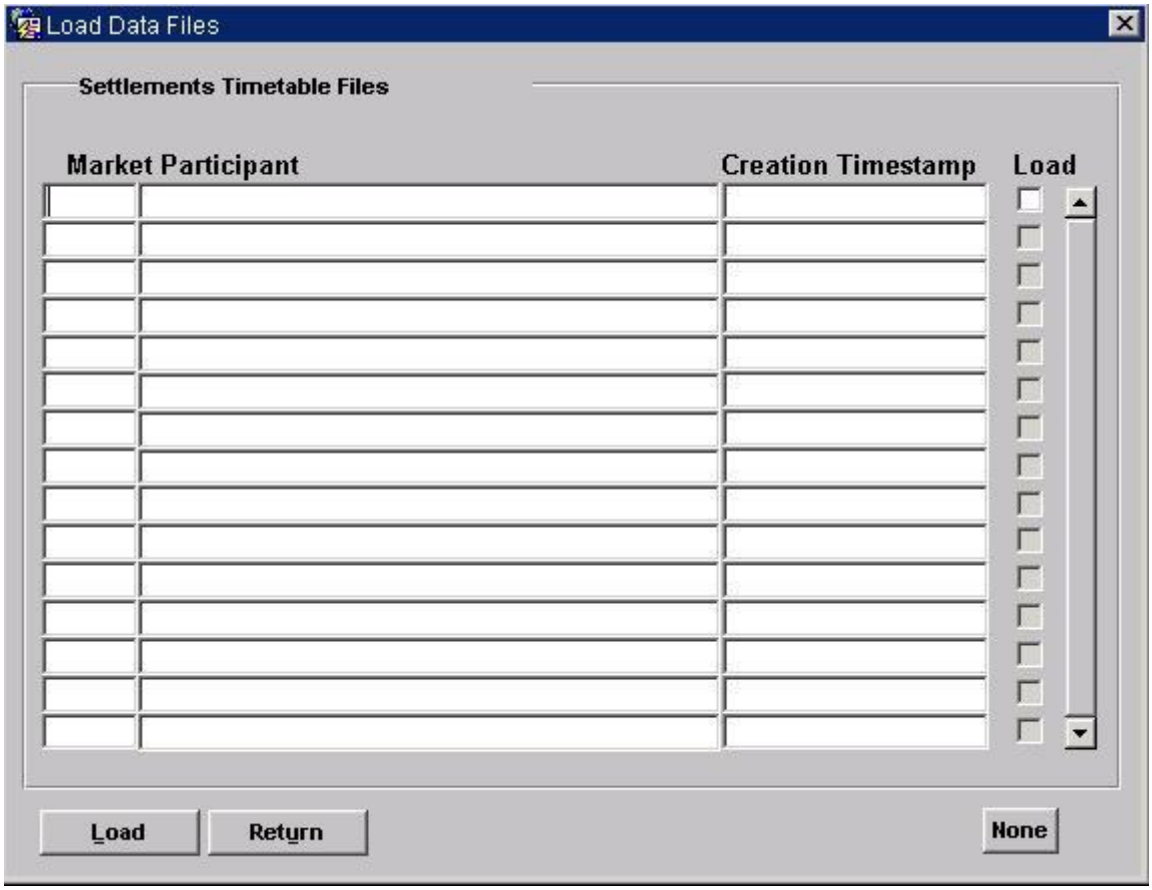
6.6.1.1.11 Load Profile Data



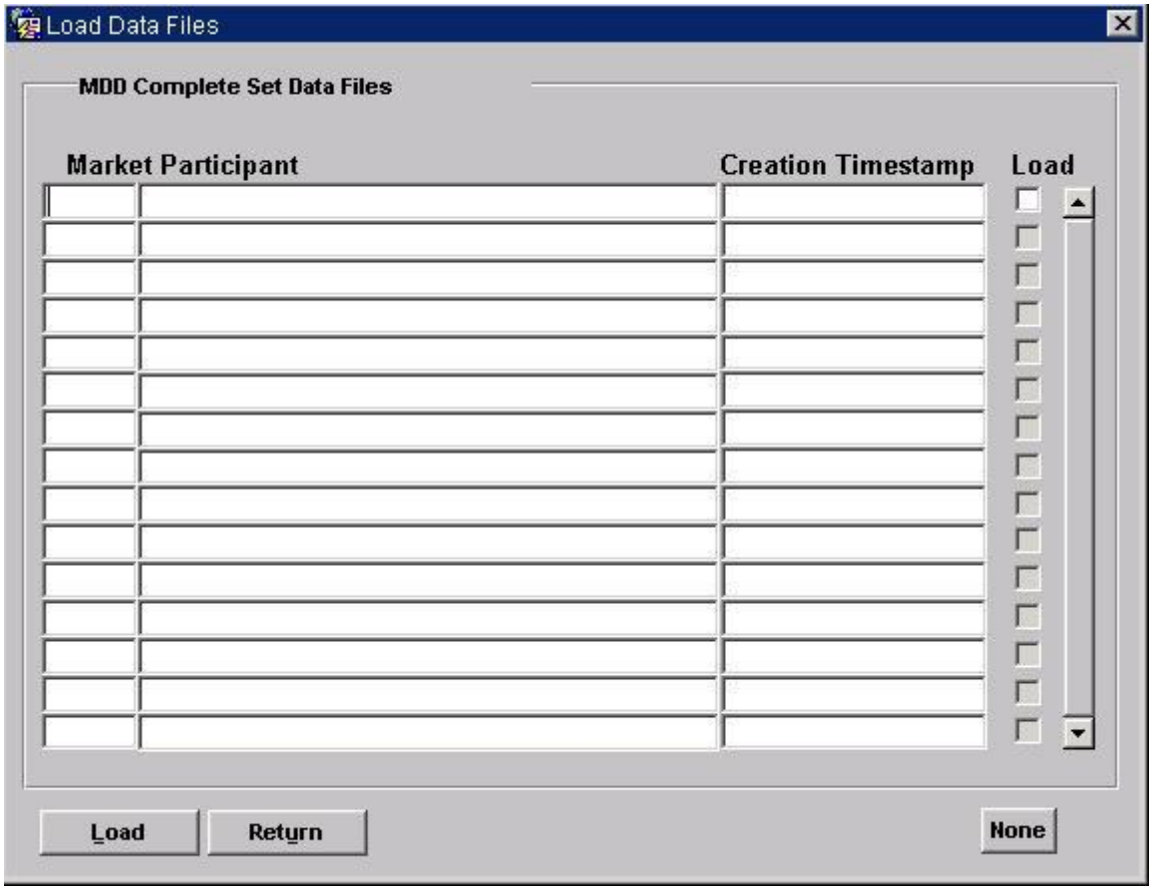
6.6.1.1.12 Load Tele-Switch Contact Switching Times



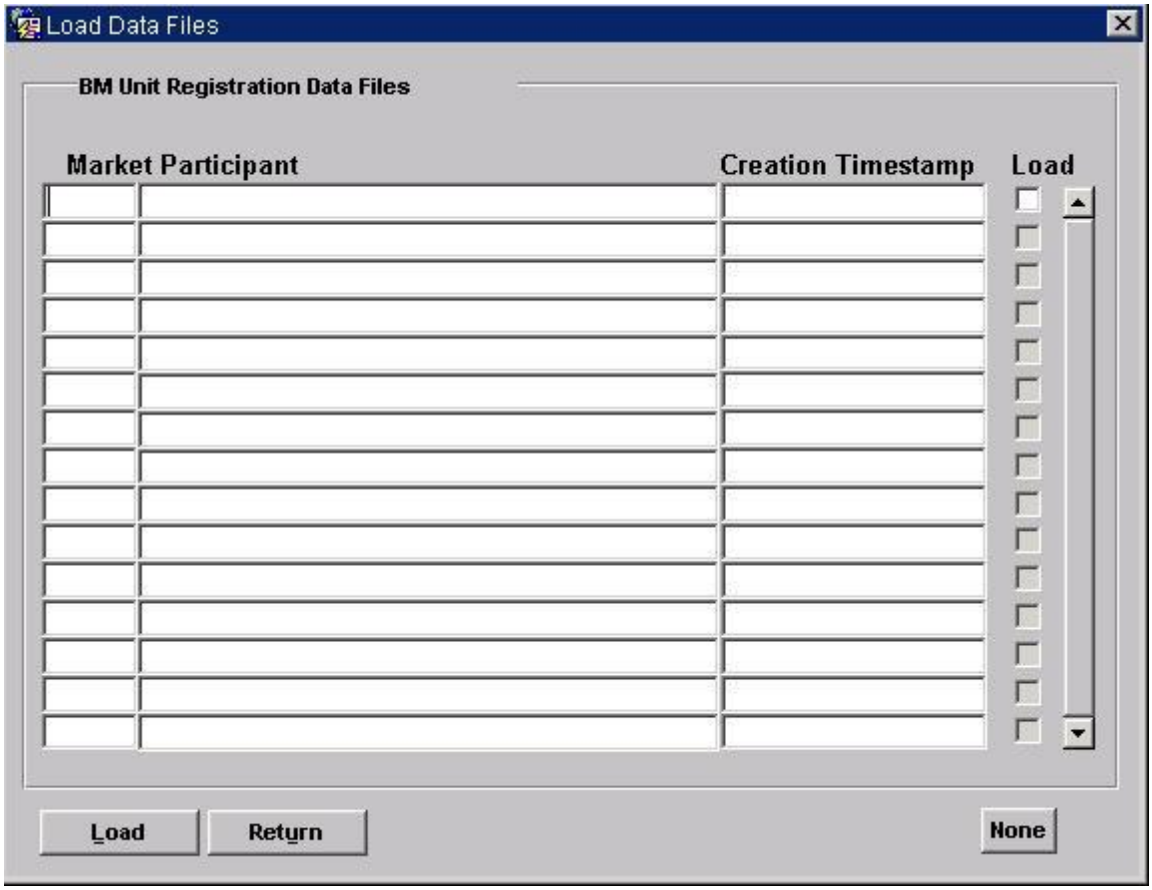
6.6.1.1.13 Load Settlements Timetable Files



6.6.1.1.14 Load Market Domain Data Complete Set



6.6.1.1.15 Load BM Unit Registration Data



6.6.1.2 Screen behaviour

Functions Implemented	I0013A - Load GSP Group Take I0014 - Load Line Loss Factor data I0017A - Load Aggregated Half-hour data I0018 - Load Tele-switch Pool Market Domain Data I0019 - Load Regression Equations I0019B - Load Scottish Regression Equations[1510] I0020A - Load Settlement Price Data I0021 - Load Sunset Data I0022A - Load Supplier Purchase Matrix Data I0028A - Initiate Load Tele-Switch Contact Switching Times I0043 - Load Market Domain Data Complete Set I0044 - Load Settlement Calendar Data I0048 - Load BM Unit Registration Data
Block	File Types
On Entry	Automatically Queried based on the input value entered in date field "Start date for file types display".
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	This is a Query-only block which acts as the "header" block for the file loading screens, displaying the types of files which may be

	loaded. The "detail" blocks then display the list of files for the Type selected.
Block	Supplier Purchase Matrix Data Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Aggregated Half Hourly Data Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Pool Market Domain Data Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Regression Equation Data Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Scottish Regression Equation Data Files[15~~10~~]
On Entry	Automatically Query.

List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Sunset Data Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Settlement Price Data Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Line Loss Factor Data Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	GSP Group Take Data Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load

	Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Profile Data Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Tele-switch Contact Switching Times Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Settlements Timetable Files
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.
Additional Behaviour	The "Load" Checkbox for each file will be set to unchecked on initial entry to this block.
Block	Market Domain Data Complete Set
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.

Block	BM Unit Registration Data
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Load Initiate the Data Load batch routine. All/None Toggle the "Load" Checkbox for each file between selecting All data files or None.

6.6.1.3 Description

This form will be available from the *Load Data Files* menu option which incorporates the loading of a set of data files, ie. Each one of the logical processes listed above.

The first window will display all of the File Types currently in existence along with three columns; 'Failure Total', 'Recent Failure' and 'Awaiting Load' which contain the following figures;

- 'Failure Total' : The total number of files that have failed to load starting from the specified input date.
- 'Recent Failure' : The total number of files that have failed to load during the last ten days (including the current day).
- 'Awaiting Load' : The total number of files that have not yet been loaded.

From here the User presses the **File List** button to move to the window displaying the list of those files defined by the File Type record the User is currently on. This block will only be queryable, no insert/update or delete will be allowed.

Each subsequent window will show as a block header, the name of the set of data files (File Type) that the User is attempting to load. The main block of the form will consist of six blocks in five windows:

ILF - base-table on idb_load_file_types view. Shows a distinct list of each file type within the cdb_file_reference table and associated counts of files which are waiting to load or have failed.

CTRL - Holds the name of the "File Type" that the user has selected to load from the menu and the user specified start date. This will be a parameter passed from the menu containing the "File Type" name. This block will be non-base table and non-enterable.

When the **Load** button is pressed, perform the following validation and display an appropriate error if required:

- Ensure that there is at least one record present in the list.
- Ensure that the user has selected at least one of the files to load.

Each of the data blocks in the form will be based on a view. They will be linked (via File Type) to the File Type context field, ie. Only the appropriate files for each type should be displayed. Each block will be queryable only, and only the "Load" checkbox will be updateable.

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ILG - base-table block based on idb_load_gg_takes view.

ILT - base-table block based on idb_load_timestamps view.

ILS - base-table block based on idb_load_sett_prices view.

ILD - base-table block based on idb_load_da_gg_setts view.

6.6.1.4 Form structure

Object	Description
Form: *LOADUTIL*	Title : Load Data Files.

Block: ***ILF***	Based on a runtime sub query Query only allowed.
	
	`SELECT /*+ FULL(CRV) */`
	`crv.value_from cfr,`
	`SUM(DECODE(cfr.status,3,1,0)) received_count,`
	`SUM(DECODE(cfr.status,102,1,0)) failure_count,`
	`SUM(DECODE(cfr.status,102,`
	`DECODE(`
	`GREATEST(cfr.process_send_time,`
	`(TRUNC(SYSDATE) -5)),`
	`cfr.process_send_time,1,0),`
	`0)) recent_failure_count`
	`FROM cdb_file_reference cfr,`
	`cdb_ref_values crv`
	`WHERE crv.value_from IN`
	`('D0040002','D0041001',`
	`'P0012001', 'P0013001',`
	`'D0278002', 'P0014001',`
	`'P0011001', 'P0015001',`
	`'D0265001', 'D0286001',`
	`'D0269002', 'D0298002',`
	`'D0299001', 'P0214001',`
	`'D0277001')`
	`AND crv.domain_code = 'fity'`
	`AND crv.value_from = cfr.file_type(+)`
	`AND cdb.creation_time > :nbt_query_date`
	`GROUP`
	`BY crv.value_from)`
	
	Join columns:
	
	nbt_file_type = menu_parameter.file_type.

file_type	Label : None Non Display.
received_count	Label : Awaiting Load. Display. Query. This is a count of all records for the nbt_file_type where status = ‘3’ and creation_time >= TRUNC(sysdate).
fail_count	Label : Failure Total. Display. Query. This is a count of all records for the nbt_file_type where status = ‘102’ and creation_time >= TRUNC(sysdate).
recent_failure_count	Label : Recent Failure Display. Query. This is a count of all records for the nbt_file_type where status = ‘102’ and the creation_time >= TRUNC(sysdate) – 10.

Object	Description
Block: *CTRL*	non-base table. Display only. Join columns: nbt_file_type = menu_parameter.file_type.
Nbt_query_date	Label : Enter the Start Date for File Types Display Display. User enterable. Update allowed. Format : DD-MON-YYYY. This field allows the user to specify the start date for querying the data files.
Nbt_file_type	Label : None Non Display. This field is documented for completeness only and will not appear on any screens.
Nbt_file_type_desc	Label : None Display only. This is a textual decode of nbt_file_type to a meaningful description. This is the block header field.
Block: *ILG*	Base table on idb_load_gg_takes view. (GSP Group Take Data Files) Query. Update. Join columns: file_type = ctrl.nbt_file_type. Order by creation_time (descending), settlement_date.
Settlement_date	Label : Date Display. Query. Format : DD-MON-YYYY.
run_type_code	Label : Run Type. Display. Queryable.
Run_number	Label : Run Number Display. Query.
Gsp_group_id	Label : GSP Group. Display. Query.
Gsp_group_name	Label : None. Display. Query.
Creation_time	Label : Creation Timestamp Display. Query.
Nbt_load_cb	Label : Load. Display. Check box. Query. Update.

Object	Description
Block: *ILS*	Base table on idb_load_sett_prices view. (Settlement Price Data Files) file_type = ctrl.nbt_file_type. Query. Update. Order by creation_time (descending), settlement_date
Settlement_date	Label : Date Display. Query. Format : DD-MON-YYYY.
run_type_code	Label : Run Type. Display. Query.
Run_number	Label : Run Number Display. Query.
Creation_time	Label : Creation Timestamp Display. Query.
Nbt_load_cb	Label : Load. Display. Query. Update.
Block: *ILT*	Base table on idb_load_timestamps view. (Line Loss Factor Data Files) (Tele-switch Pool Market Domain Data Files) (Regression Equation Data Files) (Scottish Regression Equation Data Files[1712]) (Sunset Data Files) (Profile Data Files) (Tele-switch Switching Times Data Files) (Data Aggregation and Settlements Timetable Files) (Market Domain Data Complete Set) Query. Update. file_type = ctrl.nbt_file_type. Order by creation_time (descending), participant_id.
participant_id	Label : Market Participant Display. Query
mkt_ppt_name	Label : Name Display. Query.
Creation_time	Label : Creation Timestamp Display. Query.
Nbt_load_cb	Label : Load. Display. Query. Update.

Object	Description
Block: *ILD*	Base table on idb_load_da_gg_setts view. Query. Update Join columns: file_type = ctrl.nbt_file_type. Order by creation_time (descending), data_aggregator_id.
participant_id	Label : Data Aggregator Display. Query.
Mkt_ppt_name	Label : Display. Query.
Settlement_date	Label : Date Display. Query. Format : DD-MON-YYYY.
Settlement_code	Label : Code Display. Query.
Run_number	Label : Aggr Run Number Display. Query.
Gsp_group_id	Label : GSP Group. Display. Query.
Gsp_group_name	Label : None. Display. Query.
Nbt_load_cb	Label : Load. Display. Query. Update.
Creation_time	Label : Creation Timestamp Display. Query.

6.6.1.5 Action on Query

Default forms behaviour.

6.6.1.6 Action on Update

Update allowed only on the "Load" Checkbox, but no records will be committed to the database.

6.6.1.7 Action on Insert

Insert disallowed.

6.6.1.8 Action on Delete

Deletion disallowed.

6.6.1.9 Action on button **All/None**.

This button will toggle between selection of ALL records within the list of files block or NONE of them. Set nbt_load_cb to 'Y' if button = All and set nbt_load_cb = 'N' if button = None.

6.6.1.10 Action on button **Load**.

Validate that at least 1 record has been retrieved by the query.

Validate that at least 1 record has nbt_load = 'Y'.

Use CSC.Submit to initiate the batch process to actually load the data files selected. Call this function once per file selected, passing the file_id. If the function is called successfully, an information message is displayed to the user to state that the files have been successfully submitted for loading.

Where multiple files have been selected for loading, the order in which the files are loaded is determined by their creation timestamp. The following files are loaded in ascending timestamp order ie earliest first:

1. Line Loss Factors
2. Tele-switch Pool Market Domain data
3. Profile data
4. Regression Equations
5. Scottish Regression Equations[12]
6. Sunset Data
7. Tele-switch Contact Intervals
8. Settlements Timetable File
9. Market Domain Data Complete Set
10. BM Unit Registration Data

All other files are loaded in screening descending order ie from top to bottom (latest first).

6.6.1.11 Action on button **File List**.

Ensure that the User is currently on a record within this block before attempting to move to a specific File Load window, then navigate to the appropriate block for the File Type chosen. Populate the block header with the Description of the File Type.

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7 IDP Subsystem Profile Generation Specification

7.1 Introduction

This subsystem is responsible for calculating daily profiles. It consists of a screen allowing user initiation of the profile production run, a central server based batch program to perform the profile production run calculations and an integrated set of report generation procedures to produce the output profiling reports.

In order to fully record the input data of the run and its results, the reports are produced as an integral part of the run and the process will only complete with success status if all the reports also complete successfully.

Wherever a data volume or size of a memory structure is specified, this is based on the likely volume of records identified in the database design and the formats of the actual fields comprising the records.

7.2 Subsystem Context

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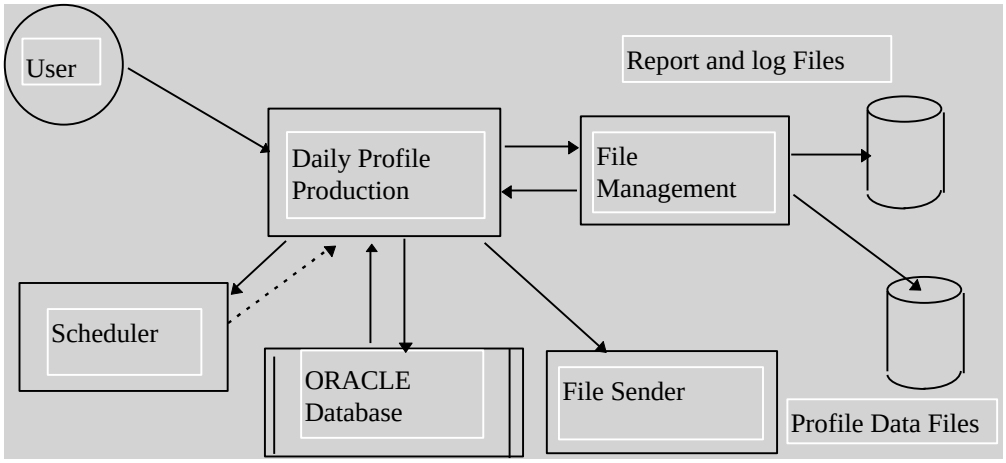
7.2.1 Daily Profile Production Context Diagram



7.2.2 Interfaces

This subsystem uses the following interfaces:

- User Entry of run parameters

  The daily profile production process is initiated by a user request entered directly through screen IDP_PROFUTIL.

  The user enters one or more GSP groups for which the profile production run is required. A profile production run number is allocated (from a database sequence). The screen writes a series of records to table IDB_PFL_PRODUCTION_RUNS each with the profile production run number, Settlement Date and GSP group to be included in the run.

  The Tele-switch date is defaulted to the Settlement Date but may be amended by the user if required. If no data exists for the settlement date the user must enter an alternative date before the profiling run can be initiated. The date selected by the user must be a date for which tele-switch Contact Switching Times are available. The detailed checking for existence of data and defaulting data from a different settlement date are described in the event Profiling run in ICONMOD.

- Request to scheduler to schedule Profiling Run

  The screen IDP_PROFUTIL then queues a request to the scheduler to initiate the Profiling Production Run.

- Request from Scheduler to start Profile Production Run

  The Profile Production procedure is started by the scheduler, passing as parameter the Profile Production Run number and the tele-switch data date (via the standard C argc, argv parameter passing mechanism).

  The Profile Production run process uses this to access the Profile Production Run table to identify the Settlement Date, tele-switch contact switching times data date and GSP Groups for which the run is required. All other input data required is read directly from the online Oracle database.

- Requests from Profile Production Run to File Management

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The Profile Production Run subsystem makes function calls (call and return) to the file management system to create and manage output files and write header records.

- Request from Profile Production Run to File Sender

  The File Sender subsystem is instructed to send the generated report files to their final destination.

7.2.3 Special Considerations

This subsystem must process large volumes of data. It will be rare for this to be run more than once per settlement day for a GSP group (ie up to about 3 times per working day) but the large volumes of data required to be read and written require careful consideration of the I/O and processing efficiency.

To minimise the amount of database accesses, and to ensure that all input and output data is fully recorded, the main profile production run triggers each of the main reports and confirms successful completion before completing with a success status.

If a catastrophic failure occurs, that is the entire ISRA system stops running, then when the scheduler next runs, it will detect that the Profile Production Run activity did not complete and will mark it as failed. The run must then be re-initiated by the ISRA operator. Files which were being written during the Profile Production Run are left incomplete. Therefore the Profile Production Run checks at the beginning of the run, whether a previous run has failed and cleans up any incomplete files.

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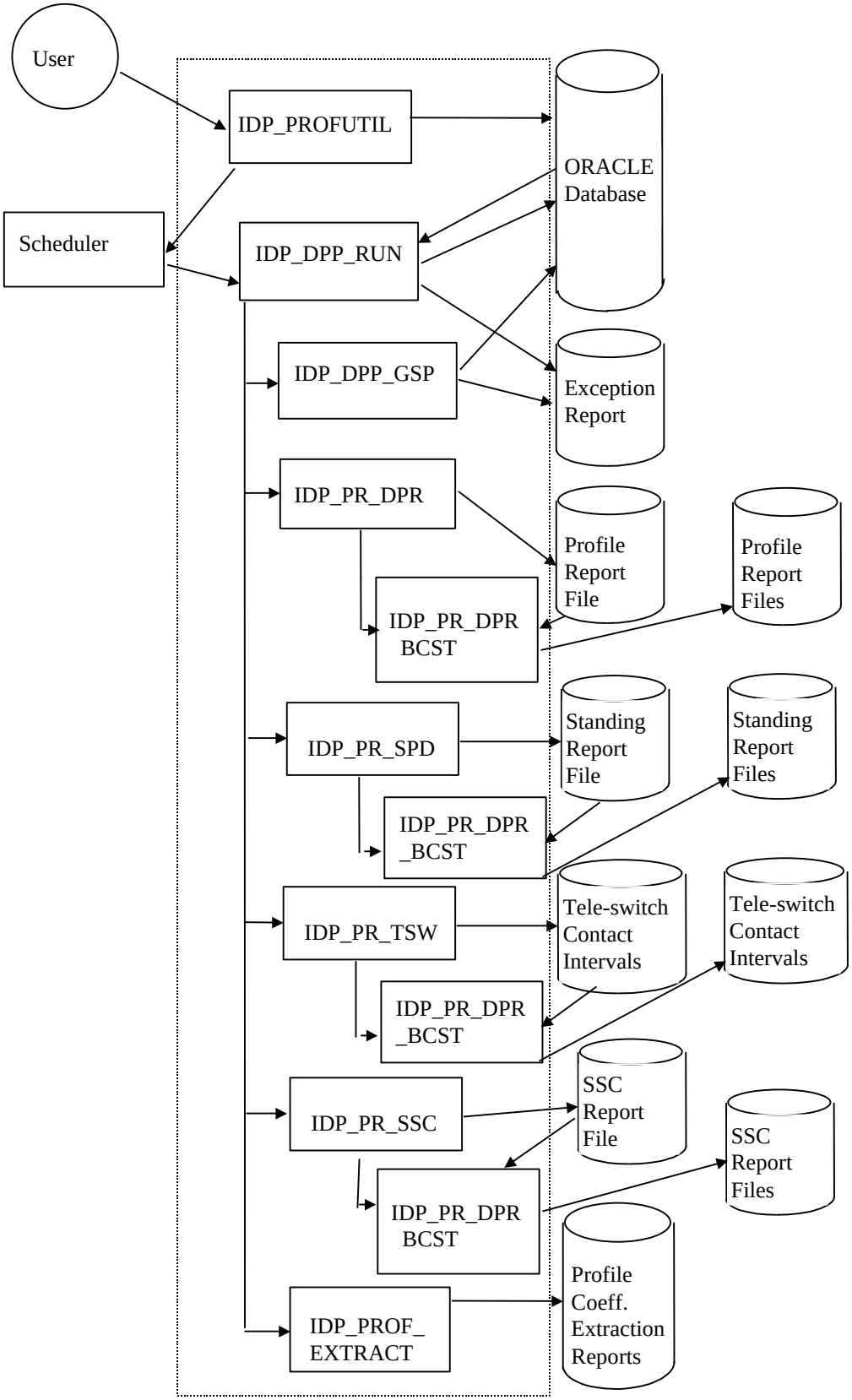
7.3 Subsystem Processing

The profile production system is structured as shown below:



The modules comprising the daily profile production subsystem are:

IDP_PROFUTIL:	This is an Oracle Forms screen process which allows the ISRA user to initiate a profile run. The GSP Groups to be included in the run and the date for the tele-switch contact switching times data are selected by the user on this screen.
IDP_DPP_RUN:	This is a C batch program to carry out the main profile calculation processes. It is initiated by the scheduler passing parameters as set up by IDP_PROFUTIL. It carries out the initial processing common to all GSP Groups then forks separate processes, one for the IDP_PR_SSC report, one for the IDP_PR_SPD report, and one to process each GSP group, in turn. It then waits for all forked processes to complete, then schedules the IDP_PR_DPR and IDP_PROF_EXTRACT processes to produce the daily profile data and profile coefficient extraction reports.
IDP_DPP_GSP:	This process carries out the calculations of the daily profiles for a single GSP group.
IDP_PR_SPD	This module produces the Standing Profile Data Report detailing the profile regression equations in use. At the end of processing, it schedules IDP_PR_DPR_BCST to distribute the report to all relevant Data Collectors and Suppliers.
IDP_PR_SSC:	This module produces the Standard Settlement Configuration Report detailing the standing data applicable at the time of performing the profile production run. At the end of processing, it schedules IDP_PR_DPR_BCST to distribute the report to all relevant Data Collectors and Suppliers.
IDP_PR_DPR:	This module produces the daily profile data report. At the end of processing, it schedules IDP_PR_DPR_BCST to distribute the report to all relevant Data Collectors and Suppliers.
IDP_PR_TSW:	This module produces the daily tele-switch contact interval report. At the end of processing, it schedules IDP_PR_DPR_BCST to distribute the report to all relevant Data Collectors and Suppliers.
IDP_PR_DPR_BCST:	This module distributes the Standing Profile Data, Standard Settlement Configuration and Daily Profile Data reports to all relevant Data Collectors and Suppliers.
IDP_PROF_EXTRACT:	This module produces the daily profile coefficient extraction reports.
IDP_CONVERT_TPR:	This module is a stand alone utility that converts Time Pattern State files in release 1 format to release 2 format.

7.4 Data Usage

7.4.1 System Data

[Hidden Text Deleted]

The following tables from the on-line database are accessed by this subsystem:

- IDB_AFYC_SETS (Read Only)
- IDB_CLOCK_INTERVALS (Read Only)
- IDB_DAILY_PFL_PARAMETERS (Read Only)
- IDB_GSP_GROUP_AVERAGE_EACS (Read Only)
- IDB_PD_PFL_REGR_COEFS (Read Only)
- IDB_PFLS (Read Only)
- IDB_PFL_CLASSES (Read Only)
- IDB_PFL_PRODUCTION_RUNS (Create/Read)
- IDB_PFL_SETS (Read Only)
- IDB_SSCS (Read Only)
- IDB_SETTLEMENT_DAYS (Read Only)
- IDB_SSR_RUNS (Read Only)
- IDB_TELESWITCH_CONTACT_RULES (Read Only)
- IDB_TELESWITCH_INTERVALS (Create)
- IDB_TSW_CONTACT_INTERVALS (Read only)
- IDB_TPRS (Read Only)
- IDB_VMR_PFL_CLASSES (Read Only)
- IDB_VSCPCS (Read Only)

- IDF_BASIC_PD_PFL_COEFS (Create)
- IDF_COMBINED_PD_PFL_COEFS (Create)
- IDF_PD_PFL_CLASS_COEFS (Create)
- IDF_PD_TIME_PATTERN_STATES (Create)

For each profile production run the following output files are produced:

- SSC Report Files

  These files are produced by the subsystem for each production run and contains the details for the Standard Settlement Configuration Report. This report is produced in the standard machine readable format as described in the Common Technical Specification [CTSPEC].

- Standing Report Files

  These files are produced by the subsystem for each production run and contains the details for the Standing Profile Data Report. This report is produced in the standard machine readable format as described in the Common Technical Specification [CTSPEC].

- Profile Report Files

  These files are produced by the subsystem for each production run and contains the details for the Daily Profile Report. This report is produced in the standard machine readable format as described in the Common Technical Specification [CTSPEC].

- Tele-Switch Contact Interval Report Files

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These files are produced by the subsystem for each production run and contains the details for the Tele-Switch Contact Intervals Data Report. This report is produced in the standard machine readable format as described in the Common Technical Specification [CTSPEC].

- Daily Profile Coefficient Extraction Report

  These files are produced by the subsystem for each production run and contains the details for the Daily Coefficient Extract report. This report is produced in the standard machine readable format as described in the Common Technical Specification [CTSPEC].

- Exception Reports

  An exception report is produced for the profile production run. The IDP_DPP_RUN and IDP_DPP_GSP processes each contribute to it.

The Standard Settlement Configuration Report, Standing Profile Data Report, Daily Profile Report, Tele-Switch Contact Interval Report and Daily Coefficient Extract Report detailed above are produced as part of a daily Profile Production Run to ensure that the input data and results of each run are stored and available for future examination. This is controlled by the status of the run only being set to success if all component parts complete successfully.

7.4.2 Local Data

[Hidden Text Deleted]

None

7.5 Procedure Details

[Hidden Text Deleted]

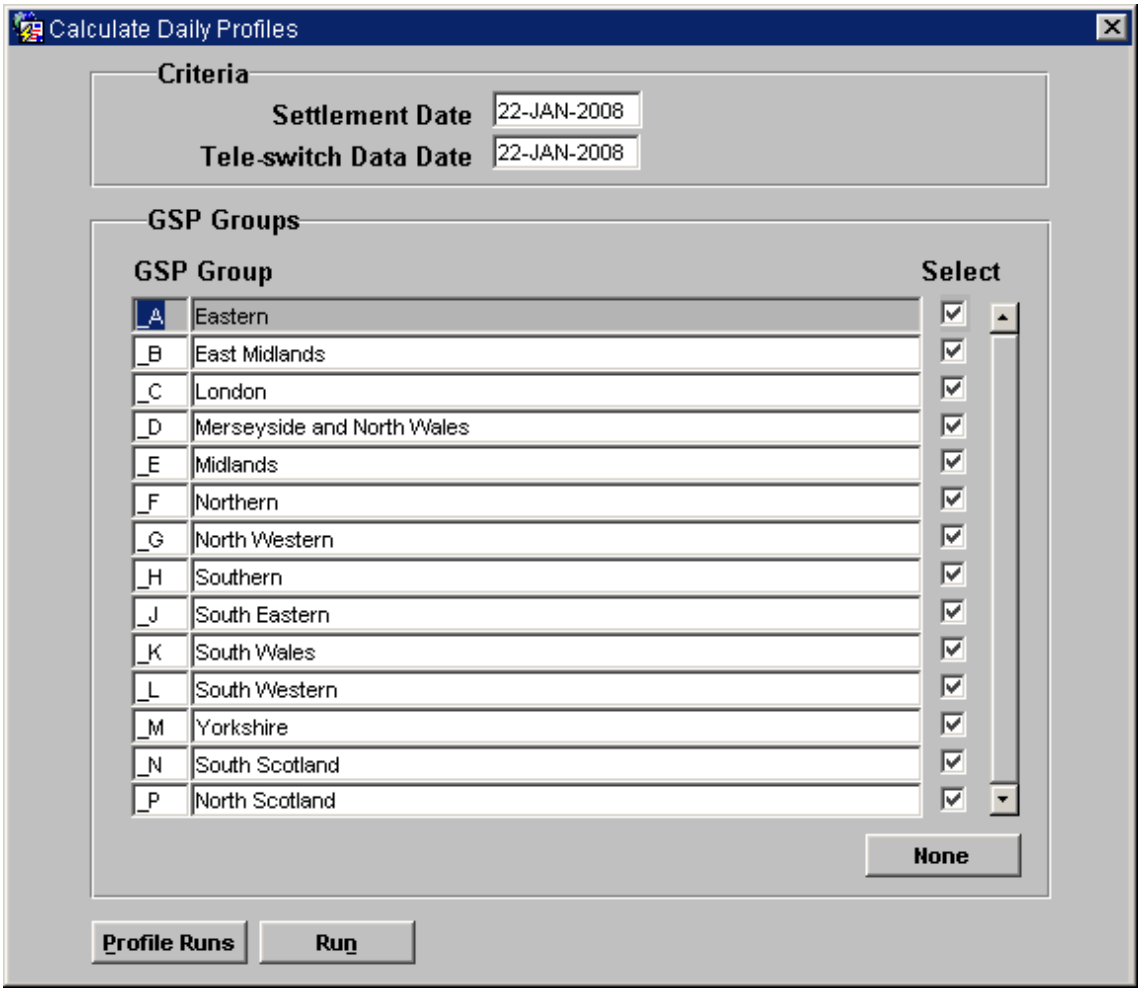
7.5.1 Form IDP_PROFUTIL

The following describes the Calculation of Daily Profiles front-end form.

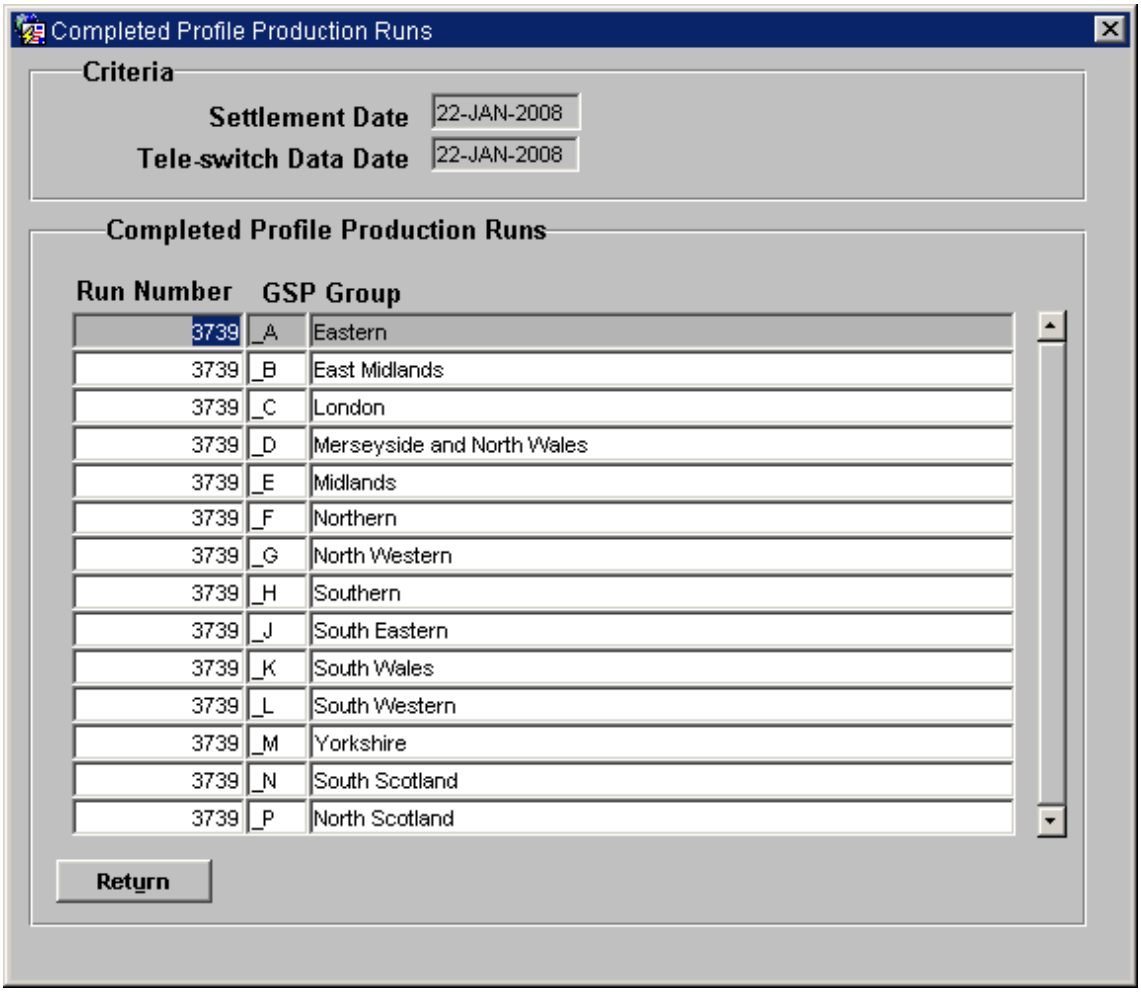
7.5.1.1 Screen layout

This form consists of two screen windows

7.5.1.1.1 Enter Run Criteria



7.5.1.1.2 Completed Profile Production Runs



7.5.1.2 Screen behaviour

Function Implemented	I0016 - Calculate Daily Profiles.
Block	Criteria
On Entry	Ready for user input.
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	No Final Initial Settlement Run can have already completed successfully on the selected settlement date. Once validated, the Settlement Date will be defaulted into the Tele-switch Data Date. If there is no Tele-switch Contact Interval data for this date, an error message will be displayed, and the User prompted to enter a different Tele-switch Data Date for which Tele-switch Contact Intervals does exist. The User can change the defaulted Tele-switch Data Date to any other settlement date, as long as there is Tele-switch Contact Interval data for the new date. If Tele-switch data existed for the defaulted Tele-switch data date, a warning will be displayed, and the User prompted to confirm the change of date.

Block	GSP Groups
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Profile Runs Navigate to the Completed Profile Production Runs block. This will pop-up a second window showing all Completed Profile Production Runs for the settlement_date and GSP_Groups entered Run The Batch Calculation is initiated by the User pressing this button and will use the Settlement Date, Tele-switch Data Date and GSP Group information entered. If any of the GSP Groups selected by the User have a Completed status for a Profile Production Run for the same Settlement Date as in the first block, then an Alert will be displayed informing the User and allowing them to either Continue with the calculation or to Cancel. If they Continue then a recalculation will be carried out for those GSP Groups which have already used in a Profile Production run. If there is no Tele-switch Contact Intervals data for the specified Tele-switch Data Date, the Run will not be initiated. All/None This button will set the "Selected" checkbox to TRUE or FALSE respectively for each GSP Group entry. The button will toggle between the two states, the label indicating the current action.
Additional Behaviour	For Settlement Dates prior to the BETTA start date, only English & Welsh GSP Groups are listed. For Settlement Dates on or after the BETTA start date, English & Welsh and Scottish GSP groups are listed. Those which are valid for today are marked as selected. The user selects the desired GSP Group(s) by selecting the checkbox next to each group.
Block	Criteria
On Entry	N/A
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	This is a non-enterable block and contains the context information from the first block.
Block	Completed Profile Production Runs
On Entry	Automatically Query.
List of Values	N/A
Poplists	N/A
Buttons	Return Navigate back to the GSP Groups block.
Additional Behaviour	This block shows only Profile Production Runs for the GSP Groups on the GSP Group block which are *completed*.

7.5.1.3 Description

The form consists of two windows and is based on four blocks:

CTRL - non-base table, no query allowed.

The User enters a settlement date. If this is a valid value, the Tele-switch Data Date is defaulted to the settlement date. If there is no corresponding Tele-switch Contact Intervals data (in idb_tsw_contact_intervals), an error message is displayed and the User is required to enter a different Tele-switch Data Date. The User may amend the defaulted Tele-switch Data Date to an earlier settlement date, even when corresponding Tele-switch data exists for the original date. The new Tele-switch Data Date must have corresponding Tele-switch Contact Intervals data. (The Tele-switch Contact Interval data relevant to a specified Tele-switch Data Date is described in the logical design ([ICONMOD], event Profiling Run) The User should be restricted to a single record entry, eg. No up/down record navigation.

The **Run** button will first insert those GSP Group records selected into the idb_pfl_production_runs table under one Profile Production Run Number (which is where the batch process will pick up those GSP Groups to run the profile calculation for) before initiating the batch process using the CSC.Submit routine. A queue of width one is used to ensure that only one profile production run can occur at any one time.

IGG - base table on idb_gsp_groups. This block is query-only. No updates/deletes or inserts are available from this block. The User will indicate which GSP Groups to perform a Profile Calculation for, by checking the "Selected" checkbox.

IPR - base table on idb_pfl_production_runs. This block should restrict the records retrieved to the settlement_date and gsp_groups entered in the previous blocks.

7.5.1.4 Form structure

Object	**Description**
Form: *PROFUTIL*	Title : Calculate Daily Profiles
Block: *IGG*	Base table on idb_gsp_groups Query. Update. Order by gsp_group_id.
Gsp_group_id	Label : GSP Group Display. User Enterable. Query.
Gsp_group_name	Display. User Enterable. Query.
nbt_selected_cb	Display. Query. Update. Format: Y or N

Object	Description
Block: *CTRL*	non-base table. Insert, Update allowed. Join columns: if ctrl.nbt_teleswitch_date < ctrl.nbt_sett_date then ctrl.nbt_teleswitch_date = ppru.sett_date else ctrl.nbt_sett_date = ppru.sett_date. ppru.gsp_group_id in (all gsp_group_id's the User has Selected from GSPG).
Nbt_sett_date	Label : Settlement Date Display. Mandatory. User Enterable. Insert. Update. Format: DD-MON-YYYY.
Nbt_teleswitch_date	Label : Tele-switch Data Date Display. User Enterable. Insert. Update. Format: DD-MON-YYYY. Validation: Applicable data must exist in idb_tsw_contact_intervals.
Block: *IPR*	Base table on idb_pfl_production_runs. Query only. Where status = 'Completed'. Order by pfl_production_run_number, gsp_group_id.
Pfl_production_run_number	Label : Run Number. Display. User Enterable. Query.
Gsp_group_id	Label : GSP Group Display. User Enterable. Query.
nbt_gspg_name	Display only.

7.5.1.5 Action on Query

Populate ppru.nbt_gspg_name from gsp_groups.gsp_group_name.

Ensure that on the PPRU block, only those idb_pfl_production_runs where gsp_group_id matches the gsp_group_id's from the GSPG block which have nbt_selected_cb = 'Y'.

7.5.1.6 Action on Update

Default Forms behaviour.

7.5.1.7 Action on Insert

No inserts allowed.

7.5.1.8 Action on Delete

No deletes allowed.

7.5.1.9 Action on button **Profile_runs**.

Go to the PPRU block, populating the CTRL_CONTEXT block on the way.

7.5.1.10 Action on button **Return.**

Go back to the GSPG block.

7.5.1.11 Action on button **All/None.**

Loop through the GSPG block toggling the state of the nbt_selected_cb checkbox.

Eg. All = Y, None = N.

7.5.1.12 Action on button **Run.**

Validate that ctrl.nbt_sett_date has been entered.

Validate that ctrl.nbt_teleswitch_data_date has been entered, and that corresponding data exists in idb_tsw_contact_intervals for that date.

Validate that at least one record exists in the gspg block.

Validate that of the records in the gspg block, at least one has nbt_selected_cb = 'Y' (ie. Selected).

Insert the gspg.gsp_group_id's where nbt_selected_cb = 'Y' into the idb_pfl_production_runs table, setting the status field to "Requested".

Initiate the batch process using the CSC.Submit routine.

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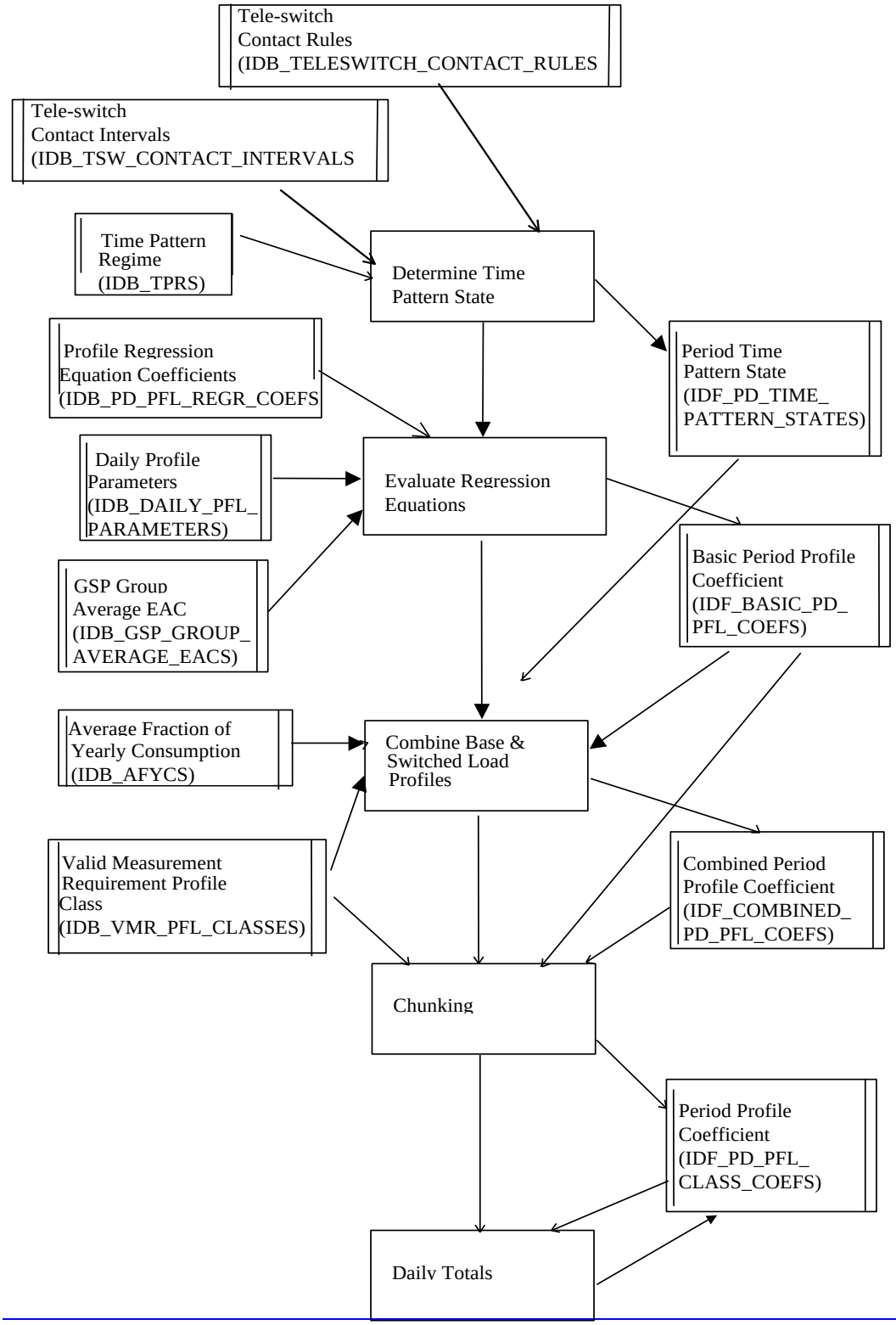
7.5.2 Procedure IDP_DPP_RUN

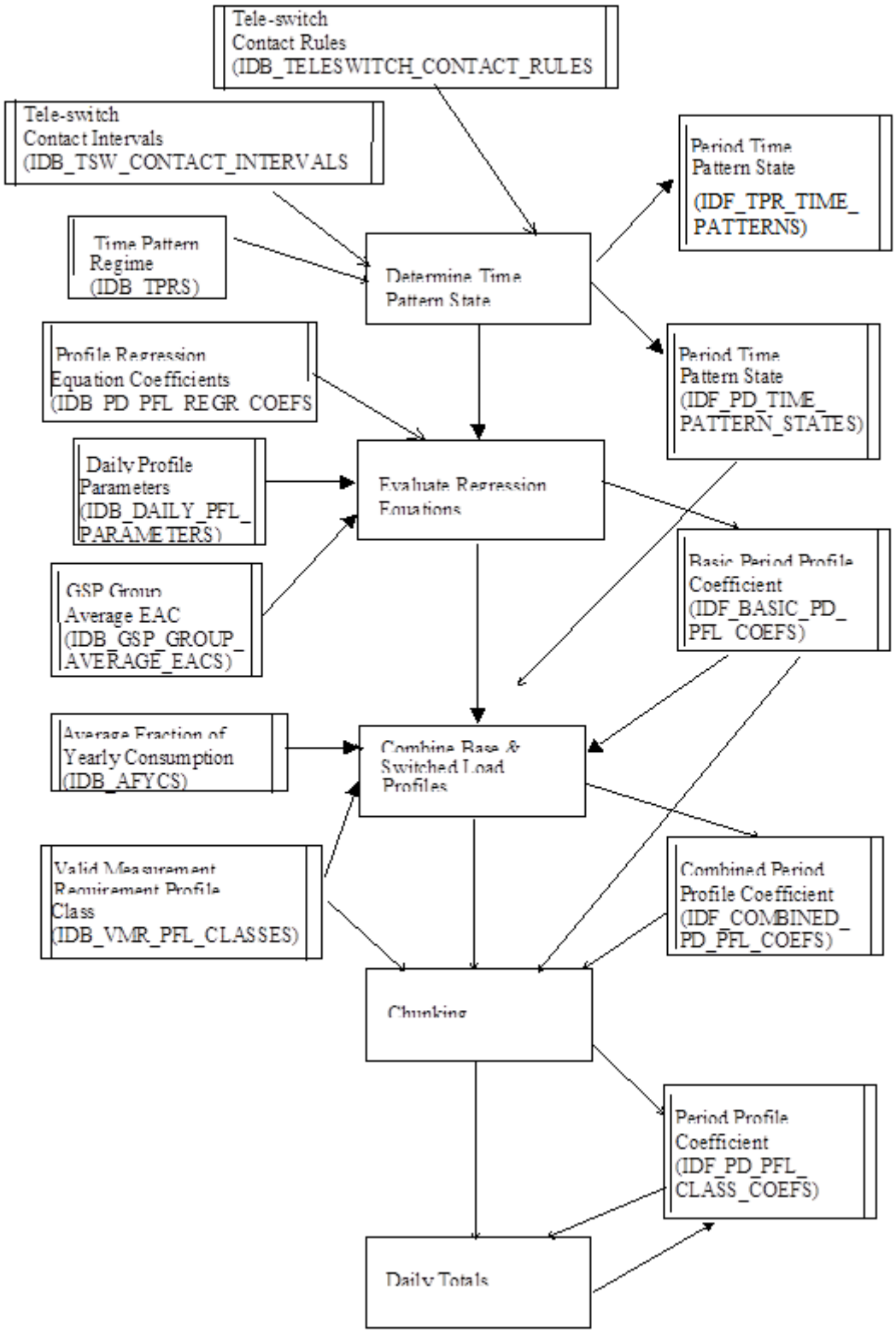
[Hidden Text Deleted]

This procedure implements the calculation of the daily profiles as described in the Logical Design, Event Description Profiling Run.

Procedure Name:	IDP_DPP_RUN
Arguments:	argc (IN)
	argv (IN) comprising:
	Profile Production Run Number
Return:	Status: Success or Failure

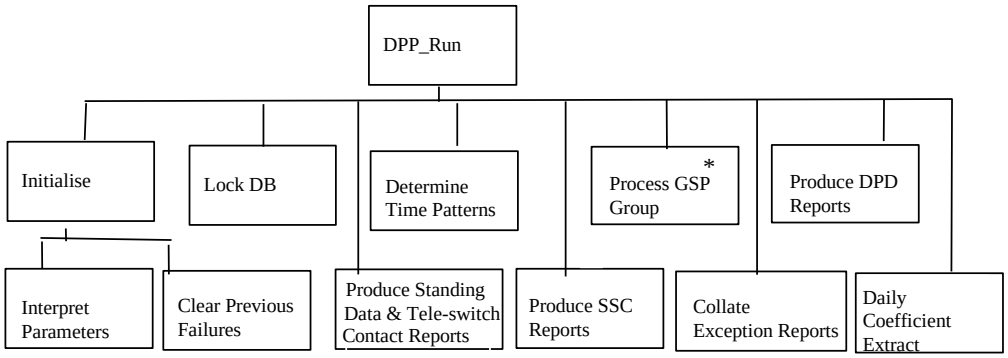
This procedure is implemented in Pro*C. The main dataflows and main stages of calculation for this process are shown in the diagram below:


Tele-switch
Contact Rules
(IDB_TELESWITCH_CONTACT_RULES
Tele-switch
Contact Intervals
(IDB_TSW_CONTACT_INTERVALS
Time Pattern
Regime
(IDB_TPRS)
Determine Time
Pattern State
Profile Regression
Equation Coefficients
(IDB_PD_PFL_REGR_COEFS
Period Time
Pattern State
(IDF_PD_TIME_
PATTERN_STATES)
Daily Profile
Parameters
(IDB_DAILY_PFL_
PARAMETERS)
Evaluate Regression
Equations
GSP Group
Average EAC
(IDB_GSP_GROUP_
AVERAGE_EACS)
Basic Period Profile
Coefficient
(IDF_BASIC_PD_
PFL_COEFS)
Average Fraction of
Yearly Consumption
(IDB_AFYCS)
Combine Base &
Switched Load
Profiles
Valid Measurement
Requirement Profile
Class
(IDB_VMR_PFL_CLASSES)
Combined Period
Profile Coefficient
(IDF_COMBINED_
PD_PFL_COEFS)
Chunking
Period Profile
Coefficient
(IDF_PD_PFL_
CLASS_COEFS)
Daily Totals



This breakdown shows that there is an initial stage that is independent of GSP Group (ie data Time Pattern Regime, Period Regression Coefficients and the output Period Time Pattern State) followed by processing that can be split by GSP Group.

The basic processing flow can be summarised as:



Read and Interpret input parameters

The input parameter Profile Production Run parameter is retrieved from the input parameter and validated and used to read the set of IDB_PFL_PRODUCTION_RUNS to identify the settlement date, the tele-switch contact switching times date and GSP Groups for which the run is required.

The exception report for the run is created using the CSL library with the format described above.

Clear out Files from any previous failed run

The first stage of the process is to clear out any files generated for any previous failure of the run. For a previously failed run, the settlement day will be the same as for the current run but the profile production run records will not have status of successful completion. Previously generated files are identified by reading the file id directly from the table CDB_DATA_FILE for the settlement date and profile production run number for runs not having status of successfully completed. For any files found, call library function CSL_DELETE_FILE to delete the files. The database data is cleared before being written (see below).

Lock Database

To ensure a consistent snapshot of the database throughout the profile production run (and to ensure that the report data matches that for the profile run), exclusive locks are taken on the following tables and processing suspends until the locks are granted or until the timeout of 60 seconds for the granting of such a lock is exceeded:

- IDB_AFYCS
- IDB_CLOCK_INTERVALS
- IDB_DAILY_PFL_PARAMETERS
- IDB_GSP_GROUP_AVERAGE_EACS
- IDB_MKT_PPT_ROLE
- IDB_PFLS
- IDB_PFL_CLASSES
- IDB_PD_PFL_REGR_COEFS
- IDB_PFL_SETS
- IDB_SETTLEMENT_DAYS

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- IDB_SSCS
- IDB_TSW_CONTACT_INTERVALS
- IDB_TELESWITCH_CONTACT_RULES
- IDB_TPRS
- IDB_VMR_PFL_CLASSES

If the process is unable to obtain a lock on one of the tables within the timeout period, the profiling run will terminate gracefully and be marked as having failed in the database.

Note: An exclusive lock only prevents write access to a table; concurrent queries can still be made.

Produce Standing Data Report

The Standing Data Report is not dependent on the output of the Profiling Run; it is effectively a snapshot of the profiles and regression equations in force at the time the profile production run is carried out.

Procedure IDP_PR_SPD is submitted for immediate execution by the scheduler (CSC.SUBMIT) to produce the Standing Profile Data Report at the time of the Profile Production Run. Once a single SPD report file has been generated, the IDP_PR_SPD procedure submits process IDP_PR_DPR_BCST via the scheduler. This distributes the generated report file to each relevant Data Collector and Supplier.

Produce Tele-Switch Contact Interval Data Report

The Tele-Switch Contact Interval Data Report is not dependent on the output of the Profiling Run; it is effectively a snapshot of the Tele-switch contact intervals relevant to the profiling run at the time the profile production run is carried out.

Procedure IDP_PR_TSW is submitted for immediate execution by the scheduler (CSC.SUBMIT) to produce Tele-Switch Contact Interval Data Report at the time of the Profile Production Run. Once a single contact interval report file has been generated, the IDP_PR_TSW procedure submits process IDP_PR_DPR_BCST via the scheduler. This distributes the generated report file to each relevant Supplier.

Determine Time Pattern State

The first stage in the calculation of the daily profiles is to determine the set of time pattern regimes based on the current settlement configurations.

The Period Time Pattern State indicators are calculated using the calculation algorithm specified in event “Profiling run” in the ISRA Conceptual Process Model [ICONMOD]. This requires data from the following tables to be read:

- IDB_TPRS (c. 4500 records)
- IDB_CLOCK_INTERVALS (c. 9000 relevant records)
- IDB_TSW_CONTACT_INTERVALS (c. 1000 relevant records)
- IDB_TELESWITCH_CONTACT_RULES (c 9000 records)

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These numbers are based on the likely data volume estimates for a single day's data.

The output from this calculation is the array of Time Pattern States (a simple 1/0) for every half hour period of every time pattern regime, ie: an array of 48 values for each of the 4500 records in IDB_TPRS.

This data is written to IDF_PD_TIME_PATTERN_STATES.

Another file is created with time pattern states for the dummy SSC received as part of the LLF SSC Data Mapping file from the Distributor.

The Period Time Pattern State indicators are calculated using the calculation algorithm specified in event "Profiling run" in the ISRA Conceptual Process Model [ICONMOD]. This requires data from the following tables to be read:

- IDB_CKI_DATA
- IDB_SSC_TPR_DATA

These records are based on the loading of the LLF SSC Data mapping file from the Distributor.

The output from this calculation is the array of Time Pattern States (a simple 1/0) for every half hour period of every time pattern regime, i.e. an array of 48 values for each of the SSC-TPR combination.

The data is written into IDF_TPR_TIME_PATTERNS.

Produce Standard Settlement Configuration Report[18]

The standard Settlement Configuration Report is dependent on the output of the Profiling Run; it is effectively a snapshot of the settlement configurations in force at the time the profile production run is carried out plus the tele-switch intervals calculated as the first part of determining the Time Pattern State

Procedure IDP_PR_SSC is submitted for immediate execution by the scheduler (CSC.SUBMIT) to produce the Standard Settlement Configuration Report at the time of the Profile Production Run. Once a single SSC report file has been generated, the IDP_PR_SSC procedure submits process IDP_PR_DPR_BCST via the scheduler. This distributes the generated report file to each relevant Data Collector and Supplier.

Process GSP Group

For each GSP Group to be processed, procedure CSC.SUBMIT is called to start procedure IDP_DPP_GSP to calculate the profile coefficients for the GSP Group. The parameters passed are the profile production run number, settlement date and GSP Group. A single exception report will be created by each invocation of IDP_DPP_GSP.

[18] The SSC report has been moved in sequence to after the time pattern state calculations from its initial position at the start of DPPRUN as it reports the tele-switch intervals. Prior to release 2 these were an input to profiling whereas in release 2 these are calculated as part of the profiling run.

A specific scheduling queue will be used and its width can be set to achieve maximum efficiency of parallel processing.

The process then issues a WAIT_ALL request to suspend processing until all GSP Groups have been processed and the reports initiated at the start of the run have completed. The status of each completed run is then checked. If any of the processes have not completed successfully, set the return status to failure, release the lock on all of the tables and exit.

Produce Daily Profile Data Report

The Daily Profile Data report is then produced by calling procedure IDP_PR_DPR by a call and return mechanism.

Once a single DPD report file has been generated, the IDP_PR_DPR procedure submits process IDP_PR_DPR_BCST via the scheduler. This distributes the generated report file to each relevant Data Collector and Supplier.

Produce Daily Coefficient Extract Report

For each Data Collector assigned to one of the GSP Groups included in this, or any previous, Profile Production Run for the Settlement Date, submit procedure IDP_PROF_EXTRACT using CSC.SUBMIT to produce the daily coefficient extract report for all the GSP Groups in these runs for which the Data Collector is responsible.

If all stages complete successfully, the return status is set to success and the procedure exits. Otherwise the procedure exits with status failure.

7.5.3 Procedure IDP_DPP_GSP

This procedure calculates the profile coefficients for a GSP Group.

Procedure Name: IDP_DPP_GSP

Arguments: argc (IN)

argv (IN) comprising:

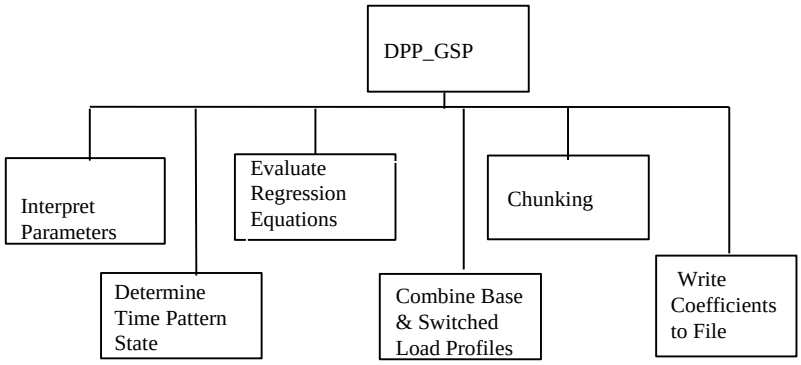
Settlement Date

Profile Production Run Number

GSP Group Id

Status (OUT): Success or Failure

A summary of the processing is indicated in the diagram below:



Interpret Parameters

Extract input parameters to identify the settlement date, name of the file containing the Time Pattern State data and GSP Group for the processing.

The exception report for the run is created using the CSL library with the format described above.

Determine Time Pattern State

Read in the Time Pattern State from the file specified in the input parameters.

Evaluate Regression Equations

This stage of the profile calculation calculates the contents of the logical entity Basic Period Profile Coefficients.

The data required consists of all the records in IDB_PD_PFL_REGR_COEFS for which:

- the current settlement date is between the effective dates on the associated IDB_PFL_SETS table and the effective dates on the associated IDB_PFLS table
- there is a record in the IDB_GSP_GROUP_AVERAGE_EACS table for the profile set
- For Scottish GSP Groups, the season and day type match the season and Scottish day type for the settlement day in IDB_SETTLEMENT_DAYS
- For English and Welsh GSP Groups, the season and day type match the season and day type for the settlement day in IDB_SETTLEMENT_DAYS
- For Scottish GSP Groups, for settlement dates before the BETTA coefficients end date, the Scottish Regression Flag is 'Y'.
- For Scottish GSP Groups, for settlement dates on or after the BETTA coefficients end date, the Scottish Regression Flag is 'N'.
- For English and Welsh GSP Groups, the Scottish Regression Flag is 'N'

The data retrieved consists of approximately:

- 100 records from IDB_GSP_GROUP_AVERAGE_EACS,

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- 5000 records from IDB_PD_PFL_REGR_COEFS,
- 1 from IDB_DAILY_PFL_PARAMETERS and
- 1 from IDB_SETTLEMENT_DAYS.

These figure are based on the estimates of likely data volumes for a single day and single GSP Group.

The calculation of the basic profile coefficients are calculated as described in the logical design [ICONMOD] event description "Profiling Run" and written to IDF_BASIC_PD_PFL_COEFS.

Combine Base and Switched Load Profiles

The Combined Period Profile Coefficients are then calculated for the settlement configurations with switched load. The calculations to perform this are documented in the logical design ([ICONMOD], event Profiling Run)

This requires reading all records from IDB_VMR_PFL_CLASSES which are for switched load (c. 8000 records), identifying their associated profiles and time pattern regimes, and ensuring their validity for the calculations, reading the associated records from IDB_AFYCS valid for the settlement date (8000 records) and carrying out the calculations as specified in the logical design event description "Profiling Run".

The output combined profile coefficients are written to IDF_COMBINED_PD_PFL_COEFS.

Chunking

This stage creates the period profile class coefficients. It uses only data already calculated and previously read plus that related to IDB_VMR_PFL_CLASSES not for switched load. The calculations are performed as specified in the logical design ([ICONMOD] event "Profiling Run") with the totalling into the daily profile coefficient being carried out at the same time.

Write Coefficients to File

This stage writes the calculated daily profile coefficients to IDF_PD_PFL_CLASS_COEFS.

If all stages complete successfully, including the writing of the coefficients to file, the return status is set to success and the procedure exits. Otherwise the procedure exits with status failure.

7.5.4 Report IDP_PR_SSC

Function Definition Ref: I0025B Produce Profile Reports - Standard Settlement Configuration Report

Enquiry Description: Standard Settlement Configuration Report

This report contains Clock or Tele-switch Intervals with their Valid Measurement Profile Class and Profile Class details.

7.5.4.1 Inputs

```
Function Name:      IDP_PR_SSC()
Arguments:          Settlement Date (IN)
                    Profile Production Run Number (IN)
Return:             success/failure
```

7.5.4.2 Outputs

See Section 3.1.14.1

7.5.4.3 Human Readable Output

See Section 3.1.14.1

7.5.4.4 Functionality

See Function Description and Enquiry Description.

Note that once a single SSC report file has been produced, process IDP_PR_DPR_BCST is invoked via the scheduler (using CSC.SUBMIT). This copies the SSC report file to each relevant Data Collector and Supplier, and sends them to their final destination by using the file sender (CFS.EXPORT).

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7.5.5 Report IDP_PR_TSW

Function Definition Ref: I0025B Produce Profile Reports Tele-Switch Contact Switching Times Report

Enquiry Description: Tele-Switch Contact Switching Times Report

This report contains Tele-Switch User, tele-Switch Groups and associated tele-switch Contact intervals applicable to the settlement date for the profiling run.

7.5.5.1 Inputs

```
Function Name:       IDP_PR_TSW()
Arguments:           Settlement Date (IN)
                     Profile Production Run Number (IN)
Return:              success/failure
```

7.5.5.2 Outputs

See Section 3.1.14.4

7.5.5.3 Human Readable Output

See Section 3.1.14.4

7.5.5.4 Functionality

See Function Description and Enquiry Description.

Note that once a single Tele-switch contact Switching Times report file has been produced, process IDP_PR_DPR_BCST is invoked via the scheduler (using CSC.SUBMIT). This copies the report file to each relevant Supplier, and sends them to the appropriate destination by using the file sender (CFS.EXPORT).

7.5.6 Report IDP_PR_SPD

Function Definition Ref: I0025B Produce Profile Reports - Standing Profile Data Report

Enquiry Description: Standing Profile Data Report

This report contains Regression Coefficients with their Profile and Profile Class details. It runs as a separate Pro*C program which is initiated by the CSC Scheduler.

7.5.6.1 Inputs

```
Function Name:       IDP_PR_SPD()
Arguments:           Settlement Date (IN)
                     GSP Group List (IN) - List of GSP Groups
                     to be included
                   Profile Production Run Number (IN)

Return:              success/failure
```

7.5.6.2 Outputs

See Section 3.1.14.3.

7.5.6.3 Human Readable Output

See Section 3.1.14.3.

7.5.6.4 Functionality

See Function Description and Enquiry Description.

Note that once a single SPD report file has been produced, process IDP_PR_DPR_BCST is invoked via the scheduler (using CSC.SUBMIT). This copies the SPD report file to each relevant Data Collector and Supplier, and sends them to their final destination by using the file sender (CFS.EXPORT).

7.5.7 Report IDP_PR_DPR

Function Definition Ref: I0025B Produce Profile Reports

Enquiry Description: Daily Profile Data Report

This report contains Basic Period Profile Coefficients, Combined Period Profile Coefficients and Period Profile Coefficients with their Standard Settlement Configuration, Profile, Profile Class and GSP Group details. The report runs as a separate Pro*C process which is initiated by the CSC Scheduler.

7.5.7.1 Inputs

```
Function Name:       IDP_PR_DPR()
Arguments:           Settlement Date (IN)
                                        Profile Production Run Number
               (IN)
                     GSP Group List (IN) - List of GSP Groups
                     to be included

Return:              success/failure
```

7.5.7.2 Outputs

See Section 3.1.14.2.

7.5.7.3 Human Readable Output

See Section 3.1.14.2.

7.5.7.4 Functionality

See Function Description and Enquiry Description.

The daily profile report must first confirm that the Time Pattern State file is a release 2 Time pattern state (ie Time Pattern regime record is of type TR2 rather than TPR). If it is not, processing stops, an error message is generated and the process terminates with error status.

Note that once a single DPD report file has been produced, process IDP_PR_DPR_BCST is invoked via the scheduler (using CSC.SUBMIT). This copies the DPD report file to each relevant Data Collector and Supplier, and sends them to their final destination by using the file sender (CFS.EXPORT).

7.5.8 Report IDP_PROF_EXTRACT

Function Definition Ref: I0008B Automatic Daily Profile Coefficient Extraction

Enquiry Description: Daily Profile Coefficient File Extraction

This data extract contains Daily Profile Coefficients with their Standard Settlement Configuration, Profile Class and GSP Group details.

This data extract is a separate process written in Pro*C.

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7.5.8.1 Inputs

This procedure is initiated using the standard argc, argv mechanism with the following parameters:

```
Function Name:      IDP_PROF_EXTRACT()
Arguments:          From Settlement Date (IN)
                    To Settlement Date (IN)
                    Market Participant Id (IN)
                    GSP Group List (IN) - List of GSP Groups
                    to be included

Return:             success/failure
```

The data inputs to this program are read from the profile data files generated by the profile production run specified. Other data is read directly from the database.

The input files (one per GSP Group) required are identified by reading the file identifiers from table CDB_DATA_FILE for the input run number, settlement date and each GSP Group.

Each file is opened and read to extract the daily profile coefficients.

7.5.8.2 Outputs

See Section 3.1.12.

7.5.8.3 Human Readable Output

See Section 3.1.12.

7.5.8.4 Functionality

The detailed processing for this report is described in the Function Description and Enquiry Description.

7.5.9 Procedure IDP_PR_DPR_BCST

This procedure distributes master Report files to Data Collectors and Suppliers.

Procedure Name: IDP_PR_DPR_BCST

Arguments: argc (IN)

argv (IN) comprising:

File Id

Settlement Date

Profile Production Run Number

Status (OUT): Success or Failure

The procedure creates a list of all Data Aggregators, Data Collectors and Suppliers assigned to one of the GSP Groups included in this, or any previous, Profile Production Run for the Settlement Date.

It then copies the file identified by File Id to each of these market participants, and sends the resulting reports to their final destination by using the file sender (CFS.EXPORT).

If all stages complete successfully, the return status is set to success and the procedure exits. Otherwise the procedure exits with status failure.

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7.5.10 Procedure IDP_CONVERT_TPR

This procedure converts an idf_pd_time_pattern_states flat file produced by ISRA R.1.1 to the format required by ISRA R2.0.

Procedure Name: IDP_CONV_TPR

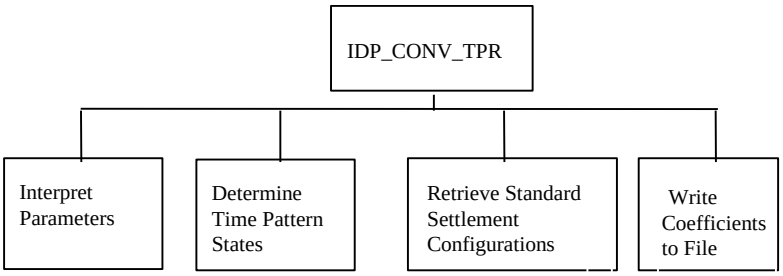
Arguments: argc (IN)

argv (IN) comprising:

File ID

Status (OUT): Success or Failure

A summary of the processing is indicated in the diagram below:



Interpret Parameters

Extract input parameter to identify the file containing the Time Pattern State data and ensure that the file is valid and exists.

The exception report for the run is created using the CSL library with the format described above.

Determine Time Pattern States

Read in all Time Pattern States from the file specified by the input parameter.

Retrieve Standard Settlement Configurations

Select all valid Standard Settlement Configuration and Time Pattern Regime combinations from IDB_MEASUREMENT_REQUIREMENT for the Time Pattern States which have been retrieved.

Write Coefficients to File

Write the Time Pattern States along with the associated Standard Settlement Configuration Id, duplicating rows for each valid combination of Time Pattern Regime and SSC.

If all stages complete successfully, including the writing of the coefficients to file, the return status is set to success and the procedure exits. Otherwise the procedure exits with status failure.

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8 IRS Run Settlements Subsystem Specification

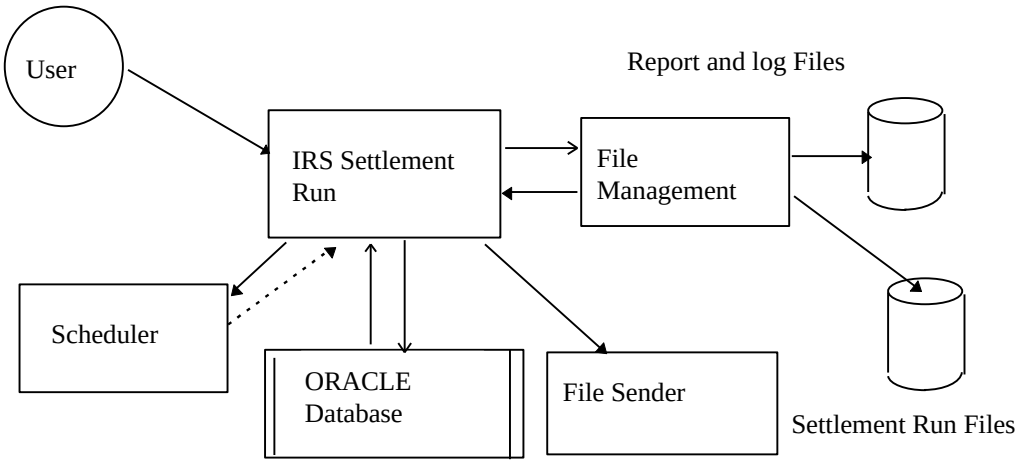
8.1 Introduction

The IRS subsystem processes the data that the ISRA system receives from the Data Aggregators to calculate a supplier's deemed take from a Grid Supply Point Group and hence the value of that take. The various stages of this processing are described in detail in the logical design [ICONMOD] under the description of 'SSR Run Event'. The subsystem will comprise of a number of processes, each relating to a different stage of the subsystems processing. The scheduling capabilities provided by the CSC Subsystem will be used to organise the order in which the stages are applied and the degree of concurrency allowed.

For Settlement Days from the start of the NETA, the subsystem also apportions energy volumes by BM Unit. To facilitate this and maintain backwards compatibility for Settlement Days before the start of the NETA, the physical implementation of the subsystem has 'split' the functions into two separate subsystems. To avoid repetition, the following sections only detail the instances where the two subsystems differ. In these instances, the pre-NETA SSR Run process is referred to as the ISRA SSR Run and the post-NETA process as the SVAA SSR Run.

8.2 Subsystem Context

The following diagram shows the context of this subsystem:



Note that the interfaces with the database and the CSL server library routines are not shown.

The IRS Settlement Run subsystem is activated by the CSC Scheduler.

8.2.1 Invoke Process

The IRS Settlement Run subsystem is invoked by the CSC Scheduler with a set of parameters that define the trading day and settlement for which processing should be performed. Optional additional parameters can be supplied to limit the GSP groups used in the run and/or the input data to use.

8.2.2 Schedule Activity

The IRS Settlement Run subsystem will schedule other stages of it's processing as separate processes through the CSC Scheduler.

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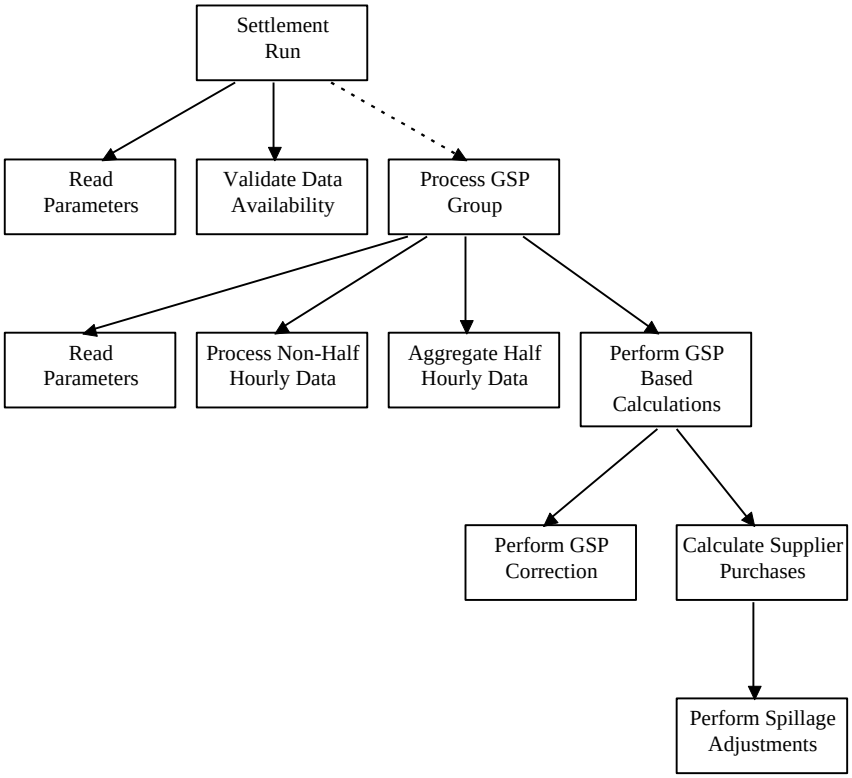
8.3 Subsystem Processing

The following diagram shows the call structure of the procedures that make up the IRS Settlement Run subsystem:



The dashed arrows indicate that the procedures are invoked as separate processes.

8.4 Data Usage

The following data is used by the subsystem.

8.4.1 System Data

8.4.1.1 Database

The subsystem accesses the following database tables directly:

Table	C	R	U	D
idb_bm_unit_in_gsp_group		X		
idb_ssr_run_gsp_group_pds	X			
idb_gsp_group_cctn_sfs		X		
idb_gsp_group_takes		X		
idb_nhh_bm_unit_allocation		X		
idb_pd_sup_purchases	X			
idb_pfl_production_runs		X		
idb_sett_pd_prices		X		
idb_sett_pd_llfs		X		
idb_settlements		X		
idb_ssr_runs		X	X	
idb_ssr_run_gsp_groups		X		
idb_ssr_run_llf_files		X		

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idb_sup_data_agtns		X		
idb_sup_data_agtn_in_ssr_runs	X			
idb_ssa_sett_gsp_groups		X		
idb_df_standing_data		X		
idb_sent_by_mkt_ppts		X		
idb_demand_data_agtns		X		

Indirect access to the database is also made through the CSC and CLG subsystem interfaces.

In addition the Oracle sequence cdb_irs_run_sequence is used to generate settlement run numbers.

8.4.1.2 Files

The subsystem accesses the following entities which will be stored in flat files and accessed through data interface routines common to ISRA subsystems:

Table	C	R	U	D
idf_agtd_sup_da_pd_consums		X		
idf_agtd_sup_pd_consums	X			
idf_agtd_bm_pd_consums (for Settlement Days from NETA start)	X			
idf_sup_purchase_matrices		X		
idf_profile_spm	X			
idf_agtd_sup_da_pd_discon_volume		X		
idf_agtd_sup_pd_discon_volume	X			
idf_pfld_dpms	X			
idf_discon_purchase_matrices		X		
idf_agtd_bm_pd_discon_volume	X			

8.4.2 Local Data

8.4.2.1 IRS_Working_Context

This structure is populated by the IRS_read_parameters procedure and transports the parameters that are being used for the run through the subsystem.

settlement_date: Database format for Settlement Date

settlement_code: Database format for Settlement Code

gsp_count: integer

array[1:MAX_GSP_GROUPS] gsp_id: integer

array[1:MAX_GSP_GROUPS] profile_prod_run: integer

8.4.2.2 IRS_BM_PD_Consums

This structure is used to hold both Supplier and BM Unit Period Consumption data in memory as it is produced and before it is output to the idf_bm_pd_consums and idf_sup_pd_consums flat file database.

The structure will be in line with the idf_bm_pd_consums flat file with the addition of fields to hold Supplier Consumption.

This structure is repeated twice, once for SSC imports and once for SSC exports.

8.4.2.3 IRS_Psp

This structure is used to hold Period Supplier Purchase data in memory as it is produced and before it is output to the idb_pd_sup_purchases database entity.

The structure will be in line with the idb_pd_sup_purchases database table.

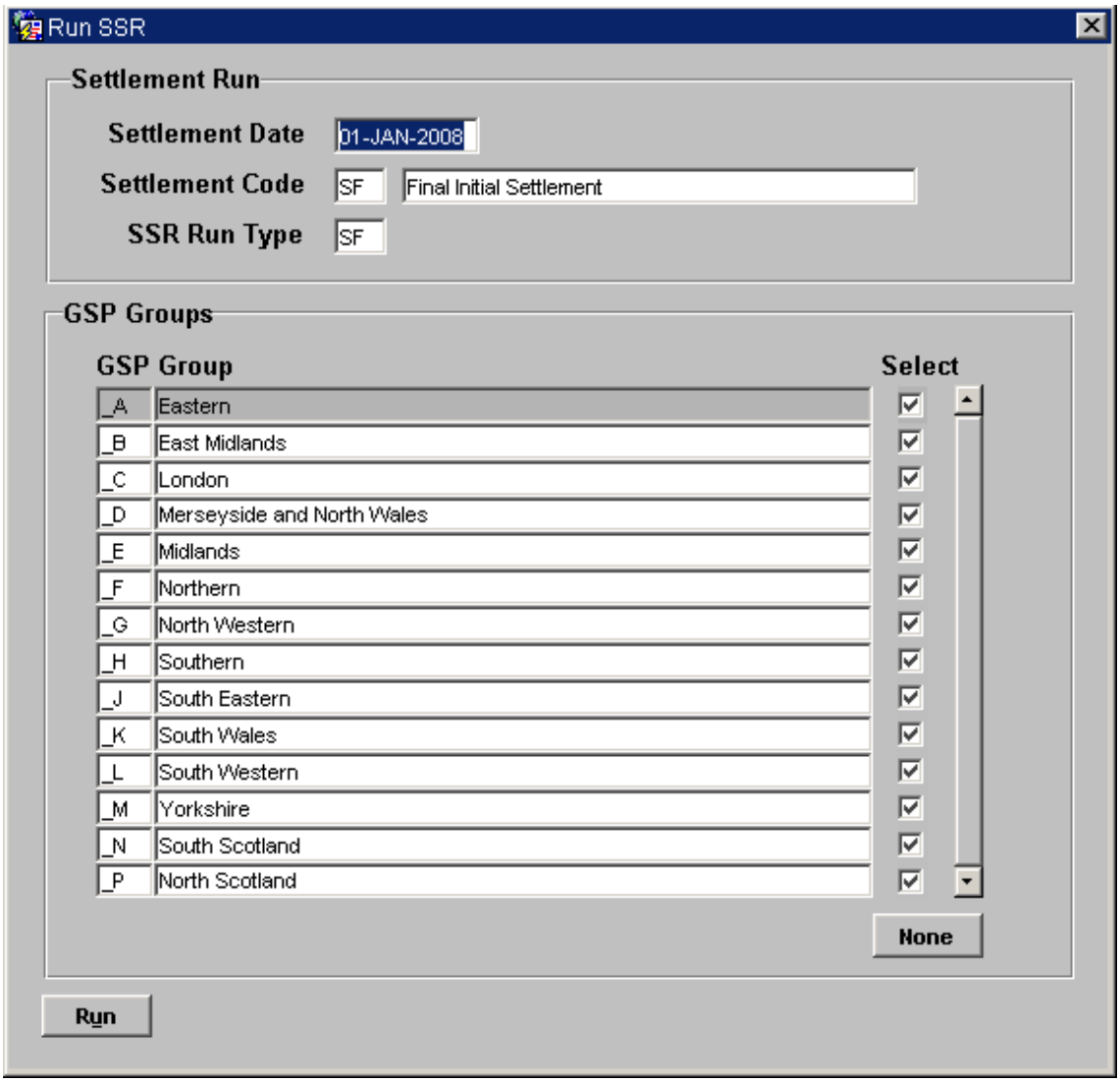
8.5 Procedure Details

8.5.1 Form ISY_RSSRUTIL

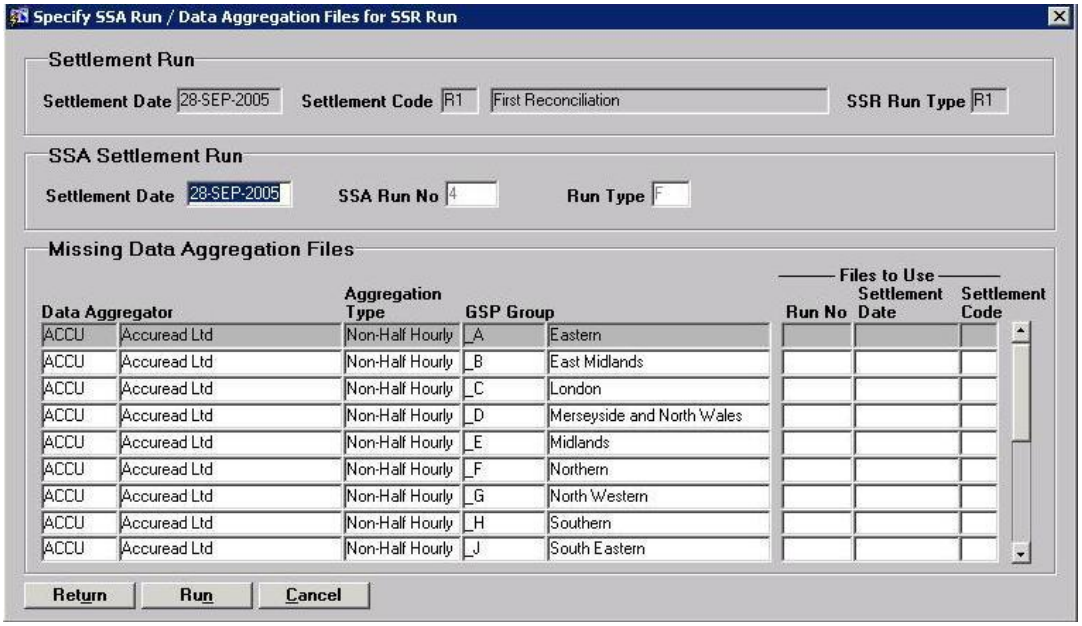
The following describes the Run SSR form.

8.5.1.1 Screen layouts

8.5.1.1.1 Run SSR



8.5.1.1.2 Specify SSA Run / Data Aggregation Files



8.5.1.2 Screen behaviour

Functions Implemented	I0029 - Run SSR.
Block	Settlement Run
On Entry	Ready for user input.
List of Values	On Settlement Code. Displays Settlement Code and Description for the Settlement Date entered.
Poplists	N / A
Buttons	N /A
Additional Behaviour	N / A
Block	GSP Groups.
On Entry	For settlement dates prior to BETTA start date, only English & Welsh GSP Groups are listed. For settlement dates on or after BETTA start date, English & Welsh and Scottish GSP Groups are listed. Those which are valid for today are marked as selected. The user selects the desired GSP Group(s) by selecting the checkbox next to each group.
List of Values	N / A
Poplists	N / A
Buttons	All Selects all GSP Groups displayed. Run Initiates validation checks on Supplier data loaded for each relevant Data Aggregator file, and for unexpected Data Aggregator files. If validation successful, proceeds with the run process by navigating to the 'Specify SSA Run / Data Aggregation Files for SSR Run' screen for further validation and verification of SSR Run data.
Additional Behaviour	If the validation initiated by pressing the Run button finds any discrepancies, the details will be written to an Exception Report.
Block	Settlement Run. Display only, displays Settlement Run information from previous

	Settlement Run block.
On Entry	N / A
List of Values	N / A
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A
Block	SSA Settlement Run
On Entry	SSA Settlement details automatically queried for the Settlement Run's Settlement Date. If no records are retrieved then the block awaits user input of SSA Settlement details from a previous Settlement Date.
List of Values	On SSA Run Number. Displays the SSA Run Number, Settlement Date and Run Type for all GSP Groups selected in the GSP Groups block.
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A
Block	Missing Data Aggregation Files.
On Entry	Any missing Data Aggregation Files for the Settlement Run are displayed. 'Files to Use' details for each file – 'Run No', 'Settlement Date' & 'Settlement Code' will be automatically 'defaulted', for DF Runs ONLY, using data from the previous RF Run.
List of Values	On Run No, Settlement Date and Settlement Code. Displays Run Numbers, Settlement Dates and Settlement Codes from Data Aggregation Files used in previous SSR Runs for all GSP Groups selected in the GSP Groups block. Settlement Codes R2, R3, RF and DF are restricted to files from the same Settlement Date. Settlement Code DF is further restricted to RF files only.
Poplists	N / A
Buttons	Return Returns to the previous Screen (Run SSR). Run Initiates the SSR Run. Validation determines whether the run is scheduled for TODAY. If not scheduled for today the dialogue message: "SSR Run is not scheduled for today, do you really want to Run?" is displayed. The user may continue with or terminate the run at this stage. Cancel Cancels the SSR Run and exits the Screen.
Additional Behaviour	N / A

8.5.1.3 Description

The Settlement Run block is based on the idb_settlements table and consists of three fields, a Settlement Date, a Settlement Code and an SSR Run Type. Settlement records are set up using the CALEMAIN form and are not created here, the purpose

of the Settlements block is to select back an existing Settlement record that the user can then schedule a SSR Run for. Initial entry to the Settlements block will query back a default Settlements record. This is achieved by returning a idb_settlements record that either has no associated idb_ssr_runs records (i.e. is still to be scheduled) or has an associated idb_ssr_runs record that has a failed status (i.e. needs to be re-run). The search should be ordered by Payment Date ascending. The SSR Run Type will default to the Settlement Code returned. If this is not the desired Settlement Code, then the user is free to query back the correct idb_settlements record by issuing as many user defined queries as necessary.

The GSP Groups block is based on gsp_groups table. On entry to the block, it should automatically be populated with all GSP Groups and those that the ISR Agent is responsible for (i.e. trunc(sysdate) is between the eff_to_date and eff_from_date of the idb_gsp_groups table) are marked as selected. The user is given the opportunity to select, using check boxes, individual GSP Groups or select all of the ones displayed using an **All** button, for which to carry out the SSR Run. Pressing **Run** will initiate the following validation of Data Aggregation data required for the run:

(i) Check whether any unexpected Data Aggregator files have been received for the Settlement date and GSP Groups selected for the run. This is achieved by retrieving all records in idb_sup_data_agtns which match the Settlement Date and Code specified in the Settlement Run block and the GSP Groups specified in the GSP Groups block, and which do not have corresponding entries in idb_da_in_gsp_groups where the Settlement Date is between the effective from and to settlement dates. If there are any unexpected files, a warning message is displayed informing the user that the files will not be used in the run. A warning record will be written to a separate exception report giving the details of each unexpected file. If the user subsequently chooses to proceed with the SSR Run, a warning message will be written to the SSR Run exception report for each unexpected Data Aggregator file not used in the run.

(ii) For each expected Data Aggregator file which has been received, validate that data has been loaded for the full set of expected Suppliers. The set of expected Suppliers is determined by retrieving all records in idb_da_in_gsp_groups which correspond to the Settlement Date, Data Aggregator and GSP Group of the Data Aggregator file. For each expected Supplier, there should be a corresponding entry in idb_sup_data_agtns for the latest Aggregation Run for the Settlement Date, Settlement Code, Data Aggregator and GSP Group. If there is any missing Supplier data, an error message will be displayed and the user prevented from initiating the SSR Run. An error record will be written to a separate exception report giving the details of each instance of missing Supplier data.

(iii) For each expected Data Aggregator file which has been received, validate that data has only been loaded for the expected set of Suppliers. This is achieved by retrieving all Supplier records from idb_sup_data_agtns for the latest Aggregation Run for the Settlement Date, Settlement Code, Data Aggregator and GSP Group of the Data Aggregator file, which do not have corresponding records in idb_da_in_gsp_groups. If there is any superfluous Supplier data, an error message will be displayed and the user prevented from initiating the SSR Run. An error record will be written to a separate exception report giving the details of each instance of superfluous Supplier data.

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Note: the validation of supplier data loaded for default Data Aggregator files will be performed during the SSR Run process itself. For each instance of missing supplier data or superfluous supplier data in the default file, a warning is written to the Exception Report.

If the validation is successful, a validation screen 'Specify SSA Run / Data Aggregation Files for SSR Run' will be displayed. The screen will be populated with values depending on the outcome of two validation checks.

(i) Check that all the expected Data Aggregator files have been received for all the GSP Groups. The files that are required are specified in the idb_da_in_gsp_groups table where the eff_from_sett_date is between the effective from and to settlement dates for each of the GSP Groups specified in the GSP Groups block. For each of these records, validate that the relevant file has arrived by checking for an associated record in the idb_sup_data_agtns table that matches the Settlement Date and Code, specified in the Settlement Run block. If any of the files are missing then all idb_da_in_gsp_groups records that match the required GSP Groups and Settlement Date that **do not** have idb_sup_data_agtns records, i.e. missing files, are listed. Missing file details are automatically selected/populated in the 'Missing Data Aggregation Files' block, for DF Settlement Runs ONLY, by using data from the previous RF Settlement Run. If multiple files are available with different aggregation run numbers, then the file with the latest aggregation run number will be selected for defaulting. The user can override this and manually specify the use of previous Data Aggregator files for the missing idb_da_in_gsp_groups records. This is achieved in one of three ways; either via a list of values that drives off the idb_sup_data_agtns table, by direct entry of a specific Data Aggregation Run Number, or by direct entry of the Settlement Date and Code of the Data Aggregation Run to be used. The list is ordered by sett_date descending, sett_code ascending and data_agtn_run_number descending.

(ii) Check that unexpected Data Aggregator files are excluded from the Settlement Run. The files that are required are specified in the idb_df_standing_data and idb_sent_by_mkt_ppts tables, where the Settlement Run Date falls between the start_sett_date and end_sett_date date values in idb_df_standing_data, for the specified GSP Group Id. Files will be excluded based on the associated Market Participant Id and Role in idb_sent_by_mkt_ppts. Any unexpected files will be ignored.

(iii) If the current SSR run is a DF run, then any unexpected files that arrived should not be treated as newer files. Instead the files from RF run shall be used as inputs for the SSR run. The same logic must apply to the function that inserts records into idb_sup_data_agtn_in_ssr_runs prior to the SSR.

(iv) Check that a valid set of SSA Settlement GSP Groups exists for the Settlement Date. This is achieved by selecting the idb_ssa_sett_runs record with the highest ssa_sett_run_number that matches the Settlement Date. Check child idb_ssa_sett_gsp_group records. Validate that, firstly, a record exists for all the required GSP Groups and, secondly, that the period_purchases_valid valid flag is set to Yes. If a valid record exists, then display the SSA Settlement Date, SSA Run No. and Run Type to the user else prompt the user to enter SSA Settlement Run details for another Settlement date. This is achieved via a list of values that displays all idb_ssa_sett_gsp_groups records that meet the required criteria. The user selects the SSA set they wish to carry out the SSR Run with.

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Once the validation / verification process for the SSA Run data and Data Aggregation files required for the SSR Run has been carried out, the user can continue with the SSR Run by pressing the **Run** button, or cancel the whole process by pressing **Cancel**. The **Return** button is used to return to the Run SSR form.

The SSR Run process is initiated in batch using the common CSC.submit() function. The appropriate SSR Run process is invoked according to the Settlement Date. For Settlement Days before the start of the NETA, the ISRA SSR Run process is invoked and for Settlement Days from the start of the NETA, the SVAA SSR Run process is invoked. In addition, a record of the SSR Run, the Data Aggregator files used and the SSA Settlement details must be recorded by inserting into the following tables:

idb_ssr_runs - holds details of the run. Note: ssr_run_type_id value from sett.nbt_run_type field and ssr_run_number generated from idb_ssr_run_number_seq sequence.

idb_ssr_run_gsp_group - records all GSP Groups used in an SSR Run.

idb_sup_data_agtn_in_ssr_runs - records Supplier and Data Aggregators used in the SSR Run.

8.5.1.4 Form structure

Object	Description
Form: *RSSRUTIL*	Title : Run SSR
ssa_sett_gsp_group_rg	Record group used to define Data Aggregator Files. Based on a Query that selects from idb_sup_data_agtns table order by sett_date desc, sett_code, data_agtn_run_number desc
ssa_sett_run_rg	Record group used to define SSA Settlement Run details.
Block: *SETT*	Settlement Run block, based on idb_settlements table. Query only. Order by payment_date ascending Where Clause : The where clause only applies to initial entry to the form : Where not exists an associated idb_ssr_runs record, join via sett_date and sett_code. OR Where exists an associated idb_ssr_runs record where ssr_run_status = 'F' (Failed), join via sett_date and sett_code.
sett_date	Label : Settlement Date Display. Query only. Format : DD-MON-YYYY
sett_code	Label : Settlement Code Display. Query only. LOV provided for user defined queries, based on idb_settlements table. Display all sett_codes for the sett.sett_date entered.
nbt_sett_code_desc	Label : Settlement Code Display only.

Object	Description
nbt_run_type	Label : SSR Run Type Display. User Enterable. Update allowed. Defaults to the sett.sett_code entered.
Block : *GSGR*	GSP Groups block, based on idb_gsp_groups table. Query, update allowed. Order by gsp_group_id, eff_from_date desc Where Condition : trunc(sysdate) is between gsgr.eff_from_date and gsgr.eff_to_date.
gsp_group_id	Label : GSP Group Display only.
gsp_group_name	Label : Name Display only.
eff_from_date	Non display.
eff_to_date	Non display.
nbt_include	Label : Selected Check box. Display. User enterable. Update allowed.
Block : *CTRL_SETT*	Non base table block used to display Settlement Run context information.
nbt_sett_date	Label : Settlement Date Display only. Value derived from set.sett_date.
nbt_sett_code	Label : Settlement Code Display only. Value derived from sett.sett_code.
nbt_sett_code_desc	Label : Settlement Code Display only. Value derived from sett.nbt_sett_code_desc.
nbt_run_type	Label : Run Type Display only.
Block : *CTRL_SSA*	SSA Settlement Run block, non base table block used to manage SSA details to be used in the run. On entry to the block, set up default values according to the following logic : (i) Select idb_ssa_sett_runs record where sett_date = sett.sett_date and ssa_sett_run_number = the max(ssa_sett_run_number). (ii) Check that records exists in idb_ssa_sett_gsp_group table with ssa_sett_run_number = to the idb_ssa_sett_runs record in (i) that match all gsgr.gsp_group_id's selected in the GSGR block and have a period_purchase_valid flag = 'Y'. (iii) If check (ii) is successful then populate ctrl_ssa fields with values from the record selected in (i) else dynamically build up a record group, ssa_sett_run_rg, that will display all idb_ssa_sett_runs records

Object	Description
	where exists associated idb_ssa_sett_gsp_groups records that have matching gsp_group_id's in the gsgr block. This can be achieved by looping through the gsgr block, selecting all gsp_group_id's that have nbt_include flag = 'Y'. Build up the following select statement… select sssr.ssa_sett_run_number ,sssr.sett_date ,sssr.sett_run_type_id from idb_ssa_sett_runs sssr where exists (select 1 from idb_ssa_sett_gsp_group ssgg where ssgg.ssa_sett_run_number = sssr.ssa_sett_run_number and ssgg.gsp_group_id = :gsgr.gsp_group_id)
	<Fetch the next :gsgr.gsp_group_id, build up sub select and concatenate to sql statement> and exists (select 1 from idb_ssa_sett_gsp_group ssgg where ssgg.ssa_sett_run_number = sssr.ssa_sett_run_number and ssgg.gsp_group_id = :gsgr.gsp_group_id) Repeat until all gsgr.gsp_group_id's have been built into the statement. Use this statement to populate ssa_sett_run_rg.
nbt_sett_date	Label : Settlement Date Display. User enterable. Update allowed. Format : DD-MON-YYYY. LOV driven based in ssa_sett_run_rg. Set LOV for validation = True.
nbt_ssa_run_number	Label : SSA Run No Display only.
nbt_sett_run_type	Label : Run Type Display only.
Block *: DAGG*	Missing Data Aggregation Files block, based on idb_da_in_gsp_groups table. Query on block allowed but disallow user queries. Insert. Update. Order by da_mkt_ppt_id, da_mkt_ppt_role_code, da_in_gsp_group_id. Where Condition : Loop through the gsgr block constructing a <gsp_group_id list>, use this

Object	Description
	list to construct the following where cause into a variable. where idb_da_in_gsp_groups.da_in_gsp_group_id in (<gsp_group_id list>) and :sett.sett_date between eff_from_sett_date and eff_to_sett_date and not exists (select 1 from idb_sup_data_agtns suda where suda.da_in_gsp_group_id = idb_da_in_gsp_groups.da_in_gsp_group_id) A join on idb_df_standing_data and idb_sent_by_mkt_ppts will ensure that only expected Data Aggregator files are included in the list of files to default. Populate DAGG's default where clause with the variable string using set_block_property on entry into the block.
da_mkt_ppt_id	Label : Data Aggregator Display.
nbt_da_mkt_ppt_name	Label : Name Display.
da_mkt_ppt_role	Label : Aggregation Type Display.
gsp_group_id	Label : GSP Group Display.
nbt_gsp_group_name	Label : Display.
nbt_run_no	Label : Run No Display. User enterable. Insert. Update. LOV driven from idb_sup_data_agtns. Set LOV for validation = False..
nbt_sett_date	Label : Settlement Date Display. Date. User enterable. Insert. Update.
nbt_sett_code	Label : Settlement Code Display. Char. User enterable. Insert. Update.

8.5.1.5 Action on Query

Automatically populate sett.nbt_set_code_desc.

Automatically populate dagg.nbt_da_mkt_ppt_name.

Automatically populate dagg.nbt_gsp_group_name.

8.5.1.6 Action on Update

None.

8.5.1.7 Action on Insert

None.

8.5.1.8 Action on Delete

None.

8.5.1.9 Action on button All

Selects all GSP Groups.

8.5.1.10 Action on button Run (Run SSR Screen)

Initiates validation checks on Supplier data loaded for each relevant Data Aggregator file, and checks for unexpected Data Aggregator files. If validation successful, continues validation / verification process by navigating to the 'Specify SSA Run / Data Aggregation Files' screen.

8.5.1.11 Action on button Run (Validation Screen)

Initiates either the ISRA SSR Run process or the SVAA SSR Run process depending on the Settlement Date, using the CSC.Submit() function passing it the SSR Run Number.

8.5.1.12 Action on button Cancel

Cancel the SSR Run process, exit the form.

8.5.1.13 Action on button Return

Return to the Run SSR Screen.

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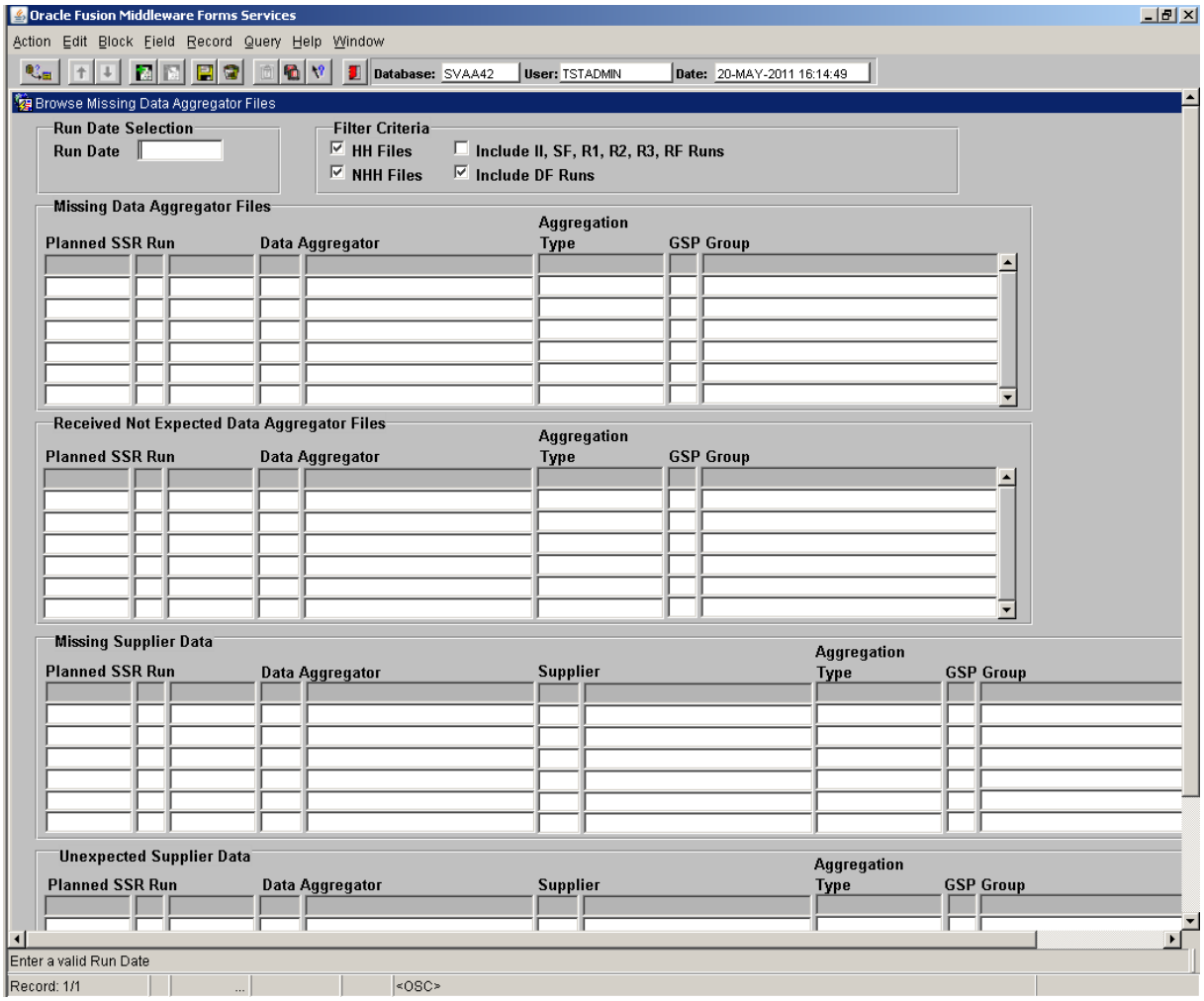
8.5.2 Form ISY_MDAGQURY

The following describes the View Missing Data Aggregator Files form.

8.5.2.1 Screen Layout



8.5.2.2

8.5.2.3 Screen behaviour

Functions Implemented	View Missing Data Aggregation Files.
Block	Run Date Selection
On Entry	Ready for user input.
List of Values	N / A
Poplists	N / A
Buttons	N / A

Additional Behaviour	The Filter checkboxes 'HH Files', 'NHH Files' & 'Include DF Runs', default to a 'checked' state. The state of the 'Include II,SF, R1, R2, R3, RF Runs' filter checkbox, is set according to the following logic: If the difference between the Run Date and System date is <= 3 days, the 'Include II,SF, R1, R2, R3, RF Runs' filter checkbox appears in a 'checked' state. If the difference between the Run Date and System date is > 3 days, the 'Include II,SF, R1, R2, R3, RF Runs' filter checkbox appears in an 'un-checked' state.
Block	Missing Data Aggregator Files.
On Entry	Missing Data Aggregator Files for the selected date range automatically queried on entry.
List of Values	N / A
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A
Block	Received Not Expected Data Aggregator Files.
On Entry	Received Not Expected Data Aggregator Files for the selected date range automatically queried on entry.
List of Values	N / A
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A
Block	Missing Supplier Data
On Entry	Missing Supplier data for the selected date range automatically queried on entry.
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A
Block	Unexpected Supplier Data
On entry	Unexpected Supplier data for the selected date range automatically queried on entry.
List of Values	N/A
Poplists	N/A
Buttons	N/A
Additional Behaviour	N/A

8.5.2.4 Description

The form will be based on the following five blocks:

CTRL - non base table block allowing selection of a Run Date and filter criteria. Insert and update allowed.

M_DAG - based on a sub-query built at runtime. Query only allowed. Records returned restricted to the selected date range entered in the CTRL block.

RNE_DAG - based on a sub-query built at runtime. Query only allowed. Records returned restricted to the selected date range entered in the CTRL block.

M_SUP – DAG - based on a sub-query built at runtime. Query only allowed. Records returned restricted to the selected date range entered in the CTRL block.

U_SUP - DAG - based on a sub-query built at runtime. Query only allowed. Records returned restricted to the selected date range entered in the CTRL block.

8.5.2.5 Form structure

Object	Description
Form: *MDAGQURY*	Title : View Missing Data Aggregator Files.
Block: *CTRL*	Calendar Date Selection block. Non base table. Insert, update allowed.
nbt_sett_date_from	Label : From Date Display. Date. User enterable. Insert, update allowed. Format : DD-MON-YYYY
hh_files_cb	Label : HH Files
nhh_files_cb	Label : NHH Files
include_df_run_cb	Label : Include DF Runs
include_subseq_run_cb	Label : Include II,SF, R1, R2, R3, RF Runs

Block*: M_DAG*	Missing Data Aggregator Files block. Based on a runtime sub-query.
	Query only allowed.
	`SELECT <columns>`
	`FROM idb_settlements idbs,`
	`idb_da_summaries ids,`
	`idb_mkt_ppts imk,`
	`idb_gsp_groups gspg`
	`WHERE gspg.gsp_group_id = ids.gsp_group_id`
	`AND imk.mkt_ppt_id = ids.da_mkt_ppt_id(+)`
	`AND idbs.planned_ssr_run_date = inpput run_date`
	`AND ids.da_mkt_ppt_role_code = role codes selected`
	`AND idbs_sett_code = Settlement Run(s) selected`
	`AND EXISTS (`
	`SELECT /*+ INDEX(DAGG IDG_IMP_FK1_I) */`
	`1`
	`FROM idb_da_in_gsp_groups dagg`
	`WHERE idbs.sett_date BETWEEN`
	`dagg.eff_from_sett_date`
	`AND NVL(dagg.eff_to_sett_date,`
	`TO_DATE ('01-jan-4000','dd-mon-yyyy'))`
	`AND dagg.gsp_group_id = ids.gsp_group_id`
	`AND dagg.da_mkt_ppt_id = ids.da_mkt_ppt_id`
	`AND dagg.da_mkt_ppt_role_code =`
	`ids.da_mkt_ppt_role_code)`
	`AND NOT EXISTS (`
	`SELECT /*+ INDEX(SUDA IDA_ISE_FK1_I) */`
	`1`
	`FROM idb_sup_data_agtns suda`
	`WHERE suda.gsp_group_id = ids.gsp_group_id`

Object	Description
	AND suda.da_mkt_ppt_id = ids.da_mkt_ppt_id AND NVL(suda.da_mkt_ppt_role_code, '?') = ids.da_mkt_ppt_role_code AND suda.sett_code = idbs.sett_code AND suda.sett_date = idbs.sett_date) AND ((EXISTS (SELECT 1 FROM idb_df_standing_data dsd, idb_sent_by_mkt_ppts smp WHERE s.sett_date BETWEEN dsd.start_sett_date AND dsd.end_sett_date AND dsd.gsp_group_id = ds.gsp_group_id AND dsd.file_type = ds.da_mkt_ppt_role_code AND smp.sent_by_mkt_ppts_id = dsd.sent_by_mkt_ppts_id AND ds.da_mkt_ppt_id = smp.mkt_ppt_id AND s.sett_code = 'DF')) OR s.sett_code IN ('II, 'SF', 'R1', 'R2', 'R3', 'RF')) ORDER BY idbs.planned_ssr_run_date, idbs.sett_code, idbs.sett_date, ids.da_mkt_ppt_id, ids.gsp_group_id;
Planned_ssr_run_date	Label : Planned SSR Run Display only. Format : DD-MON-YYYY
sett_code	Label : Display only.
sett_date	Label : Display only. Format : DD-MON-YYYY
da_mkt_ppt_id	Label : Data Aggregator Display only.
mkt_ppt_name	Label : Display only.
da_mkt_ppt_role_code	Label : Aggregation Type Display only
gsp_group_id	Label : GSP Group Display only.
gsp_group_name	Label : Display only.
Block*: RNE_DAG*	Received Not Expected Data Aggregator Files block. Based on a runtime sub-query. Query only allowed. SELECT *<columns>* FROM idb_settlements idbs, idb_da_summaries ids, idb_mkt_ppts imk,

Object	Description
	idb_gsp_groups gspg WHERE gspg.gsp_group_id = ids.gsp_group_id AND imk.mkt_ppt_id = ids.da_mkt_ppt_id(+) AND idbs.planned_ssr_run_date = input run_date AND ids.da_mkt_ppt_role_code = DF/NULL (if filter checkbox selected) AND idbs_sett_code = Settlement Run(s) selected AND EXISTS (SELECT /*+ INDEX(DAGG IDG_IMP_FK1_I) */ 1 FROM idb_da_in_gsp_groups dagg WHERE idbs.sett_date BETWEEN dagg.eff_from_sett_date AND NVL(dagg.eff_to_sett_date, TO_DATE ('01-jan-4000','dd-mon-yyyy')) AND dagg.gsp_group_id = ids.gsp_group_id AND dagg.da_mkt_ppt_id = ids.da_mkt_ppt_id AND dagg.da_mkt_ppt_role_code = ids.da_mkt_ppt_role_code) AND EXISTS (SELECT /*+ INDEX(suda ida_ise_fk1_i) */ 1 FROM idb_sup_data_agtns suda WHERE suda.gsp_group_id = ds.gsp_group_id AND suda.da_mkt_ppt_id = ds.da_mkt_ppt_id AND suda.da_mkt_ppt_role_code = ds.da_mkt_ppt_role_code AND suda.sett_code = s.sett_code AND suda.sett_date = s.sett_date) AND NOT EXISTS (SELECT 1 FROM idb_sent_by_mkt_ppts sbmp, idb_df_standing_data dfsd WHERE sbmp.sent_by_mkt_ppts_id = dfsd.sent_by_mkt_ppts_id AND input run_date BETWEEN dfsd.start_sett_date AND dfsd.end_sett_date AND dfsd.gsp_group_id = ids.gsp_group_id AND dfsd.mkt_ppt_role_code = ids.da_mkt_ppt_role_code AND sbmp.mkt_ppt_id = isd.da_mkt_ppt_id (+)) ORDER BY idbs.planned_ssr_run_date, idbs.sett_code, idbs.sett_date, ids.da_mkt_ppt_id, ids.gsp_group_id;
Planned_ssr_run_date	Label : Planned SSR Run Display only. Format : DD-MON-YYYY
sett_code	Label : Display only.
sett_date	Label : Display only. Format : DD-MON-YYYY
da_mkt_ppt_id	Label : Data Aggregator Display only.
mkt_ppt_name	Label : Display only.
da_mkt_ppt_role_code	Label : Aggregation Type

Object	Description
	Display only
gsp_group_id	Label : GSP Group Display only.
gsp_group_name	Label : Display only.

Block: *M_SUP*	Missing Suppliers block. Based on a runtime sub-query.
	Query only allowed.
	`SELECT <columns>`
	`FROM idb_settlements s,`
	`idb_da_in_gsp_groups dagg`
	`WHERE dagg.da_mkt_ppt_role_code = DF/NULL (if filter checkbox selected)`
	`AND s.sett_code = Settlement Run(s) selected`
	`AND s.planned_ssr_run_date = input run_date`
	`AND s.sett_date BETWEEN dagg.eff_from_sett_date`
	`AND NVL( dagg.eff_to_sett_date,`
	`TO_DATE( '01-JAN-4000',`
	`'DD-MON-YYYY' ) )`
	`AND EXISTS( SELECT /*+ INDEX(suda3 ida_ise_fk1_i) */`
	`1`
	`FROM idb_sup_data_agtns suda3`
	`WHERE suda3.gsp_group_id = dagg.gsp_group_id`
	`AND suda3.da_mkt_ppt_id =`
	`dagg.da_mkt_ppt_id`
	`AND suda3.da_mkt_ppt_role_code =`
	`dagg.da_mkt_ppt_role_code`
	`AND suda3.sett_code = s.sett_code`
	`AND suda3.sett_date = s.sett_date`
	`AND suda3.data_agtn_run_number =`
	`(SELECT MAX(`
	`suda4.data_agtn_run_number)`
	`FROM idb_sup_data_agtns suda4`
	`WHERE suda4.gsp_group_id =`
	`suda3.gsp_group_id`
	`AND suda4.da_mkt_ppt_id =`
	`suda3.da_mkt_ppt_id`
	`AND suda4.da_mkt_ppt_role_code =`
	`suda3.da_mkt_ppt_role_code`
	`AND suda4.sett_code =`
	`suda3.sett_code`
	`AND suda4.sett_date =`
	`suda3.sett_date))`
	`AND NOT EXISTS( SELECT /*+ INDEX(suda1 ida_ise_fk1_i) */`
	`1`
	`FROM idb_sup_data_agtns suda1`
	`WHERE suda1.gsp_group_id =`
	`dagg.gsp_group_id`
	`AND suda1.da_mkt_ppt_id =`
	`dagg.da_mkt_ppt_id`
	`AND suda1.da_mkt_ppt_role_code =`
	`dagg.da_mkt_ppt_role_code`
	`AND suda1.sett_code = s.sett_code`
	`AND suda1.sett_date = s.sett_date`
	`AND suda1.sup_mkt_ppt_id =`
	`dagg.sup_mkt_ppt_id`
	`AND suda1.sup_mkt_ppt_role_code =`
	`dagg.sup_mkt_ppt_role_code`
	`AND suda1.data_agtn_run_number =`
	`(SELECT`
	`MAX(suda2.data_agtn_run_number)`
	`FROM idb_sup_data_agtns suda2`
	`WHERE suda2.gsp_group_id =`
	`suda1.gsp_group_id`
	`AND suda2.da_mkt_ppt_id =`
	`suda1.da_mkt_ppt_id`
	`AND suda2.da_mkt_ppt_role_code=`
	`suda1.da_mkt_ppt_role_code`
	`AND suda2.sett_code =`

Object	Description
	suda1.sett_code AND suda2.sett_date = suda1.sett_date)) ORDER BY s.planned_ssr_run_date, s.sett_code, s.sett_date, dagg.da_mkt_ppt_id, dagg.sup_mkt_ppt_id, dagg.gsp_group_id;
Planned_ssr_run_date	Label : Planned SSR Run Display only. Format : DD-MON-YYYY
da_mkt_ppt_id	Label : Data Aggregator Display only.
mkt_ppt_name	Label : Display only.
da_mkt_ppt_role_code	Label : Aggregation Type Display only
gsp_group_id	Label : GSP Group Display only.
gsp_group_name	Label : Display only.
Sup_mkt_ppt_id	Label : Supplier Display only.
Sup_mkt_ppt_name	Label : Display only.
Block: *U_SUP*	Unexpected Suppliers block. Based on a runtime sub-query. Query only allowed. SELECT *<columns>* FROM idb_settlements s, idb_sup_data_agtns suda WHERE suda.da_mkt_ppt_role_code = DF/NULL (if filter checkbox selected) AND s.sett_code = Settlement Run(s) selected AND s.planned_ssr_run_date = :ctrl.nbt_run_date AND s.sett_code = suda.sett_code AND s.sett_date = suda.sett_date AND suda.data_agtn_run_number = input run_date (SELECT MAX(suda1.data_agtn_run_number) FROM idb_sup_data_agtns suda1 WHERE suda1.gsp_group_id = suda.gsp_group_id AND suda1.da_mkt_ppt_id = suda.da_mkt_ppt_id AND suda1.da_mkt_ppt_role_code = suda.da_mkt_ppt_role_code AND suda1.sett_code = suda.sett_code AND suda1.sett_date = suda.sett_date) AND NOT EXISTS (SELECT /*+ INDEX(dagg1 idg_imp_fk1_i) */ 1 FROM idb_da_in_gsp_groups dagg1 WHERE s.sett_date BETWEEN dagg1.eff_from_sett_date AND NVL(dagg1.eff_to_sett_date, TO_DATE('01-JAN-4000', 'DD-MON-YYYY')) AND dagg1.gsp_group_id =

Object	Description
	suda.gsp_group_id AND dagg1.da_mkt_ppt_id = suda.da_mkt_ppt_id AND dagg1.da_mkt_ppt_role_code = suda.da_mkt_ppt_role_code AND dagg1.sup_mkt_ppt_id = suda.sup_mkt_ppt_id AND dagg1.sup_mkt_ppt_role_code = suda.sup_mkt_ppt_role_code) ORDER BY s.planned_ssr_run_date, s.sett_code, s.sett_date, suda.da_mkt_ppt_id, suda.sup_mkt_ppt_id, suda.gsp_group_id;
Planned_ssr_run_date	Label : Planned SSR Run Display only. Format : DD-MON-YYYY
da_mkt_ppt_id	Label : Data Aggregator Display only.
Supplier	Label: Supplier Display only.
mkt_ppt_name	Label : Display only.
da_mkt_ppt_role_code	Label : Aggregation Type Display only
gsp_group_id	Label : GSP Group Display only.
gsp_group_name	Label : Display only.
Sup_mkt_ppt_id	Label : Supplier Display only.
Sup_mkt_ppt_name	Label : Display only.

8.5.2.6 Action on Query

None.

8.5.2.7 Action on Update

None.

8.5.2.8 Action on Insert

None.

8.5.2.9 Action on Delete

None.

8.5.3 Settlement Run

```
Procedure Name:     IRS_Settlement_Run
Arguments:          argc (IN)
                    argv (IN)
                    Format as described in IRS_Read_Parameters
Return:             Status indicating success or reason for failure.
```

Performs the settlement run for the settlement day and settlement indicated by the input parameters, optionally restricting the GSP groups included and/or using selected data for the run.

The procedure is also responsible for multi-threading the processing required to optimise performance by making use of the facilities provided by the CSC Scheduler subsystem.

Pseudo Code:

```
IF IRS_Read_Parameters( argc, argv,
                        IRS_Working_Context ) is successful
     IF IRS_Validate_Data_Availability( IRS_Working_Context )
          Is successful

          FOR each GSP group in IRS_Working_Context
               Update record in idb_ssr_runs setting
                           status of run to 'Executing'.

               SUBMIT( current_time,
                       IRS_GSP_Processor,
                       param=derived from IRS_Working_Context
                      )
          ENDFOR

          CSC_Wait_all processes to complete

          From idb_pd_sup_purchases summate purchases for each GSP
          group and compare with values supplied by the SSA from the
          table idb_gsp_group_takes. Generate any discrepancies
          found.
     ELSE
          RETURN status returned by
                    IRS_Validate_Data_Availability
     ENDIF
ELSE
     RETURN status returned by IRS_Read_Parameters
ENDIF
```

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```
IF status is successful
     SUBMIT( current_time,
             IRP_SSR_INITIATE_REPORTS,
             param=SSR Run number derived from
                 IRS_Working_Context)
ENDIF
```

8.5.4 Read Parameters

```
Procedure Name:     IRS_Read_Parameters
Arguments:          argc (IN)
                    argv (IN)
                    Format as described below
                    IRS_Working_Context (OUT)
Return:             Status indicating success or reason for failure.
```

Procedure will read the SSR run number from the command line, passed into the it using argv, and will then interrogate the database the following tables to populate the output parameter IRS_Working_Context:

- IDB_SSR_RUNS
- IDB_SSR_RUN_GSP_GROUP
- IDB_SUP_DATA_AGTN_IN_SSR_RUNS

The routine assumes that the strings held in argv will conform to the following syntax:

Command_line ::= *Settlement_Run_Number*

Settlement_Run_Number ::= *Number*

For every GSP group identified in the IRS_Working_Context a check will be made to ensure that every supplier has one and only one Default BM Unit defined for the Settlement Date of the SSR Run. The procedure reports the following exceptions:

- exception error for each Supplier having more than one BM Unit with the Default_BM_Unit_Flag set to "Y" for the Settlement Date.

8.5.5 Validate Data Availability

```
Procedure Name:     IRS_Validate_Data_Availability
Arguments:          IRS_Working_Context (IN)
Return:             Status indicating success or reason for failure.
```

Checks that the data required to perform the run specified in the IRS_Working_Context parameter is available in the database. If all the data is available then the procedure returns success else it returns a status indicating which data failed validation.

Parameters which are marked as -1 in the IRS_Working_Context will have appropriate values for them chosen from the database according to the rules defined in the logical design [ICONMOD]. Those that have non -1 values will be validated, again, according to the rules in the logical design [ICONMOD].

Any failure to meet the defined rules results in an error being returned from the routine.

8.5.6 Process GSP Group

```
Procedure Name:     IRS_GSP_Processor
Arguments:          argc (IN)
                    argv (IN)
```

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```
                    Format as described in IRS_Read_Parameters
Return:             Status indicating success or reason for failure.
```

This procedure is the entry point for the separate GSP based processes invoked by the IRS_Settlement_Run process. It makes use of IRS_Read_Parameters to interpret the input parameters passed in to the process using the argc method and formulates an IRS_Working_Context before beginning its processing. Parameter checking will additionally ensure that only one GSP group is specified for processing.

The procedure reports on input data used for the SSR Run. This includes reporting the following exception warnings:

- exception warnings for all default input data used for the SSR Run
- exception warnings for each Half Hourly Data Aggregators excluded from the run.
- exception warning for each instance of missing or superfluous supplier data in default aggregation files.
- exception warnings for each unexpected Data Aggregation file which is not used in the run.

The procedure will then call the following routines in sequence to perform the necessary processing for the GSP group:

i) Process Non-half Hourly Data (both the "ISRA SSR Run" and the "SVAA SSR Run" sections – the latter describes additional processing carried out since the NETA Start Date)

ii) Aggregate Half Hourly Data

iii)Perform GSP Based Calculations.

8.5.7 Process Non-Half Hourly Data - ISRA SSR Run

```
Procedure Name:     IRS_NHH_Processor
Arguments:          IRS_Working_Context (IN)
                    IRS_BM_PD_Consums (IN/OUT)
Return:             Status indicating success or reason for failure.
```

This procedure will perform all the processing required to aggregate the data supplied by non-half hourly data providers by supplier and consumption component class for the GSP group identified by the input parameters.

The logical steps performed are documented in the logical design [ICONMOD] with the 'SSR Run Event' description.

The procedure reads records from idf_sup_purchase_matrices for the GSP group being processed according to the applicable aggregation data sets and stores them into a memory resident structure, IRS_BM_PD_Consums, for each consumption component class and settlement period. Each row of the array has the aggregated consumption and line loss set according to the following equations:

$$\text{agtd\_sup\_consum} = \sum_{lpta} (SPM[component]_{saptl} xPPCC_{ptj})$$

$$\text{agtd\_sup\_line\_loss} = \sum_{lpta} (SPM[component]_{saptl} xPPCC_{ptj} x(LLF_{slj} - 1))$$

where component is one of Total EAC, Total AA or Total Unmetered and the subscripts used are as used in the logical design [ICONMOD].

The total MSID count is also aggregated and stored in IRS_BM_PD_Consums.

These equations are expansions of those detailed in the logical design [ICONMOD]. The form presented allows the physical design to use the results of a single ordered query to perform the required calculation.

The idf_sup_purchase_matrices entity will be processed primarily ordered by aggregator; this will allow values for idf_profiled_spm to be calculated and stored on the fly.

To improve performance values for PPCC and LLF will be read into memory and accessed from there.

8.5.8 Process Non-Half Hourly Data - SVAA SSR Run

```
Procedure Name:     IRS_NHH_Processor
Arguments:          IRS_Working_Context (IN)
                    IRS_BM_PD_Consums (IN/OUT)
Return:             Status indicating success or reason for failure.
```

This procedure will perform all the processing required to aggregate the data supplied by non-half hourly data providers by BM Unit, Supplier and consumption component class for the GSP group identified by the input parameters.

The logical steps performed are documented in the logical design [ICONMOD] with the 'SSR Run Event' description.

The procedure reads records from idf_sup_purchase_matrices for the GSP group being processed according to the applicable aggregation data sets and assigns the consumption/line loss values to the appropriate BM Unit through a lookup on idb_nhh_bm_unit_allocation table. Where the Valid Profile Class Settlement Configuration from the profiled SPM data for each Supplier in the GSP Group has a BM Unit allocated for the Settlement Day, then this BM Unit is used. If there is no BM Unit allocated then the Default BM Unit for the Supplier in GSP Group is used. If there is no BM Unit allocated and the Supplier in GSP Group does not have a Default BM Unit defined for the Settlement Day, then the consumption/line loss values are excluded from the SSR Run and an exception warning is reported.

The values are stored in a memory resident structure, IRS_BM_PD_Consums (there are 2 versions of this structure, a SSC Import version and a SSC Export version), for each BM Unit, consumption component class and settlement period. Each row of the array has the BM Unit Aggregated Energy and Line Losses set according to the following equations:

$$\text{agtd\_bm\_consum} = \sum_{lpta} (SPM[component]_{saptl} xPPCC_{ptj})$$

$$\text{agtd\_bm\_line\_loss} = \sum_{lpta} (SPM[component]_{saptl} xPPCC_{ptj} x(LLF_{slj} - 1))$$

where component is one of Import EAC, Export EAC, Import AA, Export AA or Total Unmetered and the subscripts used are as used in the logical design [ICONMOD].

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These equations are expansions of those detailed in the logical design [ICONMOD]. The form presented allows the physical design to use the results of a single ordered query to perform the required calculation.

The idf_sup_purchase_matrices entity will be processed primarily ordered by aggregator; this will allow values for idf_profiled_spm to be calculated and stored on the fly.

To improve performance values for PPCC and LLF will be read into memory and accessed from there.

8.5.9 Process Non-Half Hourly Disconnection Data

```
Procedure Name:     IRS_NHH_DD_Processor
Arguments:          IRS_Working_Context (IN)
                    IRS_BM_PD_discon_vol (IN/OUT)
Return:             Status indicating success or reason for failure.
```

This procedure will perform all the processing required to aggregate the disconnection purchase matrix data supplied by non-half hourly data providers by BM Unit, Supplier and consumption component class for the GSP group identified by the input parameters.

The logical steps performed are documented in the logical design [ICONMOD] with the 'SSR Run Event' description.

The procedure reads records from idf_discon_purchase_matrices for the GSP group being processed according to the applicable aggregation data sets and assigns the consumption/line loss values to the appropriate BM Unit through a lookup on idb_nhh_bm_unit_allocation table. Where the Valid Profile Class Settlement Configuration from the profiled DPM data for each Supplier in the GSP Group has a BM Unit allocated for the Settlement Day, then this BM Unit is used. If there is no BM Unit allocated then the Default BM Unit for the Supplier in GSP Group is used. If there is no BM Unit allocated and the Supplier in GSP Group does not have a Default BM Unit defined for the Settlement Day, then the consumption/line loss values are excluded from the SSR Run and an exception warning is reported.

The values are stored in a memory resident structure, IRS_BM_PD_Consums for each BM Unit, consumption component class and settlement period. Each row of the array has the BM Unit Aggregated Energy and Line Losses set according to the following equations:

$$agtd\_bm\_consum = \sum_{lpta} (DSPM[component]_{saptl} \times PPCC_{ptj})$$

$$agtd\_bm\_line\_loss = \sum_{lpta} (SDPM[component]_{saptl} \times PPCC_{ptj} \times (LLF_{slj} - 1))$$

where component is one of Import EAC, Export EAC, Import AA, Export AA or Total Unmetered and the subscripts used are as used in the logical design [ICONMOD].

These equations are expansions of those detailed in the logical design [ICONMOD]. The form presented allows the physical design to use the results of a single ordered query to perform the required calculation.

The idf_discon_purchase_matrices entity will be processed primarily ordered by aggregator; this will allow values for idf_profiled_dpm to be calculated and stored on the fly.

To improve performance values for PPCC and LLF will be read into memory and accessed from there.

~~8.5.9~~8.5.10 Aggregate Half Hourly Data

```
Procedure Name:     IRS_HH_Aggregator
Arguments:          IRS_Working_Context (IN)
                    IRS_BM_PD_Consums (IN/OUT)
Return:             Status indicating success or reason for failure.
```

This procedure will sum consumption and line losses recorded in idf_agtd_sup_da_pd_consums for the GSP group being processed over data aggregators and store the result in a memory resident structure, IRS_BM_PD_Consums. Where the BM Unit is not specified in the HH data, the Default BM Unit for the appropriate Supplier in the GSP Group will be used.

If the specified BM Unit is invalid then a warning is logged in the Exception Report and the Default BM Unit is used. The BM Unit can be invalid in three ways:

- BM Unit not defined on SVAA system
- BM Unit not valid on Settlement Date
- BM Unit not valid for GSP Group and Supplier.

Where the BM Unit is not specified in the HH data or the specified BM Unit is invalid, and the Supplier in GSP Group does not have a Default BM Unit defined for the Settlement Day, then the consumption/line loss values are excluded from the SSR Run and an exception warning is reported.

The calculated IRS_BM_PD_Consums array is passed through to IRS_GSP_Calcs for further processing.

8.5.11 Aggregate Half Hourly Demand Disconnection Volume Data

```
Procedure Name:     IRS_HH_Aggregator_DD
Arguments:          IRS_Working_Context (IN)
                    IRS_BM_PD_DD_Consums (IN/OUT)
Return:             Status indicating success or reason for failure.
```

This procedure will sum disconnection energy and line losses recorded in idf_agtd_sup_da_pd_discon_volume for the GSP group being processed over data aggregators and store the result in a memory resident structure, IRS_BM_PD_dd_Consums. Where the BM Unit is not specified in the HH data, the Default BM Unit for the appropriate Supplier in the GSP Group will be used.

If the specified BM Unit is invalid then a warning is logged in the Exception Report and the Default BM Unit is used. The BM Unit can be invalid in three ways:

- BM Unit not defined on SVAA system
- BM Unit not valid on Settlement Date
- BM Unit not valid for GSP Group and Supplier.

Where the BM Unit is not specified in the HH data or the specified BM Unit is invalid, and the Supplier in GSP Group does not have a Default BM Unit defined for the Settlement Day, then the consumption/line loss values are excluded from the SSR Run and an exception warning is reported.

The calculated IRS_BM_PD_dd_Consums array is passed through to IRS_GSP_Calcs for further processing.

8.5.108.5.12 Perform GSP Based Calculations

```
Procedure Name:     IRS_GSP_Calcs
Arguments:          IRS_Working_Context (IN)
                    IRS_BM_PD_Consums (IN)
                    IRS_BM_PD_Consums(OUT)
                    IRS_Psp (OUT)
Return:             Status indicating success or reason for failure.
```

For the GSP group identified in the IRS_Working_Context this procedure will calculate and apply GSP correction factors for every half hour period to each consumption component stored in (IRS_BM_PD_Consums - IRS_BM_PD_DD_Consums) by this SSR run by calling IRS_GSP_Correction. Once this is done the memory resident BM Unit values will be secured in the idf_agtd_bm_pd_consums entity.

The procedure will then calculate Supplier Purchases for the group by calling IRS_Calculate_PSP. As the Settlement Date is after the start of the NETA, the Supplier Purchases will be zero. No spillage adjustments will be made. The memory resident structure, IRS_Psp, will be secured to the idb_pd_sup_purchases entity before exiting.

8.5.118.5.13 Perform GSP Correction

```
Procedure Name:     IRS_GSP_Correction
Arguments:          IRS_Working_Context (IN)
                    IRS_BM_PD_Consums (IN/OUT)
Return:             Status indicating success or reason for failure.
```

For every GSP group identified in the IRS_Working_Context this procedure will calculate and apply GSP correction factors for every half hour period to each consumption component stored in IRS_BM_PD_Consums.

The factors are calculated and applied according to the logic described in the logical design [ICONMOD].

The processing required will be ordered in the following manner for each GSP group to be processed:

i. read GSP Group Takes (from idb_gsp_group_takes) for the GSP group being processed and GSP Group Scaling Factors, W_n, (from idb_gsp_group_cctn_sfs) into memory all consumption component classes;

ii. for each period in the settlement day being processed a GSP correction factor, CF_j, will be calculated using the following equation:

$$CF_i = 1 + \frac{GSPGroupTake_i - \sum_{ni} C_{nii}}{\sum_{ni} (C_{nii}\, x W_n)}$$

Each factor calculated will be stored in idb_gsp_group_cctn_factors and also retained in memory for the next stage;

iii. for each consumption and line loss component aggregated and stored in IRS_BM_PD_Consums the following formula will be used to calculate the corrected component with the result being stored back in the same record:

$$CorrectedComponent_{nii} = C_{nii}\, x(1 + (CF_i - 1) x W_n)$$

8.5.128.5.14 Calculate Supplier Purchases

Procedure Name:	IRS_Calculate_PSP
Arguments:	IRS_Working_Context (IN)
	IRS_BM_PD_Consums (IN)
	IRS_Psp (IN/OUT)
Return:	Status indicating success or reason for failure.

For every GSP group identified in the IRS_Working_Context this procedure will calculate the unadjusted supplier deemed take, perform spillage adjustments if required and derive the supplier purchases.

The calculations are performed according to the logic described in the logical design [ICONMOD].

The processing will be performed in the following manner:

i. every record stored in IRS_BM_PD_Consums by this SSR run will be read and aggregated on a per supplier, period basis; import components being added and export components being subtracted. The result, Unadjusted Supplier Deemed Take, will be retained in IRS_Psp.

ii. if any of the values calculated for Unadjusted Supplier Deemed Take are negative then appropriate adjustments to take account of the spill must take place. This will be done by passing the memory resident array to IRS_spillage_adjust which will do this and return the data corrected.

iii. finally, the idb_sett_pd_prices is read into memory and then applied to the spill adjusted supplier consumption before it is written out to idb_pd_sup_purchases. The prices are applied according to the following equation, already detailed in the logical design [ICONMOD]:

$$SupplierPurchase_{gsj} = DeemedSupplierTake_{gsj} * (1 + TLM_j) * (1 + LRM_j) * PSP_j$$

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9 IRP Reports Subsystem Specification

9.1 Introduction

The ISRA Reporting Subsystem comprises a set of programs which produce reports and data file extracts specified for the ISRA system and a set of Oracle Forms which are used to initiate reports. The report programs are written in Pro*C and retrieve data from the ISRA database and the ISRA Flat File Store.

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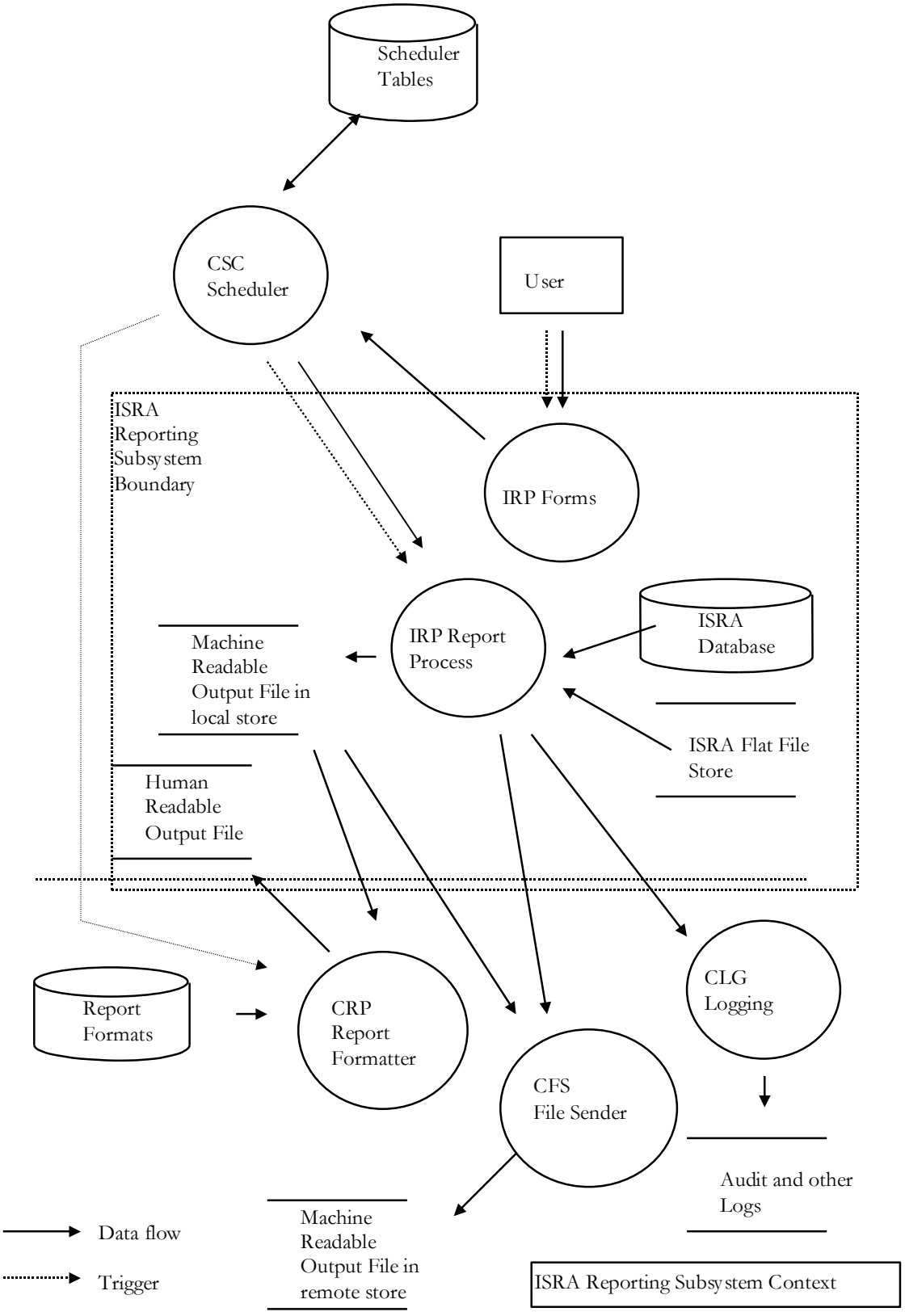
9.2 Subsystem Context



Some of the ISRA reports are produced by the subsystems which calculate the data contained in the reports. The following reports are produced by Daily Profile Production Run Subsystem:

1. Standard Settlement Configuration Report,
2. Tele-Switch Contact Interval Data Report,
3. Standing Profile Data Report,
4. Daily Profile Data Report,
5. Daily Profile Coefficient Extraction.

As there is a requirement for these reports to be available by manual request, the report is written to the ISRA Flat File Store by the subsystem generating the report and there is a separate program in the Reporting Subsystem, described below, which reproduces the report by reading the ISRA Flat File Store.

The report and data file extract programs which make up the reporting subsystem are initiated by a User, the initiating process is an Oracle Form which submits the activity using the CSC.SUBMIT stored procedure which is the interface to the Scheduler.

Parameters to report programs are passed to the CSC.SUBMIT procedure as a comma delimited string of values. These parameters are passed to the individual report programs by the Scheduler using the 'C' argc, argv mechanism. The report process is a child of the scheduler to which it returns a status when it completes. The scheduler records the exit status of report programs in the cdb_activity table.

The report programs read from the ISRA database or ISRA Flat File Store. The ISRA database is read using SQL and the ISRA Flat File Store using the CSL Library.

The report programs write textual output files in machine readable format. The files are written using CSL library. The report formats are defined in the following sections.

Some of the ISRA reports have external destinations, the machine readable versions are therefore 'external files' which contain a header indicating source and destination, a second header indicating the file is a data file, and a trailer including a checksum. The report program uses the CFS.EXPORT procedure to trigger export to an external system. The CFS.EXPORT stored procedure takes the file_id as a parameter.

Where the report needs to be produced in human readable format, the report program schedules the Report Formatter using the CRP.REPORT_FORMAT stored procedure call which takes file_id as a parameter. The Report Formatter reformats the output file using formatting information contained in the report format tables.

Failures, errors and exceptions are handled as follows:

1. If the CSC Subsystem fails then when the system is restarted, the scheduler detects that the activity did not finish and marks its status as 'unknown' in the cdb_activity table. The ISR System Administrator can query this table for information about processes whose status is unknown in order that they can be investigated and if necessary re-run.
2. If the report process fails, the scheduler does not receive a successful status and marks the activity as failed in the cdb_activity table. The ISR System

Administrator can query this table for information about processes which have failed in order that they can be investigated and re-run.

3. If the report process is unable to select any relevant data from the database then the report process produces an empty report file ie: which contains only a header and footer. The CLG logging subsystem is used to write a message to the Operator's log to indicate that no data was selected.
4. If an expected Oracle exception is encountered then the report process handles the exception and processing continues.
5. If an unexpected Oracle exception is encountered then the CLG logging subsystem is used to write a message to the Operator's log indicating that report generation has failed and to write an error to the error log. No output file is produced.

If a report needs to be repeated because of a process or system failure, it first deletes output files previously written by the failed run of the program.

The interfaces between the reporting subsystem and other subsystems are summarised as follows:

1. The report programs are called with parameters defined in the procedure specifications below.
2. Data is retrieved from the ISRA database using SQL.
3. CSL Library calls are used for read file access to the ISRA Flat File Store.
4. CSL Library calls are used for write file access to the output files. The output file formats are defined below.
5. The File Sender is triggered using the CFS.EXPORT procedure.
6. The Report Formatter is triggered using the CRP.FORMAT_REPORT procedure.
7. The CLG Logging Subsystem is used to produce operator and error logs. The CLG_write_log procedure is used to access the CLG Logging Subsystem.

Pro*C is chosen for the implementation of the report programs because:

All reports are required in machine and human readable formats, 'C' is more suited to the implementation of a two stage process with intermediate machine readable text files than Oracle Reports.

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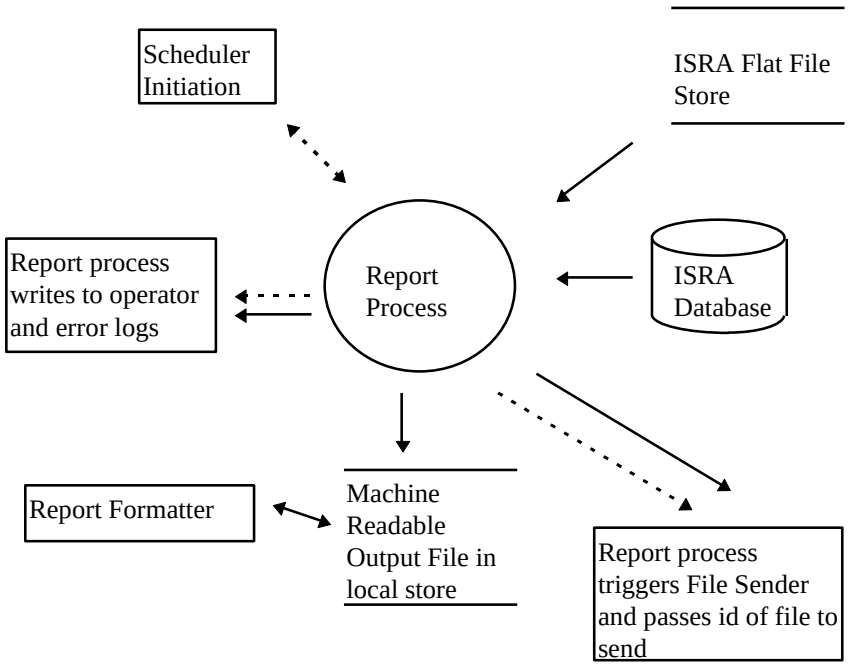
9.3 Subsystem Processing



Each report process has the same decomposition. Each interacts with the CSC Scheduler and CLG Logger and may interact with the CFS File Sender and CRP Report Formatter (indirectly). For all report processes, parameters are passed down by the CSC Scheduler, the process reads tables in the ISRA Database and ISRA Flat File Store and writes an output file in machine readable format. The format of the output file is hard-coded in the report program. [Details of the format of the output file are also implicitly contained in the cdb_record_info and cdb_field_info tables, because the formatting information used for conversion of machine readable to human readable reports is stored there.]

9.4 Data Usage

9.4.1 System Data

System tables which are important in the production of reports are generally used indirectly, that is they are hidden by library and stored procedure calls. For a number of reports more complex queries of the System tables are made and those tables are listed below:

- cdb_data_files;
- cdb_file_reference;
- cdb_ref_domains;
- cdb_ref_values.

Each report process reads ISRA database tables which are listed in the individual specifications below.

9.4.2 Local Data

Local data items used in report processing are described in the individual report specifications below.

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9.5 Report Details

To aid comprehension many of the reports include SQL statements to describe the implementation. These statements are indicative and do not constitute the implementation of the report.

All values are displayed in their external representation and may incur rounding. Where columns are totalled, the internal values are summed and the result rounded to the external representation. This rounding may result in the sum of the individual values used in the report differing from the totalled result used in the report.

9.5.1 Report IRP_PROF_EXTRACT

Function Definition Ref: I0008B Automatic Daily Profile Coefficient Extraction when initiated by I0008A, I0039 Extract Selected EAC Data.

Enquiry Descriptions: Daily Profile Coefficient File Extraction, EAC Data Extract Requested.

This data extract contains Daily Profile Coefficients with their Standard Settlement Configuration, Profile Class and GSP Group details.

The functionality described here is for manual request only. Daily Profile Coefficient Extract generation is described in the Chapter 7, Daily Profile Production Run Subsystem Specification - Report IDP_PROF_EXTRACT.

9.5.1.1 Inputs

```
Function Name:      IDP_PROF_EXTRACT()
Arguments:          Data Collector Id (IN)
                    From Settlement Date (IN)
                    To Settlement Date (IN)
                    GSP Group (IN)
Return:             success/failure
```

This program implements two functions. It may be called to produce an extract

1. For all GSP Groups for which a Data Collector is active for a specific settlement day, ie: IDP_PROF_EXTRACT(data_collector, from_settlement_day, NULL, NULL).
2. For one Data Collector, for one GSP Group, for a range of Settlement Days, ie: IDP_PROF_EXTRACT(data_collector, from_settlement_day, to_settlement_day, gsp_group).

This report is produced from files held in the ISRA Flat File Store.

9.5.1.2 Outputs

See Section 3.1.12.

9.5.1.3 Human Readable Output

See Section 3.1.12.

9.5.1.4 Functionality

The detailed processing for this report is described in the Function Descriptions and Enquiry Descriptions.

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9.5.2 Report IDP_PR_SSC

Function Definition Ref: I0025B Produce Profile Reports - Standard Settlement Configuration Report

Enquiry Description: Standard Settlement Configuration Report

This report contains Clock or Tele-switch Intervals with their Valid Measurement Profile Class and Profile Class details.

The functionality described here is for manual request only. Standard Settlement Configuration Report generation is described in Chapter 7, Daily Profile Production Run Subsystem Specification - Report IDP_PR_SSC.

9.5.2.1 Inputs

```
Function Name:      IDP_PR_SSC()
Arguments:          Settlement Date (IN)
                    Profile Production Run Number (IN)
Return:             success/failure
```

This report is produced from files held in the ISRA Flat File Store.

9.5.2.2 Outputs

See Section 3.1.14.1

9.5.2.3 Human Readable Output

See Section 3.1.14.1

9.5.2.4 Functionality

The detailed processing for this report is described in the Function Description and Enquiry Description.

9.5.3 Report IDP_PR_TSW

Function Definition Ref: I0025B Produce Profile Reports - Tele-Switch Contact Interval Data Report

Enquiry Description: Tele-Switch Contact Interval Data Report

This report contains Tele-switch Contact Intervals with Tele-switch User and Tele-switch Group details.

The functionality described here is for manual request only. Tele-Switch Contact Interval Data Report generation is described in Chapter 7, Daily Profile Production Run Subsystem Specification - Report IDP_PR_TSW.

9.5.3.1 Inputs

```
Function Name:      IDP_PR_TSW()
Arguments:          Settlement Date (IN)
                    Profile Production Run Number (IN)
Return:             success/failure
```

This report is produced from files held in the ISRA Flat File Store.

9.5.3.2 Outputs

See Section 3.1.15.4

9.5.3.3 Human Readable Output

See Section 3.1.15.4

9.5.3.4 Functionality

The detailed processing for this report is described in the Function Description and Enquiry Description.

9.5.4 Report IDP_PR_SPD

Function Definition Ref: I0025B Produce Profile Reports - Standing Profile Data Report

Enquiry Description: Standing Profile Data Report

This report contains Regression Coefficients with their Profile and Profile Class details.

The functionality described here is for manual request only. Standing Profile Data Report generation is described in Chapter 7, Daily Profile Production Run Subsystem Specification - Report IDP_PR_SPD.

9.5.4.1 Inputs

```
Function Name:       IDP_PR_SPD()
Arguments:           Settlement Date (IN)
                     Profile Production Run Number (IN)
                     GSP Group Id (IN) - List of GSP Groups to
                   be included
Return:              success/failure
```

This report is produced from files held in the ISRA Flat File Store.

9.5.4.2 Outputs

See Section 3.1.14.3

9.5.4.3 Human Readable Output

See Section 3.1.14.3

9.5.4.4 Functionality

The detailed processing for this report is described in the Function Description and Event Description.

9.5.5 Report IDP_PR_DPR

Function Definition Ref: I0025B Produce Profile Reports - Daily Profile Data Report

Enquiry Description: Daily Profile Data Report

This report contains Basic Period Profile Coefficients, Combined Period Profile Coefficients and Period Profile Coefficients with their Standard Settlement Configuration, Profile, Profile Class and GSP Group details.

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The functionality described here is for manual request only Daily Profile Data Report generation is described in Chapter 7, Daily Profile Production Run Subsystem Specification - Report IDP_PR_DPR.

9.5.5.1 Inputs

```
Function Name:       IDP_PR_DPR()
Arguments:           Settlement Date (IN)
                     Profile Production Run Number (IN)
                     GSP Group Id (IN) - List of GSP Groups to
                   be included
Return:              success/failure
```

This report is produced from files held in the ISRA Flat File Store.

9.5.5.2 Outputs

See Section 3.1.14.2

9.5.5.3 Human Readable Output

See Section 3.1.14.2

9.5.5.4 Functionality

The detailed processing for this report is described in the Function Description and Enquiry Description.

9.5.6 Report IRP_LLF_CON

This report is used to confirm on all SVA Line Loss Factor files (D0265) for a given market participant, settlement date and period are successfully loading into SVAA.

Enquiry Description: LLF Confirmation Report

9.5.6.1 Inputs

```
Function Name:       IRP_LLF_CON()
Arguments:           Distributor (IN)
                     Settlement Date (IN)
                     Settlement Period (IN)
                     LLF File Id (IN)
Return:              success/failure
```

This report is produced from the data held in idb_sett_pd_llfs database table.

9.5.6.2 Outputs

See Section 3.2.6

9.5.6.3 Human Readable Output

See Section 3.2.6

9.5.6.4 Functionality

This report is used after the annual LLF loads, to confirm that LLF values have been loaded for all the expected LLFCs. It mainly contains LLF File Id, LLF Class and Line Loss factor.

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The report process creates an output file based on the input parameters Distributor, Settlement Date, Settlement Period, LLF File Id and calls the Report Formatter to produce the output.

9.5.7 Report IRP_AUDIT

Function Definition Ref: I0023 Produce Audit Reports

Enquiry Description: Audit Report Requested

9.5.7.1 Inputs

```
Function Name:       IRP_AUDIT()
Arguments:           User Name (IN) - List of User Names
                     Audit Entity (IN) - List of Entities
                   Current Day Indicator (IN) - Indicator for
                     whether Audit Report required for current day
                     activity.
                     Start Date (IN)
                     End Date (IN)
Return:              success/failure
```

If the Current Day Indicator is set, the Start Date and End Date input parameters are ignored, and a *current day audit report* is produced by directly querying the audit tables (*cdb_audit_n* and *cdb_audit_fields_n*). The Start Date and End Date displayed in the report will both be set to the current date.

Otherwise, a *standard audit report* is produced from audit logs which are files held in the ISRA Flat File Store.

9.5.7.2 Outputs

See Section 3.1.19

9.5.7.3 Human Readable Output

See Section 3.1.9

9.5.7.4 Functionality

This report is described in the Function Description.

There are two distinct types of audit report:

- An audit report for database activity on a day or range of days prior to the current day - *standard audit report*
- An audit report for database activity on the current day - *current day audit report*

For a standard audit report, the report process reads the relevant Audit Log files to retrieve the data for the report output.

For a current day audit report, the report process reads the relevant audit database tables (*cdb_audit*_n, *cdb_audit_fields_n*) directly to retrieve the report output data. The report will be incomplete for the current day, as it will only contain audit information written to the audit tables up to the time of report generation. There will be no locking of the audit database tables being read, so information subsequently written to the audit tables will not be included in the report.

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For both types of report, the value of the online/batch indicator field of the report is derived by comparing the name of the user who made the change with the name of the batch user specified in table cdb_system_parameter. If they are the same, then the online/batch field of the report is set to 'B'. Otherwise it is set to 'O'.

9.5.8 Ad hoc Audit Reports

Function Definition Ref: I0038 Ad hoc Audit Reporting

The Ad hoc Audit Report functionality is provided by POSIX tools such as *grep* which can be used to filter the Audit Log files [CTSPEC].

9.5.9 Standing Data Audit Reports

Function Definition Ref: IC003 Authorise & Produce Standing Data Audit Report

This report is produced from a character string parameter which contains the audit report data for a change to one row in the ISRA Database. This report is only submitted by the Standing Data Maintenance Forms when a change is made to ISRA data which has been used in a Final Initial Settlement Run.

9.5.9.1 Outputs

See Section 3.1.20.

9.5.9.2 Human Readable Output

See Section 3.1.20.

9.5.9.3 Functionality

This report is described in the Function Description.

The input parameter contains data items as shown in the following example:

'Alexn|1-Apr-1998 00:21|GSP Group|Insert|GA, Area formerly known as Eastern, 1-Apr-1998'

The report process creates an output file and calls the Report Formatter to produce the output.

The value of the online/batch indicator field of the report is derived by comparing the name of the user who made the change with the name of the batch user specified in table cdb_system_parameter. If they are the same, then the online/batch field of the report is set to 'B'. Otherwise it is set to 'O'.

9.5.9 Standing Data Update Report for Suppliers

Function Definition Ref: I0049 Produce Standing Data Update Report for Suppliers.

This report is produced with reference to an individual Supplier, or for all Suppliers if no Supplier ID is provided, over a specified timeframe of change dates.

All records from the Standing Data Update Audit table (IDB_SUP_GSP_DA_AUTO_ST_DATA) matching the specified individual Supplier ID, or all Suppliers if no Supplier ID is provided, and where the record's EARLIEST_LOAD_DATE or LATEST_LOAD_DATE are within the specified timeframe will be included in the report.

9.5.9.1 Outputs

See Section 3.2.6.

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9.5.9.2 Human Readable Output

See Section 3.2.6.

9.5.9.3 Functionality

This report is described in the Function Description.

The input parameters determine the Supplier(s) and the period over which the report should select its data.

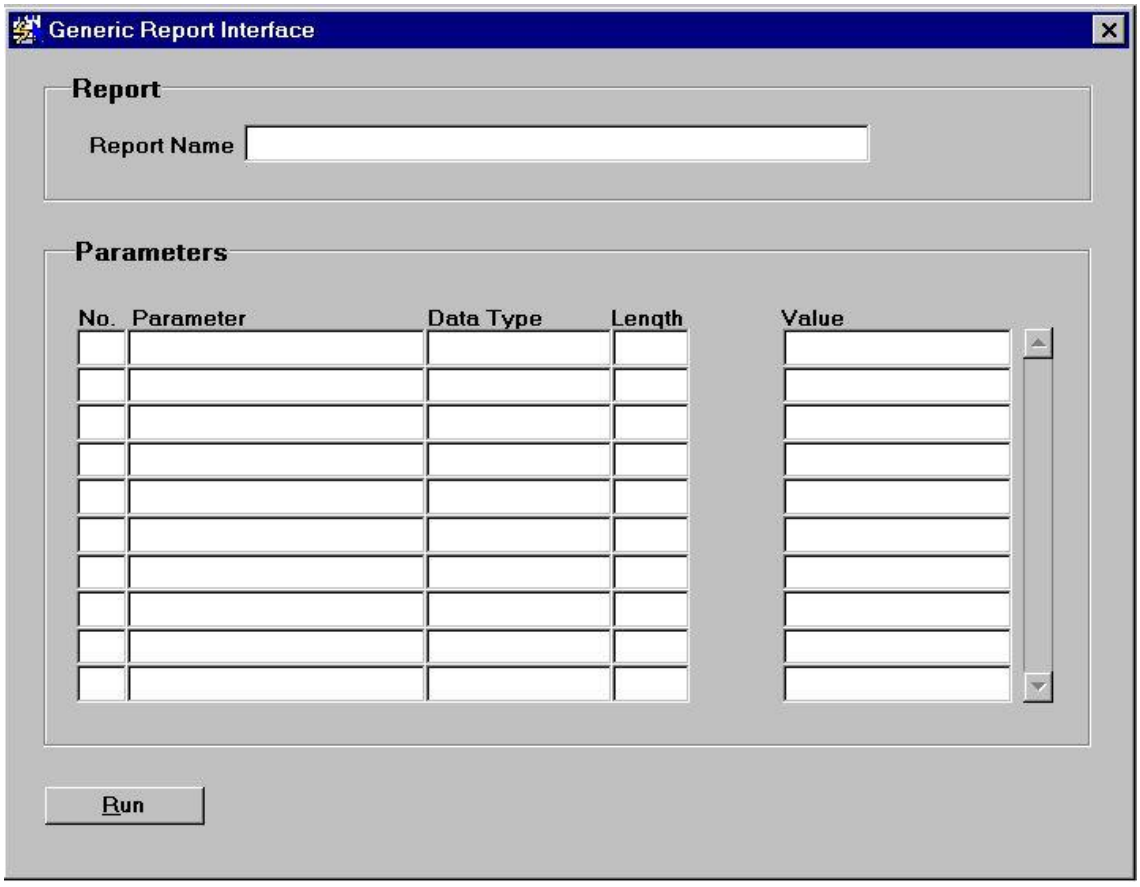
The report process creates an output file and calls the Report Formatter to produce the output if the user chooses to view the Human-readable version of the report.

9.6 Forms Details

9.6.1 Form ISY_GRINUTIL

The following describes the Generic Reports Interface utility form.

9.6.1.1 Screen layout



9.6.1.2 Screen behaviour

Functions Implemented	I0023 - Produce Audit Reports
Screen Initiation	The user selects the desired report from the reports menu. The menu will pass a parameter to GRINUTIL that will indicate to the form which report is to be run. Currently the following Report menu options are available : Audit Report. Standing Data Audit Report for Suppliers

Block	Report. Displays the name of the report that is being run, display only block.
On Entry	N / A
List of Values	N / A
Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A
Block	Parameters
On Entry	All parameters that are defined for the report are automatically queried.
List of Values	Value.
Poplists	N / A
Buttons	Run Initiates the report.
Additional Behaviour	N / A

9.6.1.3 Description

Form is based on the following two blocks :

CTRL - non base table control block which displays the Report Name, based on the parameter passed to the form from the menu. The parameter will map to value column on the cdb_ref_values table from which the associated description is selected in order to populate the nbt_report_name field. In addition, the report parameter passed to the form must equate to the actual report name that is to be run, this is so the form 'knows' which report to initiate.

REPA - based on idb_rept_params table. The purpose of this block is not to maintain the table but to provide a list of parameters that are required by the report. The table will be loaded in advance via sql scripts. The user enters the report parameter via the nbt_value field. The block is responsible for validating the values that the user enters, this is achieved by accessing SQL that is held in the idb_params table. On entry into a REPA record, the SQL is selected back from the idb_params table and used to populate a parameter record group - the list of values provided for the report parameters will be based on this record group so the list of values will be specific to each parameter. Validation is achieved by setting LOV For Validation = True.

For the Audit Report, if the Current Day Audit Indicator parameter has been set to 'Y', then the Start Date and End Date parameters will be defaulted to the current date. If the User subsequently tries to modify the Start Date or End Date to some value other than the current date, an error message will be displayed.

9.6.1.4 Form structure

Object	**Description**
Form: *GRINUTIL*	Title : Generic Reports Interface
Parameters	P1 - The report id
Record group	parameter_rg
List Of Values	parameter_lov based on parameter_rg

Object	Description
Block: *CTRL*	Report Name block. Non base table. Non Enterable. Join columns : ctrl.nbt_rept_id = repa.rept_id
nbt_rept_id	Non display. Populated from P1, which holds the rept_id.
nbt_report_name	Label : Report Name Display only. Derived from cdb_ref_values where domain = 'REPT' and value_from = P1.
Block *: REPA*	Report Parameters block. Based on idb_rept_params. Query allowed but disallow user defined queries, update. Auto-query on entry to the block. Order by param_no.
rept_id	Non display. Provides link back to ctrl.nbt_rept_id - use copy value from.
param_no	Label : No. Display only.
param_id	Non display. Provides link for nbt information from idb_params table.
nbt_param_name	Label : Parameter Display only.
nbt_data_type	Label : Data Type Display only.
null_allowed	Label : Null ? Display only. Check box.
nbt_value	Label : Value Display. User enterable. Update allowed depending on null_allowed flag. LOV / Validation driven from record group dynamically populated from idb_params table where param_id = para.param_id. LOV for Validation = True.

9.6.1.5 Action on Query

Automatically populate nbt_param_name from idb_params where param_id = repa.param_id.

Automatically populate nbt_data_type from idb_params where param_id = repa.param_id.

9.6.1.6 Action on Update

Validate para.nbt_value:

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(i) data validation provided by setting lov for validation = True.

(ii) mandatory / optional validation based on para.null_allowed flag.

(iii) Validate that where both From Settlement Date and To Settlement Date parameters are specified, the From Settlement Date does not exceed the To Settlement Date.

9.6.1.7 Action on Insert

N/A - no inserts.

9.6.1.8 Action on Delete

N/A - no deletes.

9.6.1.9 Action on Entry to Record

When-new-record-instance trigger should populate parameter_rg using SQL held in idb_params table where param_id = para.param_id.

9.6.1.10 Action on Button Run

On pressing this button, cursor should loop from the top record of the REPA block down to the bottom one, selecting back all the parameter values. A command is then built up using the rept_id || <all parameter values>, separated by commas. Pass this command to the CSC.submit() function to initiate the report.

When an Audit Report is initiated, if the Current Day Audit parameter has been set to TRUE, then a warning message will be displayed indicating that the Audit Report is for Current Day Activity, and therefore may not be complete.

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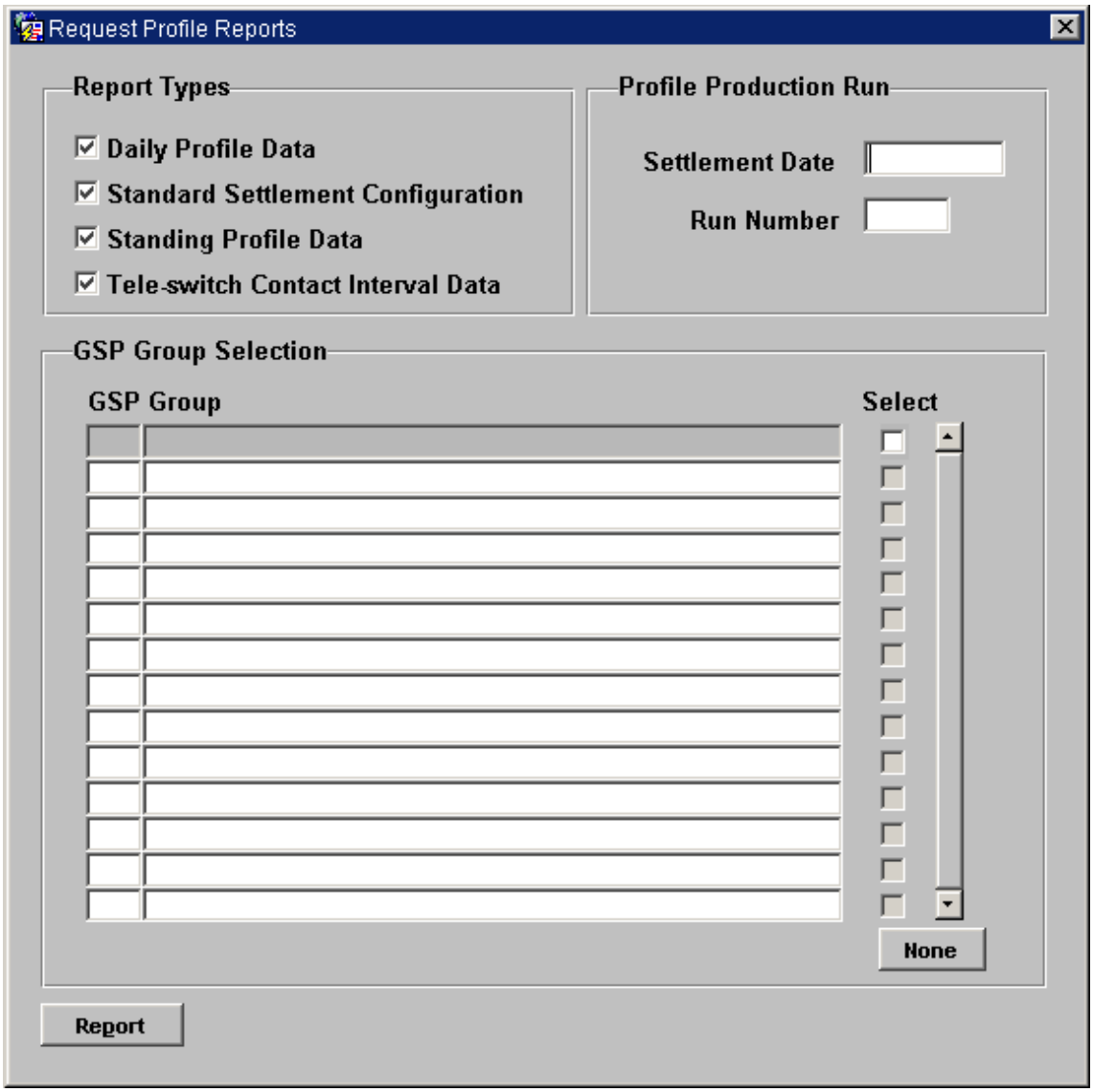
9.6.2 Form ISY_PROFREPT

The following describes the Profile Reports front-end form.

9.6.2.1 Screen layout



9.6.2.2 Screen behaviour

Functions Implemented	I0025A - Initiate Profile Reports.
Block	Report Types.
On Entry	Ready for user input. The user selects the required Report by checking the checkbox against the name of the report in the Report Types block.
List of Values	N / A
Poplists	N /A
Buttons	N / A
Additional Behaviour	N / A
Block	Profile Production Runs.
On Entry	Ready for user input of Settlement Date and Run Number.
List of Values	Run Number

Poplists	N / A
Buttons	N / A
Additional Behaviour	N / A
Block	GSP Group Selection
On Entry	GSP Group records automatically queried. The user selects the required GSP Group by selecting / deselecting the checkbox next to each GSP Group.
List of Values	On GSP Group. Displays the GSP Group Id and GSP Group Name.
Poplists	N / A
Additional Behaviour	N / A
Buttons	All Will set the checkbox for each GSP Group currently in the list to TRUE. (ie. All GSP Groups in the list are chosen). Report Will initiate each of the reports selected. If a report is requested for a run number which is not the latest run for the settlement date chosen, a warning message is displayed stating this fact and requesting confirmation for the report initiation.

9.6.2.3 Description

This form allows the user to manually request one or more of the daily profiling reports and enter criteria for this run. A set of reports is displayed, from which the user selects those required by checking a checkbox against the name of the report in the Report Types block.

This form is based on two blocks:

CTRL_REPT - Control non-base table block which holds the Report Type check boxes, the Settlement Date and the Run Number fields. The user is permitted to enter one or all of the Report Type check boxes and must enter a Settlement Date and Run Number.

GSPG - base table block on gsp_groups table. Auto query on entry to the form. No LOV's are available - the user makes their selection by selecting the check box next to each of the GSP Group record.

9.6.2.4 Form structure

Object	**Description**
Form: *PROFREPT*	Title : Initiate Profile Reports.
Block: *CTRL_REPT*	Control block, non base table.
nbt_daily_profile	Label : Daily Profile Data Check box. Display. User enterable. Insert, update allowed.
nbt_standing_profile	Label : Standing Profile Data Check box. Display. User enterable. Insert, update allowed.
nbt_std_sett_config	Label : Standard Settlement Configuration Check box. Display. User enterable. Insert, update allowed.

Object	Description
nbt_tsw_contact_intervals	Label : Tele-switch Contact Interval Data Check box. Display. User enterable. Insert, update allowed.
nbt_sett_date	Label : Settlement Date Date. Display. User enterable. Insert, update allowed. Format : DD-MON-YYYY
nbt_run_number	Label : Standing Profile Integer. Display. User enterable. Insert, update allowed. Pop list driven from idb_pfl_production_runs table where sett_date = ctrl_rept.nbt_sett_date and status is Completed. Pop list will validate this is true.
Block *: **GSGP***	GSP Group Selection block, based on idb_gsp_groups table. Query only allowed. Order by gsp_group_id.
gsp_group_id	Label : GSP Group Query only allowed. Non enterable.
gsp_group_name	Label : Name Query only allowed. Non enterable.
nbt_include	Check box. Display. User enterable. Insert, update allowed.

9.6.2.5 Action on Query

None.

9.6.2.6 Action on Update

None.

9.6.2.7 Action on Insert

None.

9.6.2.8 Action on Delete

None.

9.6.2.9 Action on Button Report

Validate the user has entered a valid combination of nbt_sett_date and nbt_run_number. The nbt_run_number must be valid for the nbt_sett_date entered and the run must have been successful. In addition nbt_sett_date and nbt_run_number parameter values are required for all reports; one or many GSP Group(s) can be selected for the Standing Profile Data report and the Daily Profile Data report.

The report / reports are initiated in the background using the CSC.Submit() function. A command is built up for each of the reports that consists of the <report name> ||’,’|| nbt_sett_date ||’,’||nbt_run_number ||’,’|| gsp_group_id. In addition, validation is carried out that ,firstly, ensures that at least one Report Type is selected and secondly, the correct parameters have been entered for the Report Type.

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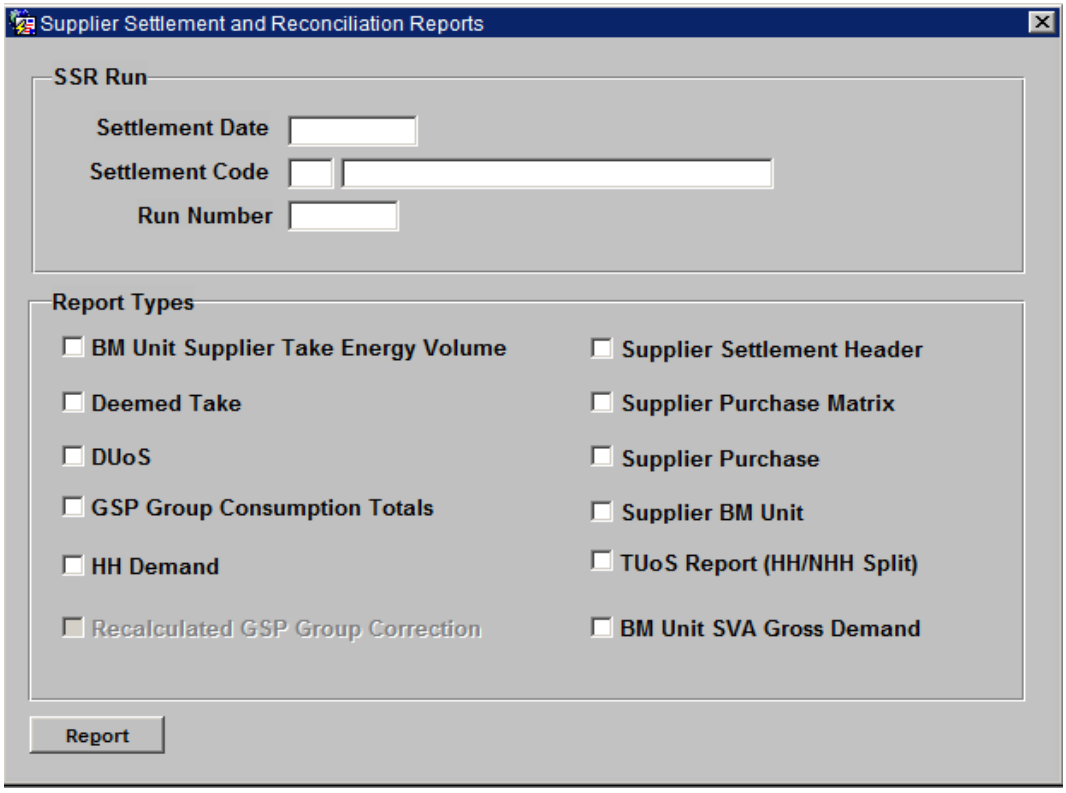
The user can choose a different Profile Production Run Number for the Settlement Date if required. The GSP Groups for which data has not been superseded by the subsequent run are displayed as confirmation.

9.6.3 Form ISY_SUSEREPT

The following describes the Supplier Settlement Reports front-end form.

9.6.3.1 Screen layout



9.6.3.2 Screen behaviour

Functions Implemented	I0026A - Initiate Produce Supplier Settlement Reports. I0027A - Initiate Produce SSR Reports.
Block	SSR Run.
On Entry	Ready for user input.
List of Values	On Settlement Code. Displays Settlement Code and Description.
Poplists	On Run Number. Displays Run Numbers for the Settlement Date and Settlement Code entered.
Buttons	N / A
Additional Behaviour	N / A
Block	Report Types.
On Entry	Ready for user input.
List of Values	N / A

Poplists	N / A
Buttons	Report Initiates each of the required SSR Reports.
Additional Behaviour	N / A

9.6.3.3 Description

The form consists of a single block which will allow entry of report parameters required for the Supplier Settlement and Reconciliation Reports.

Form is based on one block:

REPT - Non base table block, allows the parameters of the report to be selected. The user specifies the parameter values either by directly typing them into the parameter fields, as in the case for a nbt_sett_date, or by the use of a list of values and a pop list, as in the case for the nbt_sett_code and nbt_ssr_run_number respectively.

The REPT block also contains a list of checkboxes which allows the desired report to be selected.

Pressing the **Report** button causes a command to be built up, depending on the Report Type selected, that includes the report name and a list of parameters.

Note also that for settlement dates before the NETA Start Date, the BM Unit Supplier Take Energy Volume and BM Unit SVA Gross Demand are greyed out and unavailable (see screen layout above). For dates on or after the NETA Start Date, the BM Unit Supplier Energy Take Volume report and BM Unit SVA Gross Demand are available. The greyed out Recalculated GSP Group Correction is no longer available.

9.6.3.4 Form structure

Object	**Description**
Form: *SUSEREPT*	Title : Supplier Settlement and Reconciliation Reports.
Block: ***REPT***	Supplier Settlement and Reconciliation block.
nbt_sett_date	Label : Settlement Date Display. List item. User enterable. Format : DD-MON-YYYY
nbt_sett_code	Label : Settlement Code Display. List item. User enterable. LOV / Validation driven from idb_sett_types table where exists a record in idb_ssr_runs table with a ssr_run_status = 'C' (Completed Successfully) for the sett_date = nbt_sett_date.
nbt_sett_desc	Label : Settlement Code Display only.
nbt_ssr_run_number	Label : Run Number Display. List item. User enterable. Pop list driven from idb_ssr_runs table where the sett_code = nbt_sett_code and sett_date = nbt_sett_date.

Object	Description
nbt_hh_demand	Label : HH Demand Display. Check box. User enterable.
nbt_deemed_take	Label : Deemed Take Display. Check box. User enterable.
nbt_supp_purchase	Label : Supplier Purchase Display. Check box. User enterable.
nbt_supp_purch_matrix	Label : Supplier Purchase Matrix Display. Check box. User enterable.
nbt_tuos	Label : Tuos (HH/NHH Split) Display. Check box. User enterable.
nbt_duos	Label : Duos Display. Check box. User enterable.
nbt_bm_unit_supplier_take	Label : BM Unit Supplier Take Display. Check box. User enterable.
nbt_bm_unit_sva_gross_demand	Label : BM Unit SVA Gross Demand Display. Check box. User enterable.
nbt_supp_sett_hdr	Label : Supplier Settlement Header Display. Check box. User enterable.
nbt_gsp_group_consum_totals	Label : GSP Group Consumption Totals Display. Check box. User enterable.

9.6.3.5 Action on Query

None.

9.6.3.6 Action on Update

Do not allow entry of a nbt_sett_code unless a nbt_sett_date has been entered. The nbt_sett_code must be a valid entry in idb_sett_types where exists a record in idb_ssr_runs table with a ssr_run_status = 'C' (Completed Successfully) for the sett_date = nbt_sett_date.

Do not allow entry of a nbt_run_number unless a nbt_sett_date and a nbt_sett_code has been entered. The nbt_ssr_run_number field must be a valid ssr_run_number where the sett_date = rept.nbt_sett_date and sett_code = rept.nbt_sett_code.

9.6.3.7 Action on Insert

None.

9.6.3.8 Action on Delete

None.

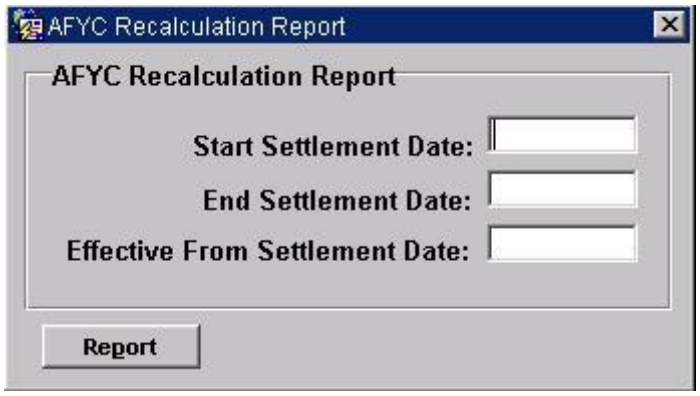
9.6.3.9 Action on Button Report

The report / reports are initiated in the background using the CSC.Submit() function. A command is built up for each of the reports that consists of the <Report Name> || nbt_ssr_run_number and market participant details.

9.6.4 Form ISY_AFYC_REPT

The following describes the AFYC Report front-end form, which initiates the AFYC Recalculation Report.

9.6.4.1 Screen layout



9.6.4.2 Screen behaviour

Functions Implemented	I0045 - Produce AFYC Recalculation Report.
Block	AFYC Recalculation Report.
On Entry	Ready for user input.
List of Values	On Start Settlement Date, displays Settlement Dates which have a completed Settlement Run. On End Settlement Date, displays Settlement Dates which have a completed Settlement Run.
Poplists	N / A
Buttons	Report Initiate the AFYC Recalculation Report.
Additional Behaviour	N / A

9.6.4.3 Description

The form consists of a single block which will allow entry of the report parameters required for the AFYC Recalculation Reports.

Form is based on one block:

REPT - Non base table block, allows the parameters of the report to be selected. The user specifies the parameter values either by directly typing them into the parameter fields, or, for Start Settlement Date or End Settlement Date, by the use of a list of values.

Pressing the **Report** button causes a command to be built up that includes the report name and a list of parameters.

9.6.4.4 Form structure

Object	Description
Form: *AFYCREPT*	Title : AFYC Recalculation Report.
Block: ***REPT***	AFYC Recalculation block.
start_sett_date	Label : Start Settlement Date Display. List item. User enterable. Format : DD-MON-YYYY LOV / Validation driven from idb_sett_runs table where exists a record with a ssr_run_status = 'C' (Completed Successfully).
end_sett_date	Label : End Settlement Date Display. List item. User enterable. Format : DD-MON-YYYY LOV / Validation driven from idb_sett_runs table where exists a record with a ssr_run_status = 'C' (Completed Successfully).
eff_fromt_sett_date	Label : Effective From Settlement Date Display. List item. User enterable. Format : DD-MON-YYYY

9.6.4.5 Action on Query

None.

9.6.4.6 Action on Update

None.

9.6.4.7 Action on Insert

None.

9.6.4.8 Action on Delete

None.

9.6.4.9 Action on Button Report

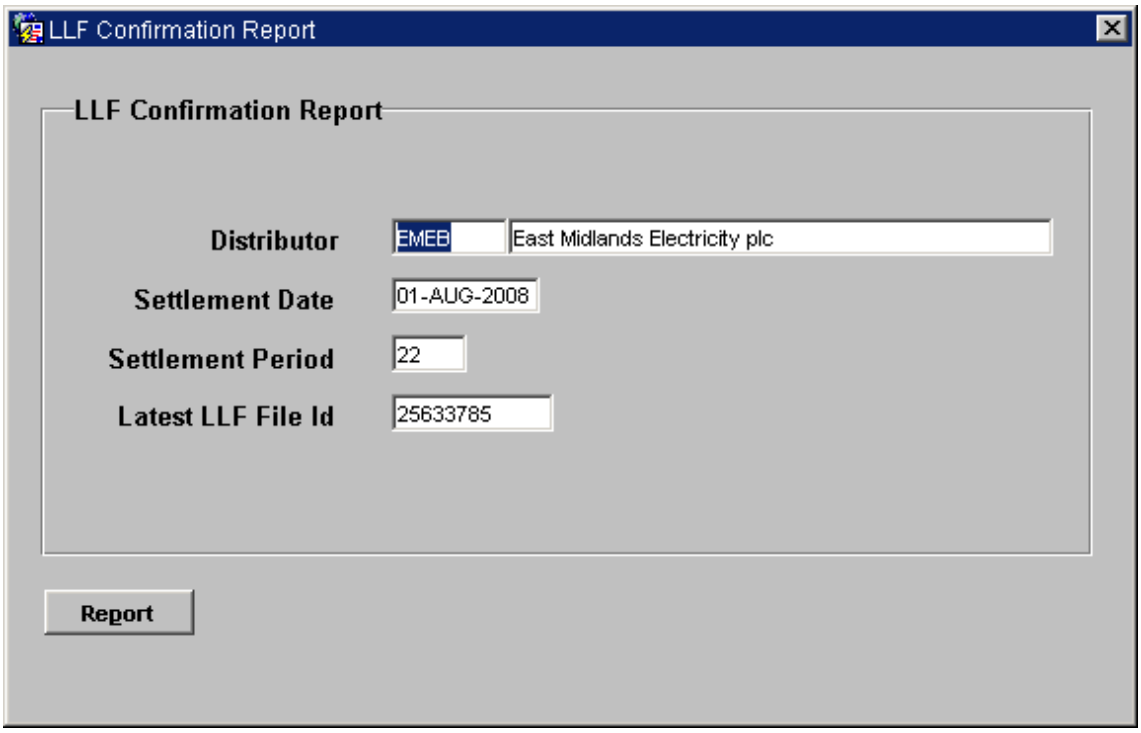
A check is made that the Start Settlement Date is not later than the End Settlement Date.

The report is initiated in the background using the CSC.Submit() function. A command is built up for the report including the three dates entered by the user.

9.6.5 Form ISY_LLFC_REPT

The following describes the Profile Reports front-end form.

9.6.5.1 Screen layout



9.6.5.2 Screen behaviour

Functions Implemented	Initiate LLF Confirmation Report.
Block	LLF Confirmation Report.
On Entry	Ready for user input. The user enters the Distributor, Settlement Date and Settlement Period.
List of Values	Distributor
Poplists	N /A
Buttons	Report Will initiate the report.
Additional Behaviour	The "Latest LLf File Id" display item will be automatically queried once all the other input parameters are available.

9.6.5.3 Description

The form consists of a single block LLF Confirmation reports which will allow entry of report parameters required for requesting the report.

CTRL_REPT - Control non-base table block which holds the Distributor, Settlement Date and Settlement Period fields.

Pressing the **Report** button causes a command to be built up, depending on the parameters entered and includes the report name.

9.6.5.4 Form structure

Object	Description
Form: *LLFCREPT*	Title : Initiate LLF Confirmation Report.
Block: *CTRL_REPT*	Control block, non base table.
nbt_dist_mkt_ppt_id	Label : Distributor Display. List item. User enterable. LOV driven based on idb_mkt_ppts. Set LOV for validation = True.
nbt_mkt_ppt_name	Label : Display Only. Query.
nbt_sett_date	Label : Settlement Date Date. Display. User enterable. Insert, update allowed. Format : DD-MON-YYYY
nbt_sett_pd_id *nbt_max_llf_file_id*	Label : Settlement Period Integer. Display. User enterable. Insert, update allowed. Label : Latest LLF File Id Integer. Display Only. No User Entry. Mandatory. Auto Populated once all the other input values are available.

9.6.5.5 Action on Query

None.

9.6.5.6 Action on Update

None.

9.6.5.7 Action on Insert

None.

9.6.5.8 Action on Delete

None.

9.6.5.9 Action on Button Report

Validate if the user has entered a valid combination of nbt_dist_mkt_ppt_id, nbt_sett_date and nbt_sett_pd_id.

Validate the auto-populated value for nbt_max_llf_file_id and if found null then do not allow user to launch the report.

The report is initiated in the background using the CSC.Submit() function. A command is built up for the report that consists of the <report name> ||’,’|| nbt_dist_mkt_ppt_id ||’,’|| nbt_sett_date ||’,’|| nbt_sett_pd_id ||’,’|| nbt_max_llf_file_id.

9.6.6 Process IRP_SSR_INITIATE_REPORTS

This process is called on completion of an SSR run and initiates all the reports which are scheduled to be produced for each SSR run. A single process is submitted to the

scheduler using the CSC.SUBMIT mechanism for each report for a single supplier. The scheduler controls the number of processes which can be run in parallel.

For each supplier active in the SSR run the following reports are submitted to the scheduler using the CSC.SUBMIT mechanism:

- Supplier settlement header;
- Supplier purchase matrix report;
- supplier purchase report;
- Half Hourly demand report;
- Deemed Take report;
- DUoS report.
- SVA Gross Demand report

For each distributor that is active during the SSR a DUoS report process for the distributor is submitted to the scheduler.

A single TUoS report process is also submitted by IRP_SSR_INITIATE_REPORTS.

9.6.7 Report IRP_SUPPLIER_SETT_HDR Specification

Function Definition Ref: I0026B Produce Settlement Reports - Supplier Settlement Header Report

9.6.7.1 Inputs

```
Function Name:      IRP_Supplier_Sett_Header()
Arguments:          SSR Run Number (IN)
                    Supplier Id (IN)
Return:             success/failure
```

ISRA tables read:

1. idb_mkt_ppt_roles
2. idb_mkt_ppts
3. idb_pfl_production_runs
4. cdb_ref_domains
5. cdb_ref_values
6. idb_ssr_run_gsp_group
7. idb_ssa_sett_runs
8. idb_ssr_runs
9. idb_sup_data_agtn_in_ssr_runs
10. idb_sett_types
11. cdb_system_parameter

9.6.7.2 Machine Readable Output

See Section 3.1.15

9.6.7.3 Human Readable Output

See Section 3.1.15

9.6.7.4 Functionality

See Function Description I0026B

For this report the data is output on a supplier basis but the database is ordered on a GSP Group. As the number of suppliers which are active within a GSP Group is low and only a small amount of data required for each supplier, data is read from the database and the relevant information stored in memory. The whole report is written once all the data has been collated. A report is written for each supplier active in the system and CFS_EXPORT called for each file to initiate file transfer.

The idb_ssr_runs table is read to get the ssr_run information (the query on the idb_sub_data_agtn_in_ssr_runs is used to cycle through the groups).

```
1:
SELECT sett_date,
       sett_code,
       ssr_run_number,
       ssr_run_date,
       ssr_run_type_id,
       ssr_run_status,
       ssa_sett_run_number,
FROM   idb_ssr_runs
WHERE  ssr_run_number = input_ssr_run_number;
```

Read SSA settlement run data for that ssr_run.

```
2:
SELECT ssa_sett_run_number,
       sett_date,
       ssa_sett_run_type_id,
       cdsc_extract_number
FROM   idb_ssa_settlement_runs
WHERE  ssa_sett_run_number = select1.ssa_sett_run_number;
```

Read the list of GSP Groups relevant to the report. This is read from idb_sup_data_agtn_in_ssr_runs for the ssr_run_number and supplier (there are a number of rows and a cursor is used).

```
3:
SELECT gsp_group_id
FROM   idb_sup_data_agtn_in_ssr_run
WHERE  ssr_run_number = input_ssr_run_number
AND    sup_mkt_ppt_id = input_supplier_id
ORDER BY gsp_group_id;
```

For a ssr_run_number the idb_sup_data_agtn_in_ssr_runs table is read to get the data_agtn_run_number, gsp_group_id and the da_mkt_ppt_id associated for the supplier (there are a number of rows and a cursor is used).

```
4:
SELECT da_mkt_ppt_id,
```

```
       data_agtn_run_number,
       gsp_group_id
FROM   idb_sup_data_agtn_in_ssr_run
WHERE  ssr_run_number = input_ssr_run_number
AND    sup_mkt_ppt_id = input_supplier_id
ORDER BY da_mkt_ppt_id,
         data_agtn_run_number,
         gsp_group_id;
```

Read profile production data for that settlement date. This is done at this stage as both a pfl_production_run_number and gsp_group_id are required.

```
5:
SELECT p.sett_date,
       p.pfl_production_run_time,
       p.pfl_production_run_date
FROM   idb_pfl_production_runs p,
       idb_ssr_run_gsp_group s
WHERE  p.pfl_production_run_number =
       s.pfl_production_run_number
ORDER BY p.pfl_production_run_number,
         p.gsp_group_id;
```

Get names for the Supplier and DA from the idb_mkt_ppts table.

```
6:
SELECT mkt_ppt_name
FROM   idb_mkt_ppts
WHERE  mkt_ppt_id = input_supplier_id;

SELECT mkt_ppt_name
FROM   idb_mkt_ppts
WHERE  mkt_ppt_id = select4.da_mkt_ppt_id;
```

The data is then output in the order described by the machine readable format.

9.6.8 Report IRP_SUPPLIER_PURCHASE_MATRIX Specification

Function Definition Ref: I0026B Produce Settlement Reports - Supplier Purchase Matrix Report

9.6.8.1 Inputs

```
Function Name:      IRP_Sup_Purchase_Matrix()
Arguments:          SSR Run Number (IN)
                    Supplier Id (IN)
Return:             success/failure
```

ISRA tables read:

1. idb_gsp_groups
2. idb_llf_classes
3. idb_mkt_ppts
4. idb_ssr_runs
5. idb_sup_data_agtn_in_ssr_runs

6. idb_sett_types

ISRA files read:

1. idf_sup_purchase_matrices

9.6.8.2 Machine Readable Output

See Section 3.1.15

9.6.8.3 Human Readable Output

See Section 3.1.15

9.6.8.4 Functionality

See Function Description I0026B

The idb_ssr_runs table is read to get the first row matching the ssr_run_number.

```
1:
SELECT sett_date,
       sett_code,
       ssr_run_number,
       ssr_run_date,
       ssr_run_type_id,
FROM   idb_ssr_runs
WHERE  ssr_run_number = input_ssr_run_number;
```

A cursor is used to retrieve supplier, group and DA data.

```
2:
SELECT gsp_group_id,
       sup_mkt_ppt_id,
       da_mkt_ppt_id,
       da_mkt_ppt_role_code,
       data_agtn_run_number,
FROM   idb_sup_data_agtn_in_ssr_runs,
WHERE  ssr_run_number = input_ssr_run_number
ORDER BY sup_mkt_ppt_id,
         gsp_group_id,
         da_mkt_ppt_id;
```

Read the names for the supplier and DA.

```
3:
SELECT mkt_ppt_name
FROM   idb_mkt_ppt
WHERE  mkt_ppt_id = sup/da_mkt_ppt_id;
```

Read the relevant Supplier Purchase Matrices file for all line loss factor classes, VMR profile classes and ssc for each Supplier/DA combination and data_agtn_run_number.

A report is written for each supplier active in the system and CFS_EXPORT called for each file to initiate file transfer.

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9.6.9 Report IRP_DISCONNECTION_PURCHASE_MATRIX Specification

Function Definition Ref: I0026B Produce Settlement Reports - Disconnetion Purchase Matrix Report

9.6.9.1 Inputs

```
Function Name:        IRP_dis_Purchase_Matrix()
Arguments:            SSR Run Number (IN)
                      Supplier Id (IN)
Return:               success/failure
```

ISRA tables read:

1. idb_gsp_groups
2. idb_llf_classes
3. idb_mkt_ppts
4. idb_ssr_runs
5. idb_sup_data_agtn_in_ssr_runs
6. idb_sett_types

ISRA files read:

1. idf_discon_purchase_matrices

9.6.9.2 Machine Readable Output

See Section 3.1.15

9.6.9.3 Human Readable Output

See Section 3.1.15

9.6.9.4 Functionality

See Function Description I0065

The idb_ssr_runs table is read to get the first row matching the ssr_run_number.

```
1:
SELECT sett_date,
       sett_code,
       ssr_run_number,
       ssr_run_date,
       ssr_run_type_id,
FROM   idb_ssr_runs
WHERE  ssr_run_number = input_ssr_run_number;
```

A cursor is used to retrieve supplier, group and DA data.

```
2:
SELECT gsp_group_id,
       sup_mkt_ppt_id,
       da_mkt_ppt_id,
       da_mkt_ppt_role_code,
       data_agtn_run_number,
FROM   idb_sup_data_agtn_in_ssr_runs,
```

```
WHERE  ssr run number = input ssr run number
ORDER BY sup mkt ppt id,
         gsp group id,
         da mkt ppt id;
```

Read the names for the supplier and DA.

```
3:
SELECT mkt ppt name
FROM   idb mkt ppt
WHERE  mkt ppt id = sup/da mkt ppt id;
```

Read the relevant Supplier Purchase Matrices file for all line loss factor classes, VMR profile classes and ssc for each Supplier/DA combination and data_agtn_run_number.

A report is written for each supplier active in the system and CFS_EXPORT called for each file to initiate file transfer.

9.6.99.6.10 Report IRP_HH_DEMAND Specification

Function Definition Ref: I0026B Produce Settlement Reports - HH Demand Report

9.6.9.19.6.10.1 Inputs

```
Function Name:        IRP_HH_Demand()
Arguments:            SSR Run Number (IN)
                      Supplier Id (IN)
Return:               success/failure
```

ISRA tables read:

1. idb_consum_comp_classes
2. idb_gsp_groups
3. idb_mkt_ppts
4. idb_ssr_runs
5. idb_gsp_group_cctn_sf_ssr_runs
6. idb_ssr_run_gsp_group_pds
7. idb_sett_types

ISRA files read:

1. idf_agtd_sup_da_pd_consums
2. idf_agtd_sup_pd_consums

9.6.9.29.6.10.2 Machine Readable Output

See Section 3.1.15

9.6.9.39.6.10.3 Human Readable Output

See Section 3.1.15

9.6.9.49.6.10.4 Functionality

See Function Description I0026B

The report consists of two separate reports, one for supplier totals by consumption component class and the other Supplier half hourly demand by DA. A report is written for each supplier active in the system and CFS_EXPORT called for each file to initiate file transfer.

The supplier totals by CCC report is generated as follows:

The idb_ssr_runs table is read for the settlement run details.

```
1:
SELECT FIRST sett_date,
             sett_code,
             ssr_run_date,
             ssr_run_type,
FROM         idb_ssr_runs
WHERE        sett_run_number = input_sett_run_number;
```

The relevant idf_agtd_sup_pd_consums file is read line by line and the supplier id, gsp group id, ccc id and consumption values are stored in memory. The information is ordered by Supplier then GSP Group then CCC id and settlement period consumptions output. Daily totals for each of the supplier/GSP/CCC consumptions are also calculated.

The second part of the report is for supplier HH demand by DA. This is generated by:

Either a query on the idb_sup_data_agtn_in_ssr_runs to generate a list of the suppliers and DAs active within the group and then search the data file for the required data or just perform a search through the data file.

For each row produced, the relevant idf_agtd_sup_da_pd_consums files is read and consumption values for each CCC stored in memory. The idb_consum_comp_classes table is read to get the details of the CCC_ID and the data output. For Settlement Days from the start of the NETA, it is necessary to sum across BM Units to generate Supplier level CCC consumption.

9.6.11 Report IRP_HH_DEMAND Disconnection Specification

Function Definition Ref: I0026B Produce Settlement Reports - HH Demand Disconnection Report

9.6.11.1 Inputs

Function Name:	IRP_HH_Demand()
Arguments:	SSR Run Number (IN)
	Supplier Id (IN)
Return:	success/failure

ISRA tables read:

1. idb_consum_comp_classes
2. idb_gsp_groups
3. idb_mkt_ppts
4. idb_ssr_runs
5. idb_gsp_group_cctn_sf_ssr_runs

6. idb_ssr_run_gsp_group_pds

7. idb_sett_types

ISRA files read:

1. idf_agtd_sup_da_pd_discon_volumes

2. idf_agtd_sup_pd_ discon_volumes

9.6.11.2 Machine Readable Output

See Section 3.1.15

9.6.11.3 Human Readable Output

See Section 3.1.15

9.6.11.4 Functionality

See Function Description I0026B

The report consists of two separate reports, one for supplier totals by consumption component class and the other Supplier half hourly demand disconnection by DA. A report is written for each supplier active in the system and CFS_EXPORT called for each file to initiate file transfer.

The supplier totals by CCC report is generated as follows:

The idb_ssr_runs table is read for the settlement run details.

```
1:
SELECT FIRST sett date,
             sett code,
             ssr run date,
             ssr run type,
FROM         idb ssr runs
WHERE        sett run number = input sett run number;
```

The relevant idf_agtd_sup_pd_discon_volumes file is read line by line and the supplier id, gsp group id, ccc id and consumption values are stored in memory. The information is ordered by Supplier then GSP Group then CCC id and settlement period consumptions output. Daily totals for each of the supplier/GSP/CCC consumptions are also calculated.

The second part of the report is for supplier HH demand by DA. This is generated by:

Either a query on the idb_sup_data_agtn_in_ssr_runs to generate a list of the suppliers and DAs active within the group and then search the data file for the required data or just perform a search through the data file.

For each row produced, the relevant idf_agtd_sup_da_pd_consums files is read and consumption values for each CCC stored in memory. The idb_consum_comp_classes table is read to get the details of the CCC_ID and the data output. For Settlement Days from the start of the NETA, it is necessary to sum across BM Units to generate Supplier level CCC consumption.

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~~9.6.10~~9.6.12 Report IRP_SUP_BMU Report Specification

Function Definition Ref: I0026B Produce Settlement Reports - Supplier BM Unit Report

~~9.6.10.1~~9.6.12.1 Inputs

```
Function Name:      IRP_SUP_BMU()
Arguments:          SSR Run Number (IN)
                    Supplier Id (IN)
Return:             success/failure
```

ISRA tables read:

1. idb_consum_comp_classes
2. idb_gsp_groups
3. idb_mkt_ppts
4. idb_ssr_runs
5. idb_gsp_group_cctn_sf_ssr_runs
6. idb_ssr_run_gsp_group_pds
7. idb_sett_types
8. idb_nhh_bm_unit_allocation
9. idb_bm_unit_in_gsp_group

10.cdb_system_parameter

ISRA files read:

1. idf_agtd_sup_da_pd_consums
2. idf_agtd_bm_pd_consums

~~9.6.10.2~~9.6.12.2 Machine Readable Output

See Section 3.1.15

~~9.6.10.3~~9.6.12.3 Human Readable Output

See Section 3.1.15

~~9.6.10.4~~9.6.12.4 Functionality

See Function Description I0026B

This report contains details of the Supplier's valid BM Units, Non-Half Hourly BM Unit Allocations, the Half Hourly consumption/generation data input into the system and the combined Half Hourly and Non-Half Hourly consumption/generation by BM Unit and Consumption Component Class calculated by the SSR run. A report is written for each supplier associated with the SSR Run and CFS_EXPORT called for each file to initiate file transfer.

The idb_ssr_runs table is read for the settlement run details.

```
1:
SELECT FIRST sett_date,
             sett_code,
             ssr_run_date,
```

```
            ssr_run_type,
FROM        idb_ssr_runs
WHERE       sett_run_number = input_sett_run_number;
```

The relevant idf_agtd_bm_pd_consums file is read line by line and the BM Unit Id, Supplier Id, GSP Group Id, CCC Id and consumption values are stored in memory.

2:

```
SELECT …
FROM idf_agtd_bm_pd_consums
WHERE  ssr_run_number = input_ssr_run_number
AND    select1.sett_date = sett_date
```

The BM Unit Standing Data is output for each GSP Group and Supplier combination held in memory by reading the idb_bm_unit_in_gsp_group and idb_nhh_bm_unit_allocation tables.

3:

```
SELECT      bm_unit_id,
            default_bm_unit_flag
FROM        idb_bm_unit_in_gsp_group
WHERE       mkt_ppt_id = 2.sup_mkt_ppt_id
AND              gsp_group_id = 2.gsp_group_id
```

4:

```
SELECT      pfl_class_id,
            ssc_id
FROM        idb_nhh_bm_unit_allocation
WHERE       4.bm_unit_id = 3.bm_unit_id
```

The next part of the report detailing consumption/generation calculated by the SSR Run is output by BM Unit for each consumption component class. The information is ordered by Supplier then GSP Group then BM Unit Id then CCC Id, and settlement period consumptions output. Daily totals for each of the Supplier/GSP/BM Unit/CCC consumptions are also calculated.

The Uncorrected Period BM Unit Total Allocated Volume and Period BM Unit Total Allocated volume is then calculated by summing the Corrected_BM Unit Energy/Line Losses across all Consumption Component Classes. Active Import CCCs are added, and Active Export CCCs subtracted. Daily totals for both data items are also calculated.

Finally Half Hourly demand by Data Aggregator is output. This is generated by reading the idb_sup_data_agtn_in_ssr_runs table to find the appropriate data aggregation run number.

5:

```
SELECT      data_agtn_run_number
FROM        idb_sup_data_agtn_in_ssr_runs
```

```
WHERE       ssr_run_number = input_ssr_run_number
AND               sup_mkt_ppt_id = 2.sup_mkt_ppt_id
AND               gsp_group_id = 2.gsp_group_id
```

The relevant idf_agtd_sup_da_pd_consums file is then read and the consumption values for each BM Unit and consumption component class are stored in memory.

The idb_consum_comp_classes table is read to get the details of the CCC_ID and the data output. The SSR Run BM Unit identifier and Default BM Unit Reason Code are generated at this point and so if the report is requested again at a later date, the values may not be accurate. Daily totals for each of the Supplier/GSP/BM Unit/CCC consumptions are also calculated.

9.6.13 Report IRP_SUP_BMU Report Specification

Function Definition Ref: I0026B Produce Settlement Reports - Supplier BM Unit Report

9.6.13.1 Inputs

Function Name:	IRP_SUP_BMU()
Arguments:	SSR Run Number (IN)
	Supplier Id (IN)
Return:	success/failure

ISRA tables read:

11.idb_consum_comp_classes

12.idb_gsp_groups

13.idb_mkt_ppts

14.idb_ssr_runs

15.idb_gsp_group_cctn_sf_ssr_runs

16.idb_ssr_run_gsp_group_pds

17.idb_sett_types

18.idb_nhh_bm_unit_allocation

19.idb_bm_unit_in_gsp_group

20.cdb_system_parameter

ISRA files read:

3. idf_agtd_sup_da_pd_consums

4. idf_agtd_bm_pd_consums

9.6.13.2 Machine Readable Output

See Section 3.1.15

9.6.13.3 Human Readable Output

See Section 3.1.15

9.6.13.4 Functionality

See Function Description I0026B

This report contains details of the Supplier's valid BM Units, Non-Half Hourly BM Unit Allocations, the Half Hourly consumption/generation data input into the system and the combined Half Hourly and Non-Half Hourly consumption/generation by BM Unit and Consumption Component Class calculated by the SSR run. A report is written for each supplier associated with the SSR Run and CFS_EXPORT called for each file to initiate file transfer.

The idb_ssr_runs table is read for the settlement run details.

```
1:
SELECT FIRST sett date,
             sett code,
             ssr run date,
             ssr run type,
FROM         idb ssr runs
WHERE        sett run number = input sett run number;
```

The relevant idf_agtd_bm_pd_consums file is read line by line and the BM Unit Id, Supplier Id, GSP Group Id, CCC Id and consumption values are stored in memory.

```
2:

SELECT …
FROM idf_agtd bm pd consums
WHERE  ssr_run_number = input_ssr_run_number
AND    select1.sett date = sett date
```

The BM Unit Standing Data is output for each GSP Group and Supplier combination held in memory by reading the idb_bm_unit_in_gsp_group and idb_nhh_bm_unit_allocation tables.

```
3:

SELECT       bm unit id,

             default bm unit flag

FROM         idb bm unit in gsp group

WHERE        mkt ppt id = 2.sup mkt ppt id

AND                gsp group id = 2.gsp group id

4:

SELECT       pfl class id,

             ssc id

FROM         idb nhh bm unit allocation

WHERE        4.bm unit id = 3.bm unit id
```

The next part of the report detailing consumption/generation calculated by the SSR Run is output by BM Unit for each consumption component class. The information is ordered by Supplier then GSP Group then BM Unit Id then CCC Id, and settlement

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period consumptions output. Daily totals for each of the Supplier/GSP/BM Unit/CCC consumptions are also calculated.

The Uncorrected Period BM Unit Total Allocated Volume and Period BM Unit Total Allocated volume is then calculated by summing the Corrected_BM Unit Energy/Line Losses across all Consumption Component Classes. Active Import CCCs are added, and Active Export CCCs subtracted. Daily totals for both data items are also calculated.

Finally Half Hourly demand by Data Aggregator is output. This is generated by reading the idb_sup_data_agtn_in_ssr_runs table to find the appropriate data aggregation run number.

```
5:
SELECT      data_agtn_run_number
FROM        idb_sup_data_agtn_in_ssr_runs
WHERE       ssr_run_number = input_ssr_run_number
AND             sup_mkt_ppt_id = 2.sup_mkt_ppt_id
AND             gsp_group_id = 2.gsp_group_id
```

The relevant idf_agtd_sup_da_pd_discon_volumes file is then read and the consumption values for each BM Unit and consumption component class are stored in memory.

The idb_consum_comp_classes table is read to get the details of the CCC_ID and the data output. The SSR Run BM Unit identifier and Default BM Unit Reason Code are generated at this point and so if the report is requested again at a later date, the values may not be accurate. Daily totals for each of the Supplier/GSP/BM Unit/CCC consumptions are also calculated.

~~9.6.11~~9.6.14 Report IRP_DEEMED_TAKE Specification

Function Definition Ref: I0026B Produce Settlement Reports - Deemed Take Report

~~9.6.11.1~~9.6.14.1 Inputs

```
Function Name:      IRP_Deemed_Take()
Arguments:          SSR Run Number (IN)
                    Supplier Id (IN)
Return:             success/failure
```

ISRA tables read:

1. idb_gsp_groups
2. idb_mkt_ppts
3. idb_pd_sup_purchases
4. idb_ssr_runs
5. idb_ssr_run_gsp_group_pds
6. idb_sett_types

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ISRA files read:

1. idf_agtd_sup_pd_consums

9.6.11.29.6.14.2Machine Readable Output

See Section 3.1.15

9.6.11.39.6.14.3Human Readable Output

See Section 3.1.15

9.6.11.49.6.14.4Functionality

See Function Description I0026B

The idb_ssr_runs_table is read to get header information.

```
1:
SELECT …
FROM   idb_ssr_runs
WHERE  ssr_run_number = input_ssr_run_number;
```

Then the idb_pd_sup_purchases table is read - using a cursor to retrieve data ordered by supplier and gsp group. Store the row in memory.

```
2:
SELECT …
FROM   idb_pd_sup_purchases
WHERE  ssr_run_number = input_ssr_run_number
AND    select1.sett_date = sett_date
ORDER BY sup_mkt_ppt_id,
         gsp_group_id;
```

Read the names of the supplier and gsp_group

```
3:
SELECT mkt_ppt_name
FROM   idb_mkt_ppts
WHERE  mkt_ppt_id = select2.sup_mkt_ppt_id;
```

```
4:
SELECT gsp_group_name
FROM   gsp_groups
WHERE  gsp_group_id = select2.gsp_group_id;
```

Read the NPG values and the Total Period Weighted Consumption from idb_ssr_run_gsp_group_pds - store in memory.

Read the gsp group correction factors (this only needs to be done once for each group and will be done the first time each group is queried and stored in memory).

```
5:
SELECT gsp_group_cctn_factor
FROM   idb_gsp_group_cctn_factors
WHERE  gsp_group_id = select1.gsp_group_id
AND    ssr_run_number = select1.ssr_run_number
AND    sett_date = select1.sett_date;
```

Read through the relevant file for idf_agtd_sup_pd_consums and sum values across all consumption component classes for a supplier.

Sum up settlement period values to give totals for each column and output the report row.

A report is written for each supplier active in the system and CFS_EXPORT called for each file to initiate file transfer.

9.6.129.6.15 Report IRP_SUPPLIER_PURCHASE Specification

Function Definition Ref: I0026B Produce Settlement Reports - Supplier Purchase Report

9.6.12.19.6.15.1 Inputs

```
Function Name:      IRP_Supplier_Purchase()
Arguments:          SSR Run Number (IN)
                    Supplier Id (IN)
Return:             success/failure
```

ISRA tables read:

1. idb_gsp_group_takes
2. idb_gsp_groups
3. idb_market_ppt_roles
4. idb_mkt_ppts
5. idb_pd_sup_purchases
6. idb_sett_pd_prices
7. idb_ssr_runs
8. idb_sett_types

9.6.12.29.6.15.2 Machine Readable Output

See Section 3.1.15

9.6.12.39.6.15.3 Human Readable Output

See Section 3.1.15

9.6.12.49.6.15.4 Functionality

See Function Description I0026B

Read the idb_ssr_run table for header details.

```
1:
SELECT sett_date,
       sett_code,
       ssr_run_date,
       ssr_run_type_id,
       ssa_sett_run_number
FROM   ssr_runs
WHERE  ssr_run_number = input_ssr_run_number;
```

Read through the idb_pd_sup_purchases table for the ssr_run and order the output by supplier and gsp group (multiple rows output so a cursor is used).

```
2:
SELECT sup_mkt_ppt_id,
       gsp_group_id,
       pd_sup_deemed_take
FROM   idb_pd_sup_purchases
WHERE  ssr_run_number = input_ssr_run_number
AND    sett_date = select1.sett_date
ORDER BY sup_mkt_ppt_id,
         gsp_group_id;
```

Read the supplier name, group name, and pool id.

```
3:
SELECT mkt_ppt_name
FROM   idb_mkt_ppts
WHERE  mkt_ppt_id = select2.sup_mkt_ppt_id;
```

```
4:
SELECT gsp_group_name
FROM   idb_gsp_groups
WHERE  gsp_group_id = select2.gsp_group_id;
```

```
5:
SELECT pool_member_id
FROM   idb_mkt_ppt_roles
WHERE  mkt_ppt_id = select2.sup_mkt_ppt_id
AND    mkt_ppt_role_code = "x";
```

Read the gsp_group_takes for the group (this only needs to be read once per group and will be stored in memory)

```
6:
SELECT gsp_group_take
FROM   idb_gsp_group_takes
WHERE  gsp_group_id = select2.gsp_group_id
AND    ssa_sett_run_number = select1.ssa_sett_run_number
AND    sett_date = select1.sett_date;
```

Read the settlement period prices for the group.

```
7:
SELECT pool_selling_price,
       trans_loss_mult,
       trans_losses_recon_mult
FROM   idb_sett_pd_prices
WHERE  settlement_date = select1.sett_date
AND    ssa_sett_run_number = select1.ssa_sett_run_number;
```

Output each line of data for a settlement period and calculate daily totals.

A report is written for each supplier active in the system and CFS_EXPORT called for each file to initiate file transfer.

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9.6.16 Report IRP_DISCONNECTION_PURCHASE Specification

Function Definition Ref: I0026B Produce Settlement Reports - Disconnection Purchase Report

9.6.16.1 Inputs

```
Function Name:        IRP_Disconnection_Purchase()
Arguments:            SSR Run Number (IN)
                      Supplier Id (IN)
Return:               success/failure
```

ISRA tables read:

1. idb_gsp_group_takes
2. idb_gsp_groups
3. idb_market_ppt_roles
4. idb_mkt_ppts
5. idb_pd_sup_purchases
6. idb_sett_pd_prices
7. idb_ssr_runs
8. idb_sett_types

9.6.16.2 Machine Readable Output

See Section 3.1.15

9.6.16.3 Human Readable Output

See Section 3.1.15

9.6.16.4 Functionality

See Function Description I0026B

Read the idb_ssr_run table for header details.

```
1:
SELECT sett date,
       sett code,
       ssr run date,
       ssr run type id,
       ssa sett run number
FROM   ssr runs
WHERE  ssr run number = input ssr run number;
```

Read through the idb_pd_sup_purchases table for the ssr_run and order the output by supplier and gsp group (multiple rows output so a cursor is used).

```
2:
SELECT sup mkt ppt id,
       gsp group id,
       pd sup deemed take
FROM   idb pd sup purchases
WHERE  ssr run number = input ssr run number
```

```
AND     sett date = select1.sett date
ORDER BY sup mkt ppt id,
         gsp group id;
```

Read the supplier name, group name, and pool id.

```
3:
SELECT mkt ppt name
FROM   idb mkt ppts
WHERE  mkt ppt id = select2.sup mkt ppt id;

4:
SELECT gsp group name
FROM   idb gsp groups
WHERE  gsp group id = select2.gsp group id;

5:
SELECT pool member id
FROM   idb mkt ppt roles
WHERE  mkt ppt id = select2.sup mkt ppt id
AND    mkt ppt role code = "x";
```

Read the gsp_group_takes for the group (this only needs to be read once per group and will be stored in memory)

```
6:
SELECT gsp group take
FROM   idb gsp group takes
WHERE  gsp group id = select2.gsp group id
AND    ssa sett run number = select1.ssa sett run number
AND    sett date = select1.sett date;
```

Read the settlement period prices for the group.

```
7:
SELECT pool selling price,
       trans loss mult,
       trans losses recon mult
FROM   idb sett pd prices
WHERE  settlement date = select1.sett date
AND    ssa sett run number = select1.ssa sett run number;
```

Output each line of data for a settlement period and calculate daily totals.

A report is written for each supplier active in the system and CFS_EXPORT called for each file to initiate file transfer.

~~9.6.13~~9.6.17 Report IRP_GSP_Group_Consum_Totals Specification

Function Definition Ref: I0026B Produce Settlement Reports - GSP Group Consumption Totals Report

~~9.6.13.1~~9.6.17.1 Inputs

```
Function Name:      IRP_GSP_Group_Consum_Totals()
Arguments:          SSR Run Number (IN)
                    Supplier Id (IN)
Return:             success/failure
```

ISRA tables read:

1. idb_gsp_groups
2. idb_mkt_ppts
3. idb_ssr_runs
4. idb_ssr_run_gsp_group_pds
5. idb_sett_types
6. idb_consum_comp_classes
7. idb_gsp_group_cctn_sf_ssr_runs
8. idb_gsp_group_cctn_factors

ISRA files read:

1. idf_agtd_sup_pd_consums

9.6.13.29.6.17.2Machine Readable Output

See Section 5.1

9.6.13.39.6.17.3Human Readable Output

See Section 5.1

9.6.13.49.6.17.4Functionality

See Function Description I0026B

A report is written for each supplier active in the system. The report contains details of the total deemed take summed over all suppliers for each settlement period for each Consumption Component Class and GSP Group before and after GSP Group Correction. If a GSP Group Consumption Component Class has no consumption (as distinct from zero consumption), it is omitted. CFS_EXPORT is called for each file to initiate file transfer.

The report is generated as follows :

The idb_ssr_runs table is read for the settlement run details.

```
1:
SELECT FIRST sett_date,
             sett_code,
             ssr_run_date,
             ssr_run_type,
FROM         idb_ssr_runs
WHERE        sett_run_number =  input_sett_run_number;
```

There is one file per GSP Group. Sum values across all suppliers in each file. To retrieve data

```
2:
SELECT …
FROM idf_agtd_sup_pd_consums
WHERE  ssr_run_number = input_ssr_run_number
AND    select1.sett_date = sett_date
ORDER BY sup_mkt_ppt_id,
         gsp_group_id;
```

Read the names of the supplier and gsp_group

```
3:
SELECT mkt_ppt_name
FROM   idb_mkt_ppts
WHERE  mkt_ppt_id = select2.sup_mkt_ppt_id;
```

```
4:
SELECT gsp_group_name
FROM   gsp_groups
WHERE  gsp_group_id = select2.gsp_group_id;
```

The relevant idf_agtd_sup_pd_consums file is read line by line and the supplier id, gsp group id, ccc id, consumption values and MSID counts are stored in memory. The values are summed across all suppliers for each consumption component class. The information is then ordered by Supplier, GSP Group and CCC id and settlement period consumptions output for each column.

9.6.18 Report IRP_GSP_Group_Demand_Disconnection_Totals Specification

Function Definition Ref: I0026B Produce Settlement Reports - GSP Group Demand Disconnection Totals Report

9.6.18.1 Inputs

Function Name:	IRP_GSP_Group_Demand_Disconnection_Totals()
Arguments:	SSR Run Number (IN)
	Supplier Id (IN)
Return:	success/failure

ISRA tables read:

1. idb_gsp_groups
2. idb_mkt_ppts
3. idb_ssr_runs
4. idb_ssr_run_gsp_group_pds
5. idb_sett_types
6. idb_consum_comp_classes
7. idb_gsp_group_cctn_sf_ssr_runs
8. idb_gsp_group_cctn_factors

ISRA files read:

1. idf_agtd_sup_pd_discon_volumes

9.6.18.2 Machine Readable Output

See Section 5.1

9.6.18.3 Human Readable Output

See Section 5.1

9.6.18.4 Functionality

See Function Description I0026B

A report is written for each supplier active in the system. The report contains details of the total deemed take summed over all suppliers for each settlement period for each Consumption Component Class and GSP Group before and after GSP Group Correction. If a GSP Group Consumption Component Class has no consumption (as distinct from zero consumption), it is omitted. CFS_EXPORT is called for each file to initiate file transfer.

The report is generated as follows :

The idb_ssr_runs table is read for the settlement run details.

```
1:
SELECT FIRST sett date,
             sett code,
             ssr run date,
             ssr run type,
FROM         idb ssr runs
WHERE        sett run number =  input sett run number;
```

There is one file per GSP Group. Sum values across all suppliers in each file. To retrieve data

```
2:
SELECT …
FROM idf agtd sup pd consums
WHERE  ssr run number = input ssr run number
AND    select1.sett date = sett date
ORDER BY sup mkt ppt id,
         gsp group id;
```

Read the names of the supplier and gsp_group

```
3:
SELECT mkt ppt name
```

```
FROM   idb_mkt_ppts
WHERE  mkt_ppt_id = select2.sup_mkt_ppt_id;

4:
SELECT gsp_group_name
FROM   gsp_groups
WHERE  gsp_group_id = select2.gsp_group_id;
```

The relevant idf_agtd_sup_pd_discon_volumes file is read line by line and the supplier id, gsp group id, ccc id, consumption values and MSID counts are stored in memory. The values are summed across all suppliers for each consumption component class. The information is then ordered by Supplier, GSP Group and CCC id and settlement period consumptions output for each column.

9.6.149.6.19 Report IRP_TUoS Specification

Function Definition Ref: I0027B Produce SSR Reports - TUoS Report

9.6.14.19.6.19.1 Inputs

```
Function Name:      IRP_TUoS()
Arguments:          SSR Run Number (IN)
Return:             success/failure
```

ISRA tables read:

1. idb_gsp_group_takes
2. idb_gsp_groups
3. idb_mkt_ppts
4. idb_pd_sup_purchases
5. idb_ssr_runs
6. idb_sett_types
7. idb_gsp_group_cctn_sf_ssr_runs
8. idb_consum_comp_classes
9. idb_bm_unit_in_gsp_groups

ISRA files read:

1. idf_agtd_sup_pd_consums
2. idf_agtd_bm_pd_consums

9.6.14.29.6.19.2 Machine Readable Output

See Section 3.1.16

9.6.14.39.6.19.3 Human Readable Output

See Section 3.1.15

9.6.14.49.6.19.4 Functionality

See Function Description I0024

Select header data from ssr_run table.

```
1:
SELECT sett_date,
       sett_code,
       ssr_run_date,
       ssr_run_type_id,
       ssa_sett_run_number,
       ssa_sett_date
FROM   idb_ssr_runs
WHERE  ssr_run_number = input_ssr_run_number;
```

Read the Consumption Component Class and GSP Group Correction Factors Used in SSR Run tables to determine the measurement quantity Id for each class considered, and associated scaling factors; Imports are taken as positive consumption whereas Exports are treated as negative when calculating the non-corrected deemed take. This information only needs to be read once per report, and will be stored in memory.

```
2:
SELECT c.consum_comp_class_id,
       c.measurement_quantity_id,
FROM   idb_consum_comp_classes c,
       idb_gsp_group_cctn_sf_ssr_runs s
WHERE  c.consum_comp_class_id =
       s.consum_comp_class_id
AND    s.ssr_run_number = input_ssr_run_number
```

Use a cursor to read through the idb_pd_sup_purchase table and order the output by gsp_group_id, supplier id and settlement_period_id.

```
3:
SELECT sup_mkt_ppt_id,
       gsp_group_id,
       sett_pd_id,
       pd_sup_deemed_take
FROM   idb_pd_sup_purchases
WHERE  ssr_run_number = input_ssr_run_number
AND    sett_date = select1.sett_date
ORDER BY gsp_group_id,
         sup_mkt_ppt_id
         sett_pd_id;
```

Read the supplier name, group name.

```
4:
SELECT mkt_ppt_name
FROM   idb_mkt_ppts
WHERE  mkt_ppt_id = select2.sup_mkt_ppt_id;
5:
SELECT gsp_group_name
```

```
FROM   idb_gsp_groups
WHERE  gsp_group_id = select2.gsp_group_id;
```

Read the gsp_group_takes for the group (this only needs to be read once per group and will be stored in memory)

6:

```
SELECT gsp_group_take
FROM   idb_gsp_group_takes
WHERE  gsp_group_id = select2.gsp_group_id
AND    ssa_sett_run_number = select1.ssa_sett_run_number
AND    sett_date = select1.sett_date;
```

Read the active BMU's for the group into memory (this needs to be done once per supplier per group)

7:

```
SELECT mkt_ppt_id, bm_unit_id, default_bm_unit_flag
FROM idb_bm_unit_in_gsp_groups
WHERE gsp_group_id = :sql_group_id
ORDER BY gsp_group_id ASC, mkt_ppt_id ASC, bm_unit_id ASC;
```

For each record retrieved from idb_pd_sup_purchase, read the aggregated supplier period consumption for the corresponding settlement period, group and supplier from the agtd_sup_pd_consum file for that SSR Run (this only needs to be done once per group). Sum the Corrected Energy/LineLoss values up to BM Unit level for each supplier taking into account whether the consumption class is half hourly or non half hourly and whether it is an Active Import or Export

8:

```
SELECT bm_unit_id, consumption_class, corrected_line_loss
FROM idf_agtd_bm_pd_consums
WHERE gsp_group_id = select2.gsp_group_id
AND ssr_run_number = input_ssr_run_number
AND sup_mkt_ppt_id = select3.sup_mkt_ppt_id
```

9:

```
SELECT data_agtn_type, measurement_quantity_id
FROM idb_consum_comp_classes
WHERE consum_comp_class_id = select8.consumption_class
```

For each record retrieved from idb_pd_sup_purchase, read the aggregated supplier period consumption for the corresponding settlement period, group and supplier from the agtd_sup_pd_consum file for that SSR Run. Take into account only that consumption or line loss which is attributable to supplies not subject to GSP group correction (non-corrected period supplier consumption).

7:

```
SELECT ac.agtd_sup_consum_nn
FROM   idf_agtd_sup_pd_consums ac
WHERE  ac.gsp_group_id = select3.gsp_group_id
```

```
AND     ac.sup_mkt_ppt_id = select3.sup_mkt_ppt_id
AND          ac.ssr_run_number = input_ssr_run_number

AND     (SELECT    gc.gsp_group_correction_sf
         FROM       idb_gsp_group_cctn_sf_ssr_runs gc
         WHERE      gc.ssr_run_number =
                    input_ssr_run_number
         AND        gc.consum_comp_class_id =
                   ac.consum_comp_class_id) = 0;
```

note: *nn* is the settlement period from select3.sett_pd_id

Output values of period supplier deemed take, broken down into corrected and non-corrected components, for each settlement period and calculate corresponding daily totals. The period supplier deemed take for each Settlement Period for a Supplier and GSP Group and the corresponding non-corrected period supplier deemed take are rounded up to 3 decimal places prior to output. Only after this rounding is the corrected period supplier deemed take for the Settlement Period, Supplier and GSP group then calculated by subtraction of the non-corrected period supplier deemed take from the period supplier deemed take. This ensures that the output values of period supplier deemed take, non-corrected and corrected period supplier deemed take are consistent in the report.

NB: The Daily Corrected Supplier Deemed Take is calculated by summing the Period Corrected Deemed Take values before they are rounded and then rounding the Daily Total up to 3 decimal places prior to output.

Output values of period half hourly and non half hourly volumes for each settlement period for each BM Unit for the supplier and calculate BM Unit Daily Totals. Then output the total.

A single report is produced and CFS_EXPORT called to initiate file transfer.

9.6.159.6.20Report IRP_BM_UNIT_SUPPLIER_TAKE Specification

Function Definition Ref: I0027B Produce SSR Reports - Supplier Take Energy Volume Data Report

9.6.15.19.6.20.1Inputs

```
Function Name:       IRP_BM_Unit_Supplier_Take()
Arguments:           SSR Run Number (IN)
Return:              success/failure
```

ISRA tables read:

1. idb_bm_unit_in_gsp_groups
2. idb_ssa_sett_runs
3. idb_ssr_runs
4. idb_ssa_sett_gsp_group
5. idb_sett_types

ISRA files read:

1. idf_agtd_bm_pd_consums

9.6.15.29.6.20.2Machine Readable Output

See Section 3.1.17

9.6.15.39.6.20.3Human Readable Output

See Section 3.1.17

9.6.15.49.6.20.4Functionality

See Function Description I0027B

Read the idb_ssr_run table for header details.

```
1:
SELECT sett_date,
       sett_code,
       ssr_run_date,
       ssr_run_type_id,
       ssa_sett_run_number
FROM   ssr_runs
WHERE  ssr_run_number = input_ssr_run_number;
```

Read idb_ssa_sett_runs for more header details.

```
2:
SELECT ssa_sett_run_type_id,
       sett_date
FROM   idb_ssa_sett_runs
WHERE  ssa_sett_run_number = select1.ssa_sett_run_number;
```

Read through the idf_agtd_bm_pd_consums table for the ssr_run. For each BM Unit for Supplier in GSP Group calculate the Period BM Unit Allocated Volume by summing the Corrected_BM Unit Energy/Line Losses across all Consumption Component Classes. Active Import CCCs are added, and Active Export CCCs subtracted.

9.6.169.6.21Report IRP_BM_UNIT_SVA_GROSS_DEMAND Specification

Function Definition Ref: I0027B Produce SSR Reports - SVA Gross Demand Data Report

9.6.16.19.6.21.1Inputs

```
Function Name:       IRP_BM_Unit_SVA_Gross_Demand()
Arguments:           SSR Run Number (IN)
Return:              success/failure
```

ISRA tables read:

1. idb_bm_unit_in_gsp_groups
2. idb_ssa_sett_runs

3. idb_ssr_runs
4. idb_ssa_sett_gsp_group
5. idb_sett_types

ISRA files read:

1. idf_agtd_bm_pd_consums

9.6.16.29.6.21.2Machine Readable Output

See Section 3.1.22

9.6.16.39.6.21.3Human Readable Output

See Section 3.1.22

9.6.16.49.6.21.4Functionality

See Function Description I0027B

Read the idb_ssr_run table for header details.

```
1:
SELECT sett_date,
       sett_code,
       ssr_run_date,
       ssr_run_type_id,
       ssa_sett_run_number
FROM   ssr_runs
WHERE  ssr_run_number = input_ssr_run_number;
```

Read idb_ssa_sett_runs for more header details.

```
2:
SELECT ssa_sett_run_type_id,
       sett_date
FROM   idb_ssa_sett_runs
WHERE  ssa_sett_run_number = select1.ssa_sett_run_number;
```

Read through the idf_agtd_bm_pd_consums table for the ssr_run. For each BM Unit for Supplier in GSP Group calculate the Period BM Unit Allocated Volume by summing the Corrected_BM Unit Energy/Line Losses across all Consumption Component Classes. Only Active Import CCCs are added.

9.6.179.6.22Report IRP_DUoS Specification

Function Definition Ref: I0027B Produce SSR Reports - DUoS Report

9.6.17.19.6.22.1Inputs

```
Function Name:       IRP_DUoS()
Arguments:           SSR Run Number (IN)
                     Mkt Ppt Id (IN)
                     Mkt Ppt Role Code (IN)
Return:              success/failure
```

ISRA tables read:

1. idb_consum_comp_classes
2. idb_ssr_run_gsp_group_pds

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3. idb_gsp_group_cctn_sf_ssr_runs
4. idb_gsp_groups
5. idb_llf_classes
6. idb_market_ppt_roles
7. idb_mkt_ppts
8. idb_sett_pd_llfs
9. idb_ssr_runs
10. idb_sett_types
11. idb_spc_records_tmp
12. idb_tpsdata_tmp

ISRA files read:

1. idf_agtd_sup_pd_consums
2. idf_pd_pfl_class_coeffs
3. idf_sup_purchase_matrices
4. idf_agtd_sup_da_pd_consums_llf
5. idf_tpr_time_patterns

9.6.22.2 Machine Readable Output

See Section 3.1.18

9.6.22.3 Human Readable Output

See Section 3.1.18

9.6.22.4 Functionality

See Function Description I0027B

The DUoS report has two sections: the DUoS report itself and a report of the DUoS Domain Data.

Each Supplier in the GSP Group will receive a DUoS report containing data relating to the Supplier. All Distribution Businesses each receive a DUoS Report relating to all the active Suppliers in the GSP Groups for which they are active. The DUoS report is generated as follows

The idb_ssr_runs table is read for header information.

```
1:
SELECT FIRST sett_date,
             sett_code,
             ssr_run_number,
             ssr_run_date,
             ssr_run_type_id,
FROM         idb_ssr_runs
WHERE        ssr_run_number = input_ssr_run_number;
```

Depending on whether a Supplier or Distributor DUoS Report is being produced, idb_sup_data_agtn_in_ssr_runs is read for the specified SSR Run and for Non Half

Hourly Data Aggregators only, to obtain valid combinations of Distributor and GSP Group, or Supplier and GSP Group respectively. This is achieved using a cursor, as multiple records can be retrieved. The results are ordered by Supplier/Distributor and GSP Group.

```
2:
SELECT DISTINCT
       s.sup_mkt_ppt_id,
       s.gsp_group_id,
FROM   idb_sup_data_agtn_in_ssr_runs  s,
       idb_mkt_ppt_role_in_gsp_groups t
WHERE  t.mkt_ppt_id = input_distributor_id
AND    t.mkt_ppt_role_code =
           CI_ROLE_CODE_DISTRIBUTOR
AND    s.da_mkt_ppt_role_code = CI_ROLE_CODE_NHHDA
AND    s.gsp_group_id = t.gsp_group_id
AND    s.ssr_run_number = input_ssr_run_number
ORDER BY sup_mkt_ppt_id,
         gsp_group_id;


SELECT DISTINCT
       t.mkt_ppt_id,
       s.gsp_group_id,
FROM   idb_sup_data_agtn_in_ssr_runs  s,
       idb_mkt_ppt_role_in_gsp_groups t
WHERE  s.ssr_run_number = input_ssr_run_number
AND    s.sup_mkt_ppt_id = input_supplier_id
AND    s.gsp_group_id   = t.gsp_group_id
AND    t.mkt_ppt_role_code =
           CI_ROLE_CODE_DISTRIBUTOR
ORDER BY t.mkt_ppt_id,
         gsp_group_id;
```

Read the supplier name, pool member id and gsp_group_name.

```
3:
SELECT mkt_ppt_name
FROM   idb_mkt_ppts
WHERE  mkt_ppt_id = select2.sup_mkt_ppt_id;

SELECT mkt_ppt_name
FROM   idb_mkt_ppts
WHERE  mkt_ppt_id = select2.dist_mkt_ppt_id;


4:
SELECT gsp_group_name
FROM   idb_gsp_groups
WHERE  gsp_group_id = select2.gsp_group_id;
```

```
5:
SELECT pool_member_id
FROM   idb_mkt_ppt_roles
WHERE  mkt_ppt_id = select2.sup_mkt_ppt_id
AND    mkt_ppt_role_code = "x";
```

Read the relevant sup_purchase_matrix file and output data according to the settlement class and consumption type.

For each settlement class, read from the idb_set_pd_llfs table to get the line loss factors for that row and read the relevant pd_pfl_class_coeffs file to get the coefficients for that profiles class. Apply the pd_profile_class coefficient for each settlement period to the SPM value to get a consumption for each settlement period and add to running daily totals. Output the results of this with the corresponding line loss factor.

Also, the idf_agtd_sup_da_pd_consums_lll, idf_tpr_time_patterns are read and stored into temporary idb_spc_records_tmp, idb_tpsdata_tmp tables respectively to write new VMR, TOT and SPX for the dummy SSC records for the matching Distributor into the DUoS report.

Details on the VMR record group are mentioned below

Group	Data Item	Derivation
VMR	Profile Class	Set to 0
VMR	Standard Settlement Configuration Id	From LLF/SSC Data Mapping file
VMR	Distributor Id	From idf_agtd_sup_da_pd_consums_lll
VMR	Line Loss Factor Class Id	From idf_agtd_sup_da_pd_consums_lll
VMR	Time Pattern Regime	From LLF/SSC Data Mapping file
VMR	SPM Total All EACs	Set to zero
VMR	SPM Total Annualised Advance Report Value	Set to zero
VMR	SPM Total EAC MSID Count	Data Aggregator HH MSID Count (for Settlement Period 1) from D0040/D0298 where CCC Id = 28, summed by Supplier, GSP Group, SSC Id, Distributor Id/LLFC Id.
VMR	SPM Total AA MSID Count	Data Aggregator HH MSID Count (for Settlement Period 1) from D0040/D0298 where CCC Id = 23, summed by Supplier, GSP Group, SSC Id, Distributor Id/LLFC Id.
VMR	SPM Default EAC MSID Count	Set to zero

Details on the SPX record group

Group	Data Item	Derivation

SPX	Profiled SPM Consumption (Settlement Period nn)	Aggregated Supplier Consumption from D0040/D0298 where CCC = 23 or CCC=28, summed by Supplier, GSP Group, SSC Id and Distributor Id/LLFC Id and multiplied by the Period Time Pattern State Indicator for the relevant TPR/Settlement Date/Settlement Period.

Details on the TOT record group

Group	Data Item	Derivation
TOT	Daily Profiled SPM Total EAC	Aggregated Supplier Consumption from D0040/D0298 where CCC = 28, summed by Supplier, GSP Group, SSC Id, Distributor Id/LLFC Id and Settlement Period and multiplied by the Period Time Pattern State Indicator for the relevant TPR/Settlement Date/Settlement Period, then summed across all Settlement Periods in the Settlement Date.
TOT	Daily Profiled SPM Total Annualised Advance	Aggregated Supplier Consumption from D0040/D0298 where CCC = 23, summed by Supplier, GSP Group, SSC Id, Distributor Id/LLFC Id and Settlement Period and multiplied by the Period Time Pattern State Indicator for the relevant TPR/Settlement Date/Settlement Period, then summed across all Settlement Periods in the Settlement Date.

The second part of the DUoS report - Domain Data is generated as follows:

Use the header data returned by select statement 1. Read through the relevant idf_agtd_sup_pd_consums file and collate a list of CCC used by each supplier and the groups in which the supplier is active.

For each supplier, read the idb_consum_comp_classes table and output the CCC details. Read the idb_gsp_group_cctn_sfactors to get the scaling weights relevant to each CCC.

```
SELECT gsp_group_correction_sfs
FROM   idb_gsp_group_cctn_sfs
WHERE  consum_comp_class = CCC_Id
AND    eff_from_sett_date <= select1.sett_date
AND    eff_to_sett_date >= select1.sett_date
```

Then read the idb_gsp_group_cctn_factors table to get the group correction factors.

```
SELECT gsp_group_cctn_factor
FROM   idb_gsp_group_cctn_factors
```

```
WHERE  sett_date = select1.sett_date
AND    gsp_group_id = select2.gsp_group_id
AND    ssr_run_number = input_ssr_run_number;
```

Output the group name and then the correction factors for each settlement period.

A report is written for each Supplier and Distributor active in the system. CFS_EXPORT is called for each file to initiate file transfer.

9.6.23 Report IRP_Disconnected_DUoS Specification

Function Definition Ref: I0027B Produce SSR Reports – Disconnected DUoS Report

9.6.23.1 Inputs

Function Name:	IRP_Disconnected_DUoS()
Arguments:	SSR Run Number (IN)
	Mkt Ppt Id (IN)
	Mkt Ppt Role Code (IN)
Return:	success/failure

ISRA tables read:

1. idb_consum_comp_classes
2. idb_ssr_run_gsp_group_pds
3. idb_gsp_group_cctn_sf_ssr_runs
4. idb_gsp_groups
5. idb_llf_classes
6. idb_market_ppt_roles
7. idb_mkt_ppts
8. idb_sett_pd_llfs
9. idb_ssr_runs
10. idb_sett_types

ISRA files read:

1. idf_agtd_sup_pd_discon_volumes
2. idf_pd_pfl_class_coeffs
3. idf_discon_purchase_matrices

9.6.23.2 Machine Readable Output

See Section 3.1.18

9.6.23.3 Human Readable Output

See Section 3.1.18

9.6.23.4 Functionality

See Function Description I0027B

The Disconnected DUoS report has two sections: the Disconnected DUoS report itself and a report of the DUoS Domain Data.

Each Supplier in the GSP Group will receive a Disconected DUoS report containing data relating to the Supplier. All Distribution Businesses each receive a Disconnected DUoS Report relating to all the active Suppliers in the GSP Groups for which they are active. The Disconnected DUoS report is generated as follows

The idb_ssr_runs table is read for header information.

```
1:
SELECT FIRST sett date,
             sett code,
             ssr run number,
             ssr run date,
             ssr run type id,
FROM         idb ssr runs
WHERE        ssr run number = input ssr run number;
```

Depending on whether a Supplier or Distributor DUoS Report is being produced, idb_sup_data_agtn_in_ssr_runs is read for the specified SSR Run and for Non Half Hourly Data Aggregators only, to obtain valid combinations of Distributor and GSP Group, or Supplier and GSP Group respectively. This is achieved using a cursor, as multiple records can be retrieved. The results are ordered by Supplier/Distributor and GSP Group.

```
2:
SELECT DISTINCT
       s.sup mkt ppt id,
       s.gsp group id,
FROM   idb sup data agtn in ssr runs  s,
       idb mkt ppt role in gsp groups t
WHERE  t.mkt ppt id = input distributor id
AND    t.mkt ppt role code =
           CI ROLE CODE DISTRIBUTOR
AND    s.da mkt ppt role code = CI ROLE CODE NHHDA
AND    s.gsp group id = t.gsp group id
AND    s.ssr run number = input ssr run number
ORDER BY sup mkt ppt id,
         gsp group id;


SELECT DISTINCT
       t.mkt ppt id,
       s.gsp group id,
FROM   idb sup data agtn in ssr runs  s,
       idb mkt ppt role in gsp groups t
WHERE  s.ssr run number = input ssr run number
AND    s.sup mkt ppt id = input supplier id
AND    s.gsp group id   = t.gsp group id
AND    t.mkt ppt role code =
           CI ROLE CODE DISTRIBUTOR
ORDER BY t.mkt ppt id,
         gsp group id;
```

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Read the supplier name, pool member id and gsp_group_name.

```
3:
SELECT mkt ppt name
FROM   idb mkt ppts
WHERE  mkt ppt id = select2.sup mkt ppt id;

SELECT mkt ppt name
FROM   idb mkt ppts
WHERE  mkt ppt id = select2.dist mkt ppt id;


4:
SELECT gsp group name
FROM   idb gsp groups
WHERE  gsp group id = select2.gsp group id;

5:
SELECT pool member id
FROM   idb mkt ppt roles
WHERE  mkt ppt id = select2.sup mkt ppt id
AND    mkt ppt role code = "x";
```

Read the relevant sup_purchase_matrix file and output data according to the settlement class and consumption type.

For each settlement class, read from the idb_set_pd_llfs table to get the line loss factors for that row and read the relevant pd_pfl_class_coeffs file to get the coefficients for that profiles class. Apply the pd_profile_class coefficient for each settlement period to the SPM value to get a consumption for each settlement period and add to running daily totals. Output the results of this with the corresponding line loss factor.

The second part of the DUoS report - Domain Data is generated as follows:

Use the header data returned by select statement 1. Read through the relevant idf_agtd_sup_pd_discon_volumes file and collate a list of CCC used by each supplier and the groups in which the supplier is active.

For each supplier, read the idb_consum_comp_classes table and output the CCC details. Read the idb_gsp_group_cctn_sfactors to get the scaling weights relevant to each CCC.

```
SELECT gsp group correction sfs
FROM   idb gsp group cctn sfs
WHERE  consum comp class = CCC Id
AND    eff from sett date <= select1.sett date
AND    eff to sett date >= select1.sett date
```

Then read the idb_gsp_group_cctn_factors table to get the group correction factors.

```
SELECT gsp group cctn factor
FROM   idb gsp group cctn factors
WHERE  sett date = select1.sett date
AND    gsp group id = select2.gsp group id
AND    ssr run number = input ssr run number;
```

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Output the group name and then the correction factors for each settlement period.

A report is written for each Supplier and Distributor active in the system. CFS_EXPORT is called for each file to initiate file transfer.

~~9.6.18~~9.6.24 Report IRP_AFYC Specification

Function Definition Ref: I0045 Produce AFYC Recalculation Report

~~9.6.18.1~~9.6.24.1 Inputs

```
Function Name:      IRP_AFYC()
Arguments:          Start Settlement Date (IN)
                    End Settlement Date (IN)
                    Effective From Settlement Date (IN)
Return:             success/failure
```

ISRA tables read:

1. idb_gsp_groups
2. idb_ssr_runs
3. idb_sup_data_agtn_in_ssr_runs

ISRA files read:

1. idf_pd_pfl_class_coeffs
2. idf_sup_purchase_matrices

~~9.6.18.2~~9.6.24.2 Machine Readable Output

See Section 3.1.23

~~9.6.18.3~~9.6.24.3 Human Readable Output

See Section 3.1.23

~~9.6.18.4~~9.6.24.4 Functionality

See Function Description I045.

1. All GSP Groups which are active within the range specified by the input parameters Start Settlement Date and End Settlement Date are read from the idb_gsp_groups table. The remainder of the processing is for each GSP Group in turn.
2. For each Settlement Date in turn, the SSR Run Number and Settlement Code of the most recent successfully completed SSR Run are selected from the idb_ssr_runs table.
3. These are used to read the DPCs for every Profile Class / SSC / TPR combination from the idf_pd_pfl_class_coeffs file for the current GSP Group and each Settlement Date.
4. The idb_sup_data_agtn_in_ssr_runs table is read to select the Data Aggregation Run Numbers and Data Aggregator Ids and these are used to sum the Total AA and Total AA Metering System Id Count for every Profile Class / SSC / TPR combination from the idf_sup_purchase_matrices files for the current GSP Group and each Settlement Date.

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5. For each Profile Class / SSC / TPR combination for each Settlement Date the "TPR EAC" apportioned to that Settlement Date is calculated using the data read in in steps 3 and 4.
6. For each Profile Class / SSC combination for each Settlement Date the Average EAC apportioned to that Settlement Date is calculated by summing the TPR EACs for each TPR of the Profile Class / SSC combination.
7. For each Profile Class for each Settlement Date the Default EAC apportioned to that Settlement Date is calculated by summing the Average EACs for each SSC of the Profile Class, weighted by the number of Metering Systems contributing to each Average EAC.
8. For each Profile Class, the Default EACs calculated in step 7 are summed and corrected for the number of days in the range to calculate the annualised Default EAC, and this is written to the report.
9. For each Profile Class / SSC combination, the Average EACs calculated in step 6 are summed and corrected for the number of days in the range to calculate the annualised Average EAC, and this is written to the report.
10. For each Profile Class / SSC combination, the AFYC is calculated for each TPR and this is written to the report.
11. CFS_EXPORT is called to initiate file transfer of the report.
12. Exception warnings are written to the report in the following two cases:
    - if there is no data for a GSP Group / Profile Class / SSC / TPR combination for one of more dates in the Settlement Date range;
    - if for more than 75% of the dates in the Settlement Date range for which there is data, the DPC for a GSP Group / Profile Class / SSC / TPR combination is zero

9.6.199.6.25Ad-hoc Reporting

Ad hoc reports may be produced by using a database query tool such as ORACLE reports. Graphical versions of reports can be produced by copying the human-readable versions of reports from the server to the client PC and importing into standard PC packages such as EXCEL.

9.6.209.6.26Report IRP_LLF_CON Specification

9.6.20.19.6.26.1Inputs

```
Function Name:IRP_LLF_CON()
Arguments:Distributor (IN)
Settlement Date (IN)
Settlement Period (IN)
LLF File Id (IN)
Return:success/failure
```

9.6.20.29.6.26.2Machine Readable Output

See Section 3.2.6

9.6.20.39.6.26.3Human Readable Output

See Section 3.2.6

9.6.20.49.6.26.4Functionality

This report is used after the annual LLF loads, to confirm that LLF values have been loaded for all the expected LLFCs. This report has only one section:

The Parameter section displays the Distributor Id, Settlement Date, Settlement Period Id and LLF File Id.

The LLF section displays llf_class_id and and llf from idb_sett_pd_llfs for the supplied parameters.

```
1:

SELECT ispl.llf_class_id,
       Ispl.llf
FROM   idb_sett_pd_llfs ispl
WHERE  ispl.dist_mkt_ppt_id = input_dist_mkt_ppt_id
AND    ispl.sett_date       = input_sett_date
AND    ispl.sett_pd_id      = input_sett_pd_id
AND    ispl.llf_file_id     = input_max_llf_file_id
ORDER BY ispl.llf_class_id;
```

A report is written based on the results obtained.

9.7 Report Sizing and Frequency

The following tables summarise the expected number of lines in each report and the frequency at which they are generated. The first table is for the standard reports which have fixed content and predictable frequencies.

The second table is for the Pool report AFYC Recalculation Report which can be requested for a range of settlement dates. In this case the size is a multiple of the number of dates selected, this is indicated in the *per* column.

The numbers are based on the *likely* numbers in [ILDATA], and the acronyms in the derivation columns are defined in Section 6 of [ILDATA].

Standard Reports

Report Name	Lines per Report	Derivation	Average Line Length	Average Report Size (bytes)	Reports per settlement day	Derivation	Total Size per settlement Day
DUOS (Distributor)	31,454	SPM_GSPST * GSP*2 /DIS	300	9,436,050	200	DIS*SRPSD	1,887,210,000
DUOS (Supplier)	43,384	SPM_GSPST * GSP*2 /SUP	300	13,015,241	145	SUP*SRPSD	1,887,210,000
Supplier BM Unit Report	18,425	GSP * ((BMUIGG/GSP/SUP)+NHHBMUIGG/GSP/SUP) + ((BMUIGG/GSP/SUP)*(HHCCC+NHHCCC)*(2+SPD))+((BMUIGG/GSP/SUP)*(2+SPD))+(HHDA_SG*(BMUIGG/GSP/SUP/HHDA_SG)*(2+SPD))	40	736,997	145	SUP*SRPSD	106,864,585
HH Demand	47,424	GSP*(NHHCCC+HHCCC)*SPD + GSP*HHDA_SG*HHCCC*SPD	50	2,371,200	145	SUP*SRPSD	343,824,000
GSP Group Consumption Totals Report	19,968	GSP*(NHHCCC+HHCCC)*SPD	60	1,198,080	145	SUP*SRPSD	173,721,600
Supplier Settlement Report Header	57	GSP + (HHDA_SG+DAPG)*GSP + 5	40	2,280	145	SUP*SRPSD	330,600
Supplier Purchase Matrix Report	21,718	GSP + GSP*DAPG + SPM_GSPST*GSP/SUP	100	2,171,807	145	SUP*SRPSD	314,912,000
Deemed Take	637	GSP * (SPD+1)	138	87,906	145	SUP*SRPSD	12,746,370
Supplier Purchase	637	GSP * (SPD+1)	80	50,960	145	SUP*SRPSD	7,389,200
TUOS	218,863	GSP*SUP*(SPD+1)	43	9,411,109	5	SRPSD	47,055,545
BM Unit Supplier Take	196,390	GSP * (1 + SUP_GSP * (2 + SPD))	22	4,320,580	5	SRPSD	21,602,900
BM Unit SVA	196,390	GSP * (1 + SUP_GSP * (2	22	4,320,580	5	SRPSD	21,602,900

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Report Name	Lines per Report	Derivation	Average Line Length	Average Report Size (bytes)	Reports per settlement day	Derivation	Total Size per settlement Day
Gross Demand		+ SPD))					
PR - SSC	71,940	VSSCPC + VMRPC + VMRPC*GSP*SSC_FACTOR + TPR*AVG_TB_TPR_DAY	25	1,798,500	54	PRPSD*(SUP+DC)	97,119,000
PR Tele-switch Contact Interval Data	1,324	1 + 1 + 1 + 1 + TELE_USER + TELE_GROUP + CONTACTS + TSW_CON_INT	25	33,100	29	SUP	959,900
PR - Standing Profile Data	2,984	PC+PROF*(1+GSP+SPD)	100	298,400	54	PRPSD*(SUP+DC) PRPSD	16,113,600
PR - Daily Profile Data	539,565	GSP * (1 + PC + PROF*2 + VSSCPC*2 + VMRPC*2	300	161,869,500	32	PRPSD*SUP	5,179,824,000
PR - Daily Profile Extract	20,709	1+PC+VSSCPC+VMRPC	22	455,598	14	PRPSD*GSP	6,378,372
Totals					**1,553**		**10,103,261,672**

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Pool Reports

Report Name	Lines	Derivation	Average line size (bytes)	Average Report Size	Per
AFYC Recalculation Report	65,562	GSP*SSC_FACTOR * (2*PC+2*VSSCPC+VMRPC)	25	1,639,040	Report

10 IAR Archive and Restore Subsystem Specifications

10.1 Introduction

This subsystem is primarily responsible for the deletion of database and file data from the system, and the selective restoring of file data from the archive tape.

On archive, the user specifies a Settlement Date. This will be referred to as the "archive date" for clarity. This represents the latest Settlement Date for which data is to be archived off. The result is an implicit request to archive all data that relates to a contiguous period of Settlement Dates starting with the earliest Settlement Date present on the system up to and including the archive date Settlement Date. This will be referred to as the "archive period" for clarity. There are two checks performed on this archive period before the data relating to it can be archived.

Firstly, the archive date must be further in the past than the Data Retention Period (DRP) system parameter. Secondly, Final Reconciliation must have been performed for each Settlement Date in the archive period.

The user is reminded that a backup of all of the day's data should have been previously performed, and given the option to abort the archive if this is not the case. If the user selects to continue, archiving begins. Data is identified as eligible for deletion in one of three ways;

1. Database and file data that directly relates to any of the Settlement Dates in the archive period is deleted. Such file data includes input data files, flat data files containing SSR and DPP related data, and report files.
2. Some database data and files relate to periods of time rather than specific Settlement Dates. Some of this database and file data will no longer be effective after the archive date and so this is also deleted.
3. Finally, there is some database and file data that cannot be logically connected to any specific Settlement Dates nor period of Settlement Dates. This includes some input data files and exception reports. In this case, the database and file data is removed according to either the time a file was received by the system, or the time a piece of data was generated. In either case where the received time of the file, or generated time of the data, is earlier than or equal to the specified archive date the data or file will be deleted.

See sections 10.4.1.1 and 10.4.1.2 of this document for details of deletion criteria for specific data and files respectively.

Note there are important exceptions to this general principle of archiving outlined above. This refers to scenarios where data may relate to multiple Settlement Dates, and only some of these dates fall within the period of time for which archiving is to be performed. The principle applied within archiving is that data or files are only removed once all settlement dates to which the files or data refer have been archived.

The archive of data to tape is achieved by the daily backup of data. The backing up of data to tape is an operational procedure defined by the ISR Agent. Details of backup can be found in the relevant sections in the Common Subsystems Technical Specification [CTSPEC].

The Data Retention Period is a user maintainable system parameter that relates solely to archiving. It specifies a minimum number of months for which data must be

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retained. The archive date specified when archiving is initiated indicates the date up to which archiving is to be performed. This archive date must be further in the past than the number of months indicated by the DRP.

Although the DRP system parameter can be set to any number of months desired, if archiving is initiated with the DRP system parameter set to less than 24 months then archiving will be aborted. 24 months represents the absolute minimum period of time that data must be retained on the system. A message output to the screen will indicate that archiving was aborted because the DRP was set too low.

The DRP system parameter does not restrict the choice of archive date at the stage when archiving is initiated. If archiving is initiated and an archive date is chosen that is too recent (i.e. a date that is within a number of months in the past that is less than the DRP system parameter), then archiving is still performed. However, only Settlement Dates that are a sufficient number of months in the past (ie more than the DRP system parameter) will actually be archived. Settlement Dates that are within the last DRP number of months will be retained. A message to this effect will be displayed on the screen upon completion of archiving.

Restore requires the database to have been previously restored from the relevant archive tape. The user either specifies a single settlement day, or a range of settlement days. Report and data files relevant to the specified settlement day(s) are then selectively restored.

Archive details are recorded in the operator log. The details consist of date and time of the archive, user Id, settlement days included and software version numbers. These details can be used to determine the versions of the archive tapes required to restore data from.

An exception report is also generated when archiving is performed. This is detailed in section 10.2.2.1 of this document.

On restore, the versions of the ISRA software and any underlying software such as Oracle and Operating System, must be compatible with versions of the software running at the time the archive tape was created. The backing up of versions of software is an operational procedure defined by the ISR Agent.

Archive and restore are implemented as separate processes. They can be initiated on the server machine via the command line. There are no screens associated with these processes.

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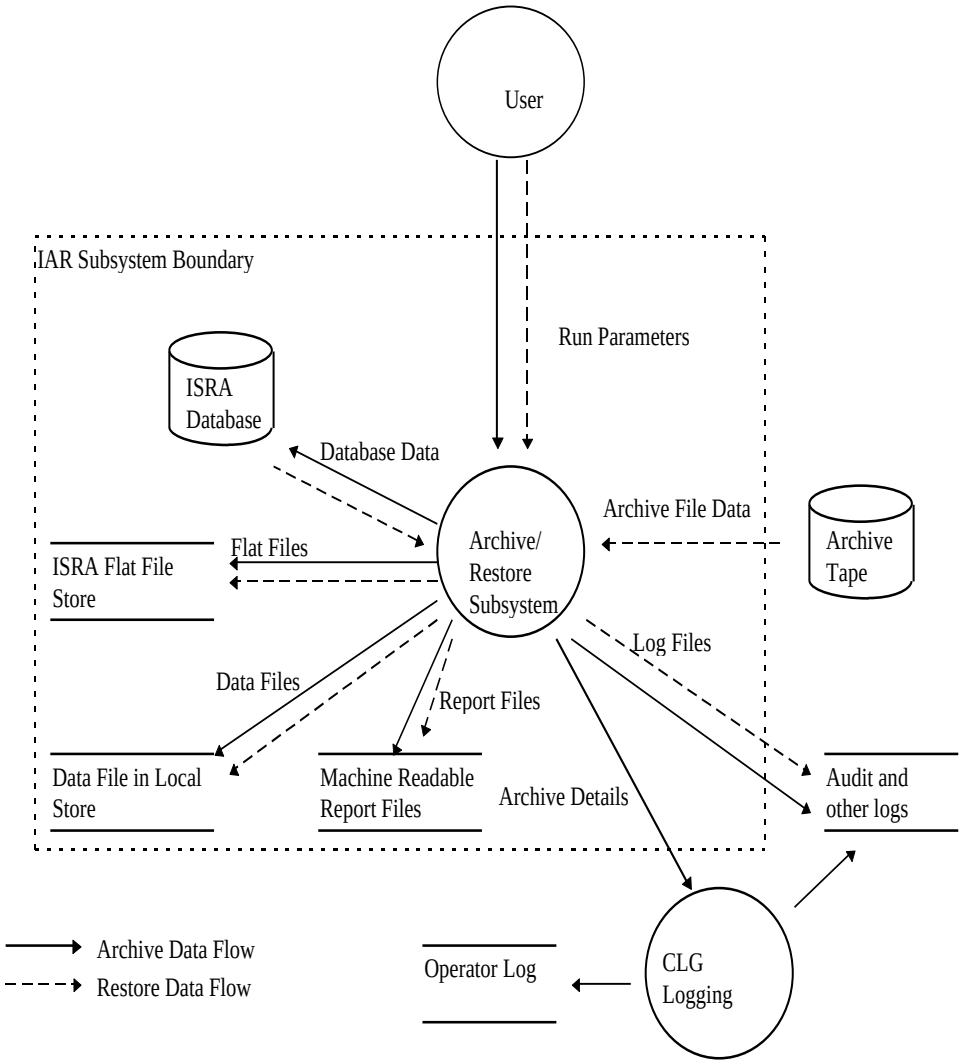
10.2 Subsystem Context

10.2.1 Archive and Restore Context Diagram



10.2.2 Interfaces

10.2.2.1 Archive Details

Deletion of entries from database tables is recorded in the audit log via the CLG common subsystem.

Details of the archive are written to the Operator Log via the CLG common subsystem. Details consist of the user name, archive date and time, and settlement dates included, version numbers of the ISRA software, Oracle software and Operating System.

An exception report is also generated when archiving is performed. The settlement date up to which archiving is requested is indicated in the file. This contains details of which files were deleted during archiving including each file's filename, file id in the database and the directory path from which it was removed. For each table that can potentially have data removed from it during archiving there is an entry in the exception report. This entry indicates the number of rows that were deleted from the

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table in the archiving. A total count of the number of rows deleted from all these tables during archiving is provided.

10.2.2.2 Archive File Data

These are file data restored from tape.

10.2.2.3 Data Files

Input data files received from external sources will be deleted if either they

1. relate directly to a Settlement Date which is to be archived.
2. supplied data that is no longer effective after the specified archive date.
3. do not relate to any specific Settlement Date or period of Settlement Dates and were received on or before the archive date.

On archive, these are deleted from the local file store.

On restore, these are files restored from the archive tape.

10.2.2.4 Database Data

During archiving certain data will be deleted, provided either;

1. the data relates directly to a Settlement Date in the archive period.
2. the data is no longer effective after the specified archive date.
3. the data does not relate to any specific Settlement Date or period of Settlement Dates and was created on or before archive date.

On restore, these are details of the relevant files referenced in the database. These are used to identify names of files to restore from the archive tape.

10.2.2.5 Flat Files

Files that are relevant to the specified Settlement Date range. These files contain data related to SSR and DPP runs.

On archive, these are deleted from the local file store.

On restore, these are restored from the archive tape.

(Note that the files will be restored to the directory they occupied at the time of archiving. Refer to Section 2.6.6 ‘Implementation of Logical Entities by Data Files’ for further details.)

10.2.2.6 Log Files

On the day of the archive, log files that have been retained on the system for more than a number of months indicated by the DRP system parameter are deleted. Log files are audit log files, operator log files and error log files. Exception files are also removed in this manner.

On restore, these are log files restored from the backup tape.

10.2.2.7 Report Files

SSR and DPP report files that are relevant to the specified Settlement Date range.

On archive, these are deleted from the local file store.

On restore, these are restored from the archive tape.

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10.2.2.8 Run Parameters

The archive and restore processes are initiated by the user via the command line on the server machine. Parameter values are specified as command line arguments.

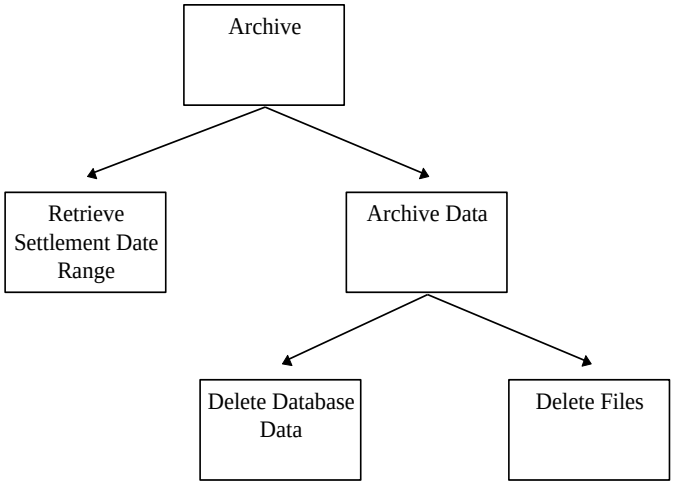
On archive, the parameters required are the Oracle user name and password, and a Settlement Date. The Settlement Date represents the latest Settlement Date for which data is to be archived off, inclusive of Settlement Dates since the last archive was performed.

On restore, the parameters required are the Oracle database name to restore associated file data to, the Oracle user name and password, and a Settlement Date range for which to restore data. If the user specifies a single Settlement Date, only file data relevant to that Settlement Date are restored. If two Settlement Dates are specified, file data relevant to the date range specified are restored.

10.3 Subsystem Processing

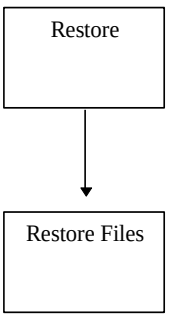
10.3.1 Archive Processing

The following diagram shows the interfaces between procedures that make up the Archive process.



10.3.2 Restore Processing

The following diagram shows the interfaces between procedures that make up the Restore process.



10.4 Data Usage

10.4.1 System Data

10.4.1.1 Database

During archive, data that have expired, data that are specific to, and those that are no longer valid after the archive period are deleted.

The following database tables are checked for data specific to the archive Settlement Date range:-

CDB_ACTIVITY (Only before the archive date)

CDB_ACTIVITY_PARAMETER

CDB_DATA_FILE

CDB_FILE_DIRECTORY

CDB_FILE_REFERENCE

CDB_FILE_EXPORT

CDB_REPORT_FILE

IDB_DAILY_PFL_PARAMETERS

IDB_GSP_GROUP_CCTN_SF_SSR_RUNS

IDB_GSP_GROUP_TAKES

IDB_PD_SUP_PURCHASES

IDB_PFL_PRODUCTION_RUNS

IDB_SETT_PD_LLFS

IDB_SETT_PD_PRICES

IDB_SETTLEMENT_DAYS

IDB_SETTLEMENTS

IDB_SSA_SETT_GSP_GROUPS

IDB_SSA_SETT_RUNS

IDB_SSR_RUN_GSP_GROUP_PDS

IDB_SSR_RUN_GSP_GROUPS

IDB_SSR_RUN_LLF_FILES

IDB_SSR_RUNS

IDB_SUP_DATA_AGTN_IN_SSR_RUNS

IDB_SUP_DATA_AGTNS

IDB_TSW_CONTACT_INTERVALS

IDB_TELESWITCH_INTERVALS

The following database tables have an effective Settlement Date range. They are checked for data that are no longer valid after the archive period.

IDB_AFYCS

IDB_DA_IN_GSP_GROUPS

IDB_GSP_GROUP_AVERAGE_EACS

IDB_GSP_GROUP_CCTN_SFS

IDB_NHH_BM_UNIT_ALLOCATION

IDB_LLF_CLASSES

IDB_MKT_PPT_ROLE_IN_GSP_GROUPS (Suppliers and Distributors only)

IDB_PD_PFL_REGR_COEFS

IDB_PFL_SETS

IDB_PFLS

IDB_VSCPCS

IDB_VMR_PFL_CLASSES

IDB_BM_UNIT_IN_GSP_GROUPS

IDB_DEMAND_CONTROL_INSTRUCTION

IDB_DEMAND_CONTROL_EVENT

Note: Since the table IDB_VMR_PFL_CLASSES has no effective From/To Settlement Dates, a record will be deemed to have expired when the last child record in IDB_VSCPCS is deleted.

On restore, all database tables are restored from the backup tape.

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10.4.1.2 Files

On archive, all data and report files that are relevant to the archive period are deleted. Data files are input data files, and flat data files that store SSR and DPP related data. On restore, these files are copied from the archive tape to the appropriate local disk directories.

The following input data file types are specific to Settlement Dates. On archive, the files that fall within the archive period are deleted. On restore, these are selectively copied from the archive tape.

GSP Group Take

Settlement Price Data

Aggregated Half Hourly Data

BM Unit Aggregated Half Hour Data

Supplier Purchase Matrix

Tele-switch Contact Intervals

Disconnection Purchase Matrix

Demand Disconnection Volume Data

BM Unit Aggregated Half Hour Demand Disconnection Data

Demand Control Instructions Data

Demand Control Event Data

MSIDs affected by Demand Control Event

The following input data files are either specific to a range of Settlement Dates or not specific to Settlement Dates at all. These files are deleted on the basis of when they were received by the system. On restore, these files are copied if they are referenced by the version of the restored database.

Regression Equation Data

Scottish Regression Equation Data

Line Loss Factors

Pool Market Domain Data

Sunset Data

Profile Data

Market Domain Data Complete Set

Data Aggregation and Settlements Timetable File

BM Unit Registration Data File

The following log files are deleted where the file creation time is earlier than the date up to which archiving is to be performed.

Error Logs

Operator Logs

Audit Logs

Exception Reports

The following flat data files contain SSR and DPP related data. These are referenced in the data model with table names starting with “IDF_”. On archive, files specific to

the archive period are deleted. On restore, these are selectively copied from the archive tape.

IDF_AGTD_SUP_DA_PD_CONSUMS

IDF_AGTD_SUP_PD_CONSUMS

IDF_AGTD_BM_PD_CONSUMS

IDF_BASIC_PD_PFL_COEFS

IDF_COMBINED_PD_PFL_COEFS

IDF_PD_PFL_CLASS_COEFFS

IDF_PFLD_SPMS

IDF_SUP_PURCHASE_MATRICES

IDF_TIME_PATTERN_STATES

IDF_AGTD_SUP_DA_PD_DISCON_VOLUME

IDF_AGTD_SUP_PD_DISCON_VOLUME

IDF_PFLD_DPMS

IDF_DISCON_PURCHASE_MATRICES

IDF_AGTD_BM_PD_DISCON_VOLUME

IDF_DISCON_MSI_HH_DD_VOLUME

Supplier and daily profile report files that are no longer relevant after the archive period are deleted during archive. On restore, these are selectively coped from the archive tape to the appropriate local disk directories.

On restore, all audit log files found on the archive tape are restored.

On successful completion of an archive, an entry is inserted into the operator log with details of the archive.

10.4.1.3 Sizing

The archive operation only removes information from the system and as such does not require space for archived data. Data to be used for the restore operation is assumed to be stored away using the backup operation.

The volumes for the backup operation will depend on the frequency of backups and will generally be:

size of oracle database +
(number of Settlement Dates backed-up * average size of flatfiles for a Settlement Date)

From figures specified in chapter 4 and estimates of volumes for input files and reports produced per Settlement Date:

Size of Oracle Database	**19 Gb**

Size of files per Settlement Date:

Database Entities Stored as Files	2.0 Gb
Input Files	0.2 Gb

Output Files (Reports)	4.8 Gb
	7 Gb

The size of backup will be:

19 + (number of Settlement Dates backed-up * 7) Gb

10.4.2 Local Data

None

10.5 Procedure Details

All of the following are implemented in C.

10.5.1 Archive Main

```
Procedure Name:    main
Arguments:         argc (IN)
                   argv (IN) comprising:
                     Oracle user name,
                     Oracle user password,
                     settlement date.
Return:            None
```

This is the entry function for the Archive process.

Extract the command line arguments.

Connect to the production database using the specified user name and password.

Check that the DRP system parameter is not set to less than 24 months. If it is, abort archiving and output an error message.

Check that there are no active processes running by examining the CDB_ACTIVITY for entries with a status of "running".

Call IAR_Get_Settlement_Date_Range to get the qualifying settlement date range for which data is to be archived.

Put up a warning message to say that data and files related to the Settlement Date range will be deleted by this process, and advise that the process be aborted if a full backup of the day's data has not been performed.

Call IAR_Archive to delete database and file data.

Disconnect from the database.

Put up an information message to advise that the backup tape be archived and kept in a safe place so it can be used for restoring Settlement Date data.

10.5.2 Retrieve Settlement Date Range

```
Procedure Name:    IAR_Get_Settlement_Date_Range
Arguments:         settlement date (IN)
                   start settlement date (OUT)
                   end settlement date (OUT)
Return:            Success or error code
```

This function determines Settlement Date range to be included for archiving. The specified Settlement Date is the latest date to be included in this archive. Settlement Dates earlier than this which have not been archived are included provided they meet the conditions detailed below.

Determine the earliest Settlement Date in the IDB_SSR_RUNS table.

Starting with this Settlement Date, determine the range of Settlement Dates for which Final Reconciliation has been performed and are a period of time in the past which is greater than that specified by the DRP system parameter.

The date range stops on the day after the specified Settlement Date, or the first Settlement Date which does not satisfy the above conditions.

10.5.3 Archive Data

Procedure Name:	IAR_Archive
Arguments:	start settlement date (IN)
	end settlement date (IN)
Return:	Success or error code

This function initiates the archive.

Start a transaction.

Lock all database tables to prevent updates from another user during the archive.

Call IAR_Delete_Database_Data to delete data from the database.

Call IAR_Delete_File_Data to delete the archive files, data files, report files and audit log files from the local file store.

Commit or rollback the transaction depending on the return status of the previous function calls.

If archive was successful, add an entry into the Operator Log to record the Settlement Date range included in the archive, the current date and time, the user name, and version numbers of the ISRA software, Oracle software and Operating System.

10.5.4 Delete Database Data

Procedure Name:	IAR_Delete_Database_Data
Arguments:	start settlement date (IN)
	end settlement date (IN)
Return:	Success or error code

This function deletes data from the database that have expired, specific to, or are no longer valid after the archive period.

Check for data expired in the database tables listed in a previous section on System Data/Database Data. Delete entries with expired data.

Check for data specific to the Settlement Date range in the database tables listed in a previous section on System Data/Database Data. Delete entries specific to the Settlement Date range. Do not include entries in the CDB_FILE_REFERENCE and CDB_DATA_FILES tables for deletion yet. This is handled in the Delete Files procedure.

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Check for data that are no longer valid after the Settlement Date range in the database tables listed in a previous section on System Data/Database Data. Delete entries with data that are no longer valid.

10.5.5 Delete Files

Procedure Name: IAR_Delete_File_Data

Arguments: start settlement date (IN)

end settlement date (IN)

Return: Success or error code

This function deletes files that are no longer valid after the archive period. Directories that become empty after the deletion of a file will also be deleted. Relevant file reference and directory entries in the database are also deleted. See section 10.4.1.2 of this document for details of which files are deleted.

Define a cursor to select rows in CDB_DATA_FILE, CDB_FILE_REFERENCE, and CDB_FILE_DIRECTORY with a settlement date lying within the specified Settlement Date range.

For each entry in the cursor, generate the full path name and delete the file if it exists on disk. Delete the cursor entry from the related CDB_DATA_FILE and CDB_FILE_REFERENCE tables.

Check if directory is empty. If it is then delete it and the associated CDB_FILE_DIRECTORY entry in the database.

Delete log, pool, report, and exception files that have a creation time earlier than the end settlement date.

Delete certain data input files that have a received time earlier than the end settlement date. (See section 10.4.1.2 for details).

Delete any remaining database entries for files with a status of deleted that have a creation time earlier than the end settlement date.

10.5.6 Restore Main

Procedure Name: main

Arguments: argc (IN)

argv (IN) comprising:

Oracle database name,

Oracle user name,

Oracle user password,

start settlement date,

end settlement date (optional).

Return: None

This is the entry function for the Restore process.

Extract the command line arguments.

Display an information message for the user to confirm that database data has been restored separately.

Connect to the specified database with the specified user name and password.

Prompt the user to insert the archive tape into the tape drive.

Call IAR_Restore_Files to restore files from tape. If no end settlement date is specified, pass in the start settlement date as the end settlement date.

Disconnect from the database.

10.5.7 Restore Files

Procedure Name: IAR_Restore_Files

Arguments: start settlement date (IN)

end settlement date (IN)

Return: Success or error code

This function restores report and data files that are relevant to the specified Settlement Date range. In addition, all log files found on the archive tape are restored.

Define a cursor to select rows in CDB_DATA_FILE, CDB_FILE_REFERENCE and CDB_FILE_DIRECTORY with a settlement date lying within the specified settlement date range.

For each entry in the cursor, construct the full path name of the file. Restore the file from tape using the appropriate Operating System utility.

Define a cursor to select unique rows in CDB_DATA_FILE, CDB_FILE_REFERENCE and CDB_FILE_DIRECTORY with a NULL settlement date field.

For each entry in the cursor, construct the full path filename. Restore the file from tape using the appropriate Operating System utility.

Restore all log files found in the archive tape.

If a file can not be located on tape then an exception will be logged using the method described in [CTSPEC].

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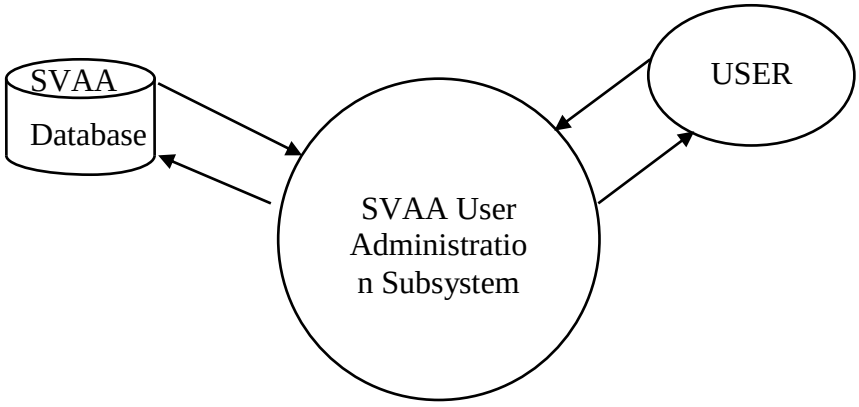
11 IUA User Administration Subsystem Specifications

11.1 Introduction

The "IUA Security" subsystem allows system manager users to list, add, edit and delete Oracle user accounts, and assign the users to the various user roles that are defined for SVAA (ITSPEC Volume 1 Section 2.10).

This subsystem provides two user interfaces under the "Security" menu. The first interface allows SVAA system manager to manage the application users while the second one allows a user to change his password. The forms work on standard Oracle database tables. No application database tables are involved. All the work is done directly from the form. No batch process is involved.

11.2 Subsystem Context



11.2.1 User Interfaces

The SVAA provides two user interfaces for managing the "User Administration" subsystem. The first interface IUA_MSS allows System Manager to do the user administration and the second interface IUA_UPC allows the application users to change their passwords.

11.2.2 Database Interface

The interaction between the various forms in this subsystem with the database are handled by Oracle SQL*Net. The data passed to the forms by the user will be defined in the form specification section.

11.2.3 Audit Log Interface

Certain actions performed using the form IUA_MSS will be logged for audit purposes: creation of users; removal of users; granting roles to users; revoking roles from users.

This will be achieved by the form, which will call the common CLG subsystem database procedures ONLINE_AUDIT and AUDIT_DETAIL to write the alterations to the data to an online audit log database table, which periodically get unloaded into audit log files. The details of the user who made the change and the date and time of the amendment are

also written to this audit log. The records created by the IUA_MSS forms are identified in the audit log by the "table code" 'IUR'.

For each audited operation, there will be the following two log entries:

<audit_id>|<timestamp>|'IUR'|<modification_type>|<user id>

<audit_id>|1|<username>

where <audit_id> is a sequence allocated by the system (same in each record); <timestamp> identifies the time when the change was mode;<modification-type> is 'I' (insert), 'U' (update) or 'D' (delete); <user id> is the user who made the change; and <username> is the username of the user being created, modified or deleted.

If the operation is a user creation or modification where roles were changed, there will follow a further record for each role changed:

<audit_id>|<role_seq_num>|<role_op>:<role_name>

where <role_seq_num> is 2 for the first role and increments for each record;<role_op> is 'G' (grant) or 'R' (revoke); and <role_name> is the name of the role being granted or revoked.

11.3 Subsystem Processing

There are no interfaces within this subsystem to discuss.

The System Data section provides a cross reference for the components of the subsystem and their mode of access.

The Local Data section contains the details of the audit data maintained by this subsystem.

11.3.1 System Data

The details of the standard Oracle tables accessed by this subsystem are as follows:

Form / Procedure	Table / View	Insert	Modify	Delete	Read
FORM IUA_MSS	dba_users	X	X	X	X
	dba_role_privs		X		X
FORM IUA_UPC	dba_users		X		

11.3.2 User Role Mapping

The following table shows how the SVAA oracle roles are mapped to the fields in the user interface.

Oracle Role	Description	Field
STANMAN	SVAA Standing Data Manager	SVAA_STANDING_DATA_MANAGER
OPSUPER	SVAA Operations Supervisor	SVAA_OPERATIONS_SUPERVISOR
OPERA	SVAA Operator	SVAA_OPERATOR
AUDI	SVAA Auditor	SVAA_AUDITOR

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Oracle Role	Description	Field
PA_ENQ	PA Operator	PA_OPERATOR
PA_USER	PA Supervisor	PA_SUPERVISOR

11.3.3 Local Data

The form IUA_MSS logs certain actions as described in section 11.2.3.

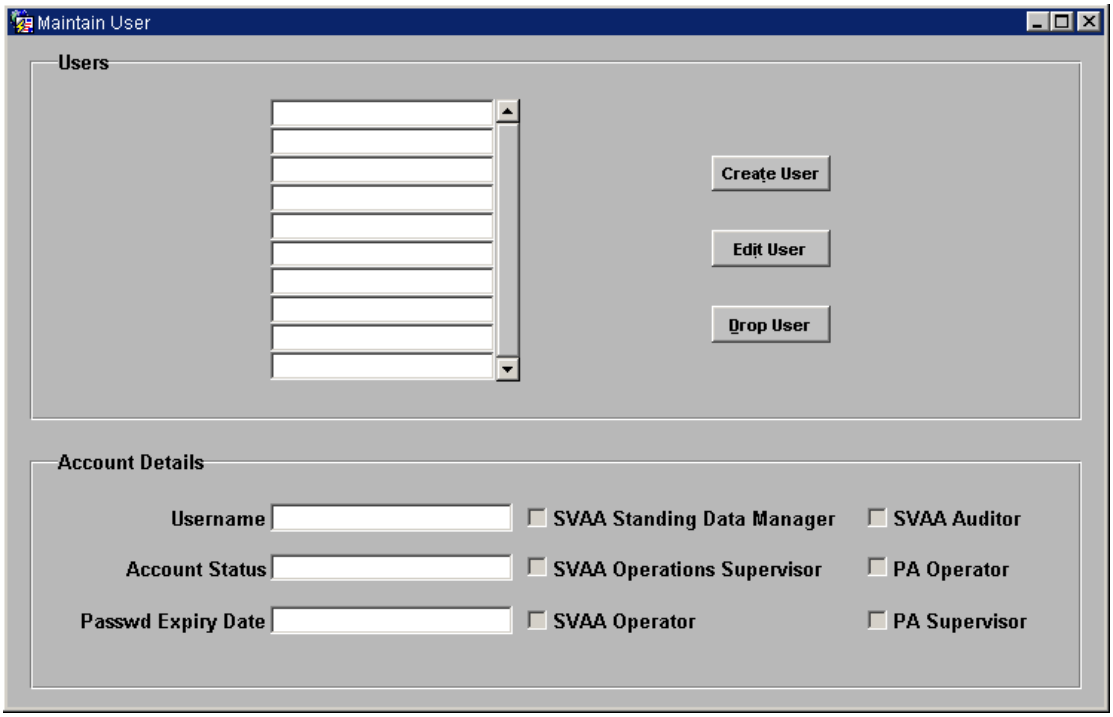
11.4 Procedure Details

The details of the forms and report contained within this subsystem are given in the following sections.

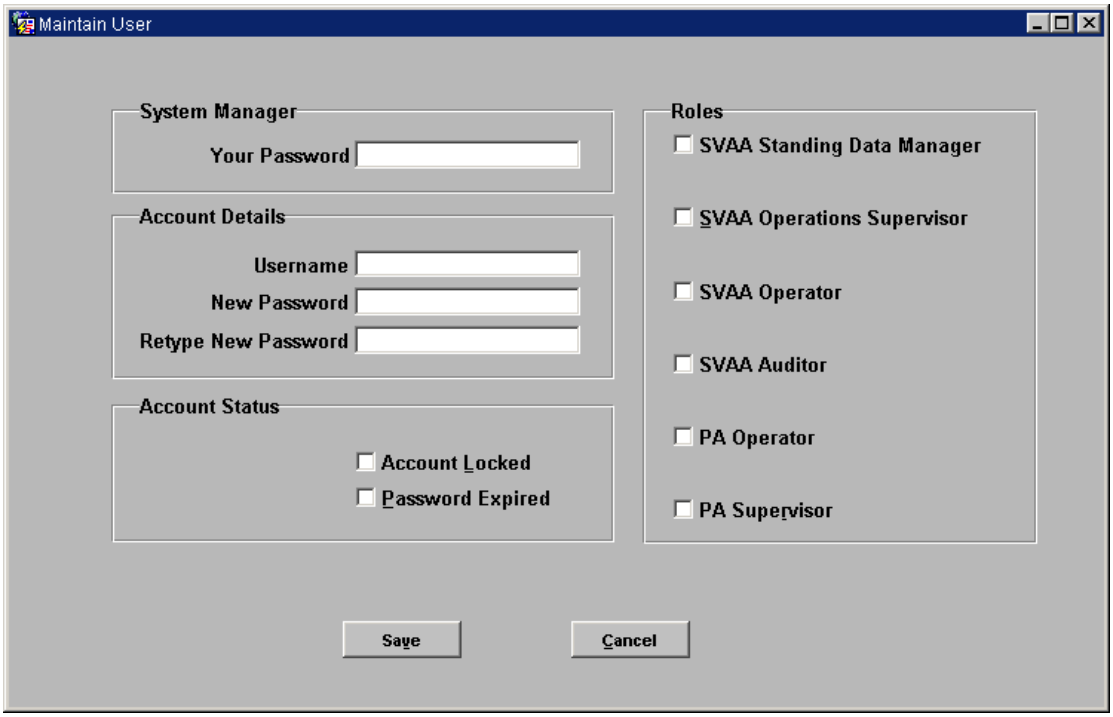
11.4.1 FORM IUA_MSS

11.4.1.1 Screen Layout

The form IUA_MSS is activated from the "Security" menu item.



When the Create User or Edit User button is pressed, a second canvas is displayed:



11.4.1.2 Screen Behaviour

The form IUA_MSS allows "SVAA System Manager" users to manage the SVAA user accounts. Only SVAA users with the System Manager role can use this form.

The table below outlines all the possible actions associated with the form IUA_MSS:

Form Action On	Form Response
Selection of Form	Display the first three blocks of the form (View Users canvas), and execute a query in the VIEW_USER_BLK Block.
Selecting a Row	Populate the VIEW_USER_ BLK block with the details for this user.
Moving to Next Record	Move to the next displayed row.
Moving to Previous Record	Move to the previous displayed row.
Tabbing	If on the Add/Edit User canvas, move the cursor to the next field, validating the field just entered as described in the Form Structure section.
Clicking On Scroll Bar	Highlight the record corresponding to the position of the scroll bar.
Function Key	Display mapping of logical functions to physical keys.
Help Key	Invokes SVAA System help.
Clicking on Create User Button	Display the Add/Edit User canvas, with all the fields blank, and the cursor in the Your Password field.
Clicking on Edit User Button	Display the Add/Edit User canvas, with the fields populated for the user being edited, and the cursor in the Your Password field.
Clicking on Drop User Button	Ask the user to confirm that he wants to drop this user. If the confirmation is made, then drop the user and redisplay the list of users. If the User is one of the standard Oracle

	users SYS, SYSTEM, OUTLN, DBSNMP or PERFSTAT, then do not allow the user to be dropped.
Clicking on Save Button	Carries out the Add User or Edit User operation, and returns from the Add/Edit User canvas to the View Users canvas, and requeries. Writes entries to the Audit Log if necessary.
Clicking on Cancel Button	Abandons the Add User or Edit User operation, and returns from the Add/Edit User canvas to the View Users canvas.

11.4.1.3 Description

This form allows an SVAA System Manager user to manage the SVAA user accounts.

It contains six blocks:

- Tool Bar Block, this block contains short cut buttons, simplifying the selection of allowed functionality of the form.

On the "View Users" canvas:

- VIEW_USER_BLK Block contains a list of usernames; and the details of the user selected on the list;
- VIEW_USER_CTL_BLK contains buttons to add, drop or edit the user selected on the list.

On the "Add/Edit Users" canvas:

- ADD_EDIT_USER_BLK Block contains the details of the user being added or edited; as well as the Save and Cancel buttons.

Only the SVAA System Manager User role can access this form.

Form Structure

Field Name	**Description**
Block: VIEW_USER_BLK	Block contains a list of users and details of the selected user. All fields are read-only
Field USER_NAME	dba_users.username : must be less than or equal to 8 characters long in SVAA. This will be displayed as a list of records to select from.
Field ACCOUNT_STATUS	dba_users.account_status
Field EXPIRY_DATE	dba_users.expiry_date (Note that a user can continue to log on to his account after the expiry date for the number of days given by the grace period, which is defined in the user's profile).
Field USERNAME2	dba_users.username : must be less than or equal to 8 characters long in SVAA. This displays the selected user account from the list.

Field Name	Description
Field SVAA_STANDING_DATA_MANAGER	dba_privs.granted_role : ticked if the user selected has the stanman role
Field SVAA_OPERATIONS_SUPERVISOR	dba_privs.granted_role : ticked if the user selected has the opsuper role
Field SVAA_OPERATOR	dba_privs.granted_role : ticked if the user selected has the opera role
Field SVAA_AUDITOR	dba_privs.granted_role : ticked if the user selected has the audi role
Field PA_OPERATOR	dba_privs.granted_role : ticked if the user selected has the pa_enq role
Field PA_SUPERVISOR	dba_privs.granted_role : ticked if the user selected has the pa_user role
Block: VIEW_USER_CTL_BLK	Block contains buttons to add, drop or edit the selected user.
Button CREATE_USER	Displays the Add/Edit Users canvas, with all the fields blank.
Button EDIT_USER	Displays the Add/Edit Users canvas, with all the fields populated with the values for the user being edited.
Button DROP_USER	Asks the user to confirm then drops the user and requeries on the VIEW_USER_ BLK. An entry is written to the Audit Log. Users may not drop their own accounts.
Field ACCOUNT_LOCKED	dba_users.account_status :ticked if status is locked.
Field PASSWORD_EXPIRED	dba_users.account_status :ticked if status is expired (this includes where the expiry date has passed but the current date is still within the grace period). An expired account can only be change to unexpired if a new password has been entered.
Field SVAA_STANDING_DATA_MANAGER	dba_privs.granted_role : ticked if the user selected has the stanman role
Field SVAA_OPERATIONS_SUPERVISOR	dba_privs.granted_role : ticked if the user selected has the opsuper role
Field SVAA_OPERATOR	dba_privs.granted_role : ticked if the user selected has the opera role
Field SVAA_AUDITOR	dba_privs.granted_role : ticked if the user selected has the audi role
Field PA_OPERATOR	dba_privs.granted_role : ticked if the user selected has the pa_enq role
Field PA_SUPERVISOR	dba_privs.granted_role : ticked if the user selected has the pa_user role
Block: ADD_EDIT_USER_DTL_BLK	Block contains details of the user being added or edited. Fields are writeable.
Field YOUR_PASSWORD	dba_users.password – for the System Manager user who is carrying out the

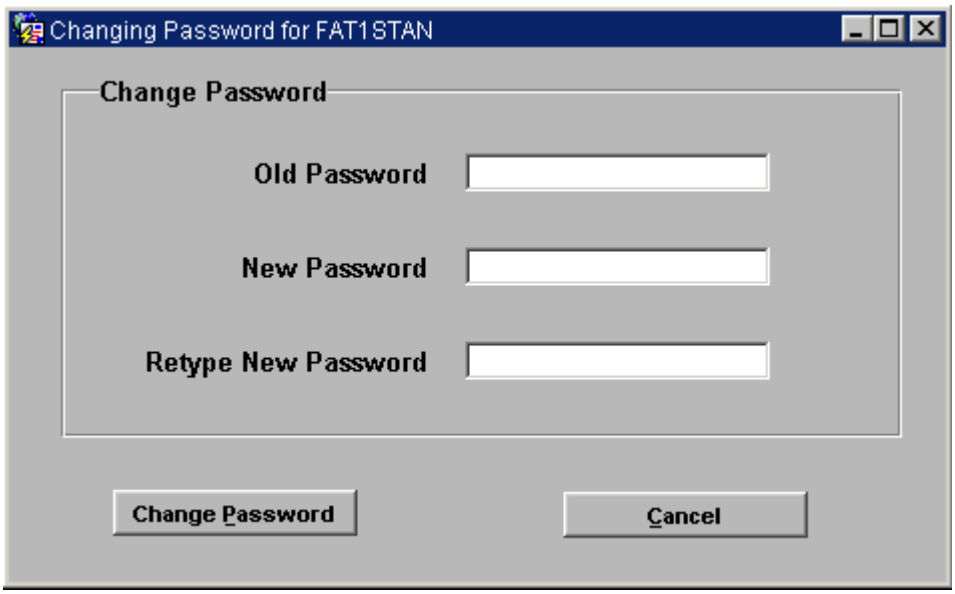
Field Name	Description
	change – this field is concealed with asterisks
Field USER_NAME	dba_users.username – this field can only be entered if a new user is being added. It must be at least 4 characters long, but no more than 8 charactesr long.
Field NEW_PASSWORD	dba_users.new_password – this field is concealed with asterisks and must be at least 6 characters long
Field VERIFY_PASSWORD	dba_users.new_password – this field is concealed with asterisks and must match the NEW_PASSWORD field
Field ACCOUNT_LOCKED	dba_users.account_status :ticked if status is locked.
Field ACCOUNT_EXPIRED	dba_users.account_status :ticked if status is expired (this includes where the expiry date has passed but the current date is still within the grace period). An expired account can only be change to unexpired if a new password has been entered.
Field SVAA_STANDING_DATA_MANAGER	dba_privs.granted_role : ticked if the user selected has the stanman role
Field SVAA_OPERATIONS_SUPERVISOR	dba_privs.granted_role : ticked if the user selected has the opsuper role
Field SVAA_OPERATOR	dba_privs.granted_role : ticked if the user selected has the opera role
Field SVAA_AUDITOR	dba_privs.granted_role : ticked if the user selected has the audi role
Field PA_OPERATOR	dba_privs.granted_role : ticked if the user selected has the pa_enq role
Field PA_SUPERVISOR	dba_privs.granted_role : ticked if the user selected has the pa_user role
Button Save	Does the validation specified for the individual fields, and makes sure that the user has at least one of the four roles granted. Carries out the user creation or user edits, returns to the View Users canvas and requeries the VIEW_USER_BLK. If a user has been created, or roles have been granted or revoked, appropriate entries are written to the Audit Log. New users created are assigned the profile PROF_SVAA.
Button Cancel	Returns to the View Users canvas without making any edits.
Block: TOOLBAR	Block contains shortcut buttons, simplifying the selection of allowed functionality of the form

Field Name	Description
Button NEXT_RECORD	Moves the cursor to the next row of the "VIEW_USER_BLK" Block, highlighting the row.
Button PREVIOUS_RECORD	Moves the cursor to the previous row of the "VIEW_USER_BLK" Block, highlighting the row.
Button FUNCTION_KEYS	Invokes standard Oracle function to display mapping of logical functions to physical keys.
Button HELP	Invokes SVAA System help.
Button EXIT	Invokes standard Oracle function to exit the form.

11.4.2 FORM IUA_UPC

11.4.2.1 Screen Layout

The form IUA_UPC is activated from the Change Password menu item on the File menu.



11.4.2.2 Screen Behaviour

The form behaves as though it was a modal dialogue box. All SVAA users can use this form.

The table below outlines all the possible actions associated with the form IUA_UPC:

Form Action On	Form Response
Selection of Form	Display the two blocks of the form and puts the cursor in the Old Password field
Clicking on Change Password Button	Alters the user's password and exits the form
Clicking on Cancel Button	Exits the form without altering the password

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11.4.2.3 Description

This form allows SVAA users to change their passwords.

It contains one block, the CHANGE_PASSWORD_BLK.

Form Structure

Field Name	Description
Block: CHANGE_PASSWORD_BLK	
Field OLD_PASSWORD	dba_users.password – this is validated to ensure it does match the password in the database – field is concealed with asterisks
Field NEW_PASSWORD	dba_users.password – must be at least 6 characters long – field is concealed with asterisks
Field VERIFY_PASSWORD	dba_users.password – must match NEW_PASSWORD – field is concealed with asterisks
Button CHANGE_PASSWORD	Validates the fields as described under the individual fields. Alters the user's password, puts up a confirmation box with the text "Password Changed Successfully" and exits the form
Button CANCEL	Exits the form without altering the password

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12 ICS COMMS

12.1 Procedure CFR_TSW_CONTACT_FTP

Function Definition Ref: I0028B Load Tele-Switch Contact Switching Times

Event Description: Tele-Switch Switching Times Available

```
Function Name:      CFR_TSW_CONTACT_FTP()
Arguments:          N/A
Return:             success/failure
```

12.1.1 Inputs

This process takes the input Tele-Switch Contact Switching Times File from the FTP server 213.212.77.202. The input file format is described in the External Interface Tele-Switch Contact Switching Times File section of the Interface Specification.

12.1.2 Outputs

This program writes to the operators log an exception report, if there are exceptions and sends a mail to SVA O&H team in case of failure in the FTP.

12.1.3 Functionality

This process will be scheduled at a specified time in the morning (between 8.00 to 10.00) and will be invoked for every 15 minutes.

The process will ftp Tele-Switch Contact Switching Times Data files from the /teleswitch/inbox directory of the Windows FTP server to the SVAA new files directory of the SVAA UNIX server."

In case of failure in ftp of the file from the FTP server a mail will be sent from the UNIX server to the SVA O&H team with an error message on the ftp failure.

After copying the file from the FTP server to the SVAA new files directory a mail will be sent to Energy Network Association (ENA) acknowledging the receipt of the Tele-Switch Contact Switching Times Data file.

The Procedure IDL_TSW_CONTACT described in section 6.5.11 loads the file into the Database.

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13 CRP Report Formatter

13.1 Introduction

This subsystem comprises the following elements:

- a process which translates the internal format reports to a human-readable format
- an Oracle Form from which a human-readable report can be selected for viewing or printing
- a set of PL/SQL functions for accessing files on the server using UTL_FILE package
- a set of library routines to write files on the application server using TEXT_IO package

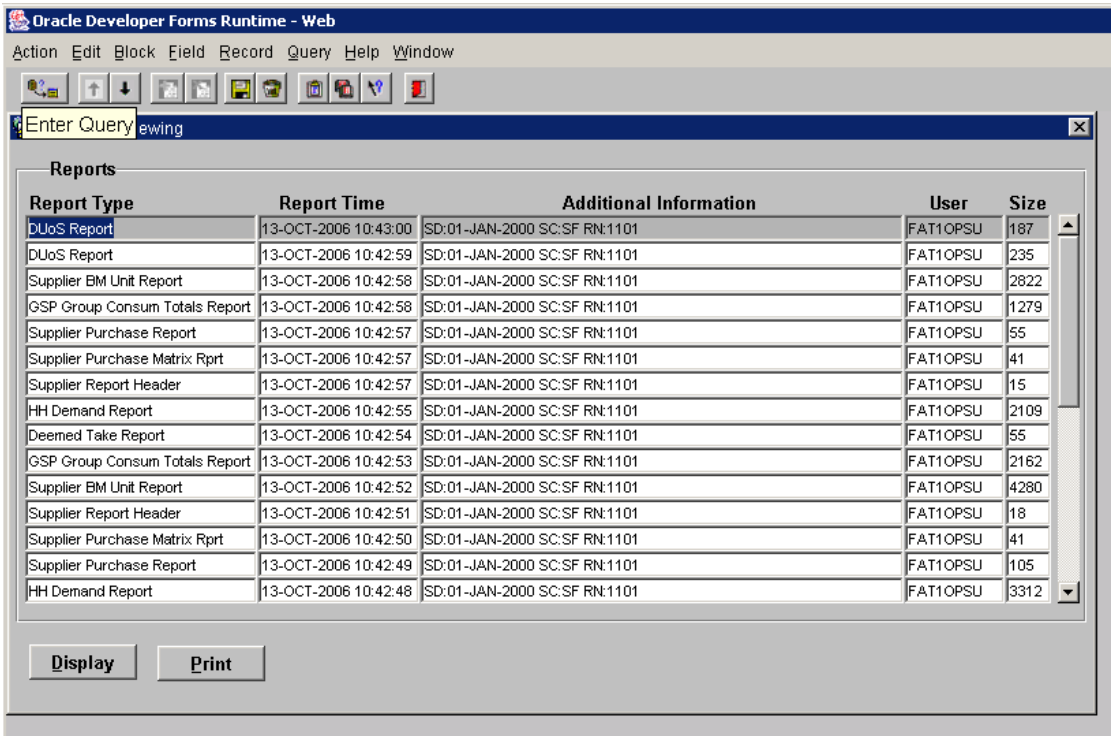
The combination of these last two components is shown in the next section as the "CRP Fetch File" process.

The subsystem uses five database tables that contain the configuration data used to control the formatting process. The data in these tables is system specific and is populated to meet the report designs documented in the individual Technical Specifications.

13.1.1 Select Reports

13.1.1.1 Screen layout

The screen layout, excluding the standard menu and toolbar is as shown in the following figure:



13.1.1.2 Screen behaviour

The form displays a selection of reports that have completed on the server. This selection only contains report types which the user has been authorised to view. These are displayed in reverse order of creation - ie: the most recently created reports are displayed at the top of the list.

The user can move through the list but cannot change the data displayed. The row on which the cursor is placed is treated as the currently selected report when any of the buttons on the Form are pressed.

With a report selected, the user can press a button to:

- display the report - invoking the web browser to view the specified file. A check is carried out to verify that the rep size does not exceed the allowed size set in system parameters. If the size is exceeded, the user is given the option to proceed or cancel. It is also possible to view multiple reports at a time.
- print the report - sending the selected file to the default printer

If the report has not previously been formatted into human-readable form, the report will first be formatted.

Note that only files with types included in 'cdb_report_type' and have a status of 'completed' will be displayed.

Authorisation to view particular report types is checked using the Oracle view 'user_role_privs'. By joining this with 'cdb_report_access', a list of report types which the current user may access is produced. The current user is determined by retrieving the user who submitted the activity that produces the underlying machine readable report.

The 'additional data' field displays information about the criteria used to generate the report.

The 'size' field give an indication of the report size by showing the number of records in the machine readable report file. The field will be left blank if this information is unavailable.

13.1.1.3 Description

This form is provided to satisfy the requirements to display and print human-readable versions of certain reports. It provides a mechanism for selecting one of the completed reports on the server and obtaining a copy of that report on the application server for viewing or printing.

Note that deletion of the created files on the application server is considered a separate, user operation - see System Management Guide.

13.1.1.4 Form structure

Field Name	Description
Block: TOOLBAR	Contains standard buttons as described in [CTSPEC] section 10.5.1
Block: REPORTS	Block contains a table of all reports available for viewing

Field Name	Description
Field Report Type	cdb_report_type.report_name
Field Additional Data	cdb_file_refrence.additional_information
Field Report Time	cdb_file_reference.creation_time
Field User	cdb_activity.username
Field Size	cdb_file_reference.number_records
Button Display	Triggers the display action described below
Button Print	Triggers the print action described below

13.1.1.5 Action on Form Query

Displays a list of all reports match the query criteria, eg:

```
SELECT   DISTINCT p.username, p.activity_id,
          p.activity_type,
          t.report_name,
          f.creation_time, f.number_records, f.file_id,
          f.additional_information
FROM           cdb_file_reference f,
         cdb_report_type t,
          cdb_activity p,
          cdb_report_access a,
          USER_ROLE_PRIVS u
WHERE    t.report_name matches any criteria specified
AND            f.creation_time matches any criteria specified
AND            p.username matches any criteria specified
AND            f.file_type = t.file_type
AND            f.status = completed
AND            p.activity_id = f.activity_id
AND            f.file_type = a.file_type
AND            a.user_role = u.granted_role
ORDER BY f.creation_time DESC
```

Note that only file types which are included in cdb_report_type will be included in the list of reports. Furthermore, only reports that have status ‘completed’ will be included. The reports displayed are further limited to those for which the user is authorised.

The authorisation check uses the Oracle View “USER_ROLE_PRIVS”, which contains all the roles granted to the current user. By joining this to cdb_report_access, a list of report types which the current user may access is determined. Since a user may have multiple roles assigned, with more than one of these allowing access to a particular report, “SELECT DISTINCT” is used to remove duplicate result rows.

The user who initiated the report is determined by looking up the user who submitted the activity which caused the underlying machine readable report to be created.

The size field gives a “relative” indication of the likely report size, based on the number of records in the underlying machine readable file. Where no size information is available (ie: the database field is null), this field will be left blank.

Implementation of this form may be simplified by defining a database view for the underlying query (ie: without the criteria specified).

13.1.1.6 Action on Button Display

```
SELECT   r.file_id
FROM           cdb_report_file r
WHERE    source_file_id = selected row file_id
IF a record is not found (ie: not yet formatted)
     CALL CRP.FORMAT_REPORT to format the report
END IF

Call CRP_FETCH.IS_FILE_TOO_BIG to check if report size exceed value
set in system parameter.

CALL CRP.DISPLAY_REPORT for human-readable report file_id to bring
the report up for display
```

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13.1.1.7 Action on Button Print

```
SELECT   r.file_id
FROM           cdb_report_file r
WHERE    source_file_id = selected row file_id
IF a record is not found (ie: not yet formatted)
     CALL CRP.FORMAT_REPORT to format the report
END IF
CALL CRP.PRINT_REPORT to queue the report to the local default
printer
```

14 Cross References

14.1 Mapping from Requirements to Physical Design

Requirement Number	Logical Design Reference	Physical Design Reference
1.1	I0013A	2.3.1 IDL Data Loader 6.6.1 Form IDL_LOADUTIL
	I0017A	2.3.1 IDL Data Loader 6.6.1 Form IDL_LOADUTIL
	I0020A	2.3.1 IDL Data Loader 6.6.1 Form IDL_LOADUTIL
	I0022A	2.3.1 IDL Data Loader 6.6.1 Form IDL_LOADUTIL
	I0013B	3.1.2 GSP Group Take File 6.5.2 Procedure IDL_GSP_GP_TAKE
	I0017B	3.1.5 Aggregated Half-Hour Data File 6.5.4 Procedure IDL_AGG_HHD
	I0020B	3.1.8 Settlement Price Data File 6.5.7 Procedure IDL_SETT_PRICE
	I0022B	3.1.10 Supplier Purchase Matrix Data File 6.5.9 Procedure IDL_SPM
1.2	I0029	2.3.4 IRS Run Settlement 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
1.3	I0029	2.3.4 IRS Run Settlement 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
1.4	I0029	2.3.4 IRS Run Settlement 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data

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Requirement Number	Logical Design Reference	Physical Design Reference
		8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
	I0030 I0034	5.6.4 Form ISY_CALEMAIN 5.6.19 Form ISY_SSRRQURY
1.5	I0001 I0005 I0006 I0010	5.6.13 Form ISY_LLFCMAIN 5.6.15 Form ISY_MPGGMAIN 5.6.15 Form ISY_MPGGMAIN 5.6.8 Form ISY_DAGGMAIN
1.6	I0029	2.3.4 IRS Settlement Run 8.4 Data Usage 4.3.3 Physical Data Model
1.7	I0029	2.3.4 IRS Run Settlement 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
1.8	I0029	2.3.4 IRS Run Settlement 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
1.9	I0029	2.3.4 IRS Run Settlement 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
1.10	I0029	2.3.4 IRS Run Settlement

Requirement Number	Logical Design Reference	Physical Design Reference
		8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
1.11	I0004	5.6.11 Form ISY_GCSFMAIN
1.12	I0029	8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
1.13	I0029	8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
1.14	I0029	8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
1.15	I0029	8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations

Requirement Number	Logical Design Reference	Physical Design Reference
		8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
1.16	Requirement is no longer used.	
1.17	Requirement is no longer used.	
1.18	I0029	8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
2.1	I0016	7.5.1 Form IDP_PROFUTIL 7.5.2 Procedure IDP_DPP_RUN 7.5.3 Procedure IDP_DPP_GSP 7.5.4 Report IDP_PR_SSC 7.5.6 Report IDP_PR_SPD 7.5.7 Report IDP_PR_DPR 7.5.8 Report IDP_PROF_EXTRACT
2.2	I0016	7.5.1 Form IDP_PROFUTIL 7.5.2 Procedure IDP_DPP_RUN 7.5.3 Procedure IDP_DPP_GSP 7.5.4 Report IDP_PR_SSC 7.5.6 Report IDP_PR_SPD 7.5.7 Report IDP_PR_DPR 7.5.8 Report IDP_PROF_EXTRACT
2.3	I0016	7.5.1 Form IDP_PROFUTIL 7.5.2 Procedure IDP_DPP_RUN 7.5.3 Procedure IDP_DPP_GSP 7.5.4 Report IDP_PR_SSC 7.5.6 Report IDP_PR_SPD 7.5.7 Report IDP_PR_DPR 7.5.8 Report IDP_PROF_EXTRACT
2.4	I0016	7.5.1 Form IDP_PROFUTIL 7.5.2 Procedure IDP_DPP_RUN 7.5.3 Procedure IDP_DPP_GSP 7.5.4 Report IDP_PR_SSC 7.5.6 Report IDP_PR_SPD 7.5.7 Report IDP_PR_DPR 7.5.8 Report IDP_PROF_EXTRACT
2.5	I0007	5.6.16 Form ISY_PROFMAIN 4.3.3 Physical Data Model
2.6	I0019	3.1.7 Regression Equations Data File

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Requirement Number	Logical Design Reference	Physical Design Reference
		6.6.1 Form IDL_LOADUTIL 6.5.6 Procedure IDL_REGN_EQN 4.3.3 Physical Data Model
	I0019B	3.1.8 Scottish Regression Equations Data File 6.6.1 Form IDL_LOADUTIL 6.5.6 Procedure IDL_REGN_EQN 4.3.3 Physical Data Model
2.7	I0018	3.1.6 Pool Market Domain Data File 6.6.1 Form ISY_LOADUTIL 6.5.5 Procedure IDL_PL_MKT_DOM 4.3.3 Physical Data Model
	I0031 I0032 I0033 I0040	5.6.18 Form ISY_SSCTMAIN 5.6.7 Form ISY_CONCMAIN 5.6.3 Form ISY_AFYCMAIN 5.6.22 Form ISY_TIPAMAIN
2.8	I0028	3.1.11 Tele-switch Contact Intervals Data File 6.5.11 Procedure IDL_TSW_CONTACT
2.9	I0012	5.6.20 Form ISY_TSCIMAIN
2.10	I0028	7.5.2 Procedure IDP_DPP_RUN
2.11	I0028	7.5.2 Procedure IDP_DPP_RUN
2.12	I0002	5.6.12 Form ISY_GSPGMAIN 4.3.3 Physical Data Model
2.13	I0003	5.6.6 Form ISY_CLOCMAIN 4.3.3 Physical Data Model
	I0011	5.6.21 Form ISY_TEMPMAIN 4.3.3 Physical Data Model
	I0021	3.1.9 Sunset Data File 6.6.1 Form IDL_LOADUTIL 6.5.8 Procedure IDL_SUNSET
	I0030	5.6.4 Form ISY_CALEMAIN
2.14	I0003	5.6.6 Form ISY_CLOCMAIN
2.15	I0011	5.6.21 Form ISY_TEMPMAIN
2.16	I0021	3.1.9 Sunset Data File 6.6.1 Form IDL_LOADUTIL
2.17	I0016	7.5.1 Form IDP_PROFUTIL 7.5.2 Procedure IDP_DPP_RUN 7.5.3 Procedure IDP_DPP_GSP
2.18	I0016	7.5.1 Form IDP_PROFUTIL 7.5.2 Procedure IDP_DPP_RUN 7.5.3 Procedure IDP_DPP_GSP
2.19	I0018	6.6.1 Form IDL_LOADUTIL 6.5.5 Procedure IDL_PL_MKT_DOM
2.20	I0016	7.5.1 Form IDP_PROFUTIL 7.5.2 Procedure IDP_DPP_RUN 7.5.3 Procedure IDP_DPP_GSP

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Requirement Number	Logical Design Reference	Physical Design Reference
		7.5.4 Report IDP_PR_SSC 7.5.6 Report IDP_PR_SPD 7.5.7 Report IDP_PR_DPR 7.5.8 Report IDP_PROF_EXTRACT
2.21	I0019B	3.1.8 Scottish Regression Equations Data File 6.6.1 Form IDL_LOADUTIL
4.1	Requirement is no longer used.	
4.2	I0027A I0027B	9.6.3 Form ISY_SUSEREPT 9.6.24 Report IRP_TUoS
4.3	I0026A I0026B	9.6.3 Form ISY_SUSEREPT 9.6.7 Report IRP_SUPPLIER_SETT_HDR Specification
4.4	I0025A I0025B	9.6.2 Form IPY_PROFREPT 7.5.4 Report IDP_PR_SSC 7.5.6 Report IDP_PR_SPD 7.5.7 Report IDP_PR_DPR
4.5	I0023 I0025A I0025B I0026A I0026B I0027A I0027B	9.5.7 Ad-hoc audit reports 9.5.8 Standing Data Audit Reports 7.5.4 Report IDP_PR_SSC 7.5.6 Report IDP_PR_SPD 7.5.7 Report IDP_PR_DPR 9.6.3 Form ISY_SUSEREPT 9.6.7 Report IRP_SUPPLIER_SETT_HDR Specification 9.6.8 Report IRP_SUPPLIER_PURCHASE_MATRIX Specification~~Report IRP_SUPPLIER_PURCHASE_MATRIX Specification~~ 9.6.10~~9.6.9~~ Report IRP_HH_DEMAND Specification~~Report IRP_HH_DEMAND Specification~~ 9.6.20 Report IRP_DEEMED_TAKE 9.6.21 Report IRP_SUPPLIER_PURCHASE 9.6.3 Form ISY_SUSEREPT 9.6.24 Report IRP_TUoS 9.6.27 Report IRP_DUoS
4.6	I0023	9.5.7 Ad-hoc Audit reports 9.5.8 Standing Data Audit Reports
4.7	I0027A I0027B	9.6.3 Form ISY_SUSEREPT 9.6.24 Report IRP_TUoS 9.6.27 Report IRP_DUoS
5.1	I0001 I0002 I0003 I0004 I0005 I0006 I0007 I0008A I0008B	5.6.13 Form ISY_LLFCMAIN 5.6.12 Form ISY_GSPGMAIN 5.6.6 Form ISY_CLOCMAIN 5.6.11 Form ISY_GCSFMAIN 5.6.12 Form ISY_GSPGMAIN 5.6.12 Form ISY_GSPGMAIN 5.6.16 Form ISY_PROFMAIN 9.6.2 Form IPY_PROFREPT 7.5.8 Report IDP_PROF_EXTRACT

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Requirement Number	Logical Design Reference	Physical Design Reference
	I0009	5.6.12 Form ISY_GSPGMAIN
	I0010	5.6.12 Form ISY_GSPGMAIN
	I0011	5.6.21 Form ISY_TEMPMAIN
	I0012	5.6.20 Form ISY_TSCIMAIN
	I0013A	6.6.1 Form ISY_LOADUTIL
	I0013B	3.1.2 GSP Group Take File
		6.5.2 Procedure IDL_GSP_GP_TAKE
	I0014	3.1.4 Line Loss factor Data File
		6.6.1 Form IDL_LOADUTIL
	I0016	7.5.1 Form IDP_PROFUTIL
		7.5.2 Procedure IDP_DPP_RUN
		7.5.3 Procedure IDP_DPP_GSP
	I0017A	6.6.1 Form IDL_LOADUTIL
	I0017B	3.1.5 Aggregated Half-Hour Data File
	I0019	3.1.7 Regression Equations Data File
		6.6.1 Form IDL_LOADUTIL
	I0019B	3.1.8 Regression Equations Data File
		6.6.1 Form IDL_LOADUTIL
	I0020A	6.6.1 Form IDL_LOADUTIL
	I0020B	3.1.8 Settlement Price Data File
	I0021	3.1.9 Sunset Data File
		6.6.1 Form IDL_LOADUTIL
	I0022A	6.6.1 Form IDL_LOADUTIL
	I0022B	3.1.10 Supplier Purchase Matrix Data File
	I0025A	9.6.2 Form IPY_PROFREPT
	I0025B	7.5.7 Report IDP_PR_DPR
	I0026A	9.6.3 Form ISY_SUSEREPT
	I0026B	9.6.7 Report IRP_SUPPLIER_SETT_HDR Specification
		9.6.8 Report IRP_SUPPLIER_PURCHASE_MATRIX Specification~~Report IRP_SUPPLIER_PURCHASE_MATRIX Specification~~
		9.6.10~~9.6.9~~ Report IRP_HH_DEMAND Specification~~Report IRP_HH_DEMAND Specification~~
	I0027A	9.6.20 Report IRP_DEEMED_TAKE
	I0027B	9.6.21 Report IRP_SUPPLIER_PURCHASE
		9.6.3 Form ISY_SUSEREPT
	I0028	9.6.24 Report IRP_TUoS
		9.6.27 Report IRP_DUoS
		5.6.21 Form ISY_TSCIMAIN
5.2		2.3.7 CFR File Receipt
		2.3.8 CSC Scheduler
		2.3.10 CFS File Sender
5.3	I0001	5.6.13 Form ISY_LLFCMAIN
	I0002	5.6.12 Form ISY_GSPGMAIN
	I0003	5.6.6 Form ISY_CLOCMAIN
	I0004	5.6.11 Form ISY_GCSFMAIN
	I0005	5.6.15 Form ISY_MPGGMAIN
	I0006	5.6.15 Form ISY_MPGGMAIN

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Requirement Number	Logical Design Reference	Physical Design Reference
	I0007	5.6.16 Form ISY_PROFMAIN
	I0010	5.6.8 Form ISY_DAGGMAIN
	I0011	5.6.21 Form ISY_TEMPMAIN
	I0013A	6.6.1 Form IDL_LOADUTIL
	I0013B	3.1.2 GSP Group Take File
		6.5.2 Procedure IDL_GSP_GP_TAKE
	I0014	3.1.4 Line Loss factor Data File
		6.6.1 Form IDL_LOADUTIL
	I0017A	6.6.1 Form IDL_LOADUTIL
	I0017B	3.1.5 Aggregated Half-Hour Data File
	I0018	3.1.6 Pool Market Domain Data File
		6.6.1 Form IDL_LOADUTIL
		6.5.5 Procedure IDL_PL_MKT_DOM
		4.3.3 Physical Data Model
	I0019	3.1.7 Regression Equations Data File
		6.6.1 Form IDL_LOADUTIL
	I0019B	3.1.8 Scottish Regression Equations Data File
		6.6.1 Form IDL_LOADUTIL
	I0020A	6.6.1 Form IDL_LOADUTIL
	I0020B	3.1.8 Settlement Price Data File
	I0021	3.1.9 Sunset Data File
		6.6.1 Form IDL_LOADUTIL
	I0022A	6.6.1 Form IDL_LOADUTIL
	I0022B	3.1.10 Supplier Purchase Matrix Data File
	I0030	5.6.4 Form ISY_CALEMAIN
	I0031	5.6.18 Form ISY_SSCTMAIN
	I0032	5.6.7 Form ISY_CONCMAIN
	I0033	5.6.3 Form ISY_AFYCMAIN
	I0040	5.6.22 Form ISY_TIPAMAIN
5.4		4.3.3 Physical Data Model
5.5	I0003	5.6.6 Form ISY_CLOCMAIN
	I0011	5.6.21 Form ISY_TEMPMAIN
	I0021	3.1.9 Sunset Data File
		6.6.1 Form IDL_LOADUTIL
		4.3.3 Physical Data Model
5.6	I0019	3.1.7 Regression Equations Data File
		6.6.1 Form IDL_LOADUTIL
	I0019B	3.1.7 Scottish Regression Equations Data File
		6.6.1 Form IDL_LOADUTIL
5.7	I0041	
5.8	I0028	3.1.11 Tele-switch Contact Interval Data File
5.9	I0014	3.1.4 Line Loss factor Data File
		6.6.1 Form IDL_LOADUTIL
5.10	I0013A	6.6.1 Form IDL_LOADUTIL
	I0013B	3.1.2 GSP Group Take File
		6.5.2 Procedure IDL_GSP_GP_TAKE
	I0020A	6.6.1 Form IDL_LOADUTIL

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Requirement Number	Logical Design Reference	Physical Design Reference
	I0020B	3.1.8 Settlement Price Data File
5.11	I0017A I0017B	6.6.1 Form IDL_LOADUTIL 3.1.5 Aggregated Half-Hour Data File
5.12	I0022A I0022B	6.6.1 Form IDL_LOADUTIL 3.1.10 Supplier Purchase Matrix Data File
5.13	I0008A I0008B I0009	5.6.17 Form ISY_PROXUTIL 9.6.2 Form IPY_PROFREPT 7.5.8 Report IDP_PROF_EXTRACT 5.6.15 Form ISY_MPGGMAIN
5.14	I0018	3.1.6 Pool Market Domain Data File 6.6.1 Form IDL_LOADUTIL 6.5.5 Procedure IDL_PL_MKT_DOM 4.3.3 Physical Data Model
5.15	I0031 I0032 I0033 I0040	5.6.18 Form ISY_SSCTMAIN 5.6.7 Form ISY_CONCMAIN 5.6.3 Form ISY_AFYCMAIN 5.6.22 Form ISY_TIPAMAIN
5.16	I0039	5.6.10 Form ISY_EACXUTILL 9.5.1 report IRP_PROF_EXTRACT
6.1	IC004 IC007	2.3.1 IDL Data Loader 2.3.7 CFR File Receipt 2.3.10 CFS File Sender 2.3.1 IDL Data Loader
6.2	IC007	2.3.7 CFR File Receipt 2.3.10 CFS File Sender 2.3.1 IDL Data Loader
6.3	IC004 IC007	2.3.1 IDL Data Loader 2.3.7 CFR File Receipt 2.3.10 CFS File Sender 2.3.1 IDL Data Loader
6.4	IC005 IC008	2.3.1 IDL Data Loader 9.5.7 Ad-hoc Audit reports 9.5.8 Standing Data Audit Reports 2.3.1 IDL Data Loader
6.5	I0011 IC004 IC009	5.6.21 Form ISY_TEMPMAIN 2.3.1 IDL Data Loader Exception report
6.6	I0005	5.6.14 Form ISY_MAPAMAIN
6.7	I0027A I0027B	9.6.3 Form ISY_SUSEREPT 9.6.24 Report IRP_TUoS 9.6.27 Report IRP_DUoS
6.8	Requirement is no longer used.	
6.9	IC008	9.5.7 Ad-hoc Audit reports

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Requirement Number	Logical Design Reference	Physical Design Reference
		9.5.8 Standing Data Audit Reports 2.3.1 IDL Data Loader
6.10	I0029	8.5.1 Form ISY_RSSRUTIL 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
6.11	I0015 I0037	4.7 Archive 4.7 Archive
6.12	I0023 IC001 IC007	9.5.7 Ad-hoc Audit reports 9.5.8 Standing data audit reports 2.7 Auditing 2.3.7 CFR File Receipt 2.3.10 CFS File Sender 2.3.1 IDL Data Loader
6.13	I0015	4.7 Archive 10 Archive & Restore
6.14	I0015 I0037	4.7 Archive 10 Archive & Restore 4.7 Archive 10 Archive & Restore
6.15	I0001 I0004 I0005 I0006 I0010 I0030	5.6.13 Form ISY_LLFCMAIN 5.6.11 Form ISY_GCSFMAIN 5.6.15 Form ISY_MPGGMAIN 5.6.15 Form ISY_MPGGMAIN 5.6.8 Form ISY_DAGGMAIN 5.6.4 Form ISY_CALEMAIN
6.16		5.2.5 Form Behaviour - Validation 6.5.1 Procedure Details - General Validation
6.17		[CTSPEC] Form ISY_REVAMAIN
6.18	Requirement is no longer used.	
6.19	I0001E I0002E I0003E I0004E I0005E I0006E I0007E I0009E I0010E	5.6.13 Form ISY_LLFCMAIN 5.6.12 Form ISY_GSPGMAIN 5.6.6 Form ISY_CLOCMAIN 5.6.11 Form ISY_GCSFMAIN 5.6.15 Form ISY_MPGGMAIN 5.6.15 Form ISY_MPGGMAIN 5.6.16 Form ISY_PROFMAIN 5.6.15 Form ISY_MPGGMAIN 5.6.9 Form ISY_DASUQURY

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Requirement Number	Logical Design Reference	Physical Design Reference
	I0030E I0032E I0033E	5.6.5 Form ISY_CALEQURY 5.6.7 Form ISY_CONCMAIN 5.6.3 Form ISY_AFYCMAIN
6.20	I0038	Ad hoc audit reporting
6.21	I0001 I0004 I0006 I0010 I0030	5.6.13 Form ISY_LLFCMAIN 5.6.11 Form ISY_GCSFMAIN 5.6.15 Form ISY_MPGGMAIN 5.6.8 Form ISY_DAGGMAIN 5.6.4 Form ISY_CALEMAIN
6.22	IC003	9.5.8 Standing data audit report
6.23	IC003	9.5.8 Standing data audit report
7.1		2.3.7 CFR File Receipt 2.3.10 CFS File Send
7.2		2.3.7 CFR File Receipt
7.3		2.7 Auditing 2.8 Fallback, Backup & Recovery Security 4.5 Audit Logs 4.7 Archive 10 Archive & Restore Subsystem
7.4	I0015 I0037	4.7Archive 10 Archive & Restore 4.7 Archive 10 Archive & Restore
7.5	I0015 I0037	4.7 Archive 10 Archive & Restore 4.7 Archive 10 Archive & Restore
7.6	I0015 I0037	4.7 Archive 10 Archive & Restore 4.7 Archive 10 Archive & Restore
7.7	IC006	5.6.1.1 Menu Security
7.8	I0023 IC001	Ad-hoc Audit reports Standing Data Audit reports 2.7 Auditing
7.9	IC006	5.6.1.1 Menu Security
7.10	I0023 IC001	9.5.7 Ad-hoc Audit reports 9.5.8 Standing Data Audit reports 2.7 Auditing
7.11	I0015 I0037	4.7 Archive 4.7 Archive
7.12	I0037	4.7 Archive 4.7 Archive
7.13	I0037	4.7 Archive

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Requirement Number	Logical Design Reference	Physical Design Reference
		4.7 Archive
7.14	I0037	4.7 Archive 4.7 Archive
7.15	IC006	Appendix B
7.16	IC006	Appendix B
7.17	I0018	3.1.6 Pool Market Domain Data File 6.6.1 Form IDL_LOADUTIL 6.5.5 Procedure IDL_PL_MKT_DOM 4.3.3 Physical Data Model
7.18	Requirement is no longer used.	
7.19	Requirement is no longer used.	
7.20	Requirement is no longer used.	
7.21	Requirement is no longer used.	
7.22	Requirement is no longer used.	
7.23	Requirement is no longer used.	
7.24	Requirement is no longer used.	
7.25	I0023 I0025A I0025B I0026A I0026B I0027A I0027B	9.5.7 Audit reports 9.6.2 Form IPY_PROFREPT 7.5.7 Report IDP_PR_DPR 9.6.3 Form ISY_SUSEREPT 9.6.7 Report IRP_SUPPLIER_SETT_HDR Specification 9.6.8 Report IRP_SUPPLIER_PURCHASE_MATRIX Specification~~Report IRP_SUPPLIER_PURCHASE_MATRIX Specification~~ 9.6.10~~9.6.9~~ Report IRP_HH_DEMAND Specification~~Report IRP_HH_DEMAND Specification~~ 9.6.20 Report IRP_DEEMED_TAKE 9.6.21 Report IRP_SUPPLIER_PURCHASE 9.6.3 Form ISY_SUSEREPT 9.6.24 Report IRP_TUoS 9.6.27 Report IRP_DUoS
7.26	Requirement is no longer used.	
8.1	I0029	2.3.4 IRS Run Settlement 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data

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		8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
8.2	I0029	2.3.4 IRS Run Settlement 8.5.1 Form ISY_RSSRUTIL 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
8.3	I0015 I0037	4.7 Archive 4.7 Archive
8.4	I0029	2.3.4 IRS Run Settlement 8.5.1 Form ISY_RSSRUTIL 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
8.5	I0029	2.3.4 IRS Run Settlement 8.5.1 Form ISY_RSSRUTIL 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
8.6		2.6.2 Merging of Logical Entities 2.6.6 Implementation of Logical Entities by Data Files 2.11 Operational Design 8. Settlement
8.7		2.6.2 Merging of Logical Entities

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Requirement Number	Logical Design Reference	Physical Design Reference
		2.6.6 Implementation of Logical Entities by Data Files 2.11 Operational Design 8. Settlement
8.8		2.6.2 Merging of Logical Entities 2.6.6 Implementation of Logical Entities by Data Files 2.11 Operational Design 8. Settlement
8.9		2.6.2 Implementation of Logical Entities by Data Files
8.10		2.6.2 Implementation of Logical Entities by Data Files
8.11	I0030	5.6.4 Form ISY_CALEMAIN
8.12		2.6.2 Merging of Logical Entities 2.6.6 Implementation of Logical Entities by Data Files 2.11 Operational Design 8. Settlement
8.13		2.6.2 Merging of Logical Entities 2.6.6 Implementation of Logical Entities by Data Files 2.11 Operational Design 8. Settlement
8.14		2.6.2 Merging of Logical Entities 2.6.6 Implementation of Logical Entities by Data Files 2.11 Operational Design 8. Settlement
8.15	I0029	2.3.4 IRS Run Settlement 8.5.1 Form ISY_RSSRUTIL 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
8.16	I0030	5.6.4 Form ISY_CALEMAIN
8.17	I0030	5.6.4 Form ISY_CALEMAIN
8.18	I0016	7.5.1 Form IDP_PROFUTIL 7.5.2 Procedure IDP_DPP_RUN 7.5.3 Procedure IDP_DPP_GSP 7.5.4 Report IDP_PR_SSC 7.5.6 Report IDP_PR_SPD 7.5.7 Report IDP_PR_DPR 7.5.8 Report IDP_PROF_EXTRACT
8.19	I0025A I0025B	9.6.2 Form IPY_PROFREPT 7.5.7 Report IDP_PR_DPR
8.20	I0016	7.5.1 Form IDP_PROFUTIL 7.5.2 Procedure IDP_DPP_RUN

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		7.5.3 Procedure IDP_DPP_GSP
8.21	I0029	2.3.4 IRS Run Settlement 8.5.1 Form ISY_RSSRUTIL 8.5.2 Procedure Settlement Run 8.5.3 Procedure Read Parameters 8.5.4 Procedure Validate Data Availability 8.5.5 Process GSP Group 8.5.6 Procedure Process Non-Half Hourly Data 8.5.7 Procedure Aggregate Half Hourly Data 8.5.8 Procedure Perform GSP Based Calculations 8.5.9 Procedure Perform GSP Correction 8.5.10 Calculate Supplier Purchases 8.5.11 Procedure Perform Spillage Adjustments
8.22		Use of English.
8.23		2.6.2 Merging of Logical Entities 2.6.6 Implementation of Logical Entities by Data Files 2.11 Operational Design 8. Settlement
8.24		2.8 Fallback, Backup and Recovery
9.1		Compliant with TSA
9.2		2.3.7 CFR File Receipt 2.3.10 CFS File Send
9.3	I0013B I0020B	3.1.2 GSP Group Take File 6.5.2 Procedure IDL_GSP_GP_TAKE 3.1.8 Settlement Price Data File 6.5.7 Procedure IDL_SETT_PRICE3.
R2_ITT1	I0012 I0028A I0028B	5.6.20 Form ISY_TSCIMAIN 2.3.1 IDL Data Loader 6.6.1 Form IDL_LOADUTIL 3.1.11 Tele-switch Contact Interval Data File 6.5.11 Procedure IDL_TSW_CONTACT
R2_ITT2	I0016	7.5.1 Form IDP_PROFUTIL 7.5.2 Procedure IDP_DPP_RUN 7.5.3 Procedure IDP_DPP_GSP
R2_ITT3	I0018 I0031 I0040	3.1.6 Pool Market Domain Data File 6.6.1 Form ISY_LOADUTIL 6.5.5 Procedure IDL_PL_MKT_DOM 4.3.3 Physical Data Model 5.6.18 Form ISY_SSCTMAIN 5.6.22 Form ISY_TIPAMAIN

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R2_ITT4	I0025A I0025B	7.5.1 Form IDP_PROFUTIL 7.5.4 Report IDP_PR_SSC 7.5.5 Report IDP_PR_TSW 7.5.6 Report IDP_PR_SPD 7.5.7 Report IDP_PR_DPR
R2_ITT5	I0027B	9.6.3 Form ISY_SUSEREPT
CR548v2 (LCR097)	I0016	7.5.3 Procedure IDP_DPP_GSP
CR479 (LCR086)	I0026B	9.6.3 Form ISY_SUSEREPT 3.1.16.6 GSP Group Consumption Totals Report 9.6.22 Report IRP_GSP_Group_Consum_Totals
(LCR099)		
TA2000 ISRA Package 1		
SIR R577 (LCR113)	I0027B	3.1.19 TUoS Report 9.6.23 Report IRP_TUoS
SIR R669 (LCR125)	(shoulder day)	3.1.1 General 4.8 Database Sizing 9.7 Report Sizing and Frequency
SIR R918 (LCR131, LCR131/3)	(extra CCCs)	3.1.1 General 4.8 Database Sizing 9.7 Report Sizing and Frequency
TA2000 ISRA Package 2		
SIR R293 (LCRA85/2)		11.1.1 Select Reports 4.3.4.1 ISRA use of cdb_ref_domains / cdb_ref_values
SIR R574 (LCRA88/2)		6.6.1 Form IDL_LOADUTIL
SIR R294 (LCRA104)	I0023	3.2.2 Audit Report 4.3.4.1 ISRA use of cdb_ref_domains / cdb_ref_values 9.5.6 Report IRP_AUDIT 9.6.1 Form ISY_GRINUTIL
SIR R887 (LCRA111/2, LCRA137)	I0044	3.1.13 Data Aggregation and Settlements Timetable File 6.6.1 Form IDL_LOADUTIL 6.5.13 Procedure IDL_SETTLEMENT_CALENDAR
SIR R295 (LCRA124/2)	I0025B I0026B	3.1.15 Daily Profile Coefficient File Extraction 3.1.17 Profile Reports 9.5.1 Report IRP_PROF_EXTRACT 9.5.2 Report IDP_PR_SSC 9.5.4 Report IDP_PR_SPD 9.5.5 Report IDP_PR_DPR 3.1.18 Supplier Settlement Reports 9.6.7 Report IRP_SUPPLIER_SETT_HDR Specification

Requirement Number	Logical Design Reference	Physical Design Reference
	I0027B	3.1.22 DUoS Report 9.6.27 Report IRP_DUoS Specification
TA2000 ISRA Package 2 (MDD)		
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