ELEXON

Non Half Hourly Data Aggregation (NHHDA)
Function Definition and User Catalogue~~Non Half Hourly Data Aggregation (NHHDA) Function Definition and User Catalogue~~

Issue Number 16.1~~0~~

Non Half Hourly Data Aggregation (NHHDA) Function Definition and User Catalogue~~Non Half Hourly Data Aggregation (NHHDA) Function Definition and User Catalogue~~

Status	:	Draft~~Final~~
~~Issue~~Version	:	16.1~~0~~
Date	:	5 November 2015~~6 November 2014~~
Prepared by	:	Cognizant
Approved by (Cognizant)	:	Project Manager

Table Of Contents

1   Introduction

1.1   Purpose

This document [NFUNDEF] describes the functions to be developed for the NHHDA system.

The content of this function definition is produced in accordance with the Logical Design Process Description [LDESPD]. It is derived from the requirements described in the Non Half Hourly Data Aggregation (NHHDA) User Requirements Specification [NHHDAURS] and where appropriate, from the Data Interfaces described in [DIS].

1.2   Scope

This document is one of the Logical Design stage deliverables and will be used as the basis for Physical Design of the NHHDA system.

It should be read in conjunction with the following Logical Design documents:

- NHHDA Logical Data Design [NLDATA] containing the following:

    - the Logical Data Model, which provides a detailed logical description of the data and its structure;

    - the Data Catalogue, which describes the data items for the system.

- NHHDA Conceptual Process Model [NCONMOD], containing Event and Enquiry Descriptions which will be cross-referred to the Function Definitions.

1.3   Structure of Document

This remainder of this document consists of the following sections:

- Section 2 contains the User Catalogue, which describes the on-line users in terms of job titles, activity descriptions and user roles. This is based on the User Roles described in [NHHDAURS];

- Section 3 contains the list of Function Definitions, which describe units of processing which need to be controlled as a whole. Each Function Definition is provided in a separate document identified by the Function ID. I/O Structure diagrams are included to show the structure of inputs and outputs for each function;

- Section 4 contains the list of Common Process descriptions and common I/O Structures for any processes that are common within the NHHDA system. Each Common Process is provided in a separate document identified by the Process ID;

- Appendix A provides an overview of the format of a Function Definition.

1.4   Amendment History

Issue	Details

Issue	Details
0.900	Issued for internal review
0.990	Issued to Pool for review
0.991	Separate files imported into single document Pool comments on Drops 1, 2 and 3 Function Definitions addressed. Subjected to internal consistency checks with other Logical Design products.
0.992	Issued to Pool for Acceptance Review.
0.993	Addresses Pool Acceptance Review comments dated 3 January 1997, Pool reference 051SCL.
0.994	Addresses additional Pool Design Review comments raised on V0.993, Logica reference EPL/LOG/179.
0.995	Further changes to address Pool Design Review comments raised on V0.993, Logica reference EPL/LOG/179
1.000	Definitive release
1.100	Incorporates LCR030. Issued for internal review
1.990	Issued to Pool for Acceptance Review.
2.000	Addresses Pool APP comments dated 2/4/97. Definitive release
2.100	CLAR 067 CLAR 074 CLAR 078 CLAR 081 CLAR 084 OR 2075 Pool Defect 12 Pool Defect 16 Pool Defect 29 Pool Defect 30 Pool Defect 49 Pool Defect 113 Pool Defect 127 CLAR072; CLAR073; CLAR075; CLAR076; CLAR077; CLAR093; CLAR100
3.000	Address review comments consistent with software Release 1.1.
3.001	Pool Defect 1254 CLAR094 OR2338 LCR75 / CR455 / OR2351 Refresh unit of work Spelling checked and corrected Pool Defect 1485 (OR2380) instruction validation Pool Defect 1472 (OR2382) instruction validation
3.100	OR2444 (LCR092 CR487) Average EAC is now Default EAC (documentation change only)
3.500	Incorporating Internal Review Comments. Draft issue for external review consistent with software release R1.2.

Issue	Details
4.000	Incorporate pool review comments and update to reflect software release R1.3 Authorised version
4.990	OR2837 - Fix and merge design documentation NHHDA Release 4.0.0 changes: SIR R419 / LCR021/3 - Consistency of Supplier Reporting Requirements from Data Aggregation SIR R 576 / LCR106 - ISR Agent Calendar/Timetable SIR R 654 / LCR114 - NHHDA Document/Software Inconsistency NHHDA Release 5.0.0 changes (including LCR148): SIR R529 / LCR094/3 - Exception handling for Full PRS Refresh SIR R709 / LCR103/2 - Metering System Data in PRS and NHHDC SIR R391 / LCR105 - Operational Improvements to NHHDA SIR R692 / LCR107 - Data Aggregation - Zero AA while de-energised SIR R715 / LCR109 - Automatic Loading of MDD SIR R716 / LCR110 - VSCPCs in GSP Groups SIR R575 / LCR112 - Instruction Processing - Apply Logic SIR R991 / LCR116 - NHHDA Aggregation Robustness SIR R295 / LCR124/2 - Predictable Outputs from NHHDA SIR R1528 / LCR127/2 - NHHDA Manage Failed Instructions Operability SIR R716 / LCR146 - Amend Instruction Failure Reason Code SIR R991 / LCR148 - Amend A12 Aggregation Exception Code Issued to Pool for review
4.991	LCR146 Instruction Failure Reason Code NNA message changed. Incorporate Pool review comments Issued to the Pool for review
4.992	Incorporate Pool review comments
4.999	Incorporate Pool review comments Issued to Pool for review
4.999a	Incorporate Pool review comments Incorporating changes for Pool reference: 329SCL01
5.000	Authorised Version. URS Baseline updated in line with CCN095.
5.001	OR2911 - Audit tables named 'insert' not 'create'. (PMR 4160)
5.002	LCR149/2 - Empty Supplier Purchase Matrices

Issue	Details
	change included.
5.003	LCR152/3 - Altering Check Data Collector processing.
5.004	Incorporate Pool review comments Issued to Pool for review
5.005	Incorporate Pool review comments
5.006	LCR157 - Missing AFYCs/Default EACs during Aggregation.
5.990	Issued to Pool for review.
6.000	Authorised version
6.001	LCR167/2 (SIR R2657) - Reducing Superfluous CDCD Exception Reports OR2976 Re-creating lost cross-reference for Table 1
6.002	Incorporate Pool review comments
6.003	Incorporate further Pool review comment and bring wording of E07 exception logic into line with LCR167/2
6.004	Incorporate further Pool review comment.
6.005	LCR143/2 - NHHDA Check Data Collector Operability Improvements and LCR169 - Management of Failed Instructions by NHHDA
6.006	Incorporate Pool review comments
6.007	Include rules for validating instructions with the archive date (OR2961).
6.008	Incorporating Pool review comments:- OR3118 - Updating the copyright notice
6.009	Change to Office 2000
6.010	Changes relating to ELEXON superseding The Electricity Pool
6.011	Incorporate Pool review comments
7.000	Authorised version
7.001	Updated document references and updated for LCR163, OR2961, OR3106 and OR3208
7.990	Version for ELEXON review
7.991	Updated with comments from ELEXON and OR3157
7.992	Updated with comments from ELEXON
8.000	Authorised version
8.001	Update document template
8.002	Changes for P62
8.003	Updated with comments from internal review
8.004	Changes LCR207
8.005	Updated with comments from internal review
8.006	Changes for LCR207/2
8.007	Updated with comments from internal review
8.008	Updated for OR3310

Issue	Details
	Updated for OR3259
8.009	Updated for OR3311 Updated for LCR215/3
8.990	Updated for OR3326 and OR3327 Version for ELEXON review
8.991	Updated from ELEXON review
9.000	Authorised version
9.001	Updated for P81 Version for ELEXON review
10.000	Made definitive
10.001	Updated for LCR218 - BETTA
10.990	Issued to ELEXON for review
10.991	Applied ELEXON review comments
10.992	Updated document references to definitive
11.000	Authorised version
12.000	Updating document references.
12.001	Updated for LCR220 - Provision of report to judge NHHDC's performance.
12.002	Updated from internal review
12.003	Applied ELEXON review comments
12.004	Updated for changes CP1001 and CP1016.
12.005	Additional review for CP1006.
12.006	Additional updates.
12.007	Further updates and issued to ELEXON for review.
12.008	Further updates added.
12.009	Additional formatting changes. Issued to ELEXON for review.
12.010	Changes in response to further Elexon feedback. Issued to ELEXON for review.
12.011	Additional changes in response to ELEXON feedback. Issued to ELEXON for review.
12.012	Final amendments added. Issued to ELEXON.
13.000	Authorised version.
13.990	Updated for February 06 Release DCRs: CP933– Management of System Security CP965– Superfluous reporting of D0095 E08-E14 exceptions combined with an E01 exception CP1047 – Warning message to highlight when no Grid Supply Point (GSP) Groups are selected for a Non Half-Hourly Data Aggregation run CP1089 – Inappropriate "dual reporting" of E03/E04 exceptions on the Non Half Hourly Data Aggregation Report (D0095) CP1121 - Defect in NHH Aggregation Rules in NHHDA Logical Design

Issue	Details
14.000	Authorised version.
14.990	Updated for February 09 Release DCRs: CP1205 - D0095 reporting of immaterial superfluous consumption; CP1206 - D0095 reporting of immaterial supplier inconsistencies; CP1207- D0095 reporting in respect of past NHHDCs; P222 - Provision of EAC Data to Distributors.
15.000	Authorised version.
15.010	Updated document classification
15.0	Back issued for exit management
16.0	Updated for CP1408 implementation to include the boundary value validation for EAC and AA values
16.1	P305 – Updated for November 2015 Release

1.5   Summary of Changes

Changes as indicated in the amendment history.

1.6   Changes Forecast

Agreed Change Requests will be incorporated.

1.7   References

Mnemonic	Information	Details
[NFUNDEF]	Title: Reference No: Issue No: Author: Date:	NHHDA Function Definition and User Catalogue 401PZT 15.000 Logica 26 February 2009
[NLDATA]	Title: Reference No: Issue No: Author: Date:	NHHDA Logical Data Design 400PZT 11.000 Logica 29 April 2005
[NCONMOD]	Title: Reference No: Issue No: Author: Date:	NHHDA Conceptual Process Model 403PZT 13.000 Logica 26 February 2009
[DIS]	Title: Reference No: Issue No: Author: Date:	SVA Data Catalogue Volume 1: Data Interfaces 005PAT 29.0 ELEXON 6 November 2008
[LDESPD]	Title: Reference No: Issue No: Author: Date:	Logical Design Process Description LUK.859.EC.24414.2.2.2.1 1.0 Jan Lock 15 October 1996

Mnemonic	Information	Details
[NHHDAURS]	Title:	Non Half Hourly Data Aggregation User Requirements Specification
	Reference No:	003IBR
	Issue No:	14.0
	Author:	ELEXON
	Date:	23 August 2007

1.8   Abbreviations

AA   Annualised Advance

BETTA   British Electricity Transmission and Trading Arrangements

DC   Data Collector

EAC   Estimate of Annual Consumption

ISRA   Initial Settlement and Reconciliation Agency (now called SVAA[1])

NETA   New Electricity Trading Arrangements

NHHDA   Non Half Hourly Data Aggregation

NHHDC   Non Half Hourly Data Collector

PRS   PES Registration Service (now called SMRA[2])

SMRA   Supplier Meter Registration Agent

SPM   Supplier Purchase Matrix

SVAA   Supplier Volume Allocation Agent

URS   User Requirement Specification, eg: [NHHDAURS]

---

[1] It should be noted that after NETA (New Electricity Trading Arrangements), ISRA is known as SVAA. The NHHDA application and documentation has not been updated for this new terminology.

[2] It should be noted that the PRS was also known as the MPAS (Metering Point Administration Service). The BSC Terminology for the MPAS Agent is the SMRA (Supplier Meter Registration Agent). The NHHDA application and documentation has not been updated for this new terminology.

1.9   Intellectual Property Rights and Copyright

This document contains materials the copyright and other intellectual property rights in which are vested in ELEXON Limited or which appear with the consent of the copyright owner.   These materials are made available for you under the terms of a separate licence agreement with ELEXON Limited. Unless you are a licensee you are not permitted to view, download, modify, copy, distribute, transmit, store, reproduce or otherwise use, publish, licence, transfer, sell or create derivative works (in whatever format) from this document or any information obtained from this document.

All copyright and other proprietary notices contained in the original material must be retained on any copy that you make. All other rights of the copyright owner not expressly dealt with above are reserved.

This report is confidential and intended only for the person(s) named. Unless you are that person, or authorised to receive this report, you must not copy or use it or disclose it to anyone else. If you have received this report in error, please contact the sender. Thank you for your co-operation.

2   User Catalogue

The following User Roles have been identified for users of the NHHDA system and are shown with the corresponding activities for each User Role.

User Role	Activities
Market Domain Data Administrator	The activities of this job include the following: • maintaining Market Domain Data for the system
Superior Market Domain Data Administrator	The activities of this job include the following: • maintaining Market Domain Data for the system • making authorised changes to data used in a Final Initial Settlement
Data Aggregation Administrator	The activities for this job include the following: • scheduling data aggregation runs • initiating the send of data aggregation run results to ISR agents
Exception Administrator	The activities of this job include the following: • requesting Data Collector exception reports • investigating and resolving unsuccessfully processed Instructions from PRS Agents and Data Collectors
System Operator	The activities of this job include the following: • monitoring system operation • monitoring interface operation • monitoring system performance and capacity • managing archive
System Manager	The activities of this job include the following: • creation and deletion of users and assigning of users to User Roles • managing system operation problems • managing interface operation problems • managing system performance and capacity problems • managing audit, security and control • managing backup and recovery
Auditor	The activities of this job include the following: • examining database data • examining exception and run logs • examining audit trails

3 Functions

Note: Many simple functions are specified here. During physical design, these may be combined (e.g. the set of "Report on MS…" reports may be combined into a single report).

Where lists are presented, they will be sorted in reverse date order, alphabetical order or numerical order as appropriate, unless specified otherwise.

The functions specified here all assume that the processing of incoming files will be initiated manually.

3.1 N0001 Define Profile Classes

3.1.1 Function Type

On-line   Update   User initiated

3.1.2 Function Description

This function is invoked by an NHHDA user to allow browsing and maintenance of the set of valid Profile Classes and their associated GSP Group Profile Class Researched Default EACs.

A list of existing Profile Class Ids is displayed (this list is not shown in the I/O Structure, and should not be confused with the "Profile Class Browsed" branch of the I/O Structure). The user either selects one of them to amend, delete or browse, or enters a new one.

For creation, the Profile Class Id is input and the user enters the Profile Class Description. If the GSP Group Profile Class Researched Default EACs are known at this time, the user may enter them and the associations between Profile Class and GSP Group will be created, otherwise they may be entered later using the amendment facility.

For amendment, deletion and browsing, the Profile Class Id and Profile Class Description are displayed, together with the GSP Group Id, Effective From Settlement Date and Researched Default EAC for all associated GSP Group Profile Class Researched Default EACs, if any.

For amendment, the user amends the Profile Class Description if required and either amends or deletes existing GSP Group Profile Class Researched Default EACs or creates new ones. Amendments may be made to either or both of the Effective From Settlement Date and Researched Default EAC, but both of these values must be entered when creating a new one.

For deletion, the user deletes the Profile Class and all of its associated GSP Group Profile Class Researched Default EACs.

3.1.3 Processing Description

Reference: EPD 4.1 - Maintain Profile Class

This process allows suitably authorised NHH Data Aggregator users to maintain Profile Classes and their associated GSP Group Profile Class Researched Default EACs (as specified by the Profile Administrator).

A Profile Class Id and Profile Class Description must be specified for each Profile Class. The system will allow Profile Classes to be created, updated and deleted.

A GSP Group Id, Profile Class Id, Effective From Settlement Date for the Researched Default EAC must be specified for each GSP Group Profile Class Researched Default EAC. The system will allow them to be created, updated and deleted.

3.1.4   Error Handling

Reference: EPD 4.1 - Maintain Profile Class

A Profile Class cannot be deleted if it is associated with Valid Settlement Configuration Profile Classes, or occurrences of Metering System Profile Class or Metering System Profile Class (DC);

A warning will be issued if an attempt is made to delete a Profile Class which has GSP Group Profile Class Researched Default EACs defined.

New Profile Class Ids must be different from all existing ones.

A Profile Class cannot be created without a Profile Class Description or amended to remove the description.

The GSP Group Id must be one of those which already exists on the system.

GSP Group Profile Class Researched Default EAC data for dates which have already been used in a "Final Initial Settlement" may only be entered, deleted or updated by the Superior Market Domain Data Administrator. Any such change is reported to the Data Aggregator.

3.1.5   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

3.1.6   Volumes

At market inception, 8 Profile Classes.

Thereafter, one change per year, i.e. 8 per year.

Assumes that one invocation of the function for one Profile Class enables the GSP Group Profile Class Researched Default EACs to be accessed for all GSP Groups.

If a new GSP Group is created, a further 8 invocations will be required.

An indeterminate number of Profile Classes and their associate GSP Group Profile Class Researched Default EACs will be browsed on an ad hoc basis.

3.1.7 Events

GSP Group Profile Class Researched Default EAC details deleted

GSP Group Profile Class Researched Default EAC details entered

GSP Group Profile Class Researched Default EAC details updated

Profile Class details deleted

Profile Class details entered

Profile Class details updated

3.1.8 Event Frequency

The exact frequency cannot be determined, but the sum of the frequencies of the three Profile Class events (entered, amended, deleted), the three GSP Group Profile Class Researched Default EAC events (entered, amended, deleted), and the browse enquiry is one; Lookup Latest Final Initial Settlement Run Date is invoked once when the function is invoked.

3.1.9 Enquiries

Browse Profile Classes

Lookup Latest Final Initial Settlement Run Date

3.1.10 Enquiry Frequency

See event frequency.

3.1.11 Requirements Catalogue Ref.

F1, F4, N15, N16

3.1.12 User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.1.13   I/O Structures
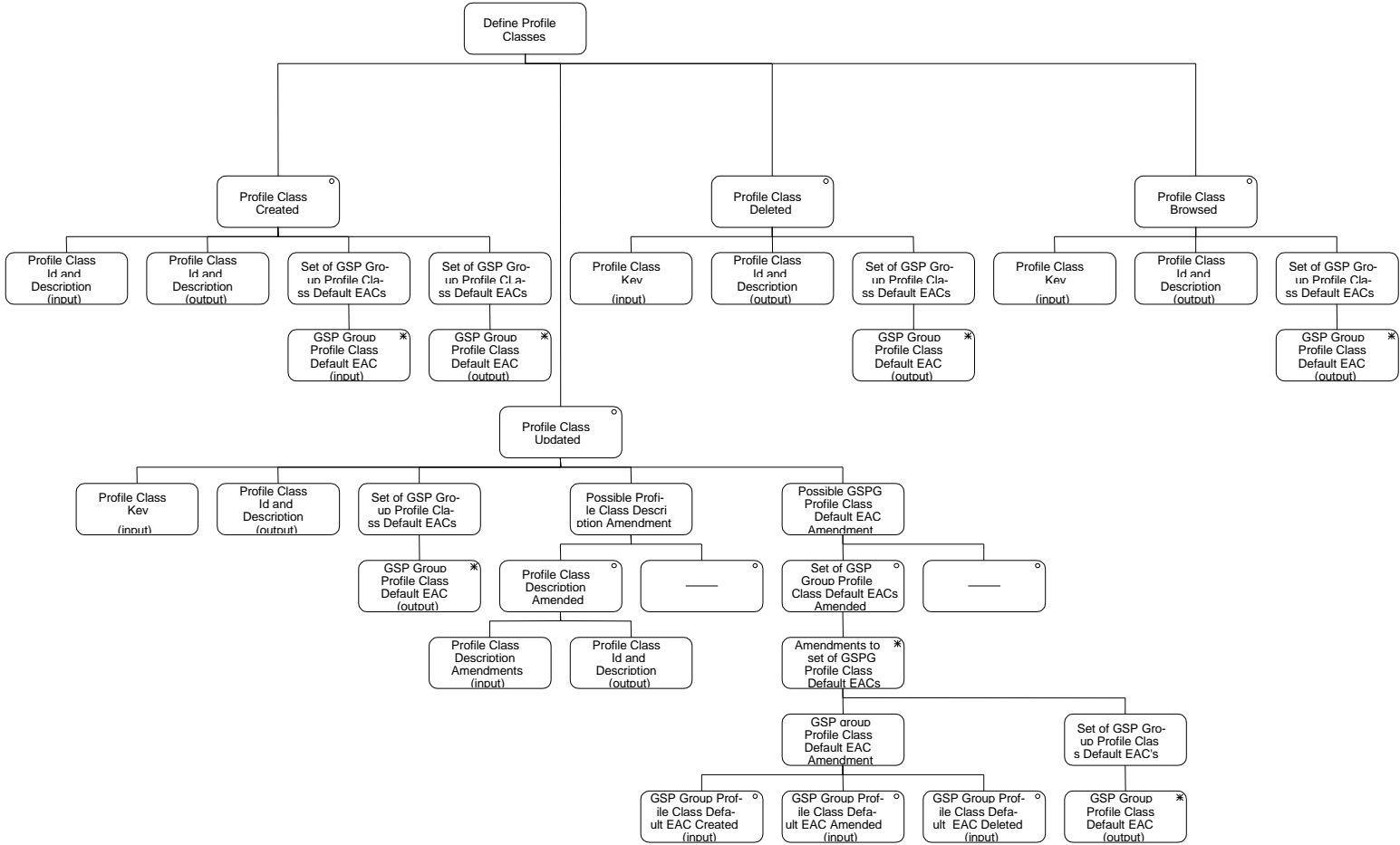
I/O Structure Element	Data Items
GSP Group Profile Class Researched Default EAC	GSP Group Id
	Researched Default EAC
	X GGPCDE Effective From Settlement Date {GGPCDE}
GSP Group Profile Class Researched Default EAC Amended	GSP Group Id
	Researched Default EAC
	X GGPCDE Effective From Settlement Date {GGPCDE}
GSP Group Profile Class Researched Default EAC Created	GSP Group Id
	Researched Default EAC
	X GGPCDE Effective From Settlement Date {GGPCDE}
GSP Group Profile Class Researched Default EAC Deleted	GSP Group Id
	Researched Default EAC
	X GGPCDE Effective From Settlement Date {GGPCDE}
Profile Class Description Amendments	Profile Class Description
Profile Class Id and Description	Profile Class Description
	Profile Class Id
Profile Class Key	Profile Class Id

3.2   N0001E Browse Profile Classes

3.2.1   Function Type

On-line   Enquiry   User initiated

3.2.2   Function Description

This function is invoked by an NHHDA user to allow browsing of the set of valid Profile Classes and their associated GSP Group Profile Class Researched Default EACs.

A list of Profile Class Ids is displayed. The user selects one of them to browse.

The Profile Class Id and Profile Class Description are displayed, together with the GSP Group Id, Effective From Settlement Date and Researched Default EAC for all associated GSP Group Profile Class Researched Default EACs, if any.

3.2.3   Processing Description

The user must be able to browse Profile Class and GSP Group Profile Class Researched Default EACs

The user has the option of entering a Profile Class Id, once this information is entered a list of GSP Group Profile Class Researched Default EACs will be displayed for that Profile Class Id.

3.2.4   Error Handling

None

3.2.5   Common Processing

NC006 Restrict On-line Access

3.2.6   Volumes

An indeterminate number of Profile Classes and their associate GSP Group Profile Class Researched Default EACs will be browsed on an ad hoc basis.

3.2.7   Events

None

3.2.8   Event Frequency

N/A

3.2.9   Enquiries

Browse Profile Classes

3.2.10   Enquiry Frequency

1

3.2.11   Requirements Catalogue Ref.

N17

3.2.12   User Roles

Exception Administrator

Auditor

3.2.13   I/O Structures

See "Profile Class Browsed" branch of N0001.

Auditor

3.2.13   I/O Structures

3.3   N0003 Restore

3.3.1   Function Type

Batch   Update   User initiated

3.3.2   Function Description

This function is invoked by the NHHDA user to allow restoration of previously archived data to a state where it may be browsed and/or reported on. This will involve restoring to a separate area, this may or may not be on the same machine as the production data. Once loaded, the data may be examined using the same functions as for "live" data. If the restore is to a separate machine's "live" database, then all functions access the loaded data allowing, for example, aggregation runs for dispute resolution.

3.3.3   Processing Description

The data is selected by type and settlement date. The user selects the type(s) of data required and the settlement date(s) for which it was in effect.

When the backup is performed, prior to archive, **all** data is moved to secure storage medium. This ensures that not only is it possible to restore all data that is deleted as part of the archive process but also any other appropriate data. This ensures that all the archived data can be seen within the context that it was set prior to being archived.

NB This function exists to document the requirement for restoration of archived data. It is not intended to be a detailed description of the restore mechanism. Therefore, no I/O Structures have been created.

3.3.4   Error Handling

None

3.3.5   Common Processing

NC006 Restrict On-Line Access

3.3.6   Volumes

Data will be restored on an ad-hoc basis.

3.3.7   Events

Restore

3.3.8   Event Frequency

1

3.3.9   Enquiries

None

3.3.10   Enquiry Frequency

N/A

3.3.11   Requirements Catalogue Ref.

N27, N29

3.3.12   User Roles

System Manager

3.3.13   I/O Structures

None

3.4   N0004 Manage Failed Instructions

3.4.1   Function Type

On-line   Update   User initiated

3.4.2   Function Description

This function is invoked by the NHHDA user to allow reprocessing, marking for resend or resending of failed Instructions.

A list of failed instructions is displayed, which can be restricted by entering search criteria on any combination of the following: instruction type, instruction sequence number, processed date from and to, market role and participant, metring system, distributor, resend flag and reprocess flag.

As each instruction is selected additional details about the instruction is displayed. These include the file name, file created and received date. The contents of the selected file can also be viewed. The user selects one or more instructions to:

- Mark for resending only; this mark the selected instructions for resending but does not create the D0023 file.

- Resend all; this resends all selected instructions and those already marked for resending via a D0023 file.

- Mark and resend all not sent; this resends all selected instructions and those already marked for resending via a D0023 file provided they have not been resent in the past.

- Mark for reprocessing; this is reprocessed when instruction processing is next run.

Instruction failure reason defaults to 'Unresolvable' to allow the failed instruction to be returned via theD0023 file.

3.4.3   Processing Description

It is possible to sort the list of displayed files by using the sort buttons at the top of each column. The user can perform any of the following on the selected instruction(s):

For each Instruction selected for reprocessing using the 'Reprocess All' functionality:

- set the Reprocess Flag to "Yes"

- Instruction reprocessing is performed when next instruction processing is been run.

For each Instruction selected, using the 'Mark for Resend' functionality :

- set the Resend Request Flag to "Yes"

- D0023 file is not created by this function.

For each Instruction selected and processed using the 'Resend All' functionality:

- Resend Date is set to today's date

- Instruction failure reasons are set to "Unresolvable" by default if the ActionState field is blank. This allow the instructions to be returned in the D0023 file.

- D0023 file is created for instructions currently selected and those Instructions with the Resend Request flag set to "Yes".

For each Instruction selected and processed using the 'Resend All not Sent' functionality (this is applicable to those instructions which have not been resent in the past):

- Resend Date is set to today's date.

- Instruction failure reasons are set to "Unresolvable" by default if the ActionState field is blank. This allows them to be returned in the D0023 file.

- D0023 files are created for these Instructions.

The 'View' button will allow the display of a file that contains the instruction selected (if it has not been archived).

For each Instruction Status Reason set AggregatorActionState to the new values selected

When creating the D0023 files, for the metering systems selected:

If the specified source is a Data Collector:

Examine each Instruction from that Data Collector;

Select all Metering Systems for which there is at least one Instruction with

- Instruction Status = "Failed"

- Resend Request Flag = "Yes"

Identify the earliest Significant Date of all such Instructions for the Metering System.

Create / write to the report file:

- the Metering System Id,

- the identified Significant Date and

- for each Instruction

  - Instruction Number

  - Reasons for Failure which have AggregatorActionState = "cannot resolve"

Update each Instruction included in the report:

- set Resend Request Date = today and

- Resend Request Flag = "No"

If the report has been created, send the file to the data source.

If the specified source is a PRS Agent:

For each Distribution Business to which the PRS Agent has a current appointment:

Select all Metering Systems within the Distribution Business for which there is at least one Instruction with

- Instruction Status = "Failed" and

- Resend Request Flag = "Yes"

or at least one Refresh Instruction Failure with

- Resend Request Flag = "Yes".

Identify the earliest Significant Date of all such Instructions and Refresh Instruction Failures for the Metering System.

Create / write to the report file:

- the Metering System Id,

- the identified Significant Date,

- for each Instruction, write:

  - the Instruction Sequence Number and

  - the Instruction Status Reasons which have AggregatorActionState = "cannot resolve",

- for each Refresh Instruction Failure, write:

  - the Instruction Sequence Number and

  - the Refresh Instruction Failure Reasons which have Include Reason Flag = "Yes".

Update each Instruction and Refresh Instruction Failure included in the report such that:

- Resend Request Date = today and

- Resend Request Flag = "No".

If the report has been created, send the file to the PRS Agent based on the short code of the Metering System ID.

After a D0023 file is created, the Resent File ID is populated with the file id of the D0023 flow that contained the failed Instruction.

Changes may only be made by the Exception Administrator

3.4.4   Error Handling

Reprocess Flag may only be set to "Yes" for an Instruction which has Reprocess Flag = "No"

Resend Request Flag may only be set to "Yes" for an Instruction which has Resend Request Flag = "No"

When viewing a file, the user will be presented with a warning message if the size of the machine readable file (in bytes) is larger than the allowed size set in the system parameter. The user will also be presented with an error message if the physical file does not exist.

3.4.5   Common Processing

NC002 - Update On-line Audit Log

NC005 Create File Header

NC006 - Restrict On-line Access

NC007 Update File Log

3.4.6   Volumes

For administering Errors, the volume cannot be predicted. For sizing purposes assume that, say, 5% of Instructions will fail.

For returned instructions, an indeterminate number of Failed Instruction reports will be created on an ad hoc basis.

3.4.7   Events

Update Instruction

Update Instruction Status Reason

Update Refresh Instruction Failure

3.4.8   Event Frequency

For administering Errors, the exact frequency cannot be determined, but the sum of the frequencies of the events and enquiries is one.

Update Instruction is invoked for each Instruction included in the report.

Update Refresh Instruction Failure occurs once for each Refresh Instruction failure included in the report.

3.4.9   Enquiries

Browse Instructions

3.4.10   Enquiry Frequency

For administering Errors, the exact frequency cannot be determined, but the sum of the frequencies of the events and enquiries is one.

Browse Instruction is invoked once per source

3.4.11   Requirements Catalogue Ref.

F5, F6, F11, F13, F14, F18, F19, N2, N3, N7, N17, N18, N19, N20, N21, N24

3.4.12   User Roles

Exception Administrator

3.4.13   I/O Structures

Manage Failed Instructions

Criteria Selction

Set of Instructions Fulfilli-ng Criteria

Optional Date Range

Optional Instruction Type

Optional Instruction Sequence No.

Optional Reprocess Flag

Optional Distributer

Instruction

Date Range For Report (input)

Instruction Type (input)

Instruction Sequence No. (input)

Reprocess Flag (input)

Distributer (input)

Source

Instruction Details (output)

Instruction Status Reasons

Optional Addit-Ional File Details

Optional Market Role

PRS Agent Id (output)

Data Collector Id (output)

Instruction Reason Details (output)

Add File Details (output)

Market Role (input)

Optional Instr-uction Source

PRS Agent

Data Collector

Instruction Subject

Optional Return Request Flag

PRS Agent Id (input)

PRS Agent Id and Name (output)

Data Collector Id (input)

Data Collector Id and Name (output)

Metering System

Return Request Flag (input)

Metering System Id (input)

Metering System Id (output)

Set of User Actions

User Action

Mark Failed Instructions for Resend

Resend All Failed Instructions

Resend All Failed Instructions Not Sent

Reprocess Fail-ed Instructions

Aggregator Action Change

View File

Source

Instruction Sequence Number (input)

Source

Instruction Sequence Number (input)

Source

Instruction Sequence Number (input)

Source

Instruction Sequence Number (input)

Source

Instruction Sequence Number (input)

Instruction Re-ason for Change

File Name (input)

PRS Agent Id (input)

Data Collector Id (input)

PRS Agent Id (input)

Data Collector Id (input)

PRS Agent Id (input)

Data Collector Id (input)

PRS Agent Id (input)

Data Collector Id (input)

PRS Agent Id (input)

Data Collector Id (input)

Instruction Reason Key (input)

Aggregator Action State (input)

I/O Structure Element	Data Items
AggregatorActionState	AggregatorActionState
Data Collector Id and Name	Data Collector Id
	Data Collector Name
Data Collector Id	Data Collector Id
DateRange For Report	Start Date for Selection
	End Date for Selection
Distributor	Distributor ID
File Details	File Name
	File Received Timestamp
	File Creation Timestamp
File Name	File Name
Instruction Details	Market Participant Id
	Market Participant Name
	Instruction Sequence Number
	Metering System Id
	Significant Date
	Instruction Type
	Resend Request Date
	Resent File ID
Instruction Reason Details	Reason Number
	Instruction Status Reason
	AggregatorActionState
Instruction Reason Key	Reason Number
Instruction Sequence Number	Instruction Sequence Number
Instruction Type	Instruction Type
Marketing Role	Market Participant Role Code
Metering System Id	Metering System Id
PRS Agent Id	PRS Agent Id
PRS Agent Id and Name	PRS Agent Id
	PRS Agent Name
Return Request Flag	Return Request Flag
Reprocess Flag	Reprocess Flag

3.5 N0005 Generate Supplier Purchase Matrix

3.5.1 Function Type

Batch   Update   User initiated

3.5.2 Function Description

This function allows the Data Aggregation Administrator to trigger the extraction of Supplier Purchase Matrix data for a previously performed Data Aggregation Run.

The system presents a list of all Settlement Dates for which Supplier Purchase Matrix data is available on-line. The user selects one and is presented with a list of Data Aggregation Runs for that date which are available on-line. The user selects one and the system produces an appropriate set of SPM data files.

The output from this function (Supplier Purchase Matrix) may be examined using N0027 Browse Exception Data and N0028 Report Exception Data.

NOTE: In this section ISR Agent is detemined by the BETTA Start Date for Scottish GSPs. For settlement dates before the BETTA Start Date the ISR Agent for Scottish GSPs will be IAR, for settlement dates on or after the BETTA Start Date for Scottish GSP Groups the ISR Agent appointments will be set up via MDD file or the GSP groups Form in the same way that English and Welsh GSP Group ISR Agent appointments are set up.

3.5.3 Processing Description

(reference EPD Process 5 - Send Supplier Purchase Matrices to ISR)

This process allows suitably authorised NHH Data Aggregator users to request the send of previously aggregated Supplier Purchase Matrices to the relevant ISR Agent(s) and Suppliers. The user will select a Data Aggregation Run which has been performed.

The system will perform the following processing using the Supplier Purchase Matrix data calculated in the Data Aggregation Run.

For each GSP Group included in the Data Aggregation Run:

- obtain the GSP Group's Supplier Purchase Matrix data;

- collate a Supplier Purchase Matrix Data file;

- send the file to the ISR Agent appointed to the GSP Group.

- For each Supplier with consumption data aggregated in the Data Aggregation Run for the current GSP Group:

  - obtain the Supplier's Supplier Purchase Matrix data for the current GSP Group;

  - collate a Supplier Purchase Matrix Data file;

  - send the file to the Supplier.

3.5.4 Error Handling

The system will contain controls to ensure that data cannot be sent for a Data Aggregation Run which is not the latest for that Settlement Day, unless the user explicitly acknowledges and overrides a warning message.

3.5.5 Common Processing

NC005 Create File Header

NC006 Restrict On-line Access

NC007 Update File Log

3.5.6 Volumes

Rarely - normally the automatic batch version of this function (N0026) is sufficient. This function is only used when a repeat of the data extraction is required.

3.5.7 Events

SPM file created

3.5.8 Event Frequency

Once per Supplier with aggregated consumption data for each GSP Group and once for each GSP Group's appointed ISR Agent.

3.5.9 Enquiries

Request to Send SPM Received

3.5.10 Enquiry Frequency

1

3.5.11 Requirements Catalogue Ref.

F36, N09, N10, N2

3.5.12 User Roles

Data Aggregation Administrator

3.5.13   I/O Structures
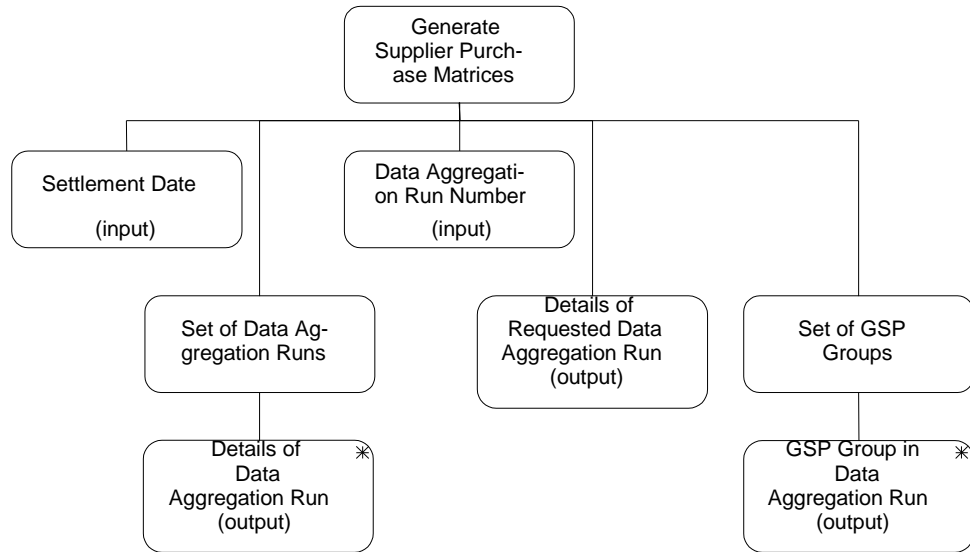
I/O Structure Element	Data Items
Data Aggregation Run Number	Data Aggregation Run Number
Details of Data Aggregation Run	Data Aggregation Run Date
	Data Aggregation Run Number
	Data Aggregation Run Time
	Settlement Code
Details of Requested Data Aggregation Run	Data Aggregation Run Date
	Data Aggregation Run Number
	Data Aggregation Run Time
	Settlement Code
	Settlement Date
GSP Group in Data Aggregation Run	GSP Group Id
	GSP Group Name
Settlement Date	Settlement Date
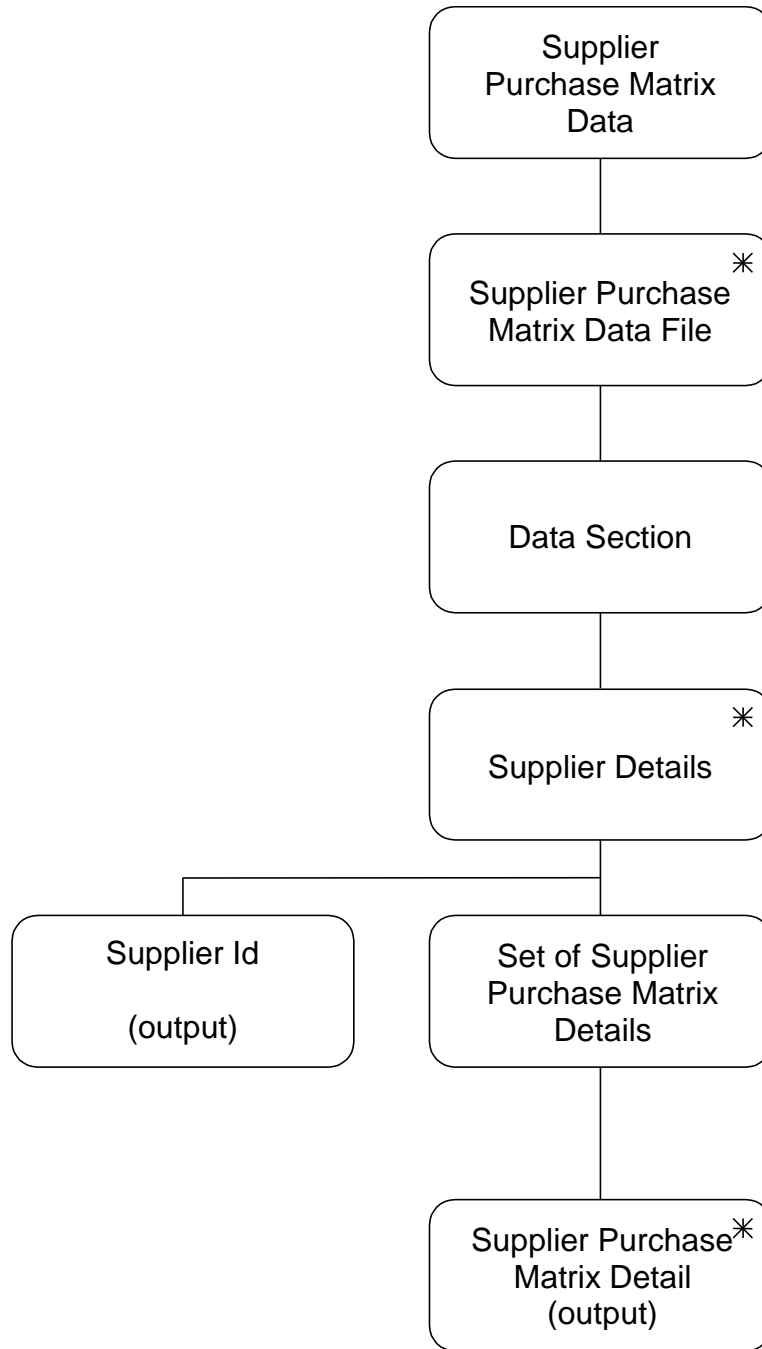
```
                        ┌─────────────────┐
                        │    Supplier     │
                        │ Purchase Matrix │
                        │      Data       │
                        └────────┬────────┘
                                 │
                        ┌────────┴────────┐
                        │ Supplier Purchase│  ✳
                        │ Matrix Data File │
                        └────────┬────────┘
                                 │
                        ┌────────┴────────┐
                        │  Data Section   │
                        │                 │
                        └────────┬────────┘
                                 │
                        ┌────────┴────────┐
                        │ Supplier Details│  ✳
                        │                 │
                        └────────┬────────┘
                    ┌────────────┴───────┐
         ┌──────────┴──────┐   ┌─────────┴────────┐
         │   Supplier Id   │   │ Set of Supplier  │
         │                 │   │ Purchase Matrix  │
         │    (output)     │   │     Details      │
         └─────────────────┘   └─────────┬────────┘
                                         │
                               ┌─────────┴────────┐
                               │ Supplier Purchase│ ✳
                               │  Matrix Detail   │
                               │    (output)      │
                               └──────────────────┘
```

I/O Structure Element	Data Items
Supplier Id	Supplier Id
Supplier Purchase Matrix Detail	Profile Class Id
	Distributor Id
	Line Loss Factor Class Id
	Standard Settlement Configuration Id
	Time Pattern Regime Id
	SPM Default EAC MSID Count

SPM Default Unmetered MSID Count

SPM Total AA MSID Count

SPM Total Annualised Advance

SPM Total EAC

SPM Total EAC MSID Count

SPM Total Unmetered Consumption

SPM Total Unmetered MSID Count

3.6   N0006 Define Suppliers

3.6.1   Function Type

On-line   Update   User initiated

3.6.2   Function Description

This function is invoked by the NHHDA user to allow browsing and maintenance of the set of valid Suppliers.

A list of existing Supplier Ids is displayed (this list is not shown in the I/O Structure, and should not be confused with the "Supplier Browsed" branch of the I/O Structure).

The user either selects one of them to amend, delete or browse, or enters a new one.

For creation, the user enters a new Supplier Id and Supplier Name.

For amendment, deletion and browsing, the Supplier Id and Supplier Name are displayed when chosen from a pick list.

When amending or deleting a supplier a user either amends the Supplier Name or deletes the Supplier.

3.6.3   Processing Description

This process allows suitably authorised NHH Data Aggregator users to maintain details of Suppliers. A Supplier Id and Supplier Name must be specified.

The system will allow Suppliers to be created, and their names updated.

Users will also be allowed to delete suppliers.

3.6.4   Error Handling

Reference: EPD 4.2 - Maintain Supplier

It will only allow a Supplier to be deleted if it has no associated Registrations, Registration (DC)s, or Supplier Purchase Matrix data.

New Supplier Ids must be different from all existing ones.

3.6.5   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

3.6.6   Volumes

At market inception, about 30 Suppliers will be created. Thereafter, about five Suppliers created, five Suppliers deleted and five Suppliers amended per year.

An indeterminate number of Suppliers will be browsed on an ad hoc basis.

3.6.7   Events

Supplier details entered

Supplier details updated

Supplier details deleted

3.6.8   Event Frequency

The exact frequency cannot be determined, but the sum of the frequencies of the three events (entered, amended, deleted) and the browse enquiry is one;

3.6.9   Enquiries

Browse Suppliers

3.6.10   Enquiry Frequency

See event frequency.

3.6.11   Requirements Catalogue Ref.

F01

3.6.12   User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.6.13   I/O Structures

```
                                    ┌─────────────┐
                                    │   Define    │
                                    │  Suppliers  │
                                    └─────────────┘
        ┌──────────────────┬──────────────────────────┬──────────────────────┐
  ┌───────────┐°     ┌───────────┐°            ┌───────────┐°          ┌───────────┐°
  │  Supplier │      │  Supplier │            │  Supplier │          │  Supplier │
  │  Created  │      │  Updated  │            │  Deleted  │          │  Browsed  │
  └───────────┘      └───────────┘            └───────────┘          └───────────┘
    ┌──────┴──────┐    ┌────────┬──────────┬────────┐    ┌────┴────┐      ┌────┴────┐
```

| Supplier Id and Name (input) | Supplier Id and Name (output) | Supplier Key (input) | Supplier Id and Name (output) | Supplier Name Amendments (input) | Supplier Id and Name (output) | Supplier Key (input) | Supplier Id and Name (output) | Supplier Key (input) | Supplier Id and Name (output) |
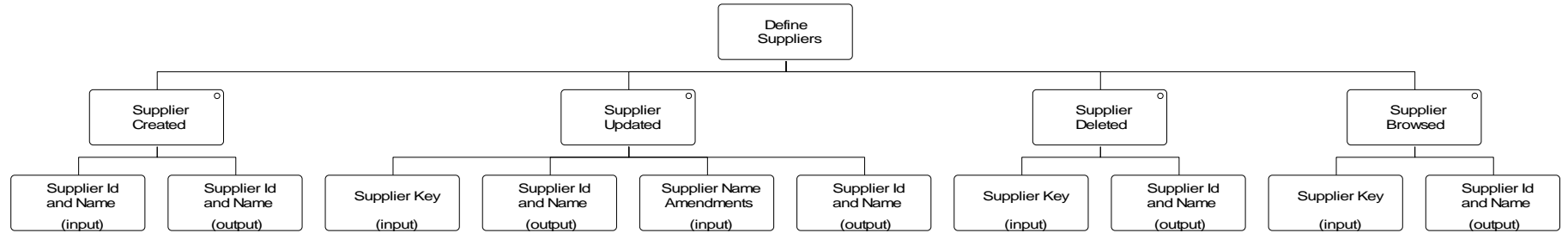
I/O Structure Element	Data Items
Supplier Id and Name	Supplier Id
	Supplier Name
Supplier Key	Supplier Id
Supplier Name Amendments	Supplier Name

3.7   N0006E Browse Suppliers

3.7.1   Function Type

On-line   Enquiry   User initiated

3.7.2   Function Description

This function is invoked by the NHHDA user to allow browsing of the set of valid Suppliers.

A list of existing Supplier Ids is displayed. The user selects one of them to browse.

The Supplier Id and Supplier Name are displayed.

3.7.3   Processing Description

This function is invoked by the NHHDA user to allow browsing of the set of valid Suppliers.

The user enters a supplier id from a list of suppliers and the corresponding supplier Name is displayed.

3.7.4   Error Handling

None

3.7.5   Common Processing

NC006 Restrict On-line Access

3.7.6   Volumes

An indeterminate number of Suppliers will be browsed on an ad hoc basis.

3.7.7   Events

None

3.7.8   Event Frequency

N/A

3.7.9   Enquiries

Browse Suppliers

3.7.10   Enquiry Frequency

1

3.7.11   Requirements Catalogue Ref.

N17

3.7.12   User Roles

Exception Administrator

Auditor

3.7.13   I/O Structures

See "Supplier Browsed" branch of N0006

3.8   N0008 Aggregate EACs and AAs

3.8.1   Function Type

Batch   Update   System initiated

3.8.2   Function Description

This function is triggered by the system, at a time previously specified by the Data Aggregation Administrator using function N0022.

The function aggregates EACs and AAs to the level of Supplier, GSP Group, Line Loss Factor Class, and Valid Measurement Requirement Profile Class.

3.8.3   Processing Description

(incorporating EPD Process 3.2 - Perform Aggregation Run)

This process performs a previously requested Aggregation Run at the scheduled time. The Metering Systems included are those for which, the PRS Agent has notified a Data Aggregation Appointment for the Settlement Date of the Aggregation Run.

In the event that PRS and the Data Collector disagree over the GSP Group, Supplier, Energisation Status, Measurement Class, Profile Class, or Standard Settlement Configuration of a Metering System, the PRS data will be treated as definitive.

The process is initiated at (or as soon as possible after) the time at which the Aggregation Run was scheduled to run.   If the System Parameter "Aggregate All Valid GSP Groups" is set to TRUE and the run is not for a dispute (or it is for a dispute but no GSP Groups have been assigned to the run), then all Valid GSP Groups will be included in the run. At the end of Aggregation, those GSP Groups scheduled and containing no valid Metering Systems for that Settlement Date will be removed from the schedule, and those GSP Groups containing valid Metering Systems for that Settlement Date but not scheduled will be added, and in both cases, the action performed will be reported to the Operator Log, as will the total Metering Systems for each GSP Group. If the System Parameter is FALSE or if the run is for a dispute (irrespective of the value of the System Parameter), then the system determines the set of GSP Groups included in the Aggregation Run (event: Scheduled Aggregation Run Initiated), and aggregates each of the GSP Groups as follows:

For each combination of GSP Group, Supplier, Line Loss Factor Class[3] and Valid Measurement Requirement Profile Class, the system maintains totals across all Metering Systems for:

- Annualised Advances (MAA);

- the number of Metering Systems (NMA) contributing to Annualised Advances;

---

[3] Line Loss Factor Classes are unique for each Distributor. This means that when there are multiple Distributors in a GSP Group with the same LLFC value, multiple totals will be maintained.   This change was introduced as modification P62.

- Estimated Annual Consumptions (ME) for non half hourly metered Metering Systems;

- the number of non half hourly metered Metering Systems (NMME) contributing to Estimated Annual Consumptions;

- the number of energised non half hourly metered Metering Systems (NMMDE) without either an Estimated Annual Consumption or Annualised Advance (and which therefore require a default EAC to be used);

- Estimated Annual Consumptions (UE) for non half hourly unmetered Metering Systems;

- the number of non half hourly unmetered Metering Systems (NMUE) contributing to Estimated Annual Consumptions;

- the number of energised non half hourly unmetered Metering Systems (NMUDE) without an Estimated Annual Consumption (and which therefore require a default EAC to be used).

In order to do this, for each GSP Group included in the Aggregation run, identify all Metering Systems for which the Data Aggregator is appointed on the Settlement Date, and which the PRS Agent says were in the current GSP group on the Settlement Date. Process is as follows:-

- lookup the PRS viewand the set of Measurement Requirements relating to that Metering System on the Settlement Date, and lookup the set of Data Collector Appointments relating to that Metering System which begin on or before the current Calendar Date (enquiry Lookup PRS View, DC Appts and Measurement Reqts);

- for each Data Collector appointment, lookup the Annualised Advance or Estimated Annual Consumption provided by the Data Collector for one Measurement Requirement of the Metering System which applies to the Settlement Date (enquiry Lookup AA and EAC);

- if more than one of the appointed Data Collectors has provided data, determine which of those consumptions to use (and whether Estimated or not):

  - if any AAs have been retrieved, use the one from the Data Collector with the latest appointment start date;if more than one of the appointed Data Collectors provided AA data, report exception for those Data Collectors whose data is <u>not</u> used;

  - if no AAs have been retrieved, use the EAC with the latest Effective From Settlement Date; if this identifies more than one EAC, use the one from the Data Collector with the latest appointment start date;

- if the above logic has identified an AA or EAC from a Data Collector:

- lookup that Data Collector's consumption data for all other Measurement Requirements (if any) (enquiry Lookup AA and EAC);

- lookup that Data Collector's view of the Metering System for the Settlement Date (enquiry Lookup Data Collector View);

- compare the PRS and DC views reporting exceptions as specified in Error Handling;

- for each Measurement Requirement, update the supplier purchase matrix according to the data read (event Supplier Purchase Matrix Updated):

Data found	Metered		Unmetered	
	Energised	De-energised	Energised	De-energised
AA	Add AA to MAA Add 1 to NMA	Add AA to MAA if AA non-zero for one or more Measurement Requirements, add 1 to NMA and log exception: de-energised Metering System with non-zero AA, otherwise do not count this meter in the aggregation.	Add 1 to NMUDE log exception: unmetered Metering System with an AA	
EAC	Add EAC to ME Add 1 to NMME	Do not count this meter in the aggregation	Add EAC to UE add 1 to NMUE	Do not count this meter in the aggregation
no data	Add 1 to NMMDE log exception: no data for meter, default used	Do not count this meter in the aggregation	Add 1 to NMUDE log exception: no data for meter, default used	Do not count this meter in the aggregation

Table 1 : Where to include a Metering System's data

Once all Metering Systems have been processed, the system calculates default usage for all SPM cells where either NMMDE or NMUDE is non-zero:

- lookup the Threshold Parameter

- lookup all SPM cells where defaults occur (enquiry Lookup SPM Cells with Defaults)

- if NMMDE is non-zero, calculate the default metered consumption DEM:

- if NMA + NMME > Threshold Parameter

  DEM = (MAA + ME) / (NMA + NMME)

- otherwise lookup the GSP Group Profile Class Researched Default EAC (GGPCDEAC) and the Average Fraction of Yearly Consumption (AFYC) (enquiry: Lookup PC Researched Default EAC and AFYC)

  DEM = GGPCDEAC * AFYC

- Update the SPM cell:

  add NMMDE to NMME

  add NMMDE * DEM to ME

- if NMUDE is non-zero, calculate the default unmetered consumption DEU:

  - if NMUE > Threshold Parameter

    DEU = UE / NMUE

  - otherwise lookup the GSP Group Profile Class Researched Default EAC (GGPCDEAC) and the Average Fraction of Yearly Consumption (AFYC) (enquiry: Lookup PC Researched Default EAC and AFYC)

    DEU = GGPCDEAC * AFYC

  - Update the SPM cell:

    add NMUDE to NMUE

    add NMUDE * DEU to UE

- Update the SPM Cell (Event: Update Supplier Purchase Matrix)

All data used in generating the SPM will be recorded in the audit log. Generation of the NHHDC Performance Report is initiated (see section 3.79).

The Run Status is set to success (Event: Data Aggregation Run Amended)

3.8.4   Error Handling

The Run Status is set to fail if the System Parameter "Aggregate All Valid GSP Groups" is set to FALSE and no GSP Groups have been assigned to this run.

An audit log will be optionally generated, showing which Estimated Annual Consumption or Annualised Advance value was used for each Metering System.

An exception log is always produced identifying the following Exception Conditions encountered during calculation of the Supplier Purchase Matrix:

- exceptions due to the absence of Metering System details from the PRS Agent or Data Collector which are required for aggregation (the associated Metering System will not be included in the SPM calculations);

- exceptions resulting from comparison of PRS view with the view of the Data Collector whose data is used in the aggregation:

  - mismatch of the Metering System's Profile Class as advised by the PRS Agent and that advised by the Data Collector;

  - mismatch of the Metering System's GSP Group as advised by the PRS Agent and that advised by the Data Collector;

  - mismatch of the Metering System's Standard Settlement Configuration as advised by the PRS Agent and that advised by the Data Collector (Note that as consumption data is selected using the Standard Settlement Configuration as part of the criteria, this exception can never occur);

  - mismatch of the Metering System's Supplier Registration as advised by the PRS Agent and that advised by the Data Collector;

  - mismatch of the Metering System's Measurement Class as advised by the PRS Agent and that advised by the Data Collector;

  - mismatch of the Metering System's Energisation Status as advised by the PRS Agent and that advised by the Data Collector;

- exceptions resulting from received data which is inconsistent with the Metering System's Energisation Status or Measurement Class (as established in Table 1 : Where to include a Metering System's data):

  - missing EAC/AA for the Metering System resulting in a default EAC being used;

  - unmetered Metering Systems with an AA which is ignored, resulting in a default EAC being used;

  - de-energised Metering Systems with non-zero AA which is used;

- exception due to AA from more than one Data Collector;

- exception due to missing Average Fractions of Year Consumption data,

- exceptions resulting from missing Researched Default EAC data.

3.8.5   Common Processing

NC003 Update Batch Audit Log

3.8.6   Volumes

Once per Data Aggregation Run (i.e. normally 5 per Settlement Day, up to 30 runs per day)

3.8.7   Events

Scheduled Data Aggregation Run Initiated

Supplier Purchase Matrix Updated

Data Aggregation Run Amended

3.8.8 Event Frequency

Scheduled Data Aggregation Run Initiated and Data Aggregation Run Complete are invoked once per aggregation run.

SPM Updated is invoked once pre Settlement Register processed and once per SPM cell with default usage.

3.8.9 Enquiries

Lookup AA and EAC

Lookup Data Collector View

Lookup PC Researched Default EAC and AFYC

Lookup PRS View, DC Appts and Measurement Reqts

Lookup SPM Cells with Defaults

3.8.10 Enquiry Frequency

Lookup PRS View, DC Appts and Measurement Reqts and Lookup SPM Cells with Defaults are invoked once per GSP Group per Data Aggregation Run.

Lookup AA and EAC is invoked at least once per Settlement Register in a Data Aggregation Run.

Lookup Data Collector View is invoked once per Metering System for which Data Collector Data is found.

Lookup PC Researched Default EAC and AFYC is invoked once per SPM Cell with Defaults for which the number of actual EAC values is less than the threshold parameter.

3.8.11 Requirements Catalogue Ref.

F29, F34, F35, N11, N12, N26, N27, O16

3.8.12 User Roles

None

3.8.13 I/O Structures

None

3.9   N0009 Archive Settlement Data

3.9.1   Function Type

On-line   Update   User initiated

3.9.2   Function Description

This function is invoked by the NHHDA user to allow removal to a secure storage medium and deletion from the system of all data and files meeting certain criteria. This function is a two stage process. First data is copied to a secure medium and then obsolete/old data is deleted. Whilst the copy process may be automatic the deletion of data process remains under user control.

The function is On-line because user interaction is required to allow the deletion by confirming the secure copy is useable.

3.9.3   Processing Description

The data is selected by type and date. All data will be copied to a secure storage medium and then time based data is deleted from on-line storage, based on the Settlement Days for which it is required for settlement or problem resolution. The specified data is deleted when it refers solely to Settlement Days which are more than a qualifying time ago. Input and output files are copied to a secure medium and deleted from on-line storage a qualifying number of days after their receipt/transmission, depending on the particular file. Supplier Purchase Matrices are copied to a secure medium and deleted from on-line storage a qualifying number of days after the data aggregation run which produced them. Similarly, audit logs will copied to a secure storage medium and then deleted from on-line storage after a qualifying period of time.

All qualifying dates and time periods are user configurable on an individual basis. i.e. Different data/files/logs may have different qualifying dates and times. Some data/files/logs may be grouped together for this purpose.

The basic archiving rules are:

- Appointments with 'To' dates are deleted when 'To' date is more than the configurable period ago.

- When a Data Aggregator Appointment is deleted, PRS data which is no longer relevant to any Data Aggregator Appointment is deleted (including the Registration if no other Data Aggregator Appointments exist for it)

- Data Collector Appointments are deleted when their master Registration is deleted.

- Settlement Date based data (from PRS or Data Collector) is deleted if the 'From' date is more than the configurable period ago and if there is a subsequent change in the same association which is also more than this configurable period ago.

- Physical files - each type of physical file will have its own parameter which will determine when the files can be deleted (note

the file entity remains for a period that is determined by a configurable parameter)

- Meter Advance Consumption are deleted when 'To' date more than the configurable period ago.

- EACs are deleted if either

  - an EAC for the same metering system settlement register with a later Effective From Settlement Date has been received from a Data Collector appointed to one of the metering system's registrations and this later EAC has an Effective From Settlement Date on or prior to the latest date that qualifies for archival;

  - or if the EAC has an Effective From Settlement Date prior to the latest date that qualifies for archival and there are no Data Aggregator Appointments for the metering system with an Effective To Settlement Date on or after the EAC Effective From Settlement Date.

- Other metering system time based relationships from a Data Collector may be archived if either

  - there is a relationship of the same type, for the same metering system and from the same Data Collector with a later Effective From Settlement Date that is on or prior to the latest date that qualifies for archival;

  - or there are no EACs or AAs for the same metering system from the same Data Collector on the system.

    It should be noted that the removal of Data Collector data based on deletion due to there being no corresponding PRS data may cause new Data Collector instructions relating to the same Metering System to fail, whereas the instructions would not have failed prior to archive.

- Settlement Register (DC) is deleted if a deletion leaves it with no details.

- Data Aggregation Run, Settlement and GSP Groups in Aggregation Run are deleted when the Settlement Date is more than the configurable period ago.

Note that if a Data Collector appointed to one of the registrations for the Metering System's registrations removed the EAC which allowed the archive of an earlier EAC from another Data Collector, a default EAC would be used in subsequent aggregations for the affected settlement dates. This would be very rare and would be reported as an exception.

NB This function exists to document the requirement for archiving. It is not intended to be a detailed description of the archiving mechanism. Therefore, no I/O Structures have been created.

3.9.4   Error Handling

None

3.9.5   Common Processing

NC006 Restrict On-Line Access

3.9.6   Volumes

Data will be archived on a regular basis which could be as often a daily.

3.9.7   Events

Archive Settlement Data.

3.9.8   Event Frequency

1

3.9.9   Enquiries

None

3.9.10   Enquiry Frequency

N/A

3.9.11   Requirements Catalogue Ref.

N08, N26, N27, N28, N30

3.9.12   User Roles

System Manager

3.9.13   I/O Structures

None

3.10   N0010 Check data collector data

3.10.1   Function Type

Batch   Enquiry   User initiated

3.10.2   Function Description

This function is invoked by the Exception Administrator to request a report identifying any inconsistencies between data received from a Data Collector and Metering System data received from PRS, or to amend or delete previously submitted report requests.

A list of Suppliers is displayed (this list is not shown on the I/O structure). The user may select a Supplier (otherwise all Suppliers will be used).

A list of Data Collectors is displayed (this list is not shown on the I/O structure). The user may select a Data Collector (otherwise all Data Collectors will be used).

The user will also have the option of selecting a PRS Agent (chosen from a list, which is not shown on the I/O structure).

The user must enter a range of dates.

The user may then request the generation of the report(s) meeting the specified criteria.

Alternatively, the user may display a list of the report requests currently awaiting processing that match the specified criteria. The user may then

modify details of these requests, or delete them, provided the NCD Check DC Data process is not currently running.

Generation of the reports is carried out in batch mode; the output of this process is a set of Exception Logs which may be examined using N0027 Browse Exception Data and N0028 Report Exception Data.

These logs are automatically sent to the relevant Suppliers when the process completes.

The header details of D0095 exception files generated may be reported using the Request Monthly D0095 Report option under the Reports menu.

3.10.3 Processing Description

(includes EPD process: 'Report on Exception in DC Data')

In the following checks,

- if a PRS Agent is specified, only Metering Systems for the Distribution Business(es) for which the PRS Agent has appointments at the time of processing will be included (subject to the specified Supplier and Data Collector), otherwise all Metering Systems will be included (subject to the specified Supplier and Data Collector);

- Data Aggregator Appointments refer to appointments which are for Registrations to the specified Supplier for which the specified Data Collector has a Data Collector Appointment and which overlap the specified date range;

- if a specific Supplier/Data Collector combination is specified, a report will be generated for that combination;

- if the Supplier/Data Collector combination is not specified, a report will be produced for each active Supplier/Data Collector combination. A report will not be produced for inactive combinations;

- if the Data Collector is specified but the Supplier is not specified a report will be produced for each possible combination (both active and inactive) of Supplier with the specified Data Collector;

- if the Supplier is specified but the Data Collector is not specified a report will be produced for each active combination of Data Collector with the specified Supplier. A report will not be produced for inactive combinations.

An active Supplier/Data Collector combination is one where the Supplier has appointed the Data Collector according to PRS, or where the Data Collector has sent consumption data for the Supplier.

The system reports on the following discrepancies for each Supplier, Data Collector and PRS Agent as specified in the selection criteria.

The system will also report the total number of Metering Systems against which one or more exceptions are recorded and the total number of Metering Systems failing each check.

On completion of all checks, send the reports to the relevant Suppliers.

Note: The codes indicated within square brackets in the following section are used to record exception reasons. They do not form part of logical design but are included as an aid to users.

For each Data Collector Data exception report (D0095) requested the header details are stored in the ndb_exception_data table. These details are reported on using the Request Monthly D0095 Report option specifying an exception file creation start and end date range.

3.10.3.1   Check for missing consumption data

For each Data Aggregator Appointment (in the following AAs and EACs refer to data from any Data Collector with a Data Collector Appointment to the Registration which the Data Aggregator appointment is for):

- if

    - there are no sets of AAs which overlap the Data Aggregator Appointment, and

    - the metering system is energised (according to PRS) at some point during the overlap between the Data Aggregator Appointment and the specified date range and

    - there is no set of EACs with an Effective From Settlement Date on or before the first such point

  then [E01]

- if

    - there is at least one set of AAs which overlaps the Data Aggregator Appointment and

    - no set of AAs overlaps the Data Aggregator Appointment end date and

    - the metering system is energised (according to PRS) at some point after the latest end date of all sets of AAs and within the overlap between the Data Aggregator Appointment and the specified date range and

    - there is no set of EACs with an Effective From Settlement Date on or before the first such point

  then [E02]

  E01 and E02 exceptions are only reported for the currently appointed Data Collector [DC] i.e. the most recent DC appointment to the Supplier Registration on the date when the NCD Check DC Data process was run.

3.10.3.2   Check for extraneous consumption data

The following checks apply where there is a Registration to the specified Supplier according to either or both the specified Data Collector and the PRS Agent.

If there are any sets of AAs from the specified Data Collector which overlap the specified date range but do not overlap any Data Aggregator Appointment nor the day before the start of the appointment[E03]

If there are any sets of EACs from the specified Data Collector where the period from the Effective From Settlement Date of one set to the Effective From Settlement Date - 1 of a subsequent set (also from the specified Data Collector), or to the end of time if there is no subsequent set, overlap the specified date range but do not overlap any Data Aggregator Appointment nor the day after the end of the appointment [E04]

Exceptions [E03] and [E04] are only reported to the Supplier according to the Data Collector, and not to the Supplier according to the PRS Agent.

3.10.3.3   Check for consumption while de-energised

If there are any non-zero AAs from the specified Data Collector (which overlap any Data Aggregator Appointment and which overlap the specified date range) whilst the metering system is de-energised (according to Data Collector) [E05]

3.10.3.4   Check for inconsistent consumption

For each Data Aggregator Appointment (in the following AAs and EACs refer to data from any Data Collector with a Data Collector Appointment to the Registration which the Data Aggregator Appointment is for):

- if

  - there is any date range within the Data Aggregator Appointment which overlaps the specified date range but does not overlap a set of AAs and for which the metering system is energised (according to the PRS) and

  - there are later dates (within the Data Aggregator Appointment) which are covered by at least one set of AAs

  then [E06]

  E06 exceptions are only reported for the currently appointed Data Collector [DC] i.e. the most recent DC appointment to the Supplier Registration on the date when the NCD Check DC Data process was run.

- if

  - there are any sets of AAs from Data Collectors appointed to the same Supplier registration as the Data Aggregator Appointment which overlap each other during the specified date range and during the Data Aggregator Appointment (apart from where the overlapping sets of AAs have the same start dates, end dates, are

for the same set of Settlement Registers and the corresponding Settlement Registers have the same AA) and

- where one of the sets of AAs is from the specified Data Collector

then [E07]

3.10.3.5 Check for inconsistent views from PRS Agent and Data Collector

The checks in this section only apply where there is data from both the specified Data Collector and from the PRS Agent which differ as described, and where AAs or EACs have been received from the Data Collector within the specified date range.

If the values of corresponding relationships of any of the following types differ on any date during any Data Aggregator Appointments within the specified date range:

- Supplier [E08]

- Measurement Class [E09]

- GSP Group [E10]

- Profile Class [E11]

- Energisation Status [E12]

- Standard Settlement Configuration [E13]

For each Registration to the specified Supplier (according to the specified Data Collector) during the specified date range:

- if there is no corresponding Registration to the specified Supplier according to PRS * [E14]

* When this occurs then an exception [E14] is only reported where it overlaps a Supplier Registration (according to the PRS Agent) within which the specified Data Collector has supplied an AA or has supplied an EAC with an effective from date after the registration start date.

3.10.4 Error Handling

End date specified must not be earlier than the start date.

It is not possible to modify details of report requests, or delete them, if the NCD Check DC Data process is running.

3.10.5 Common Processing

NC005 Create File Header

NC006 Restrict On-line Access

NC007 Update File Log

3.10.6 Volumes

Ad hoc, up to 1/day for each Data Collector and Supplier combination.

Typically 3000 such combinations per fortnight (based on 50 Suppliers, 60 Data Collectors).

3.10.7   Events

None

3.10.8   Event Frequency

N/A

3.10.9   Enquiries

Browse Check Data Collector Data report requests

Check Data Collector Data

3.10.10   Enquiry Frequency

1 (per PRS Agent, Data Collector and Supplier combination)

3.10.11   Requirements Catalogue Ref.

F28, O16

3.10.12   User Roles

Auditor

Exception Administrator

3.10.13   I/O Structures
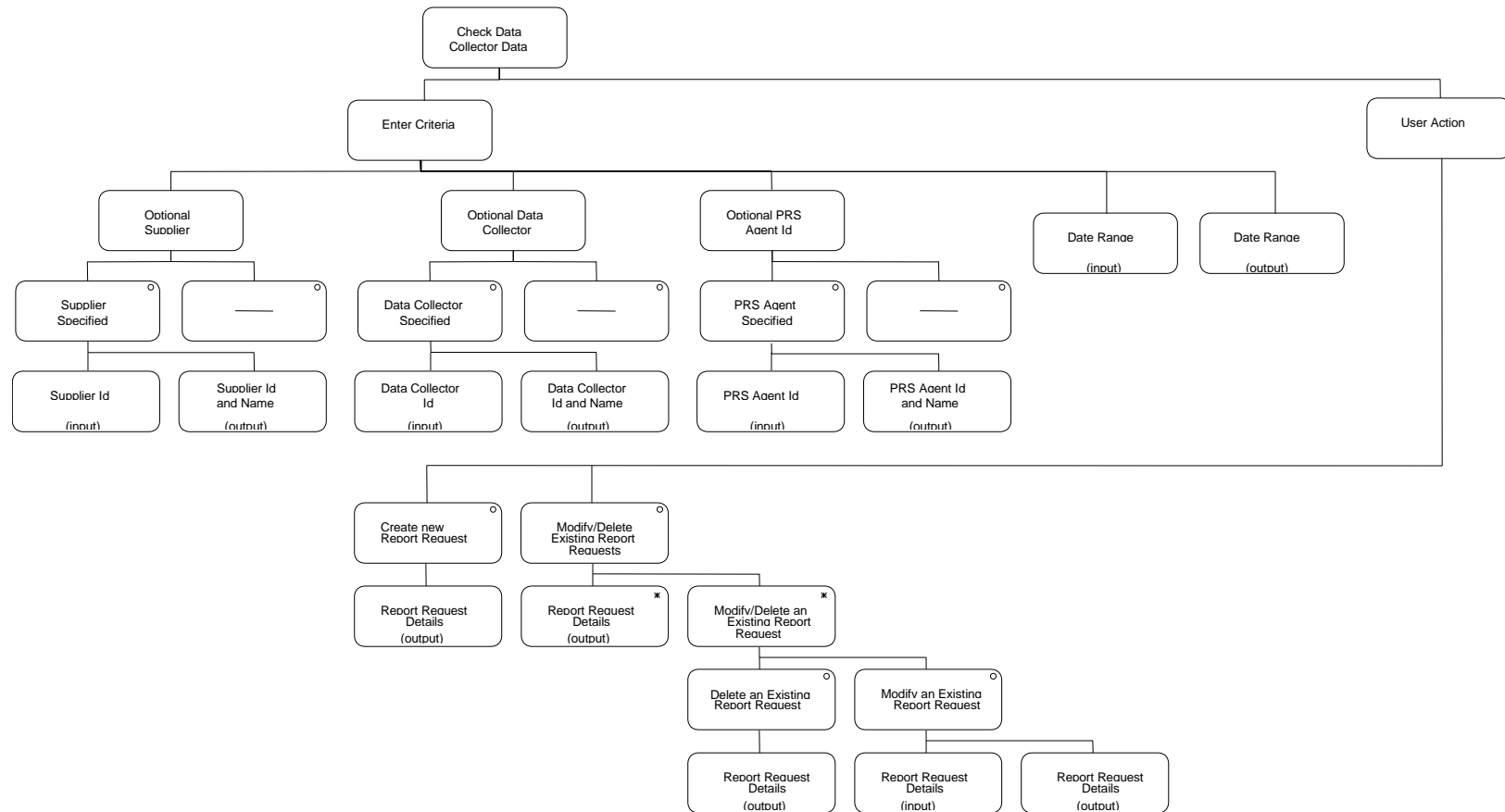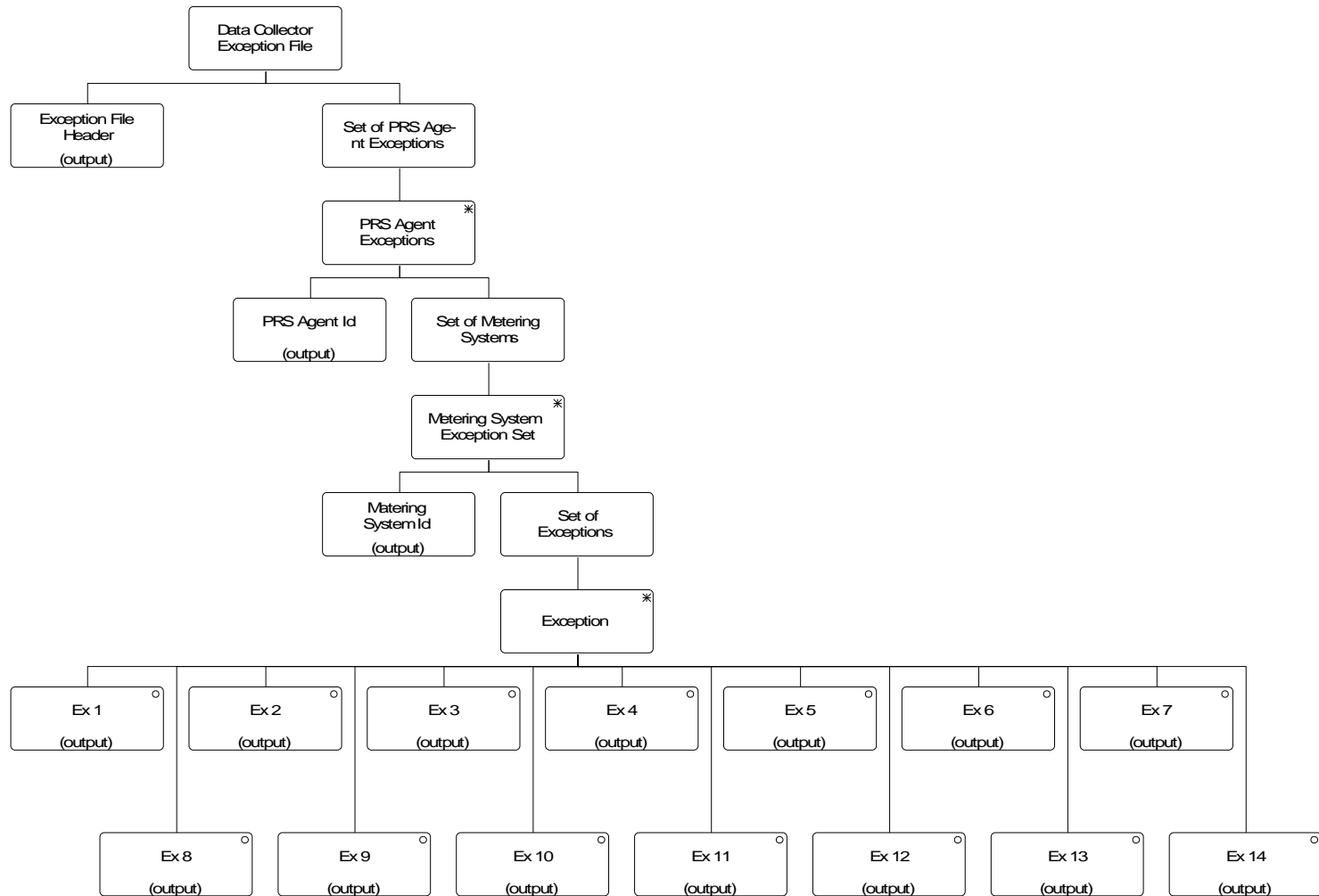
```
                      ┌─────────────────┐
                      │  Data Collector │
                      │ Exception File  │
                      └─────────────────┘
                    ┌───────────┴───────────┐
         ┌─────────────────┐        ┌─────────────────┐
         │ Exception File  │        │ Set of PRS Age- │
         │     Header      │        │  nt Exceptions  │
         │    (output)     │        └─────────────────┘
         └─────────────────┘                 │
                                   ┌─────────────────┐ *
                                   │   PRS Agent     │
                                   │   Exceptions    │
                                   └─────────────────┘
                               ┌───────────┴───────────┐
                      ┌─────────────────┐    ┌─────────────────┐
                      │  PRS Agent Id   │    │ Set of Metering │
                      │                 │    │    Systems      │
                      │    (output)     │    └─────────────────┘
                      └─────────────────┘             │
                                        ┌─────────────────┐ *
                                        │ Metering System │
                                        │  Exception Set  │
                                        └─────────────────┘
                                    ┌───────────┴───────────┐
                           ┌─────────────────┐    ┌─────────────────┐
                           │    Metering     │    │     Set of      │
                           │   System Id     │    │   Exceptions    │
                           │    (output)     │    └─────────────────┘
                           └─────────────────┘             │
                                             ┌─────────────────┐ *
                                             │    Exception    │
                                             └─────────────────┘
```

I/O Structure Element	Data Items
DateRange	Start Date for Selection
	End Date for Selection
Data Collector Id	Data Collector Id
Data Collector Id and Name	Data Collector Id
	Date Collector Name
Ex 1	Effective From Settlement Date {REGI}
	Effective From Settlement Date {DAA}
Ex 2	Effective From Settlement Date {REGI}
	Effective From Settlement Date {DAA}
	Settlement Date[4]
Ex 3	Effective From Settlement Date {MACDC}
Ex 4	Effective From Settlement Date {EACDC}
Ex 5	Effective From Settlement Date {MACDC}
Ex 6	Settlement Date[5]
Ex 7	Effective From Settlement Date {MACDC}
	Data Collector Id[6]
	Effective From Settlement Date {MACDC}[7]
Ex 8	Effective From Settlement Date {REGI}
	Supplier Id[8]
	Effective From Settlement Date {RDC}
Ex 9	Measurement Class Id[9]
	Effective From Settlement Date {MSMC}
	Measurement Class Id[10]
	Effective From Settlement Date {MSMCDC}
Ex 10	GSP Group Id[11]

---

[4] First date where data is missing

[5] First date when data is missing

[6] of Data Collector supplying overlapping data

[7] of Data Collector supplying overlapping data

[8] according to Data Collector

[9] according to PRS Agent

[10] according to Data Collector

[11] according to PRS Agent

I/O Structure Element	Data Items
	Effective From Settlement Date {MSGG}
	GSP Group Id[12]
	Effective From Settlement Date {MSGGDC}
Ex 11	Profile Class Id[13]
	Effective From Settlement Date {MSPC}
	Profile Class Id[14]
	Effective From Settlement Date {MSPCDC}
Ex 12	Energisation Status Id[15]
	Effective From Settlement Date {MSES}
	Energisation Status Id[16]
	Effective From Settlement Date {MSESDC}
Ex 13	Standard Settlement Configuration Id[17]
	Effective From Settlement Date {SCON}
	Standard Settlement Configuration Id[18]
	Effective From Settlement Date {SCDC}
Ex 14	Effective From Settlement Date {REGI}
	Supplier Id[19]
	Effective From Settlement Date {RDC}
Exception File Header	Data Collector Id
	Supplier Id
	Start Date for Selection
	End Date for Selection
	Number of Metering Systems with at least 1 exception Ex 1
	Number of Metering Systems with at least 1 exception Ex 2

---

[12] according to Data Collector

[13] according to PRS Agent

[14] according to Data Collector

[15] according to PRS Agent

[16] according to Data Collector

[17] according to PRS Agent

[18] according to Data Collector

[19] according to PRS Agent

I/O Structure Element	Data Items
	Number of Metering Systems with at least 1 exception Ex 3
	Number of Metering Systems with at least 1 exception Ex 4
	Number of Metering Systems with at least 1 exception Ex 5
	Number of Metering Systems with at least 1 exception Ex 6
	Number of Metering Systems with at least 1 exception Ex 7
	Number of Metering Systems with at least 1 exception Ex 8
	Number of Metering Systems with at least 1 exception Ex 9
	Number of Metering Systems with at least 1 exception Ex 10
	Number of Metering Systems with at least 1 exception Ex 11
	Number of Metering Systems with at least 1 exception Ex 12
	Number of Metering Systems with at least 1 exception Ex 13
	Number of Metering Systems with at least 1 exception Ex 14
	Number of Metering Systems with at least one exception
Metering System Id	Metering System Id
PRS Agent Id	PRS Agent Id
PRS Agent Id and Name	PRS Agent Id
	PRS Agent Name
Report Request Details	Supplier Id
	Supplier Name
	Data Collector Id
	Data Collector Name
	PRS Agent Id
	PRS Agent Name
	Start Date for Selection
	End Date for Selection

I/O Structure Element	Data Items
Supplier Id	Supplier Id
Supplier Id and Name	Supplier Id
	Supplier Name

3.11   N0011 Define Average Fractions of Yearly Consumption

3.11.1   Function Type

On-line   Update   User initiated

3.11.2   Function Description

This function is invoked by the NHHDA user to allow browsing and maintenance of the Average Fractions Of Yearly Consumption assigned to each Measurement Requirement for a particular Standard Settlement Configuration, Profile Class and GSP Group.

A list of existing GSP Group Ids and Names is displayed and the user selects one. A list of existing Profile Class Ids and Descriptions is displayed and the user selects one. A list of Standard Settlement Configuration Ids and Descriptions is displayed for the selected Profile Class (as recorded by Valid Settlement Configuration Profile Class) and the user selects one. (These three lists are not shown on the I/O Structure and should not be confused with the "Average Fraction of Yearly Consumption Browsed" branch of the I/O structure.)

A list of all the Time Pattern Regime Ids is displayed for the selected Profile Class and Standard Settlement Configuration (as recorded by Valid Measurement Requirement Profile Class) together with their Average Fractions of Yearly Consumption, Effective From Settlement Date {AFYC}s and Effective To Settlement Date {AFYC}s for the selected GSP Group, if any (from entity Average Fraction of Yearly Consumption).

The user enters new Average Fractions of Yearly Consumption, or amends the Average Fraction of Yearly Consumption values and/or dates of existing ones, or deletes existing sets.

The user may select a new GSP Group without having to repeat all the other selections.

3.11.3   Processing Description

This process allows suitably authorised NHH Data Aggregator users to specify the Average Fraction of Yearly Consumption for each Valid Measurement Requirement Profile Class for a given combination of Valid Settlement Configuration Profile Class and GSP Group.

An Effective From Settlement Date will be specified for each set of data. The Effective To Settlement Date must also be specified unless the Effective From Settlement Date is the latest for the Standard Settlement Configuration/Profile Class/GSP Group combination (in which case, the Effective To Settlement Date will default to open-ended).

Note that Standard Settlement Configuration data will normally be inserted or updated by loading a file prepared by the Pool (see process 3.42 - Load

Pool Market Domain Data). This manual process is required as a backup, and possibly for minor amendments (such as deletions).

3.11.4   Error Handling

Reference: EPD 4.5.4 - Specify Average Fraction of Yearly Consumption

Before accepting the changes to the AFYC data, the system will validate that, if all changes are accepted, the following conditions will be met.

- The fractions specified sum to one for each set of data (i.e. for a given GSP Group, Effective From Settlement Date, Standard Settlement Configuration and Profile Class).

- The Effective From Settlement Date {AFYC} is later than the latest Settlement Date for which a Final Initial Settlement run has been performed and earlier than or equal to the Effective To Settlement Date {AFYC}.

- Insertion and modification will not result in overlapping AFYC data for any Profile Class/SSC/GSP Group/TPR combination.

- Modification or deletion will not leave any Metering System without AFYC data for the Settlement Dates within any Data Aggregator Appointment.

Average Fractions of Yearly Consumption data for dates which have already been used in a "Final Initial Settlement" may only be entered, deleted or updated by the Superior Market Domain Data Administrator. Any such change is reported to the Data Aggregator.

3.11.5   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

3.11.6   Volumes

At market inception, about 28000 Average Fractions of Yearly Consumption will be created (2142 Valid Measurement Requirement Profile Classes * 13 GSP Groups), but this will probably be done automatically.

Thereafter, they will be occasionally created, amended and deleted as authorised by the Pool; but this cannot be quantified.

An indeterminate number of Average Fractions of Yearly Consumption will be browsed on an ad hoc basis.

3.11.7   Events

Average Fractions of Yearly Consumption entered

Average Fractions of Yearly Consumption updated

Average Fractions of Yearly Consumption deleted

3.11.8   Event Frequency

The exact frequency cannot be determined, but the sum of the frequencies of the three events (entered, amended, deleted) and the browse enquiry is one;

Lookup Latest Final Initial Settlement Run Date is invoked once when the function is invoked.

3.11.9 Enquiries

Browse Average Fractions of Yearly Consumption

Lookup Latest Final Initial Settlement Run Date

3.11.10 Enquiry Frequency

See event frequency.

3.11.11 Requirements Catalogue Ref.

F01, N15, N16

3.11.12 User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.11.13   I/O Structures

```
                                              Define Average
                                              Fractions of
                                                 Yearly
                                              Consumption
    ┌───────────────────────────┬──────────────────────────────┬──────────────────────────────┐
 Average                      Average                        Average                        Average
 Fraction of                 Fraction of                    Fraction of                    Fraction of
 Yearly Consump-             Yearly Consump-                Yearly Consump-                Yearly Consump-
 tion Created                tion Updated                   tion Deleted                   tion Browsed
 ┌────┬────┬────┐          ┌────┬────┬────┐                ┌────┬────┐                     ┌────┬────┐
```

Id of a set of AFYCs for a GSPG. SSC & Prfl Class (input)	Set of AFYCs	Id of a set of AFYCs for a GS-PG. SSC & Prfl Class (output)	Set of AFYCs

AFYC Value for a Measurement Requirement (input) ✳

AFYC Value for a Measurement Requirement (output) ✳

Id of a set of AFYCs for a GSPG. SSC & Prfl Class (input)	Set of AFYCs	Set of AFYCs	Set of AFYCs

AFYC Value for a Measurement Requirement (output) ✳

Average Fraction of Yearly Consumption Amendments (input) ✳

AFYC Value for a Measurement Requirement (output) ✳

Id of a set of AFYCs for a GSPG. SSC & Prfl Class (input)	Set of AFYCs

AFYC Value for a Measurement Requirement (output) ✳

Id of a set of AFYCs for a GSPG. SSC & Prfl Class (input)	Set of AFYCs

AFYC Value for a Measurement Requirement (output) ✳

I/O Structure Elements	Data Items
AFYC Value for a Measurement Requirement	Average Fraction of Yearly Consumption
	Time Pattern Regime Id
Average Fraction of Yearly Consumption Amendments	Average Fraction of Yearly Consumption
Id of a set of AFYCs for a GSPG, SSC & Prfl Class	GSP Group Id
	Profile Class Id
	Standard Settlement Configuration Id
	X AFYC Effective From Settlement Date {AFYC}
	Y AFYC Effective To Settlement Date {AFYC}

3.12   N0011E Browse Average Fractions of Yearly Consumption

3.12.1   Function Type

On-line   Enquiry   User initiated

3.12.2   Function Description

This function is invoked by the NHHDA user to allow browsing of the Average Fractions Of Yearly Consumption assigned to each Measurement Requirement for a particular Standard Settlement Configuration, Profile Class and GSP Group.

3.12.3   Processing Description

A list of existing GSP Group Ids and Names is displayed and the user selects one.

A list of existing Profile Class Ids and Descriptions is displayed and the user selects one.

A list of Standard Settlement Configuration Ids and Descriptions is displayed for the selected Profile Class (as recorded by Valid Settlement Configuration Profile Class) and the user selects one.

A list of all the Time Pattern Regime Ids is displayed for the selected Profile Class and Standard settlement Configuration (as recorded by Valid Measurement Requirement Profile Class) together with their Average Fractions of Yearly Consumption, Effective From Settlement Date {AFYC}s and Effective To Settlement Date {AFYC}s for the selected GSP Group, if any (from entity Average Fraction of Yearly Consumption).

The user may select a new GSP Group without having to repeat all the other selections.

3.12.4   Error Handling

None

3.12.5   Common Processing

NC006 Restrict On-line Access

3.12.6   Volumes

An indeterminate number of Average Fractions of Yearly Consumption will be browsed on an ad hoc basis.

3.12.7   Events

None

3.12.8   Event Frequency

N/A

3.12.9   Enquiries

Browse Average Fractions of Yearly Consumption

3.12.10   Enquiry Frequency

1

3.12.11   Requirements Catalogue Ref.

N17

3.12.12   User Roles

Exception Administrator

Auditor

3.12.13   I/O Structures

See "Average Fraction of Yearly Consumption Browsed" branch of N0011

3.13   N0012 Define Data Collectors

3.13.1   Function Type

On-line   Update   User initiated

3.13.2   Function Description

This function is invoked by the NHHDA user to allow browsing and maintenance of the set of valid Data Collectors.

A list of existing Data Collector Ids is displayed (this list is not shown on the I/O Structure and should not be confused with the "Data Collector Browsed" branch of the I/ O Structure).

The user either selects one of them to amend, delete or browse, or enters a new one.

For creation, the Data Collector Id is input and the user enters the Data Collector Name.

For amendment, deletion and browsing, the Data Collector Id and Data Collector Name are displayed.

The user may either amend the Data Collector Name or delete the Data Collector.

3.13.3   Processing Description

This process allows suitably authorised NHH Data Aggregator users to maintain details of Data Collectors.

The system will allow Data Collectors to be created, and their names updated.

Users will also be allowed to delete Data Collectors.

3.13.4   Error Handling

Reference: EPD 4.3 - Maintain Data Collector

Data Collectors may not be deleted if they have any associated Data Collector Appointments, Metering System Measurement Class (DC)'s, Registration (DC)'s, Metering System GSP Group (DC)'s, Metering System Energisation Status (DC)'s, Metering System Profile Class (DC)'s, Settlement Configuration (DC)'s or Settlement Register (DC)'s.

New Data Collector Ids must be different from all existing ones.

A Data Collector Id and Data Collector Name must be specified.

3.13.5   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

3.13.6   Volumes

At market inception, 12 Data Collectors will be created.

After 1st April, 2000 (01/04/2000), the number may rise to about 50 in the first year.

Thereafter, about five Data Collectors created, five Data Collectors amended and five Data Collectors deleted per year.

An indeterminate number of Data Collectors will be browsed on an ad hoc basis.

3.13.7   Events

Data Collector details entered

Data Collector details updated

Data Collector details deleted

3.13.8   Event Frequency

The exact frequency cannot be determined, but the sum of the frequencies of the three events (entered, amended, deleted) and the browse enquiry is one;

3.13.9   Enquiries

Browse Data Collectors

3.13.10   Enquiry Frequency

See event frequency.

3.13.11   Requirements Catalogue Ref.

F01

3.13.12   User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.13.13   I/O Structures
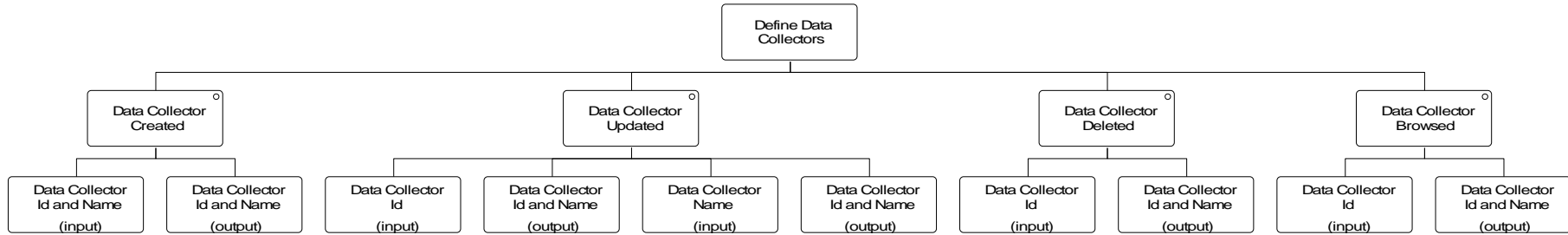
```
                                    ┌─────────────────┐
                                    │  Define Data    │
                                    │  Collectors     │
                                    └─────────────────┘
          ┌──────────────────┬──────────────────────┬──────────────────────┐
 ┌────────────────┐ ┌────────────────┐    ┌────────────────┐    ┌────────────────┐
 │ Data Collector │ │ Data Collector │    │ Data Collector │    │ Data Collector │
 │   Created    ° │ │   Updated    ° │    │   Deleted    ° │    │   Browsed    ° │
 └────────────────┘ └────────────────┘    └────────────────┘    └────────────────┘
```

| Data Collector Id and Name (input) | Data Collector Id and Name (output) | Data Collector Id (input) | Data Collector Id and Name (output) | Data Collector Name (input) | Data Collector Id and Name (output) | Data Collector Id (input) | Data Collector Id and Name (output) | Data Collector Id (input) | Data Collector Id and Name (output) |

I/O Structure Element	Data Items
Data Collector Id	Data Collector Id
Data Collector Id and Name	Data Collector Id
	Data Collector Name
Data Collector Name	Data Collector Name

3.14 N0012E Browse Data Collectors

3.14.1 Function Type

On-line Enquiry User initiated

3.14.2 Function Description

This function is invoked by the NHHDA user to allow browsing of the set of valid Data Collectors.

A list of existing Data Collector Ids is displayed.

The user selects one of them to browse. The Data Collector Id and Data Collector Name are displayed.

3.14.3 Processing Description

This function is invoked by the NHHDA user to allow browsing of the set of valid Data Collectors.

The user selects a Data Collector Id from a list of Data Collectors, upon which the Data Collector Id and Description is displayed.

3.14.4 Error Handling

None

3.14.5 Common Processing

NC006 Restrict On-line Access

3.14.6 Volumes

An indeterminate number of Data Collectors will be browsed on an ad hoc basis.

3.14.7 Events

None

3.14.8 Event Frequency

N/A

3.14.9 Enquiries

Browse Data Collectors

3.14.10 Enquiry Frequency

1

3.14.11 Requirements Catalogue Ref.

N17.

3.14.12 User Roles

Exception Administrator

Auditor

3.14.13 I/O Structures

See "Data Collector Browsed" branch of N0012.

3.15   N0013 Define Distributors and PRS Agents

3.15.1   Function Type

On-line   Update   User initiated

3.15.2   Function Description

This function is invoked by the NHHDA user to allow browsing and maintenance of the set of valid Distributors and PRS Agents.

A list of existing Distributor Ids is displayed (this list is not shown in the I/O Structure, and should not be confused with the "Distributor Browsed" branch of the I/O Structure). The user either selects one of them to amend, delete or browse, or creates a new one by entering a new Distributor Id.

For creation, the user enters the Distributor Id, Distributor Name and Distributor Short Code.

For amendment, deletion and browsing, the Distributor Id and Distributor Name are displayed. The user may either amend the Distributor Name or amend the Distributor Short Code or delete the Distributor.

The creation of a Distributor will also create a PRS Agent with the same Market Participant Id.

3.15.3   Processing Description

A Distributor Id, Distributor Name and Distributor Short Code must be specified.

The system will allow Distributors and PRS Agents to be created, updated and deleted. Distributors and PRS Agents will always be created, updated and deleted at the same time.

3.15.4   Error Handling

Reference: EPD 4.6 - Maintain Distributor, EPD 4.9 - Maintain PRS Agents

A Distributor may only be deleted if it has no associated Line Loss Factor Classes, GSP Group Distributors or Metering Systems.

New Distributor Ids must be different from all existing ones.

A Distributor Id and Distributor Name must be specified.

The Distributor Short Code may not be changed if there are any Metering Systems which are details of this Distributor.

The PRS Agent Id must match the Distributor Id (as the application will force their market participants Ids to match this error will never actually arise).

3.15.5   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

3.15.6   Volumes

At market inception, twelve Distributors/PRS Agents will be created.

Thereafter, less than five Distributor/PRS Agent per year created, deleted and amended. An indeterminate number of Distributors/PRS Agents will be browsed on an ad hoc basis.

3.15.7   Events

Distributor details entered

Distributor details updated

Distributor details deleted

3.15.8   Event Frequency

The exact frequency cannot be determined, but the sum of the frequencies of the six events and the enquiry (browsed) is one

3.15.9   Enquiries

Browse Distributors and PRS Agents

3.15.10   Enquiry Frequency

See event frequency.

3.15.11   Requirements Catalogue Ref.

F01.

Change Requests LCR207 and LCR207/2.

Modification Proposal P62

3.15.12   User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.15.13   I/O Structures

```
                                    ┌──────────────┐
                                    │   Define     │
                                    │ Distributors │
                                    └──────┬───────┘
          ┌────────────────────────────────┼───────────────────────────────────────┐
   ┌──────┴───────┐°                ┌───────┴──────┐°                                │
   │ Distributor  │                 │ Distributor  │                                 │
   │  Created     │                 │   Deleted    │                                 │
   └──────┬───────┘                 └──────┬───────┘                                 │
   ┌──────┼──────┐            ┌────────────┼────────────┐                            │
```

Distributor Id and Name (input)	Distributor Id and Name (output)	PRS Agent ID (output)

Distributor Id (input)	Distributor Id and Name (output)	PRS Agent ID (output)

Distributor Updated °

Distributor Id (input)	Distributor Id and Name (output)	Distributor Change	Distributor Id and Name (output)	PRS Agent ID (output)

Distributor Change:

Distributor Name (input) °	Distributor Shot Code (input) °

Distributor Browsed °

Distributor Id (input)	Distributor Id and Name (output)	PRS Agent ID (output)

I/O Structure Element	Data Items
Distributor Id	Distributor Id
Distributor Id and Name	Distributor Id
	Distributor Name
	Distributor Short Code
Distributor Name	Distributor Name
Distributor Short Code	Distributor Short Code
PRS Agent Id	PRS Agent Id
	Distributor Name

3.16   N0013E Browse Distributors and PRS Agents

3.16.1   Function Type

On-line   Enquiry   User initiated

3.16.2   Function Description

This function is invoked by the NHHDA user to allow browsing of the set of valid Distributors/PRS Agents.

A list of existing Distributor Ids is displayed. The user selects one of them to browse.

3.16.3   Processing Description

This function is invoked by the NHHDA user to allow browsing of the set of valid Distributors/PRS Agents.

The user selects a Distributor Id from a list of Distributors, upon which the Distributor/PRS Agent Name and Distributor Short Code are displayed.

3.16.4   Error Handling

None

3.16.5   Common Processing

NC006 Restrict On-line Access

3.16.6   Volumes

An indeterminate number of Distributors/PRS Agents will be browsed on an ad hoc basis.

3.16.7   Events

None

3.16.8   Event Frequency

N/A

3.16.9   Enquiries

Browse Distributors and PRS Agents

3.16.10   Enquiry Frequency

1

3.16.11   Requirements Catalogue Ref.

N17.

Change Request LCR207 and LCR207/2.

Modification Proposal P62

3.16.12   User Roles

Exception Administrator

Auditor

3.16.13   I/O Structures

See "Distributor Browsed" branch of N0013.

3.17   N0014 Define GSP Groups

3.17.1   Function Type

  On-line   Update   User initiated

3.17.2   Function Description

This function is invoked by the NHHDA user, and allows details of GSP Groups and their associated Distributor, PRS Agent and ISR Agent appointments to be browsed and maintained.

A list of existing GSP Groups is displayed (this list is not shown in the I/O structure). The user can enter details of a new GSP Group, or select an existing one to delete, amend Distributor/PRS Agent Assignments, amend ISR Agent Appointments, amend GSP Group details, or browse.

3.17.3   Processing Description

This process allows suitably authorised NHH Data Aggregator users to maintain details of GSP Groups. A GSP Group Id and GSP Group Description must be specified.

The system will also allow details of the appointments of ISR Agents, Distributors and PRS Agents to be specified. In each case, the appropriate Id will be selected from a list, and the Effective From Date and, optionally, Effective To Date specified. It should be noted that a PRS Agent is appointed at the same time as a Distributor.

The system will also allow GSP Groups and their appointments to be updated and deleted.

If a GSP Group is deleted and there are any associated ISR Agent Appointments, GSP Group Distributor, GSP Group PRS Agent, GSP Group Profile Class Researched Default EAC or Average Fraction of Yearly Consumption then these are also deleted.

3.17.4   Error Handling

Reference: EPD 4.7 - Maintain GSP Groups

Users may delete a GSP Group if it has no associated occurrences of Metering System GSP Group, Metering System GSP Group (DC), or GSP Group in Aggregation Run.

When entering or amending Distributor and PRS Agent Assignments, the Id entered by the user must already be defined on the system as both a Distributor and a PRS Agent. When amending Distributor Assignments, check that none of the Metering Systems in the GSP Group have an open Data Aggregator Appointment.

When entering or amending ISR Agent Appointments, the ISR Agent Id entered by the user must already be defined on the system.

All GSP Groups for a particular distributor will be administered by the same PRS Agent.

3.17.5   Common Processing

NC006 Restrict On-line Access

NC002 Update On-line Audit Log

3.17.6 Volumes

Occasional

3.17.7 Events

GSP Group Entered

GSP Group Amended

GSP Group Deleted

ISR Agent appointed to GSP Group

ISR Agent appointment deleted

ISR Agent appointment amended

Distributor assigned to a GSP Group

Distributor assignment deleted

3.17.8 Event Frequency

The sum of the frequencies of the nine events and the browse enquiry is one.

3.17.9 Enquiries

Browse GSP Groups

3.17.10 Enquiry Frequency

See Event Frequency.

3.17.11 Requirements Catalogue Ref.

F01.

3.17.12 User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.17.13　　I/O Structures

* 'Distributor Assignment Amended' and 'ISR Agent Appointment Amended' are continued on separate diagrams
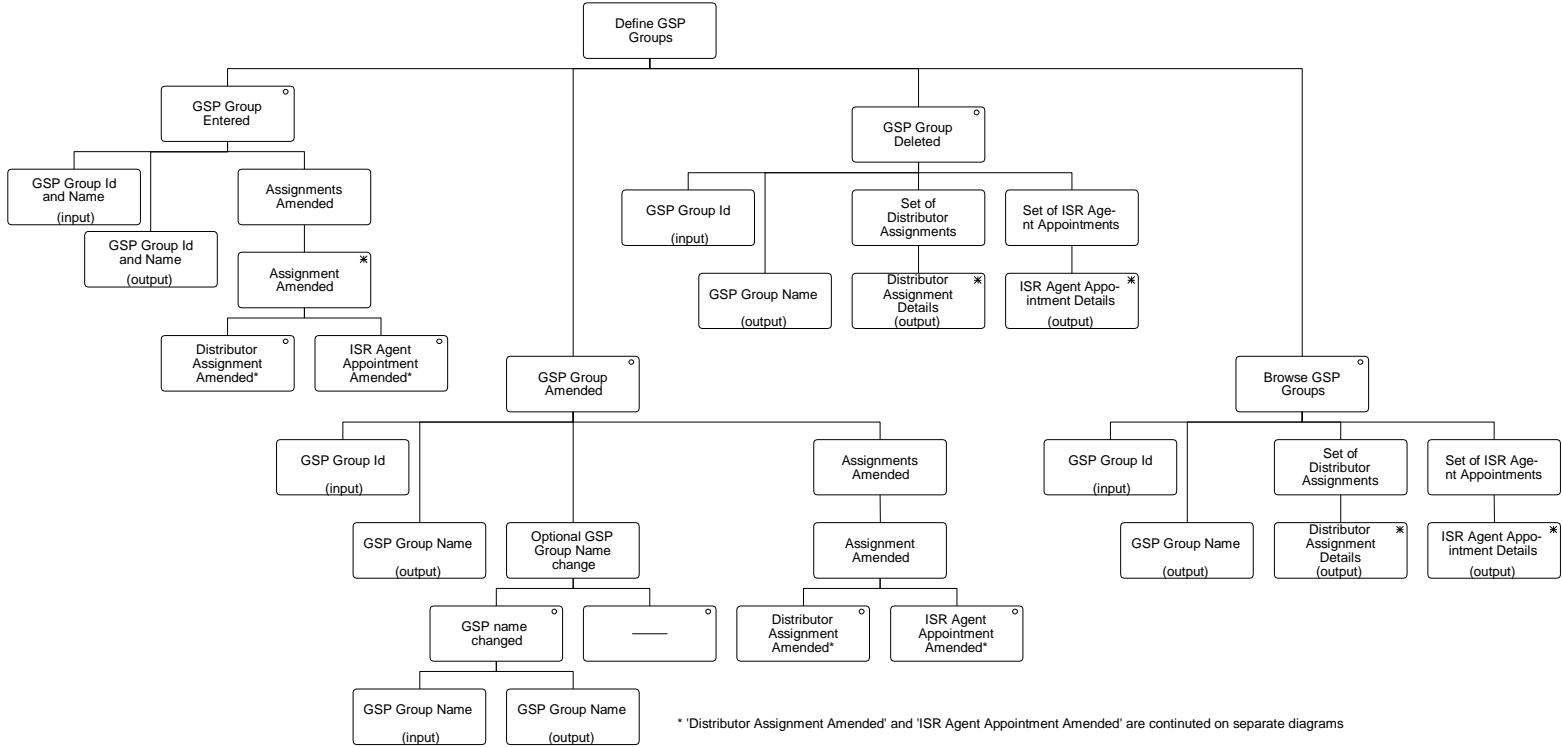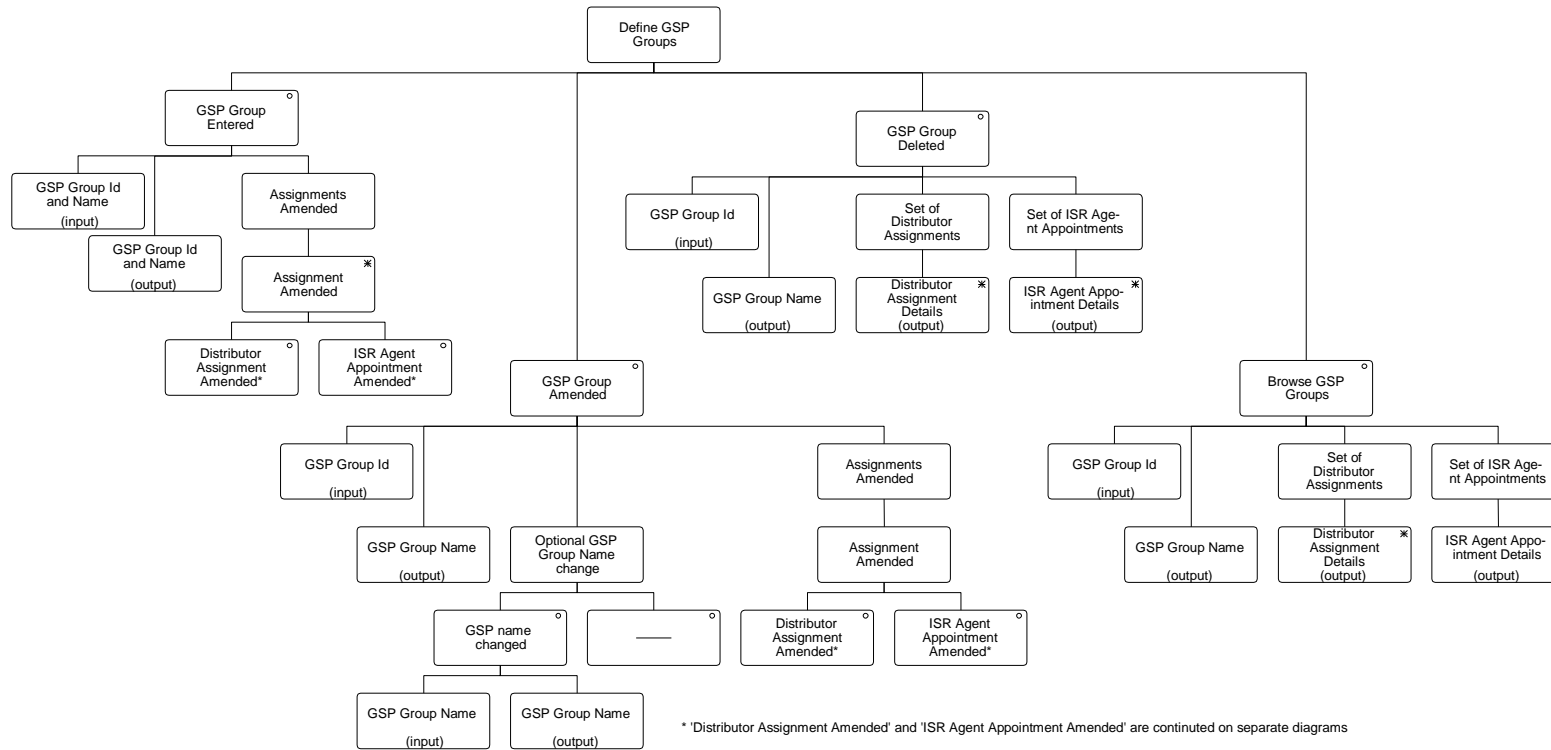
Define GSP Groups

NOTE THAT THIS I/O
STRUCTURE IS CONTINUED
FROM A PREVIOUS SHEET

```
                            ┌─────────────────┐
                            │   Distributor   │
                            │   Assignment    │
                            │    Amended      │
                            └────────┬────────┘
                                     │
                            ┌─────────────────┐ ⁎
                            │   Distributor   │
                            │   Assignment    │
                            │   Amendment     │
                            └────────┬────────┘
```

Distributor Assigned to a GSP Group ○				Distributor Assignment Deleted ○		
Set of Distributor Assignments	Distributor Assignment Key (input)	Set of Distributor Assignments		Set of Distributor Assignments	Distributor Assignment Key (input)	Set of Distributor Assignments
Distributor Assignment Details (output) ⁎		Distributor Assignment Details (output) ⁎		Distributor Assignment Details (output) ⁎		Distributor Assignment Details (output) ⁎

⁎ The assignment of a Distributor to a GSP Group also appoints the PRS Agent to the Distrobutor

Distributor Assignment Amended

NOTE THAT THIS I/O
STRUCTURE IS CONTINUED
FROM A PREVIOUS SHEET

```
                              ┌──────────────────┐
                              │ ISR Agent Appo-  │
                              │ intment Amended  │
                              └──────────────────┘
                                       │
                              ┌──────────────────┐ ✳
                              │ IST Agent        │
                              │ Appointment      │
                              │ Amendment        │
                              └──────────────────┘
              ┌────────────────────────┼────────────────────────┐
     ┌──────────────────┐°    ┌──────────────────┐°     ┌──────────────────┐°
     │ ISR Agent        │     │ ISR Agent Appo-  │      │ ISR Agent Appo-  │
     │ Appointed to     │     │ intment Amended  │      │ intment Deleted  │
     │ GSP Group        │     │                  │      │                  │
     └──────────────────┘     └──────────────────┘      └──────────────────┘
```

| Set of ISR Age-nt Appointments | ISR Agent Appointment (input) | Set of ISR Age-nt Appointments | Set of ISR Age-nt Appointments | ISR Agent Appointment (input) | Set of ISR Age-nt Appointments | End Date (input) | Set of ISR Age-nt Appointments | ISR Agent Appointment Key (input) | Set of ISR Age-nt Appointments |

| ISR Agent Appo-intment Details (output) | | ISR Agent Appo-intment Details (output) | ISR Agent Appo-intment Details (output) | | ISR Agent Appo-intment Details (output) | | ISR Agent Appo-intment Details (output) | | ISR Agent Appo-intment Details (output) |

ISR Agent Appointment Amended

I/O Structure Element	Data Items
Distributor Assignment Key	Distributor Id
	X GDD Effective From Settlement Date {GGD}
	Y GDD Effective To Settlement Date {GGD}
	PRS Agent Id
Distributor Assignment Details	Distributor Id
	Distributor Name
	Distributor Short Code
	X GGD Effective From Settlement Date {GGD}
	Y GDD Effective To Settlement Date {GGD}
	PRS Agent Id
GSP Group Id and Name	GSP Group Id
	GSP Group Name
GSP Group Id	GSP Group Id
GSP Group Name	GSP Group Name
ISR Agent Appointment	Effective From Date {IAA}
	Effective To Date {IAA}
	ISR Agent Id
ISR Agent Appointment Details	Effective From Date {IAA}
	Effective To Date {IAA}
	ISR Agent Id
	ISR Agent Name
ISR Agent Appointment Key	Effective From Date {IAA}
	GSP Group Id

3.18   N0014E Browse GSP Groups

3.18.1   Function Type

On-line   Enquiry   User initiated

3.18.2   Function Description

This function is invoked by the NHHDA user, and allows details of GSP Groups and their associated Distributor, PRS Agent and ISR Agent appointments to be browsed.

A list of existing GSP Groups is displayed. The user selects one of them to browse.

3.18.3   Processing Description

The GSP Group Id and Name are displayed, together with its distributor and PRS agent assignment details and ISR agent appointment details.

3.18.4   Error Handling

None

3.18.5   Common Processing

NC006 Restrict On-line Access

3.18.6   Volumes

Occasional

3.18.7   Events

None

3.18.8   Event Frequency

N/A

3.18.9   Enquiries

Browse GSP Group

3.18.10   Enquiry Frequency

1

3.18.11   Requirements Catalogue Ref.

N17

Change Request LCR207.

3.18.12   User Roles

Exception Administrator

Auditor

3.18.13   I/O Structures

See "Browse GSP Groups" branch of "Define GSP Groups" in N0014

3.19   N0015 Define ISR Agents

3.19.1   Function Type

On-line   Update   User initiated

3.19.2   Function Description

This function is invoked by the NHHDA user to allow browsing and maintenance of the set of valid ISR Agents.

A list of existing ISR Agent Ids is displayed (this list is not shown in the I/O Structure, and should not be confused with the "ISR Agent Browsed" branch of the I/O Structure). The user either selects one of them to amend, delete or browse, or enters a new one.

For creation, the ISR Agent Id is displayed and the user enters the ISR Agent Name.

For amendment, deletion and browsing, the ISR Agent Id and ISR Agent Name are displayed. The user may either amend the ISR Agent Name or delete the ISR Agent.

3.19.3   Processing Description

This process allows suitably authorised NHH Data Aggregator users to maintain details of ISR Agents.

The system will allow ISR Agents to be created, updated and deleted.

3.19.4   Error Handling

Reference: EPD 4.4 - Maintain ISR Agents

ISR Agents may only be deleted if it has no associated ISR Agent Appointments.

New ISR Agent Ids must be different from all existing ones.

An ISR Agent Id and ISR Agent Name must be specified.

3.19.5   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

3.19.6   Volumes

At market inception the most likely options are that there will be either one national ISR Agent or twelve regional ones.

Thereafter, it is most unlikely that ISR Agents will be created, modified or deleted on any frequent basis. An indeterminate number of ISR Agents will be browsed on an ad hoc basis.

3.19.7   Events

ISR Agent details entered

ISR Agent details updated

ISR Agent details deleted

3.19.8   Event Frequency

The exact frequency cannot be determined, but the sum of the frequencies of the three events (entered, amended, deleted) and the browse enquiry is one.

3.19.9   Enquiries

Browse ISR Agents

3.19.10   Enquiry Frequency

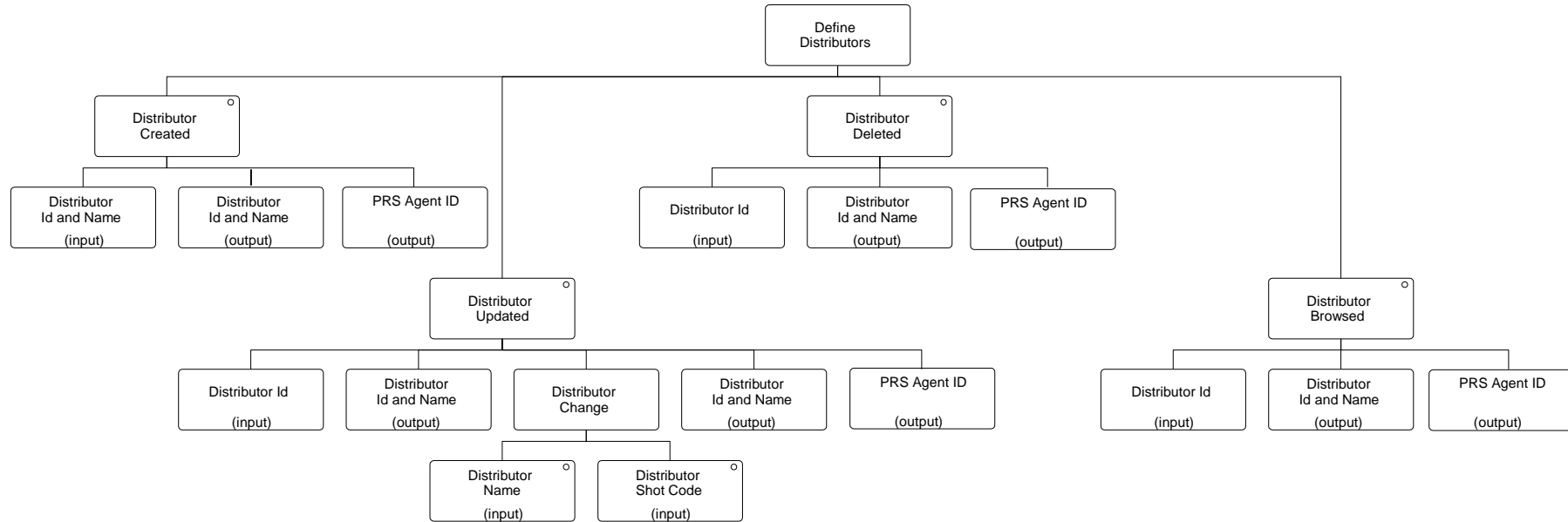See event frequency.

3.19.11   Requirements Catalogue Ref.

F01.

3.19.12   User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.19.13　　I/O Structures
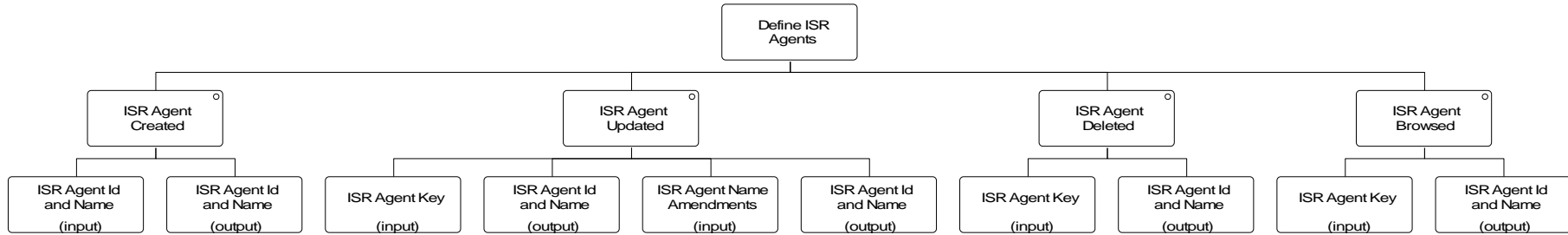
I/O Structure Element	Data Items
ISR Agent Id and Name	ISR Agent Id, ISR Agent Name
ISR Agent Key	ISR Agent Id
ISR Agent Name Amendments	ISR Agent Name

3.20   N0015E Browse ISR Agents

3.20.1   Function Type

On-line   Enquiry   User initiated

3.20.2   Function Description

This function is invoked by the NHHDA user to allow browsing of the set of valid ISR Agents.

A list of existing ISR Agent Ids is displayed. The user selects one of them to browse. The ISR Agent Id and ISR Agent Name are displayed.

3.20.3   Processing Description

This function is invoked by the NHHDA user to allow browsing of the set of valid ISR Agents.

A list of existing ISR Agent Ids is displayed. The user selects one of them to browse. The ISR Agent Id and ISR Agent Name are displayed.

3.20.4   Error Handling

None

3.20.5   Common Processing

NC006 Restrict On-line Access

3.20.6   Volumes

An indeterminate number of ISR Agents will be browsed on an ad hoc basis.

3.20.7   Events

None

3.20.8   Event Frequency

N/A

3.20.9   Enquiries

Browse ISR Agents

3.20.10   Enquiry Frequency

1

3.20.11   Requirements Catalogue Ref.

N17

3.20.12   User Roles

Exception Administrator

Auditor

3.20.13   I/O Structures

See "ISR Agent Browsed" branch of N0015.

3.21   N0016 Define Line Loss Factor Classes

3.21.1   Function Type

On-line   Update   User initiated

3.21.2   Function Description

This function is invoked by the NHHDA user to allow browsing and maintenance of the set of valid Line Loss Factor Classes for each Distributor.

The user selects a Distributor Id from a pick list (not shown on the IO structure). A list of existing Line Loss Factor Classes for the Distributor is displayed (this list is not shown in the I/O Structure, and should not be confused with the "Line Loss Factor Class Browsed" branch of the I/O Structure).

The user either selects one of them to amend, delete or browse, or creates a new one by entering a new Line Loss Factor Class Id and Line Loss Factor Class Description.

For amendment, deletion and browsing, the Distributor Id, Distributor Name, Line Loss Factor Class Id and Line Loss Factor Class Description are displayed. The user may either amend the Line Loss Factor Class Description or delete the Line Loss Factor Class.

3.21.3   Processing Description

This process allows suitably authorised NHH Data Aggregator users to maintain details of Line Loss Factor Classes.

A Distributor Id must be selected, and a Line Loss Factor Class Id and Line Loss Factor Class Description specified.

The system will allow Line Loss Factor Classes to be deleted or created, and their Descriptions to be updated.

Note that Standard Settlement Configuration data will normally be inserted or updated by loading a file prepared by the Pool (see process 3.42 - Load Pool Market Domain Data). This manual process is required as a backup, and possibly for minor amendments (such as deletions).

3.21.4   Error Handling

Reference: EPD 4.8 - Maintain Line Loss Factor Classes

Users may only delete a Line Loss Factor Class if it has no associated Metering System Line Loss Factor Classes or Supplier Purchase Matrix data.

New Line Loss Factor Classes can only be created for existing Distributors. New Line Loss Factor Class Ids must be different from all existing ones for the same Distributor.

3.21.5   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

3.21.6 Volumes

At market inception, about 48 Line Loss Factor Classes will be created.

Thereafter, about four Line Loss Factor Classes created, four Line Loss Factor Classes amended and four Line Loss Factor Classes deleted annually. An indeterminate number of Line Loss Factor Classes will be browsed on an ad hoc basis.

3.21.7 Events

Line Loss Factor Class details entered

Line Loss Factor Class details updated

Line Loss Factor Class details deleted

3.21.8 Event Frequency

The exact frequency cannot be determined, but the sum of the frequencies of the three events (entered, amended, deleted) and the enquiry (browsed) is one.

3.21.9 Enquiries

Browse Line Loss Factor Classes

3.21.10 Enquiry Frequency

The exact frequency cannot be determined, but the sum of the frequencies of the three events (entered, amended, deleted) and this enquiry is one.

3.21.11 Requirements Catalogue Ref.

F03

### 3.21.12 User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.21.13   I/O Structures

```
                                    ┌─────────────┐
                                    │ Define Line │
                                    │ Loss Factor │
                                    │   Classes   │
                                    └──────┬──────┘
        ┌──────────────────┬──────────────┴──────────────┬──────────────────┐
 ┌────────────┐     ┌────────────┐               ┌────────────┐       ┌────────────┐
 │ Line Loss  │°    │ Line Loss  │°              │ Line Loss  │°      │ Line Loss  │°
 │Factor Class│     │Factor Class│               │Factor Class│       │Factor Class│
 │  Created   │     │  Updated   │               │  Deleted   │       │  Browsed   │
 └─────┬──────┘     └─────┬──────┘               └─────┬──────┘       └─────┬──────┘
   ┌───┴───┐      ┌───┬───┴───┬───┐                ┌───┴───┐          ┌─────┴─────┐
```

| Distributor Id, Name, LLFC Id and Description (input) | Distributor Id, Name, LLFC Id and Description (output) | Line Loss Factor Class Id (input) | Distributor Id, Name, LLFC Id and Description (output) | Line Loss Factor Class Description (input) | Distributor Id, Name, LLFC Id and Description (output) | Line Loss Factor Class Id (input) | Distributor Id, Name, LLFC Id and Description (output) | Line Loss Factor Class Id (input) | Distributor Id, Name, LLFC Id and Description (input) |

I/O Structure Element   **Data items**

Distributor Id, Name, LLFC Id and   Distributor Description
    Description   Distributor Id

                                                         Line Loss Factor Class Description

                                                        Line Loss Factor Class Id

Line Loss Factor Class Description   Line Loss Factor Class Description

Line Loss Factor Class Key   Distributor Id

                                                        Line Loss Factor Class Id

I/O Structure Element   **Data items**

Distributor Id, Name, LLFC Id and
    Description

3.22   N0016E Browse Line Loss Factor Classes

3.22.1   Function Type

On-line   Enquiry   User initiated

3.22.2   Function Description

This function is invoked by the NHHDA user to allow browsing of the set of valid Line Loss Factor Classes for each Distributor.

The user selects a Distributor Id from a pick list (not shown on the I/O structure). A list of existing Line Loss Factor Classes for that Distributor is displayed. The user selects one of them to browse.

The Distributor Id, Distributor Name, Line Loss Factor Class Id and Line Loss Factor Class Description are displayed.

3.22.3   Processing Description

This function is invoked by the NHHDA user to allow browsing of the set of valid Line Loss Factor Classes for each Distributor.

A list of existing Line Loss Factor Classes by Distributor is displayed. The user selects one of them to browse.

The Distributor Id, Line Loss Factor Class Id and Line Loss Factor Class Description are displayed.

3.22.4   Error Handling

None

3.22.5   Common Processing

NC006 Restrict On-line Access

3.22.6   Volumes

An indeterminate number of Line Loss Factor Classes will be browsed on an ad hoc basis.

3.22.7   Events

None

3.22.8   Event Frequency

N/A

3.22.9   Enquiries

Browse Line Loss Factor Class

3.22.10   Enquiry Frequency

1

3.22.11   Requirements Catalogue Ref.

N17

3.22.12   User Roles

Exception Administrator

Auditor

3.22.13   I/O Structures

See "Line Loss Factor Class Browsed" branch of N0016.

3.23   N0019 Define Standard Settlement Configurations

3.23.1   Function Type

On-line   Update   User initiated

3.23.2   Function Description

This function is invoked by the NHHDA user to allow browsing and maintenance of Standard Settlement Configurations and their associated Time Pattern Regimes and Profile Classes.

Each associated Time Pattern Regime is recorded by an occurrence of Measurement Requirement.

Each associated Profile Class is recorded by an occurrence of Valid Settlement Configuration Profile Class. A list of existing Standard Settlement Configuration Ids is displayed (this list is not shown in the I/O Structure, and should not be confused with the "Standard Settlement Configuration Browsed" branch of the I/O Structure). The user either selects one of them to amend, delete or browse, or enters a new one.

For creation, the user enters the Standard Settlement Configuration Id, the Standard Settlement Configuration Description and the lists of associated Time Pattern Regime Ids and Profile Class Ids.

For amendment, deletion and browsing, the Standard Settlement Configuration Id and Description are displayed, together with the Time Pattern Regime Ids of all associated Measurement Requirements and the Profile Class Ids of all associated Valid Settlement Configuration Profile Classes.

The user may either amend the Standard Settlement Configuration Description and/or add to and delete from the lists of Time Pattern Regime Ids and Profile Class Ids assigned to that Standard Settlement Configuration; or delete the Standard Settlement Configuration and all of its associated Measurement Requirements and Valid Settlement Configuration Profile Classes.

When maintaining the list of associated Valid Settlement Configuration Profile Classes, a list is available of all valid Profile Class Ids and their Descriptions (this list is not shown in the I/O Structure).

When maintaining the lists of Time Pattern Regime Ids and Profile Class Ids, the function ensures that the occurrences of Measurement Requirement and Valid Measurement Requirement Profile Class are kept in step such that for each occurrence of Valid Settlement Configuration Profile Class there is an occurrence of Valid Measurement Requirement Profile Class corresponding to each occurrence of Measurement Requirement associated with the Standard Settlement Configuration, and there are no occurrences of Valid Measurement Requirement Profile Class without a corresponding Measurement Requirement.

When modifying the list of Time Pattern Regime Ids, the user has the option of selecting an existing Id from a pick list or of entering a new Id (which will be added to the Time Pattern Regime entity).

3.23.3 Processing Description

Enter Standard Settlement Configurations

This process allows suitably authorised NHH Data Aggregator users to enter, update and delete Standard Settlement Configurations.

An Id and Description will be specified for each configuration. The user will also specify the Time Pattern Regime Ids that define the Measurement Requirements within the Standard Settlement Configuration.

Note that Standard Settlement Configuration data will normally be loaded from a file prepared by the Pool (see process 3.42 Load Pool Market Domain Data). This manual process is required as a backup, and possibly for deletions and minor amendments.

Assign Configurations to Profile Classes

This process allows suitably authorised NHH Data Aggregator users to assign or de-assign Standard Settlement Configurations to a Profile Class.

When assigning a Standard Settlement Configuration to a Profile Class, the process will create an occurrence of Valid Settlement Configuration Profile Class, and an occurrence of Valid Measurement Requirement Profile Class for each Measurement Requirement of the Standard Settlement Configuration. Conversely, these occurrences will be deleted if the Standard Settlement Configuration is unassigned from the Profile Class.

Note that Standard Settlement Configuration data will normally be loaded from a file prepared by the Pool (see process 3.42 - Load Pool Market Domain Data). This manual process is required as a backup, and possibly for deletions and minor amendments.

3.23.4 Error Handling

Reference: EPD 4.5.2 - Enter Standard Settlement Configurations

EPD 4.5.3 - Assign Configurations to Profile Classes

The system will only allow a Standard Settlement Configuration to be deleted if it has no associated Settlement Configurations or Settlement Configuration (DC)s.

The system will only allow a Standard Settlement Configuration to be unassigned from a Profile Class if no Metering Systems or Supplier Purchase Matrix data are assigned to that combination of Standard Settlement Configuration and Profile Class by referring to MS Profile Class and Settlement Configuration and to MS Profile Class (DC) and Settlement Configuration (DC).

The system will only allow a change in Measurement Requirements for a Standard Settlement Configuration if no Metering Systems or Supplier Purchase Matrix data are assigned to any Measurement Requirements for the Standard Settlement Configuration by referring to Settlement Register (DC) and if no Average fractions of Yearly consumption exist for the Standard Settlement Configuration.

Standard Settlement Configurations can only be assigned to existing Profile Classes.

Removal of Measurement Requirements / deassignment of Profile Class from a Standard Settlement Configuration is prevented if corresponding Average Fractions of Yearly Consumption exist.

3.23.5   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

3.23.6   Volumes

At market inception, about 500 Standard Settlement Configurations will be created, but this will probably be done automatically (Reference: Process 3.42 - Load Pool Market Data).

Thereafter, they will be occasionally created, amended and deleted as authorised by the Pool; but this cannot be quantified.

An indeterminate number of Standard Settlement Configurations will be browsed on an ad hoc basis.

3.23.7   Events

Standard Settlement Configuration entered

Standard Settlement Configuration updated

Standard Settlement Configuration deleted

Standard Settlement Configuration assigned to Profile Class

Standard Settlement Configuration deassigned From Profile Class

Time Pattern Assigned To Standard Settlement Configuration

Time Pattern unassigned From Standard Settlement Configuration

Time Pattern Regime entered

3.23.8   Event Frequency

The exact frequency cannot be determined, but the sum of the frequencies of the three Standard Settlement Configuration events (entered, amended, deleted), the two Profile Class events (assigned and unassigned to and from Standard Settlement Configuration), the two Time Pattern Regime events (assigned and unassigned to and from Standard Settlement Configuration), and the browse enquiry is one; Time Pattern Regime entered is invoked when the user inputs a new Id.

3.23.9   Enquiries

Browse Standard Settlement Configurations

Metering System Exist Combination

3.23.10   Enquiry Frequency

See event frequency.

3.23.11   Requirements Catalogue Ref.

F01.

3.23.12   User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.23.12   User Roles

3.23.13   I/O Structures
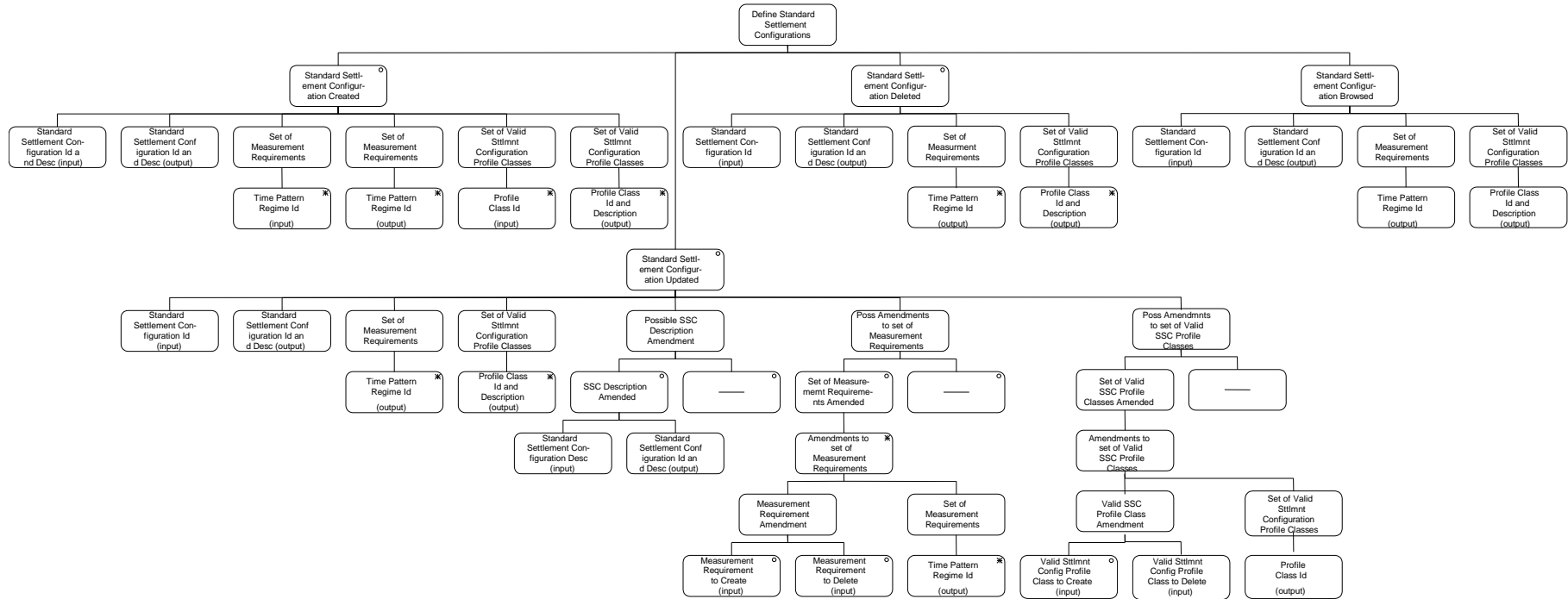
I/O Structure Element	Data Items
Measurement Requirement To Create	Time Pattern Regime Id
Measurement Requirement To Delete	Time Pattern Regime Id
Profile Class Id	Profile Class Id
Profile Class Id and Description	Profile Class Id
	Profile Class Description
Standard Settlement Configuration Description	Standard Settlement Configuration Description
Standard Settlement Configuration Id	Standard Settlement Configuration Id
Standard Settlement Configuration id and Description	Standard Settlement Configuration Id
	Standard Settlement Configuration Description
Time Pattern Regime Id	Time Pattern Regime Id
Valid Settlement Configuration Profile Class to Create	Profile Class Id
Valid Settlement Configuration Profile Class to Delete	Profile Class Id

3.24   N0019E Browse Standard Settlement Configurations

3.24.1   Function Type

On-line   Enquiry   User initiated

3.24.2   Function Description

This function is invoked by an NHHDA user to allow browsing of the set of valid Standard Settlement Configurations.

A list of Standard Settlement Configuration Ids is displayed. The user selects one of them to browse.

3.24.3   Processing Description

The Standard Settlement Configuration Id and Description are displayed, together with the Time Pattern Regime Ids of all the associated Measurement Requirements and the Profile Class Ids of all the associated Valid Settlement Configuration Profile Classes.

3.24.4   Error Handling

None

3.24.5   Common Processing

NC006 Restrict On-line Access

3.24.6   Volumes

An indeterminate number of Standard Settlement Configurations will be browsed on an ad hoc basis.

3.24.7   Events

None

3.24.8   Event Frequency

N/A

3.24.9   Enquiries

Browse Standard Settlement Configurations.

3.24.10   Enquiry Frequency

1

3.24.11   Requirements Catalogue Ref.

N17

3.24.12   User Roles

Exception Administrator

Auditor

3.24.13   I/O Structures

See "Standard Settlement Configuration Browsed" branch of N0019.

3.25   N0020 Define Threshold Parameters

3.25.1   Function Type

On-line   Update   User initiated

3.25.2   Function Description

This function is invoked by the NHHDA user to allow browsing and maintenance of the Threshold Parameters.

A list of existing Effective From Settlement Date {Threshold Parameter}s and Threshold Parameters is displayed (this list is not shown in the I/O Structure, and should not be confused with the "Threshold Parameter Browsed" branch of the I/O Structure).

The user either selects one of them to amend, delete or browse, or creates a new one.

For creation, the user enters the Effective From Settlement Date {Threshold Parameter} and the Threshold Parameter.

For amendment, deletion and browsing, the Effective From Settlement Date {Threshold Parameter} and Threshold Parameter are displayed. The user either amends the Threshold Parameter value or deletes the Threshold Parameter.

3.25.3   Processing Description

This process allows suitably authorised NHH Data Aggregator users to maintain details of the Threshold Parameter.

This is a system-wide parameter specifying the minimum number of Metering Systems required in a given cell of the Supplier Purchase Matrix before their Researched Default EAC/AA will be used as a default for Metering Systems without EAC/AA data.

An Effective From Settlement Date will be specified for each value.

3.25.4   Error Handling

Reference: EPD 4.11 - Maintain Threshold Parameters

New Effective From Settlement Date {TPAR}s must be different from all existing ones, i.e. there can only ever be one Threshold Parameter for any given day.

The user must enter the Effective From Settlement Date {Threshold Parameter} and the Threshold Parameter when creating a new Threshold Parameter.

Threshold Parameters for dates which have already been used in a "Final Initial Settlement" may only be entered, deleted or updated by the Superior Market Domain Data Administrator. Any such change is reported to the Data Aggregator.

3.25.5   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

3.25.6   Volumes

At market inception, one Threshold Parameter will be created.

Thereafter, less than one Threshold Parameter will be created, amended or deleted per year.

An indeterminate, but very low, number of Threshold Parameters will be browsed on an ad hoc basis.

3.25.7   Events

Threshold Parameter entered

Threshold Parameter updated

Threshold Parameter deleted

3.25.8   Event Frequency

The exact frequency cannot be determined, but the sum of the frequencies of the three events (entered, amended, deleted) and the browse enquiry is one; Lookup Latest Final Initial Settlement Run Date is invoked once when the function is invoked.

3.25.9   Enquiries

Browse Threshold Parameter

Lookup Latest Final Initial Settlement Run Date

3.25.10   Enquiry Frequency

See event frequency.

3.25.11   Requirements Catalogue Ref.

F01, N15, N16

3.25.12   User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.25.13　　I/O Structures

```
                              ┌──────────────────┐
                              │ Define Thresho-  │
                              │ ld Parameters    │
                              └──────────────────┘
        ┌──────────────────┬──────────┴──────────┬──────────────────────┐
┌──────────────┐°  ┌──────────────┐°      ┌──────────────┐°      ┌──────────────┐°
│ Threshold Pa-│   │ Threshold Pa-│       │ Threshold Pa-│       │ Threshold Pa-│
│ meter Created│   │ meter Updated│       │ meter Deleted│       │ meter Browsed│
└──────────────┘   └──────────────┘       └──────────────┘       └──────────────┘
```

| Effective Date {TPAR} and Threshold Parameter (input) | Effective Date {TPAR} and Threshold Parameter (output) | X TPAR Effective From Settlement Date {TPAR} (input) | Effective Date {TPAR} and Threshold Parameter (output) | Threshold Parameter (input) | Effective Date {TPAR} and Threshold Parameter (output) | X TPAR Effective From Settlement Date {TPAR} (input) | Effective Date {TPAR} and Threshold Parameter (output) | X TPAR Effective From Settlement Date {TPAR} (input) | Effective Date {TPAR} and Threshold Parameter (output) |

I/O Structure Element	Data Items
Effective Date {TPAR} and Threshold Parameter {TPAR}	Threshold Parameter
	X TPAR Effective From Settlement Date
Threshold Parameter	Threshold Parameter
X TPAR Effective From Settlement Date {TPAR}	X TPAR Effective From Settlement Date {TPAR}

3.26   N0020E Browse Threshold Parameters

3.26.1   Function Type

On-line   Enquiry   User initiated

3.26.2   Function Description

This function is invoked by an NHHDA user to allow browsing of the Threshold Parameters.

3.26.3   Processing Description

All the Effective From Settlement Date {Threshold Parameter} and Threshold Parameters are displayed.

3.26.4   Error Handling

None

3.26.5   Common Processing

NC006 Restrict On-line Access

3.26.6   Volumes

An indeterminate number of Threshold Parameters will be browsed on an ad hoc basis.

3.26.7   Events

None

3.26.8   Event Frequency

N/A

3.26.9   Enquiries

Browse Threshold Parameter.

3.26.10   Enquiry Frequency

1

3.26.11   Requirements Catalogue Ref.

N17.

3.26.12   User Roles

Exception Administrator

Auditor

3.26.13   I/O Structures
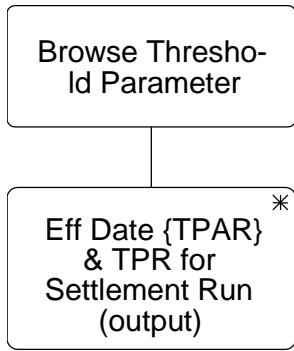
```
┌─────────────────────┐
│   Browse Thresho-   │
│   ld Parameter      │
│                     │
└──────────┬──────────┘
           │
┌──────────┴──────────┐ ✳
│   Eff Date {TPAR}   │
│   & TPR for         │
│   Settlement Run    │
│   (output)          │
└─────────────────────┘
```

I/O Structure Element	**Data Items**
Eff Date & TPR	Threshold Parameter
	X TPAR Effective From Settlement Date {TPAR}

3.27   N0022 Schedule Aggregation Run

3.27.1   Function Type

On-line   Update   User initiated

3.27.2   Function Description

The default schedule is prepared by the Settlement Timetable, which is automatically loaded (N0024). This function is invoked by the Data Aggregation Administrator to allow Data Aggregation Runs to be re-scheduled, new Runs scheduled or the status of a scheduled run to be changed. Following the automated load N0024, it is possible for a run to start without operators setting the status of the run. For Data Aggregation Runs of the correct Status the system will automatically trigger the Data Aggregation Run at the time requested (see function N0008).

Before a run has started, the user will have the option of modifying the Status, rescheduling or cancelling the run, and adding or removing the GSP Groups to be included in the run. The browse option will list all the GSP groups with those included in the run ticked.

The user may also add, delete and amend Settlements.

3.27.3   Processing Description

If a Settlement Date range is specified:

- all Settlements within the specified date range are displayed;

- the user selects a Settlement and all runs scheduled for that Settlement are displayed;

- the user selects a Run and all GSP Groups included in that Run are displayed.

If a Settlement Code is specified:

- all Settlements with the specified code are displayed;

- the user selects a Settlement and all runs scheduled for that Settlement are displayed.

- the user selects a Run and all GSP Groups included in that Run are displayed.

If a Data Aggregation Run Date range is specified:

- all Settlements for which a run is scheduled within the specified date range are displayed;

- the user selects a Settlement and all runs scheduled for that Settlement to run within the specified date range are displayed

- the user selects a Run and all GSP Groups included in that Run are displayed.

If a Data Aggregation Run Number is specified:

- all Settlements for which a run is scheduled with the specified run number are displayed;

- the user selects a Settlement and all runs scheduled for that Settlement to run are displayed.

- the user selects a Run and all GSP Groups included in that Run are displayed.

If the Status is specified:

- all Settlements for which a run is scheduled with the specified status are displayed;

- the user selects a Settlement and all runs scheduled for that Settlement to run are displayed.

- the user selects a Run and all GSP Groups included in that Run are displayed.

The Data Aggregation Administrator will have the option of adding or deleting Settlements, or modifying the ISR Notification Date of an existing one.

The Data Aggregation Administrator will have the option of scheduling a new Data Aggregation Run, or rescheduling, modifying the Status, cancelling or browsing an existing one.

3.27.4   Error Handling

The date specified for a Data Aggregation Run to occur must not be in the past (i.e. prior to the system clock current date).

The system will not allow a Data Aggregation Run to be cancelled or rescheduled if it has already taken place.

The status of a run may only be changed from Provisional, Provisional (Default), Approved or Released to Approved, Released or Provisional.

GSP Groups may only be added or removed from aggregation runs which are Provisional or Provisional (Default).

Run Date may only be changed for runs which are Provisional or Provisional (Default).

A Settlement may not be deleted if there are any Data Aggregation Runs scheduled for that Settlement.

If the System Parameter "Aggregate All Valid GSP Groups" is set to FALSE and the user has not included any GSP Groups, then a warning message is displayed (but the Data Aggregation Run (function N0008) will fail when it is automatically triggered at its requested time, unless the user has set the System Parameter to TRUE or included GSP Groups before this time). This warning message is displayed for all Run Types.

For a Dispute Run only, If the System Parameter "Aggregate All Valid GSP Groups" is set to TRUE and the user has not included any GSP Groups, then

another warning message is displayed (in this case the Data Aggregation Run will not fail but will run with all GSP Groups included).

3.27.5   Common Processing

NC006 Restrict On-line Access

NC002 Update On-Line Audit Log

3.27.6   Volumes

An indeterminate number of Aggregation Runs will be scheduled manually, the primary means of scheduling aggregation runs is done by the data file load - N0024 (Load Pool Settlement Timetable).

3.27.7   Events

Data Aggregation run amended

Data Aggregation run cancelled

Data Aggregation run scheduled

GSP Group Added to Aggregation Run

GSP Group Removed from Aggregation Run

Settlement entered

Settlement amended

Settlement deleted

3.27.8   Event Frequency

The sum of the frequencies of the three events and the enquiry is one.

3.27.9   Enquiries

Browse Data Aggregation Run Status

3.27.10   Enquiry Frequency

The sum of the frequencies of the three events and the enquiry is one.

3.27.11   Requirements Catalogue Ref.

F30

3.27.12   User Roles

Data Aggregation Administrator

3.27.13   I/O Structures
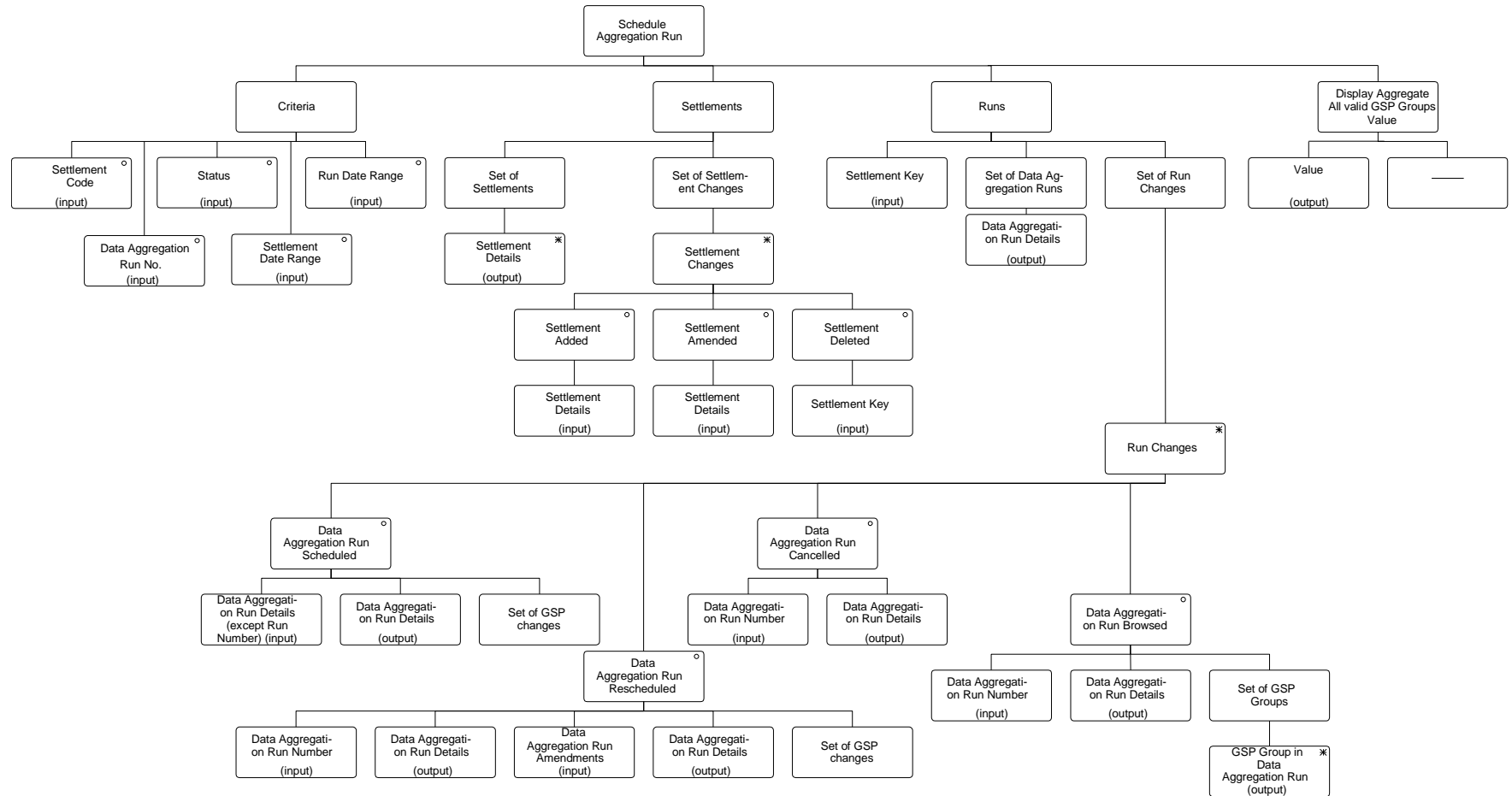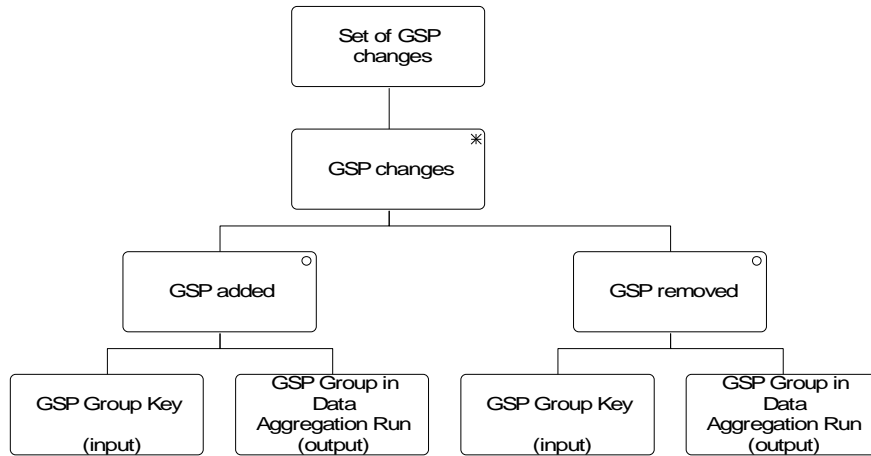
I/O Structure Element	Data Items
Data Aggregation Run Amendments	Data Aggregation Run Date
	Data Aggregation Run Status
Data Aggregation Run Details	Data Aggregation Run Date
	Data Aggregation Run Number
	Data Aggregation Run Status
Data Aggregation Run Details (except Run Number)	Data Aggregation Run Date
	Data Aggregation Run Status
Data Aggregation Run Number	Data Aggregation Run Number
GSP Group in Data Aggregation Run	GSP Group Id
	GSP Group Name
GSP Group Key	GSP Group Id
RunDateRange	Start Date for Selection
	End Date for Selection
Settlement Code	Settlement Code
SettlementDateRange	Start Date for Selection
	End Date for Selection
Settlement Details	Settlement Date
	Settlement Code
	ISR Notification Date
Settlement Key	Settlement Date
	Settlement Code
Status	Data Aggregation Run Status
Value	Aggregate All Valid GSP Groups Value

3.28   N0023 Specify Data Accessible To Ad-Hoc Reports

3.28.1   Function Type

On-line   Update   User initiated

3.28.2   Function Description

This function is invoked by the NHHDA user to define the entities and attributes and entity occurrences for which each user may produce ad-hoc reports.

By default, a user cannot view any data.

3.28.3   Processing Description

A user will be selected from a list of users; the system will list all entities and views the user has access to. A new entity or view may be added, or an existing one selected. All attributes of the selected entity/view available to the user are displayed. Attributes may be added or removed from the list.

3.28.4   Error Handling

None

3.28.5   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

3.28.6   Volumes

This event is invoked for each user who will be able to produce ad hoc reports.

3.28.7   Events

Specify Data Accessible To Ad Hoc Reports

3.28.8   Event Frequency

1

3.28.9   Enquiries

None

3.28.10   Enquiry Frequency

N/A

3.28.11   Requirements Catalogue Ref.

N22

3.28.12   User Roles

System Manager

3.28.13   I/O Structures
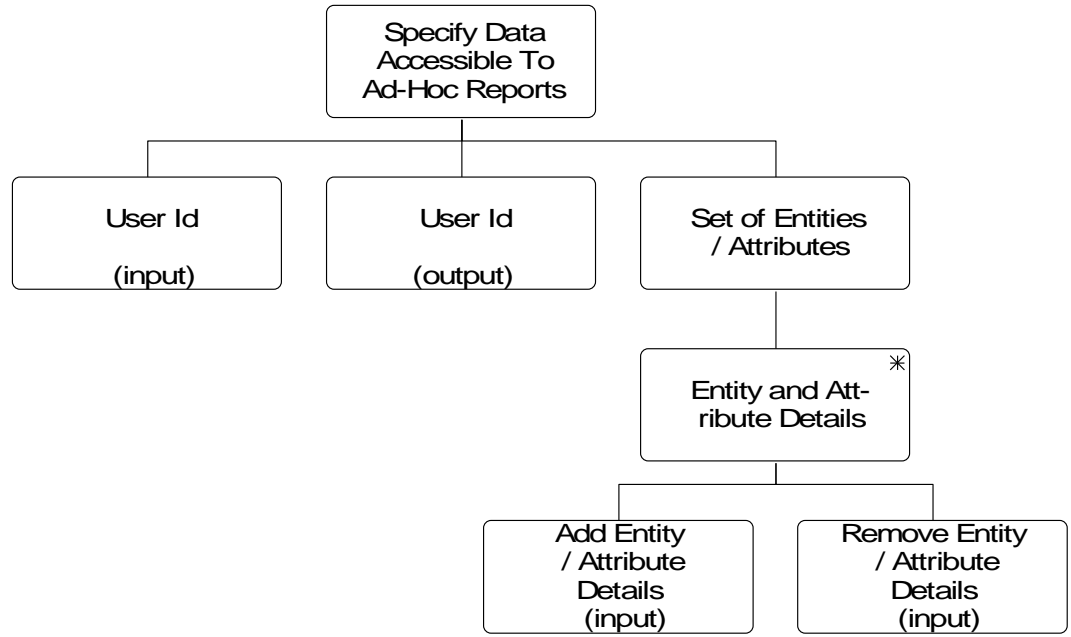
Specify Data Accessible To Ad-Hoc Reports

An I/O structure description has not been created as it is inappropriate for this function.

3.29   N0024 Load Pool Settlement Timetable

3.29.1   Function Type

Batch   Update   System initiated

3.29.2   Function Description

The default schedule is prepared from the Data Aggregation and Settlements Timetable, which is automatically loaded into NHHDA by this function. This function also allows the last successfully loaded DAST file to be reprocessed. The Data Aggregation and Settlements Timetable is prepared covering a period of Payment Dates. The arrival of the file may be via a network or manually from disc.

3.29.3   Processing Description

Existing Data Aggregation Runs for Payment Dates between the dates held in the First Payment Date and Last Payment Date fields of the Timetable Header record are deleted unless the run has already taken place or has a dispute-type Settlement Code (in these cases, a report is made to the exception log).

Note: runs created through N0022 do not have a Payment Date and are unaffected.

For each timetable details record, a new Data Aggregation Run is scheduled unless a run already exists on the database for the same Settlement Date and Settlement Code (in which case a report is made to the exception log).

The run date of each new Data Aggregation Run is determined as follows.

- If the user configurable parameter "Use Run Date from File" is "FALSE", the Data Aggregation Run Date is calculated as "Days before Notification for Aggregation Run" working days before the corresponding ISR Notification Deadline Date. The definition of a working day is any day for which an ISR Notification Deadline Date exists in the DAST file or the NHHDA database. If no working day can be found or the working day calculated is more than a user configurable number ('Max Days before Notification for Aggregation Run') of calendar days before the ISR Notification Deadline Date, then the Data Aggregation Run Date is set to the date held in the Planned Data Aggregation Run Date field of the PST Details record and a report is made to the exception log.

- If configurable parameter "Use Run Date from File" is "TRUE", the date held in the Planned Data Aggregation Run Date field of the PST Details record is used.

All new Data Aggregation Runs have a status of 'Released', apart from runs scheduled for the Planned Data Aggregation Run Date because the attempt to calculate a run date was unsuccessful (in which case the runs have a status of 'Provisional Default').

All GSP Groups known to the system at the time of loading the DAST file are included in the scheduled Data Aggregation Runs. Note that subsequent addition of a GSP Group to the system will not automatically include the new GSP Group in the Data Aggregation Runs already on the database - the new GSP Group must be manually added to all scheduled Data Aggregation Runs or the Data Aggregation and Settlements Timetable must be reprocessed.

3.29.4   Error Handling

If any of the following checks fail, the file is not processed.

- The DAST file creation timestamp must be on or after that of the last successfully loaded Data Aggregation and Settlements Timetable file.

- The First Payment Date must be on or before the Last Payment Date.

Each PST Details record is checked to ensure that:

- the Payment Date is on or between the First Payment Date and Last Payment Date.

- the Settlement Date is before the Planned Data Aggregation Run Date.

- the Planned Data Aggregation Run Date is before the ISR Notification Deadline Date.

- the ISR Notification Deadline Date is before the Payment Date.

- the Settlement Code is valid.

3.29.5   **Common Processing**

NC003 Update Batch Audit Log

NC004 Check File Header

NC007 Update File Log

NC009 Restrict Off-line Access

3.29.6   **Volumes**

A typical Data Aggregation and Settlements Timetable data file will contain at least one and up to five (but not usually more than four) PST records for each Settlement Date with an associated Payment Date within the Payment Date range specified by the TTH record. This range will usually be one year in duration. There will normally be 1825 (5 * 365) PST records in each DAST data file. If the period covered by a DAST data file is more or less than one year, the number of PST records will vary accordingly.

3.29.7   **Events**

Data Aggregation Run Cancelled

Data Aggregation Run Scheduled

GSP Group Added to Data Aggregation Run

GSP Group Removed from Data Aggregation Run

Pool Settlement Timetable Received

Settlement entered

Settlement amended

3.29.8   **Event Frequency**

Pool Settlement Timetable Received = 1, others depend upon contents of file.

3.29.9   **Enquiries**

None

3.29.10   **Enquiry Frequency**

N/A

3.29.11   **Requirements Catalogue Ref.**

F31, F32, N1

3.29.12   **User Roles**

None

3.29.13   I/O Structures

```
                        ┌──────────────────┐
                        │   Load Pool      │
                        │   Settlement     │
                        │   Timetable      │
                        └────────┬─────────┘
                                 │
                        ┌────────┴─────────┐
                        │  Pool Settlement │
                        │  Timetable File  │
                        └────────┬─────────┘
                 ┌───────────────┴───────────────┐
        ┌────────┴─────────┐           ┌──────────┴────────┐
        │ Timetable Header │           │   Set of Pool     │
        │                  │           │   Settlement      │
        │     (input)      │           │ Timetable Details │
        └──────────────────┘           └──────────┬────────┘
                                                   │
                                        ┌──────────┴────────┐
                                        │ Pool Settlement  ✳ │
                                        │ Timetable Details │
                                        │     (input)       │
                                        └───────────────────┘
```
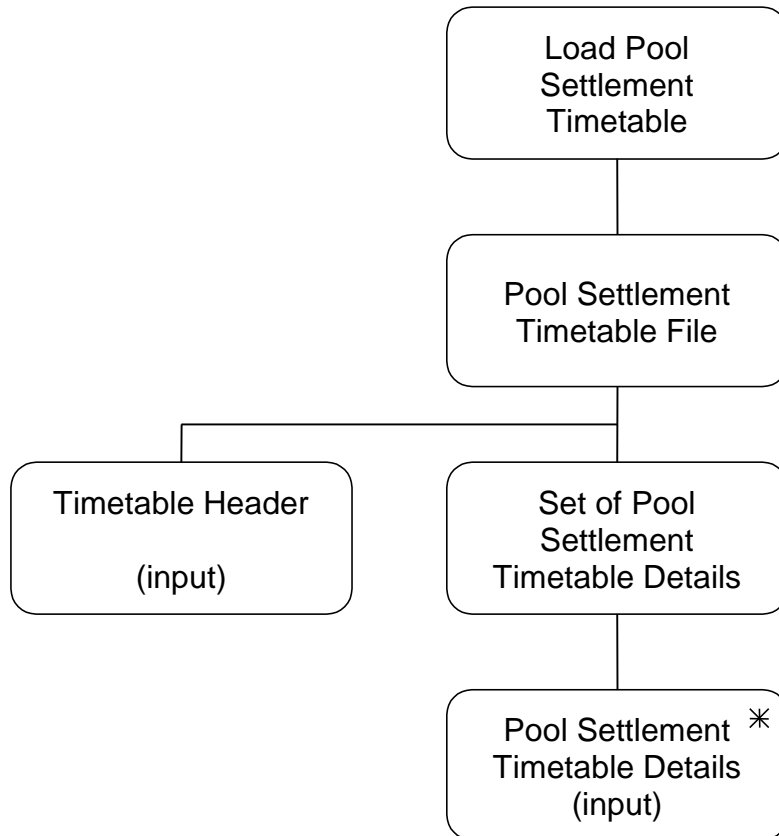
I/O Structure Element	Data Items
Timetable Header	First Payment Date
	Last Payment Date
Pool Settlement Timetable Details	Settlement Code
	Settlement Date
	Payment Date
	ISR Notification Deadline Date
	Planned Data Aggregation Run Date

3.30   N0026 Automatically Send Supplier Purchase Matrix

3.30.1   Function Type

Batch   Enquiry   System initiated

3.30.2   Function Description

On successful completion of a Data Aggregation Run, this function is invoked to automatically generate the Supplier Purchase Matrix data files for transmission to the ISR Agent(s) and the Suppliers.

NOTE: In this section ISR Agent is determined by the BETTA Start Date for Scottish GSPs. For settlement dates before the BETTA Start Date the ISR Agent for Scottish GSPs will be IAR, for settlement dates on or after the BETTA Start Date for Scottish GSP Groups the ISR Agent appointments will be set up via MDD file or the GSP groups Form in the same way that English and Welsh GSP Group ISR Agent appointments are set up.

3.30.3   Processing Description

(reference EPD Process 5 - Send Supplier Purchase Matrices to ISR)

The Data Aggregation Run is specified by the calling function (N0008 Aggregate EACs and AAs).

The system will perform the following processing using the Supplier Purchase Matrix data calculated in the Data Aggregation Run.

For each GSP Group included in the Data Aggregation Run:

- obtain the GSP Group's Supplier Purchase Matrix data;

- collate a Supplier Purchase Matrix Data file;

- send the file to the ISR Agent appointed to the GSP Group.

- For each Supplier with consumption data aggregated in the Data Aggregation Run for the current GSP Group:

  - obtain the Supplier's Supplier Purchase Matrix data for the current GSP Group;

  - collate a Supplier Purchase Matrix Data file;

  - send the file to the Supplier.

3.30.4   Error Handling

None.

3.30.5   Common Processing

NC005 Create File Header

NC007 Update File Log

3.30.6   Volumes

Once per Data Aggregation Run (i.e. 5 per Settlement Day).

3.30.7   Events

SPM file created

3.30.8   Event Frequency

For each GSP Group, once per Supplier with aggregated consumption data for that GSP Group and once for the GSP Group's appointed ISR Agent.

3.30.9   Enquiries

Request to Send SPM Received

3.30.10   Enquiry Frequency

1

3.30.11   Requirements Catalogue Ref.

F33, F36, N09, N10, N2

3.30.12   User Roles

None.

3.30.13   I/O Structures
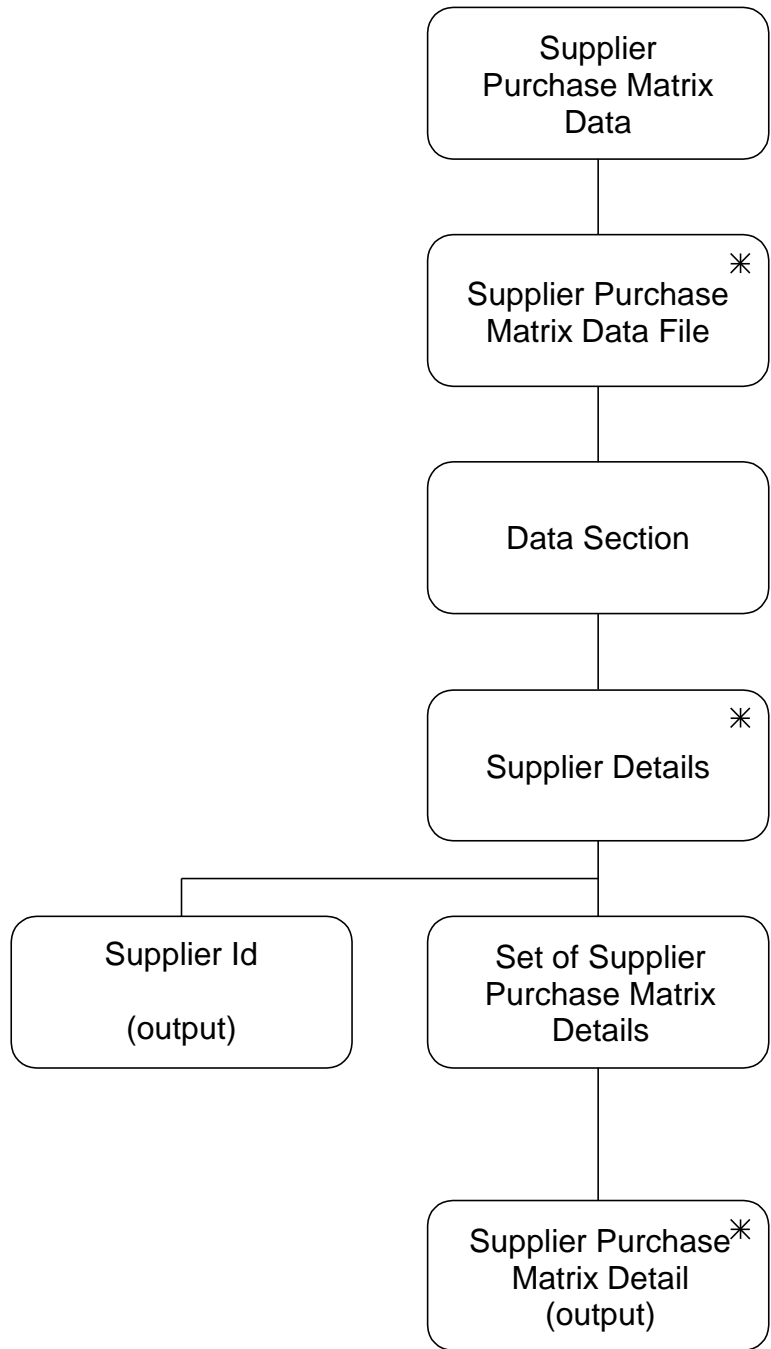
I/O Structure Element	**Data Items**
Supplier Id	Supplier Id
Supplier Purchase Matrix Detail	Profile Class Id
	Distributor Id
	Line Loss Factor Class Id
	Standard Settlement Configuration Id
	Time Pattern Regime Id
	SPM Default EAC MSID Count
	SPM Default Unmetered MSID Count
	SPM Total AA MSID Count
	SPM Total Annualised Advance
	SPM Total EAC
	SPM Total EAC MSID Count
	SPM Total Unmetered Consumption
	SPM Total Unmetered MSID Count

Supplier Id   Supplier Id

3.31   N0027 Browse Exception Data

3.31.1   Function Type

On-line   Enquiry   User initiated

3.31.2   Function Description

This function is invoked by the NHHDA user to browse output data from batch processing. Output files which may be browsed include:

- Supplier Purchase Matrix

- Aggregation Exception Log

- Check Data Collector Data Exception Log

- File Loading Exception Logs

The user selects the type of file required from a pick list and then chooses the file to browse from a pick list of files of that type. Once a file is selected, the user may optionally enter other information as a filter to restrict the number and/or type of records being browsed.

3.31.3   Processing Description

Records matching the selection criteria are displayed.

3.31.4   Error Handling

None

3.31.5   Common Processing

NC006 Restrict On-line Access

3.31.6   Volumes

An indeterminate number of files will be produced on an ad hoc basis.

3.31.7   Events

None

3.31.8   Event Frequency

N/A

3.31.9   Enquiries

Browse Exception Data

3.31.10   Enquiry Frequency

1

3.31.11   Requirements Catalogue Ref.

N12, N13, N14, N17

3.31.12   User Roles

Data Aggregation Administrator

Exception Administrator

System Manager

System Operator

Auditor

3.31.13   I/O Structures

An I/O structure has not been created as it is inappropriate for this function.

3.32 N0028 Report Exception Data

3.32.1 Function Type

On-Line   Enquiry   User initiated

3.32.2 Function Description

This function is invoked by the NHHDA user to report on output data from batch processing. Output files which may be reported include:

- Supplier Purchase Matrix

- Aggregation Exception Log

- Check Data Collector Data Exception Log

- File Loading Exception Logs

The user selects the type of file required from a pick list and then chooses the file to report on from a pick list of files of that type. Once a file is selected, the user may optionally enter other information as a filter to restrict the number and/or type of records being reported.

3.32.3 Processing Description

Records matching the selection criteria are displayed.

3.32.4 Error Handling

None

3.32.5 Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.32.6 Volumes

An indeterminate number of files will be reported on an ad hoc basis.

3.32.7 Events

None

3.32.8 Event Frequency

N/A

3.32.9 Enquiries

Report Exception Data

3.32.10 Enquiry Frequency

1

3.32.11 Requirements Catalogue Ref.

N12, N13, N14, N17, N18, N19, N20, N21

3.32.12 User Roles

Data Aggregation Administrator

Exception Administrator

System Manager

System Operator

Auditor

3.32.13   I/O Structures

An I/O structure has not been created as it is inappropriate for this function.

3.33   N0029 Maintain System Configuration Data

3.33.1   Function Type

On-line   Update   User initiated

3.33.2   Function Description

This function allows the NHHDA user to edit and browse the system configuration data required to run the system.

I/O Structures, window designs and a detailed processing specification are not appropriate to this function because the means of implementation will be decided during Physical Design. This function has been included in order to be consistent with the Logical Data Design, which contains entities for system configuration data.

3.33.3   Processing Description

This process maintains system configuration data needed to run the system.

Data items can be entered and amended for the entities System Configuration, File Locations, Market Role, Instruction Type, Energisation Status and Measurement Class. Note that these last four are present on the database to provide textual descriptions in reporting and browse functions.

3.33.4   Error Handling

N/A

3.33.5   Common Processing

NC002 Update On-Line Audit Log

NC006 Restrict On-line Access

3.33.6   Volumes

Ad hoc

3.33.7   Events

System Configuration Data updated

3.33.8   Event Frequency

1

3.33.9   Enquiries

System Configuration Data Browsed.

3.33.10   Enquiry Frequency

1

3.33.11   Requirements Catalogue Ref.

N22

3.33.12   User Roles

3.33.12.1 Changes to Pool Market Domain Agent

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.33.12.2   Changes to All others

System Manager

System Operator

3.33.13   I/O Structures

I/O Structures are not appropriate for this function as the implementation will be decided during the Physical Design stage.

3.34   N0030 System Initialisation

3.34.1   Function Type

On-line   Update   User initiated

3.34.2   Function Description

This function is invoked as part of installation to provide initial values for the system configuration entities.

I/O Structures are not appropriate to this function because the means of implementation will be decided during Physical Design. This function has been included in order to be consistent with the Logical Data Design, which contains entities for system configuration data.

3.34.3   Processing Description

This process maintains system configuration data needed to run the system.

Data items can be entered for the entities System Configuration, Market Role, File Location, Market Role, Instruction Type, Energisation Status and Measurement Class.

3.34.4   Error Handling

N/A

3.34.5   Common Processing

NC006 Restrict On-line Access

3.34.6   Volumes

Once at system initialisation

3.34.7   Events

System Configuration Data updated

3.34.8   Event Frequency

1

3.34.9   Enquiries

None.

3.34.10   Enquiry Frequency

N/A

3.34.11   Requirements Catalogue Ref.

F1, F5

3.34.12   User Roles

System Operator

3.34.13   I/O Structures

I/O Structures are not appropriate for this function as the implementation will be decided during the Physical Design stage.

3.35   N0031 Instruction File Arrival

3.35.1   Function Type

Batch   Update   System initiated

3.35.2   Function Description

On arrival, a file is checked for validity and the Instructions are loaded for subsequent processing.

3.35.3   Processing Description

Create an Instruction File entry with File Status = "Unprocessed".

Validate and load the file according to NC010 Process Received Instruction File

3.35.4   Error Handling

None.

3.35.5   Common Processing

NC003 Update Batch Audit Log

NC004 Check File Header

NC007 Update File Log

NC010 Process Received Instruction File

3.35.6   Volumes

1 file per PRS Agent per day. Each file may contain anything up to one Instruction per Metering System covered by the PRS Agent (each Metering System appears in an average of 2 files per year).

1 file per day for each Data Collector that is appointed to a Metering System that the Data Aggregator is also appointed to (each Metering System appears in an average of 4 files per year).

3.35.7   Events

Metering System entered

Instruction entered

Instruction File entered

3.35.8   Event Frequency

1 Instruction entered per Instruction found in a valid Instruction File;

1 Metering System entered per non PRS Refresh Instruction entered where the Metering System subject of the Instruction does not already exist;

1 Instruction File updated per file other than when file is not processed because there is an earlier file missing.

3.35.9   Enquiries

Check Metering System Exists

3.35.10   **Enquiry Frequency**

1 per non PRS Refresh Instruction entered

3.35.11   **Requirements Catalogue Ref.**

F5, F11, F14, F17, F25

3.35.12   **User Roles**

None

3.35.13   I/O Structures

```
                                    ┌──────────────┐
                                    │ Instruction  │
                                    │    File      │
                                    └──────┬───────┘
            ┌──────────────────────────────┴──────────────────────────┐
    ┌───────┴────────┐                                        ┌────────┴────────┐
    │  Instruction   │                                        │ Footer Section  │
    │   Section      │                                        │                 │
    └───────┬────────┘                                        │    (input)      │
            │                                                 └─────────────────┘
    ┌───────┴────────┐ *
    │  Instruction   │
    └───────┬────────┘
```

- Instruction Section
  - Instruction *
    - Instruction Sequence Number (input)
    - Subject
      - Metering System Id (input)
      - Distributor Id (input)
    - Significant Date (input)
    - Instruction Type (input)
    - Data Section (depends on Instruction Type)
      - Data Collector Appointment Details
      - Data Aggregator Appointment Details
      - Measurement Class in Registration Details
      - Profile Class/SSC in Registration Details
      - GSP Group Details
      - Energisation Status in Registration Details
      - PRS Refresh
      - Line Loss Factor Class Details
      - EAC/AA & MS Details
- Footer Section (input)

```
                                    ┌─────────────────┐
                                    │ Data Aggregator │
                                    │   Appointment   │
                                    │     Details     │
                                    └────────┬────────┘
      ┌──────────────┬──────────────┬────────┼──────────────┬──────────────┐
┌───────────┐ ┌─────────────┐ ┌─────────────┐ ┌─────────────┐ ┌─────────────┐
│   Set of  │ │ Set of Data │ │    Data     │ │ Measurement │ │  Line Loss  │
│Registrations│ │Aggregator Appo│ │  Collector  │ │Class in Regis-│ │Factor Class│
│           │ │intment Details│ │ Appointment │ │tration Details│ │   Details   │
│           │ │             │ │   Details   │ │             │ │             │
└─────┬─────┘ └──────┬──────┘ └─────────────┘ └─────────────┘ └─────────────┘
      │              │               ┌─────────────┐ ┌─────────────┐ ┌─────────────┐
┌───────────┐* ┌─────────────┐*      │Profile Class /│ │Energisation │ │  GSP Group  │
│           │ │    Data     │        │SSC in Registr-│ │Status in Regis│ │   Details   │
│Registration│ │ Aggregator  │        │ation Details │ │tration Details│ │             │
│           │ │ Appointment │        └─────────────┘ └─────────────┘ └─────────────┘
└─────┬─────┘ └──────┬──────┘
   ┌──┴──┐        ┌──┴──┐
┌────────┐┌────────┐┌────────┐┌────────┐
│Registration││Registration││Registration││  Data  │
│Identifier ││ Details ││Identifier ││Aggregator│
│        ││        ││        ││Appointment│
│ (input) ││ (input) ││ (input) ││ (input) │
└────────┘└────────┘└────────┘└────────┘
```

```
┌──────────────────┐                    ┌──────────────────┐
│ Data Collector   │                    │ Profile Class /  │
│ Appointment      │                    │ SSC in Registr-  │
│ Details          │                    │ ation Details    │
└────────┬─────────┘                    └────────┬─────────┘
         │                                       │
┌────────┴─────────┐ ✳                  ┌────────┴─────────┐ ✳
│ Data Collector   │                    │ Profile Class    │
│ Appointment      │                    │ / SSC in Regis-  │
│ Detail           │                    │ tration Detail   │
└────────┬─────────┘                    └────────┬─────────┘
    ┌────┴────┐                             ┌─────┴─────┐
┌───┴────┐ ┌──┴─────┐                  ┌────┴────┐ ┌────┴─────┐
│Registr-│ │Data    │                  │Registr- │ │Profile   │
│ation   │ │Collector│                 │ation    │ │Class     │
│Identifier││Appointment│               │Identifier││/ SSC Details│
│(input) │ │(input) │                  │(input)  │ │(input)   │
└────────┘ └────────┘                  └─────────┘ └──────────┘
```

```
┌──────────────────┐                    ┌──────────────────┐
│ Measurement      │                    │ Energisation     │
│ Class in Regis-  │                    │ Status in Regis  │
│ tration Details  │                    │ tration Details  │
└────────┬─────────┘                    └────────┬─────────┘
         │                                       │
┌────────┴─────────┐ ✳                  ┌────────┴─────────┐ ✳
│ Measurement      │                    │ Energisation     │
│ Class in Regis-  │                    │ Status in Regi-  │
│ tration Detail   │                    │ stration Detail  │
└────────┬─────────┘                    └────────┬─────────┘
    ┌────┴────┐                             ┌─────┴─────┐
┌───┴────┐ ┌──┴─────┐                  ┌────┴────┐ ┌────┴─────┐
│Registr-│ │Measurement│               │Registr- │ │Energistation│
│ation   │ │Class     │               │ation    │ │Status    │
│Identifier││Details  │               │Identifier││Details   │
│(input) │ │(input)  │               │(input)  │ │(input)   │
└────────┘ └────────┘                  └─────────┘ └──────────┘
```

```
                                        ┌──────────────────┐
                                        │   PRS Refresh    │
                                        └────────┬─────────┘
                                                 │
                                        ┌────────┴─────────┐ ✳
                                        │ Metering System  │
                                        │ Information       │
                                        └────────┬─────────┘
┌──────────┐ ┌──────────┐                   ┌────┴────┐
│GSP Group │ │Line Loss │              ┌─────┴─────┐ ┌────┴──────┐
│Details   │ │Factor Class│            │Metering   │ │Data Aggregator│
│          │ │Details   │              │System ID  │ │Appointment│
└────┬─────┘ └────┬─────┘              │(input)    │ │Details    │
     │ ✳          │ ✳                  └───────────┘ └───────────┘
┌────┴─────┐ ┌────┴─────┐
│GSP Group │ │Line Loss Fact-│
│Details   │ │or Class Detail│
│(input)   │ │(input)   │
└──────────┘ └──────────┘
```

```
                              ┌─────────────────┐
                              │   EAC/AA & MS   │
                              │     Details     │
                              └─────────────────┘
        ┌──────────────┬──────────────┬──────────────┬──────────────┐
┌───────────────┐ ┌───────────────┐ ┌──────────┐ ┌───────────────┐ ┌───────────────┐
│ Set of Annual │ │ Set of        │ │ Set of   │ │ Set of Measure-│ │ Set of Energis-│
│ Advances      │ │ Estimated Annu-│ │Registrations│ │ ment Classes  │ │ ation Statuses │
└───────────────┘ │ al Consumptions│ └──────────┘ └───────────────┘ └───────────────┘
                  └───────────────┘
┌───────────────┐* ┌───────────────┐* ┌──────────┐* ┌───────────────┐* ┌───────────────┐*
│ Annualised    │ │ Estimated     │ │Registration│ │ Measurement   │ │ Energisation  │
│ Advance Details│ │ Annual Consump-│ │          │ │ Class Details │ │ Status Details│
│               │ │ tion Details  │ │ (input)  │ │ (input)       │ │ (input)       │
└───────────────┘ └───────────────┘ └──────────┘ └───────────────┘ └───────────────┘
   ┌──────┴──────┐     ┌──────┴──────┐
┌───────────┐ ┌─────────┐ ┌───────────┐ ┌─────────┐
│Meter Advance│ │Set of   │ │EAC Effective│ │Set of   │
│Period     │ │Settlem- │ │From Settlement│ │Settlem- │
│(input)    │ │ent Registers│ │Date      │ │ent Registers│
└───────────┘ └─────────┘ │(input)   │ └─────────┘
                          └───────────┘
              ┌───────────┐*            ┌───────────┐*
              │Settlement Reg-│          │Settlement Reg-│
              │ister Details│            │ister Details│
              └───────────┘            └───────────┘
            ┌──────┴──────┐          ┌──────┴──────┐
    ┌───────────┐ ┌───────────┐ ┌───────────┐ ┌───────────┐
    │Time Pattern│ │Annualised│ │Time Pattern│ │Estimated Annu-│
    │Regime Id  │ │Advance   │ │Regime Id  │ │al Consumption│
    │(input)    │ │(input)   │ │(input)    │ │(input)    │
    └───────────┘ └───────────┘ └───────────┘ └───────────┘

                  ┌───────────────┐      ┌───────────────┐
                  │Set of Profile │      │Set of GSP     │
                  │Class / SSCs   │      │Groups         │
                  └───────────────┘      └───────────────┘
                  ┌───────────────┐*     ┌───────────────┐*
                  │Profile Class  │      │GSP Group      │
                  │/ SSC Details  │      │Details        │
                  │(input)        │      │(input)        │
                  └───────────────┘      └───────────────┘
```

I/O Structure Element	Data Items
Annualised Advance	Annualised Advance
Data Aggregation Appointment	Data Aggregator Id
	X DAA Effective From Settlement Date {DAA}
	Y Data Aggregator Appointment Effective To Settlement Date {DAA}
Data Collector Appointment	Data Collector Id
	Effective From Date {DCA}
Distributor Id	Distributor Id
EAC Effective From Settlement Date	X EACDC Effective From Settlement Date {EACDC}
Energisation Status Details	Energisation Status
	X MSES Effective From Settlement Date {MSES}
Estimated Annual Consumption	Estimated Annual Consumption
Footer Section	Record Count
	Check Sum
	End
GSP Group Details	GSP Group Id
	X MSGG Effective From Settlement Date {MSGG}
Instruction Sequence Number	Instruction Sequence Number
Instruction Type	Instruction Type
Line Loss Factor Class Detail	Distributor Id
	Line Loss Factor Class Id
	X MSLLFC Effective From Settlement Date {MSLLFC}
Measurement Class Details	Measurement Class Id
	X MSMC Effective From Settlement Date {MSMC}
Meter Advance Period	X MACDC Effective From Settlement Date {MACDC}
	Y MACDC Effective To Settlement Date {MACDC}
Metering System Id	Metering System Id

Profile Class / SSC Details	Profile Class Id
	X MSPC Effective From Settlement Date {MSPC}
	Standard Settlement Configuration Id
	X SCON Effective From Settlement Date {SCON}
Registration Details	Supplier Id
Registration Identifier	X REGI Effective From Settlement Date {REGI}
Significant Date	Significant Date
Time Pattern Regime Id	Time Pattern Regime Id

3.36   N0032 Process Instructions

3.36.1   Function Type

Batch   Update   System initiated

3.36.2   Function Description

Process all Instructions which do not have Instruction Type "PRS Refresh" and which have either:

- Instruction Status = "Unprocessed";

- or Reprocess Flag = true

Where there is more than one Instruction to process with the same Metering System as subject and from the same source, the Instructions must be processed in Instruction Sequence order.

Processing a single Instruction constitutes a success unit (apart from refresh instructions where processing of each Metering System within the refresh is a success unit).

3.36.3   Processing Description

This description relates to non-refresh instructions. Note that refresh processing does, however, utilise the validation, apply and supersede rules as described below.

Note that N0031 Instruction File Arrival has already checked that Instructions have an Instruction Type appropriate to the Instruction source role. Also note that all Instructions are validated before they are applied.

- Set the Last Process Date-Time to system date-time

- If Reprocess Flag = true then

  - set Reprocess Flag = false

  - delete any Instruction Status Reasons for the current Instruction.

- Validate each Instruction as described in Validation of Instructions.

- If any check fails, set the Instruction Status to "Failed" and do not process the Instruction.

- Apply each Instruction as described in Apply Instructions.

  - Set the Instruction Status to "Applied".

- Carry out the procedure described in Supersede Instructions.

3.36.3.1   Validation of Instructions

Note: The codes indicated within square brackets are used to record failure reasons. They do not form part of logical design but are included as an aid to users.

- Establish the Distribution Business associated with the Instruction:

  If the Instruction is PRS Refresh
  - the Distribution Business which is the subject of the Instruction;

  otherwise,
  - the Distribution Business identified by the Distributor Short Code embedded within the Metering System Id.

- If the Instruction is from a PRS Agent:

  - Check that the source PRS Agent is appointed to that Distribution Business [20] [NVZ].

    If not, enter an Instruction Status Reason and set the Instruction Status to "Failed" and do not process the Instruction further.

  - Establish the 'Control Date' as follows

    If there is a Data Aggregator Appointment for the Metering System on the database which starts before the Significant Date and is open-ended or ends on or after the Significant Date then the Control Date is the Significant Date.

    Otherwise, establish the Effective To Settlement Date of the latest Data Aggregator Appointment for the Metering System which is before the Significant Date. The Control Date is the day after this. If no date is determined, the Control Date is taken as 1 January 1901.

  - Establish the 'Reference Date' as follows

    If Instruction is Data Aggregator Appointment or PRS Refresh, set Reference Date to the Effective From Settlement Date of earliest Data Aggregator Appointment in the Instruction for the Metering System, or to Significant Date if that is later.

    Otherwise, if there is a Data Aggregator Appointment on the database for the Metering System which spans the Significant Date, set Reference Date to Significant Date; otherwise set to

---

[20] The Distribution Business is identified from its short code, which is represented by the first two digits of the Metering System ID.

Effective From Settlement Date of earliest Data Aggregator Appointment on the database for the Metering System which starts after the Significant Date.

If no Reference Date can be identified from the above rules, set Reference Date to 0.

- Set the 'Reference Registration Date' to the Registration Start Date for the Data Aggregator Appointment used to determine the Reference Date above (or 0 if Reference Date is 0).

- If the Instruction is from a Data Collector:

  - Establish the 'Control Date' as follows (only data from the same Data Collector as the Instruction is considered).

    If there is a Meter Advance Period for the Metering System on the database which starts before the Significant Date and which ends on or after the Significant Date then the Control Date is the Significant Date.

    Otherwise, establish the Effective To Settlement Date of the latest Meter Advance Period for the Metering System which is before the Significant Date; establish the Effective From Settlement Date of the latest EAC which starts before the Significant Date. The Control Date is the day after the later of the two dates determined. If no date is determined, the Control Date is taken as 1 January 1901.

  - Establish the 'Reference Date' as follows.

    Set Reference Date to the earliest Effective From Settlement Date of any consumption (EAC or AA) in the Instruction for the Metering System, or to Significant Date if that is later.

    If no consumption appears in the Instruction, set Reference Date to 0.

- Carry out the validation checks described in the following sub-sections.

  - For each check that fails, enter an Instruction Status Reason;

  - If any check has failed, set the Instruction Status to "Failed" and do not process the Instruction.

It should be noted that where data has been archived from the system, then the instruction can not be validated against this data. The following logic is used when processing the records of instructions in comparison with the database archive date (it should be noted that data can be archived up to and including the archive date):

For each data item in an instruction:

- Ignore all data group items with an effective to settlement date prior to or equal to the archive date

- Where records have no effective to settlement date, ignore all data group items prior to or on the archive date, except for the last one (as this crosses the archive date)

- Process the Data Aggregation Appointment data group items that cross the archive date as follows:

  - if the significant date of the instruction is prior to or equal to the archive date, then perform no validation check on the effective from settlement date for the data group item

  - if the significant date for the instruction is after the archive date, then perform validation check on the effective from date of the data group item

- Process the Data Collector Appointment data group items that cross the archive date as follows:

  - check both the value and the effective from date

- Process the AA records and EAC records that cross the archive date as follows:

  - check both the value and the effective from date

- Process other data items that cross the archive date as follows

  - if the control date is on or before the instruction data item effective from date then perform no validation on the value or the effective from date

  - otherwise

    - if the instruction data item effective from date is before the first database data item effective from date and this database effective from date is on or after the control date then perform no validation on the value

    - if the instruction data item effective from date is before the first database data item effective from date and this database effective from date is on or before the day after the archive date then perform no validation on the effective from date

    - otherwise check both the value and the effective from date

It should be noted that the following validation of records still takes place irrespective of archive date:

- where a record contains both effective from and effective to dates, the record is checked that the effective from date is prior to or equal to the effective to date

- for energisation records the value of energised or de-energised is checked

- for measurement class records the value of metered or un-metered is checked

- where an instruction contains more than one record of the same type the uniqueness of dates is still checked

- only one record of each type may have an effective from date prior to the significant date

3.36.3.1.1 Validation of Data Aggregator Appointment Details

If the Instruction only contains a "Data Aggregator Appointment Details" and the Effective To Settlement Date in the Instruction is equal to the Significant Date and that the Data Aggregation Appointment already exists on the system with no end date (ie. this is a special case DAA)

- check that the Effective From Settlement Date is less than or equal to the Effective To Settlement Date [NXA];

- check that the Registration already exists on the system with no end date [NRA]

- check that the Data Aggregation Appointment Effective From Date is not before the corresponding Registration Effective From date [NEB]

- Validation of the Instruction is complete.

If the Instruction is a "PRS Refresh"

- check that the Distribution Business identified by the Distributor Short Code embedded within the Metering System Id is the subject of the Refresh Instruction [N0W].

If the Instruction is "Data Aggregator Appointment Details" or for each "Data Aggregator Appointment Details" section of "PRS Refresh":

- for each Registration

  - check that the Supplier Id is valid [NIR];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2R];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMR];

  - check that if Reference Date is not 0, there is a Registration with Effective From Settlement Date on or before Reference Date [NZR];

  - check that each item in the set has a unique Effective From Settlement Date [NDR];

- for each Data Aggregator Appointment Details

  - check that the Effective From Settlement Date is less than or equal to the Effective To Settlement Date [NXA];

  - check that no appointments overlap [NOA];

- check that the Registration Identifier is that of a Registration contained within the Instruction [NRA];

- check that the item has an Effective From Settlement Date later than or equal to the Effective From Settlement Date of the Registration [NEB] and an Effective To Settlement Date earlier than the Effective From Settlement Date of any subsequent Registration [NAA];

- check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then the item already exists on the system [NMA] with an Effective To Settlement Date later than or equal to the Significant Date (but not necessarily the same as that in the item) [NCA] and all other items have an Effective From Settlement Date later than the Significant Date [covered by NCA and NOA];

- check that the item has an Effective To Settlement Date later than or equal to the Significant Date [NEA];

- check that each item in the set has a unique Effective From Settlement Date [covered by NOA];

- check that if a Data Aggregator Appointment exists with an Effective From Settlement Date before the Significant Date and an Effective To Settlement Date on or after the Significant Date then this appointment is included in the Instruction [NZA];

- check that after applying the Instruction each Registration in the Instruction will have a Data Aggregator Appointment [NNR];

- for each Data Collector Appointment Details:

  - check that the Data Collector Id is valid [NIC];

  - check that the Registration Identifier is that of a Registration contained within the Instruction, or that it is of one which already exists on the system with an Effective From Settlement Date earlier than the Significant Date [NRC];

  - check that the item has an Effective From Date later than or equal to the Effective From Settlement Date of the Registration [NEC];

  - check that if any item in the set has an Effective From Date earlier than the Significant Date then all other items for the same Registration have an Effective From Date later than the Significant Date [N2C];

  - check that if Reference Date is not 0, there is a Data Collector Appointment for the Reference Registration Date with Effective From Date on or before Reference Date [NZC];

  - if Effective From Date of the Data Collector Appointment is before the Significant Date and is for a Registration which was on the database before starting to process this instruction, check that the Data Collector Appointment is already on the database

and is the latest Data Collector Appointment already on the database before the Significant Date for the Registration [NMC];

- check that each item in the set for the same Registration has a unique Effective From Date [NDC];

- check that after applying the Instruction each Registration will have a Data Collector Appointment with an Effective From Date on or before the earliest Effective From Settlement Date of any Data Aggregator Appointment for the Registration [NSC];

- for each Profile Class/SSC Details:

  - check that the Profile Class Id [NIP] and SSC Id [NIS] are valid;

  - check that there is an existing entry in Valid Settlement Configuration/Profile Class for the item [NVP];

  - check that the Registration Identifier is that of a Registration contained within the Instruction [NRP];

  - check that the item has an Effective From Settlement Date later then or equal to the Effective From Settlement Date of the Registration [NEP] and earlier than any subsequent Registration [NAP];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2P];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMP];

  - check that each item in the set has a unique Effective From Settlement Date [NDP];

  - check that if Reference Date is not 0, there is a Profile Class/SSC with Effective From Settlement Date on or before Reference Date [NZP];

  - check that after applying the Instruction each item in the set will be effective on at least one Settlement Date for which there is a Data Aggregator Appointment [NNP].

- check that after applying the Instruction, for each Settlement Date included in a Data Aggregator Appointment, the Metering System will have a Profile Class/SSC [NSP];

- for each Measurement Class Details:

  - check that the Measurement Class is valid [NIM];

  - check that the Registration Identifier is that of a Registration contained within the Instruction [NRM];

- check that the item has an Effective From Settlement Date later than or equal to the Effective From Settlement Date of the Registration [NEM] and earlier than any subsequent Registration [NAM];

- check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2M];

- check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMM];

- check that each item in the set has a unique Effective From Settlement Date [NDM];

- check that if Reference Date is not 0, there is a Measurement Class with Effective From Settlement Date on or before Reference Date [NZM];

- check that after applying the Instruction each item in the set will be effective on at least one Settlement Date for which there is a Data Aggregator Appointment [NNM].

- check that after applying the Instruction, for each Settlement Date included in a Data Aggregator Appointment, the Metering System will have a Measurement Class [NSM];

- for each Energisation Status Details:

  - check that the Energisation Status is valid [NIE];

  - check that the Registration Identifier is that of a Registration contained within the Instruction [NRE];

  - check that the item has an Effective From Settlement Date later than or equal to the Effective From Settlement Date of the Registration [NEE] and earlier than any subsequent Registration [NAE];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2E];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NME];

  - check that each item in the set has a unique Effective From Settlement Date [NDE];

  - check that if Reference Date is not 0, there is an Energisation Status with Effective From Settlement Date on or before Reference Date [NZE];

- check that after applying the Instruction each item in the set will be effective on at least one Settlement Date for which there is a Data Aggregator Appointment [NNE].

- check that after applying the Instruction, for each Settlement Date included in a Data Aggregator Appointment, the Metering System will have an Energisation Status [NSE];

- for each Line Loss Factor Class:

  - check that the Distributor Id is valid [N0W];

  - check that the Line Loss Factor Class Id is valid for the Distributor [NIL];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2L];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NML];

  - check that each item in the set has a unique Effective From Settlement Date [NDL];

  - check that if Reference Date is not 0, there is a Line Loss Factor Class with Effective From Settlement Date on or before Reference Date [NZL];

  - check that after applying the Instruction each item in the set will be effective on at least one Settlement Date for which there is a Data Aggregator Appointment [NNL].

- check that after applying the Instruction, for each Settlement Date included in a Data Aggregator Appointment, the Metering System will have a Line Loss Factor Class [NSL];

- for each GSP Group Details:

  - check that the GSP Group Id is valid [NIG];

  - check that the GSP Group is appointed to the Instruction's associated Distribution Business on the Effective From Settlement Date for the item providing it is within a DAA [NVG]. If the Effective From Settlement Date is outside a DAA then check the GSP Group is appointed to the Distribution Business on the Effective From Date of the DAA. - NOTE: An NVZ will be produced when an NVG is produced;

  - check that the GSP Group is appointed to the Instruction's associated Distribution Business on the notional Effective To Settlement Date[21] for the item providing it is within a DAA

---

[21] The notional Effective To Settlement Date is the day before the next Effective From Settlement Date (or the Oracle Max Date)

[NVG]]. If the Effective To Settlement Date is outside a DAA then check the GSP Group is appointed to the Distribution Business on the Effective To Date of the DAA. - NOTE: An NVZ will be produced when an NVG is produced;

- check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2G];

- check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMG];

- check that each item in the set has a unique Effective From Settlement Date [NDG];

- check that if Reference Date is not 0, there is a GSP group with Effective From Settlement Date on or before Reference Date [NZG];

- check that after applying the Instruction each item in the set will be effective on at least one Settlement Date for which there is a Data Aggregator Appointment [NNG].

- check that after applying the Instruction, for each Settlement Date included in a Data Aggregator Appointment, the Metering System will have a GSP Group [NSG].

- check that after applying the Instruction, for each Settlement Date within a Data Aggregator Appointment there will be an AFYC for the SSC/PC/GSP Group combination of the Metering System on that date [NIA].

3.36.3.1.2   Validation of Data Collector Appointment Details

If the Instruction is "Data Collector Appointment Details":

- for each Data Collector Appointment Details:

  - check that the Data Collector Id is valid [NIC];

  - check that the Registration Identifier is that of a Registration which exists on the system [NRC];

  - check that the item has an Effective From Date later than or equal to the Effective From Settlement Date of the Registration [NEC];

  - check that if any item in the set has an Effective From Date earlier than the Significant Date then all other items for the same Registration have an Effective From Date later than the Significant Date [N2C];

  - check that if Reference Date is not 0, there is a Data Collector Appointment for the Reference Registration Date with Effective From Date on or before Reference Date [NZC];

- if Effective From Date of the Data Collector Appointment is before the Significant Date, check that the Data Collector Appointment is already on the database and is the latest Data Collector Appointment already on the database before the Significant Date for the Registration [NMC];

  - check that each item in the set for the same Registration has a unique Effective From Date [NDC];

- check that after applying the Instruction each Registration will have a Data Collector Appointment [NSC].

3.36.3.1.3   Validation of Profile Class/SSC Details

If the Instruction is "Profile Class/SSC Details":

- for each Profile Class/SSC Details:

  - check that the Profile Class Id [NIP]and SSC Id [NIS] are valid;

  - check that there is an existing entry in Valid Settlement Configuration/Profile Class for the item [NVP];

  - check that the Registration Identifier is that of a Registration which exists on the system [NRP];

  - check that the item has an Effective From Settlement Date later than or equal to the Effective From Settlement Date of the Registration [NEP] and earlier than any subsequent Registration [NAP];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2P];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMP];

  - check that each item in the set has a unique Effective From Settlement Date [NDP];

  - check that if Reference Date is not 0, there is a Profile Class/SSC with Effective From Settlement Date on or before Reference Date [NZP];

  - check that each item in the set will be effective on at least one Settlement Date for which there is a Data Aggregator Appointment [NNP].

- check that after applying the Instruction, for each Settlement Date included in a Data Aggregator Appointment, the Metering System will have a Profile Class/SSC [NSP] and an AFYC for the Profile Class/SSC/GSP Group combination of the Metering System on that date [NIA].

3.36.3.1.4 Validation of Measurement Class Details

If the Instruction is "Measurement Class Details":

- for each Measurement Class Details:

  - check that the Measurement Class is valid [NIM];

  - check that the Registration Identifier is that of a Registration which exists on the system [NRM];

  - check that the item has an Effective From Settlement Date later than or equal to the Effective From Settlement Date of the Registration [NEM] and earlier than any subsequent Registration [NAM];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2M];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMM];

  - check that each item in the set has a unique Effective From Settlement Date [NDM];

  - check that if Reference Date is not 0, there is a Measurement Class with Effective From Settlement Date on or before Reference Date [NZM];

  - check that each item in the set will be effective on at least one Settlement Date for which there is a Data Aggregator Appointment [NNM].

- check that after applying the Instruction, for each Settlement Date included in a Data Aggregator Appointment, the Metering System will have a Measurement Class [NSM].

3.36.3.1.5 Validation of Energisation Status Details

If the Instruction is "Energisation Status Details":

- for each Energisation Status Details:

  - check that the Energisation Status is valid [NIE];

  - check that the Registration Identifier is that of a Registration which exists on the system [NRE];

  - check that the item has an Effective From Settlement Date later than or equal to the Effective From Settlement Date of the Registration [NEE] and earlier than any subsequent Registration [NAE];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other

items have an Effective From Settlement Date later than the Significant Date [N2E];

- check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NME];

- check that each item in the set has a unique Effective From Settlement Date [NDE];

- check that if Reference Date is not 0, there is an Energisation Status with Effective From Settlement Date on or before Reference Date [NZE];

- check that each item in the set will be effective on at least one Settlement Date for which there is a Data Aggregator Appointment [NNE].

- check that after applying the Instruction, for each Settlement Date included in a Data Aggregator Appointment, the Metering System will have an Energisation Status [NSE].

3.36.3.1.6 Validation of Line Loss Factor Class Details

If the Instruction is "Line Loss Factor Class Details":

- for each Line Loss Factor Class:

  - check that the Distributor Id is valid [N0W];

  - check that the Line Loss Factor Class Id is valid for the Distributor [NIL];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2L];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NML];

  - check that each item in the set has a unique Effective From Settlement Date [NDL];

  - check that if Reference Date is not 0, there is a Line Loss Factor Class with Effective From Settlement Date on or before Reference Date [NZL];

  - check that each item in the set will be effective on at least one Settlement Date for which there is a Data Aggregator Appointment [NNL].

- check that after applying the Instruction, for each Settlement Date included in a Data Aggregator Appointment, the Metering System will have a Line Loss Factor Class [NSL].

3.36.3.1.7 Validation of GSP Group Details

If the Instruction is "GSP Group Details":

- for each GSP Group Details:

  - check that the GSP Group Id is valid [NIG];

  - check that the GSP Group is appointed to the Instruction's associated Distribution Business on the Effective From Settlement Date for the item [NVG] - NOTE: An NVZ will be produced;

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2G];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMG];

  - check that each item in the set has a unique Effective From Settlement Date [NDG];

  - check that if Reference Date is not 0, there is a GSP group with Effective From Settlement Date on or before Reference Date [NZG];

  - check that each item in the set will be effective on at least one Settlement Date for which there is a Data Aggregator Appointment [NNG].

- check that after applying the Instruction, for each Settlement Date included in a Data Aggregator Appointment, the Metering System will have a GSP Group [NSG] and an AFYC for the Profile Class/SSC/GSP Group combination of the Metering System on that date [NIA].

3.36.3.1.8 Validation of EAC/AA & MS Details Instruction

If the Instruction is "EAC/AA & MS Details":

- In the following checks, only data provided by the same Data Collector is considered;

- Check that after applying the Instruction there will be an association with each of the following with an Effective From Settlement Date earlier than or equal to the earliest Effective From Settlement Date of any set of AAs or EACs for the Metering System:

  - Registration [NFR],

  - Profile Class [NFP],

  - Standard Settlement Configuration [NFP],

  - Measurement Class [NFM],

- Energisation Status [NFE],

- GSP Group [NFG].

- check that none of the following change during a Meter Advance Period:

  - Standard Settlement Configuration [NCS],

  - Energisation Status [NCE],

  - Registration [NCR],

  - Measurement Class [NCM].

- If there is an existing Meter Advance Period with an Effective From Settlement Date before the Significant Date and an Effective To Settlement Date on or after the Significant Date this Meter Advance Period is included in the Instruction (with the same Effective To Settlement Date, AA and for the same set of Time Pattern Regime Ids) [NZX].

- check that after applying the Instruction, for each Settlement Date within a Data Aggregator Appointment there will be an AFYC for the SSC/PC/GSP Group combination of the Metering System on that date [NIA].

- For each Annual Advance Details:

  - check that the Effective To Settlement Date of the Meter Advance Period is on or after the Significant Date [NEX];

  - check that the Effective To Settlement Date is on or before the Effective From Settlement Date [NXX];

  - check that no Meter Advance Periods overlap [NOX];

  - if any Meter Advance Period in the set has an Effective From Settlement Date earlier than the Significant Date then the item already exists on the system [NMX] and all other items have an Effective From Settlement Date later than the Significant Date [covered by NEX and NOX];

  - check that each item in the set has a unique Effective From Settlement Date [covered by NOX];

  - check that each set of Settlement Registers contains the set of Time Pattern Regimes associated with the Metering System's Standard Settlement Configuration [NTV, NTX, NUX].

  - check that the AA values are within the boundary values defined in the system_parameter table. The system_parameter table is defined in the system management guide.

- For each Estimated Annual Consumption Details:

  - if any EAC Effective From Settlement Date in the set is earlier than the Significant Date then the item already exists on the system [NMY] and all other items have an EAC Effective From Settlement Date later than the Significant Date [N2Y];

- check that each item in the set has a unique Effective From Settlement Date [NDY];

- check that each set of Settlement Registers contains the set of Time Pattern Regimes associated with the Metering System's Standard Settlement Configuration [NTW, NTY, NUY].

- check that the EAC values are within the boundary values defined in the system_parameter table. The system_parameter table is defined in the system management guide

- For each Set of Registrations:

  - check that the Supplier Id is valid [NIR];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2R];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMR];

  - check that if Reference Date is not 0, there is a Registration with Effective From Settlement Date on or before Reference Date [NZR];

  - check that each item in the set has a unique Effective From Settlement Date [NDR].

- For each Set of Profile Class / SSCs:

  - check that the Profile Class Id [NIP] and SSC Id [NIS] are valid;

  - check that there is an existing entry in Valid Settlement Configuration/Profile Class for the item [NVP];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2P];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMP];

  - check that if Reference Date is not 0, there is a Profile Class/SSC with Effective From Settlement Date on or before Reference Date [NZP];

  - check that each item in the set has a unique Effective From Settlement Date [NDP].

- For each Set of Measurement Classes:

  - check that the Measurement Class is valid [NIM];

- check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2M];

- check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMM];

- check that if Reference Date is not 0, there is a Measurement Class with Effective From Settlement Date on or before Reference Date [NZM];

- check that each item in the set has a unique Effective From Settlement Date [NDM].

- For each Set of Energisation Status:

  - check that the Energisation Status is valid [NIE];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2E];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NME];

  - check that if Reference Date is not 0, there is a Energisation Class with Effective From Settlement Date on or before Reference Date [NZE];

  - check that each item in the set has a unique Effective From Settlement Date [NDE].

- For each Set of GSP Groups:

  - check that the GSP Groups Id is valid [NIG];

  - check that the GSP Group is appointed to the Instruction's associated Distribution Business on the Effective From Settlement Date for the item [NVG];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Significant Date then all other items have an Effective From Settlement Date later than the Significant Date [N2G];

  - check that if any item in the set has an Effective From Settlement Date earlier than the Control Date then it matches the latest data already on the database before the Control Date [NMG];

  - check that if Reference Date is not 0, there is a GSP Group with Effective From Settlement Date on or before Reference Date [NZG];

- check that each item in the set has a unique Effective From Settlement Date [NDG].

3.36.3.2   Apply Instructions

Note that if any of the validation checks for a non-refresh Instruction fail it is not applied; similarly if any of the validation checks for a Metering System within a refresh instruction fail then changes to that Metering System are not applied.

Data with an effective to settlement date prior to the archive date or a notional effective to settlement date prior to the archive date is not written to the database, with the exception of Data Collector Appointments. (A notional effective to settlement date is where another record of the same type within the instruction has a later effective from settlement date, hence effectively terminating the first record.) All Data Collector Appointment Details for the Data Aggregation Appointment that crosses the archive date are written to the database as Data Collector Appointments are not terminated by a later appointment.

3.36.3.2.1 Apply Data Aggregator Appointment Details

If the Instruction is "Data Aggregator Appointment Details" and the instruction contains only a Data Aggregator Appointment with Start Date and End Date, and that Data Aggregator Appointment is open ended on the database:

- Set the End Date of the Appointment

- Delete all occurrences of the following data items with Effective From Settlement Date later than the Significant Date.

  - Metering System Profile Class,

  - Settlement Configurations,

  - Metering System Measurement Class,

  - Metering System Energisation Status,

  - Metering System Line Loss Factor Class and

  - Metering System GSP Group.

- Processing on the Instruction is complete.

If the Instruction is "Data Aggregator Appointment Details" or for each "Data Aggregator Appointment Details" section of "PRS Refresh":

- Delete all Data Aggregator Appointments for the Metering System which span or begin on or after the Significant Date.

- Delete all Registrations which span or begin on or after the Significant Date and which do not overlap an existing Data Aggregator Appointment.

- Delete all Data Collector Appointments for that Registration which begin on or after the Significant Date.

- Delete all occurrences of the following data items which begin on or after the earliest of the Significant Date or the earliest effective from date of the data item.

  - Metering System Profile Class,

  - Settlement Configurations,

  - Metering System Measurement Class,

  - Metering System Energisation Status,

  - Metering System Line Loss Factor Class and

  - Metering System GSP Group.

- Delete all Data Collector Appointments for the Metering System which begin on or after the Significant Date.

For each Registration in the Instruction which does not already exist

- Insert Registration

For each Data Aggregator Appointment in the Instruction which does not already exist

- Insert Data Aggregator Appointment

For each Data Collector Appointment in the Instruction which does not already exist

- Insert Data Collector Appointment

For each Profile Class in the Instruction

- Insert Metering System Profile Class

For each SSC in the Instruction

- Insert Settlement Configuration

For each Measurement Class in the Instruction

- Insert Metering System Measurement Class

For each Energisation Status in the Instruction exist

- Insert Metering System Energisation Status

For each Line Loss Factor in the Instruction

- Insert Metering System Line Loss Factor Class

For each GSP Group in the Instruction

- Insert Metering System GSP Group

If the Metering System is now without any details

- Delete the Metering System

3.36.3.2.2 Apply Data Collector Appointment Details

If the Instruction is "Data Collector Appointment Details":

Delete all occurrences of Data Collector Appointment with Effective From Date on or after the Significant Date

For each Data Collector Appointment in the Instruction which does not already exist

- Insert Data Collector Appointment

3.36.3.2.3 Apply Profile Class/SSC Details

If the Instruction is "Profile Class/SSC Details":

Delete all occurrences of Metering System Profile Class which begin on or after the earliest of the Significant Date or the earliest effective from date of Metering System Profile Class in this instructions.

Delete all occurrences of Settlement Configuration which begin on or after the earliest of the Significant Date or the earliest effective from date of Settlement Configuration in this instructions.

For each Profile Class in the Instruction

- Insert Metering System Profile Class

For each SSC in the Instruction

- Insert Settlement Configuration

3.36.3.2.4 Apply Measurement Class Details

If the Instruction is "Measurement Class Details":

Delete all occurrences of Metering System Measurement Class which begin on or after the earliest of the Significant Date or the earliest effective from date of Metering System Measurement Class in this instructions.

For each Measurement Class in the Instruction

- Insert Metering System Measurement Class

3.36.3.2.5 Apply Energisation Status Details

If the Instruction is "Energisation Status Details":

Delete all occurrences of Metering System Energisation Status which begin on or after the earliest of the Significant Date or the earliest effective from date of Metering System Energisation Status in this instructions.

For each Energisation Status in the Instruction

- Insert Metering System Energisation Status

3.36.3.2.6 Apply Line Loss Factor Class Details

If the Instruction is "Line Loss Factor Class Details":

Delete all occurrences of Metering System Line Loss Factor Class which begin on or after the earliest of the Significant Date or the earliest effective from date of Metering System Line Loss Factor Class in this instructions.

overlap a Data Aggregator Appointment prior to the Significant Date

For each Line Loss Factor Class in the Instruction

- Insert Metering System Line Loss Factor Class

3.36.3.2.7 Apply GSP Group Details

If the Instruction is "GSP Group Details":

Delete all occurrences of Metering System GSP Group which begin on or after the earliest of the Significant Date or the earliest effective from date of Metering System GSP Group in this instructions.

For each GSP Group in the Instruction

- Insert Metering System GSP Group

3.36.3.2.8 Apply EAC/AA & MS Details

If the Instruction is "EAC/AA & MS Details":

- Delete all occurrences of the following data items for the Metering System which are active on or start on or after the Significant Date.
  - Meter Advance Consumption(DC),
  - Estimated Annual Consumption(DC)
- Delete all occurrences of the following data items which begin on or after the earliest of the Significant Date or the earliest effective from date of the data item.
  - Metering System Profile Class (DC)
  - Settlement Configuration (DC)
  - Metering System Measurement Class (DC)
  - Metering System Energisation Status (DC)
  - Registration (DC)
  - Metering System GSP Group (DC)
- For each AA in the Instruction which does not already exist
  - For each Settlement Register in the set of Settlement Registers which does not already exist
    - Insert Settlement Register (DC)
  - Insert Meter Advance Consumption (DC)
- For each EAC in the Instruction which does not already exist
  - For each Settlement Register in the set of Settlement Registers which does not already exist
    - Insert Settlement Register (DC)
  - Insert Estimated Annual Consumption (DC)
- For each Registration in the Instruction
  - Insert Registration (DC)
- For each Profile Class in the Instruction

- Insert Metering System Profile Class (DC)

- For each SSC in the Instruction

  - Insert Settlement Configuration (DC)

- For each Measurement Class in the Instruction

  - Insert Metering System Measurement Class

- For each GSP Group in the Instruction which does not already exist

  - Insert Metering System GSP Group (DC)

- For each Energisation Status in the Instruction

  - Insert Metering System Energisation Status (DC)

If the Metering System is now without any details

- delete the Metering System

3.36.3.3   Supersede Instructions

When applying a Refresh Instruction, the following processing is carried out for each Metering System which is updated by the Instruction as if a Data Aggregator Appointment Instruction had been successfully applied for that Metering System (this applies to all Metering Systems updated by refresh processing whether or not actually mentioned in the Instruction).

The Instruction Status of Instructions with an Instruction Status = "Failed" or Instruction Status = "Discarded" will be updated if the failed Instruction meets the following criteria:

If current Instruction is "Data Aggregator Appointment Details" (not special case) or "PRS Refresh" and:

- failed Instruction is for the same Metering System as the current Instruction and

- either failed Instruction is from the same PRS Agent as the current Instruction and has an earlier Instruction Sequence Number,

- or failed Instruction is from a PRS Agent which has no future appointment to the Distribution Business

  - If the Significant Date of the failed Instruction is earlier than that of the current (successfully applied) Instruction, set Reprocess Flag to "cannot reprocess";

  - otherwise, set the Instruction Status of the failed Instruction to "Superseded".

If current Instruction is from a PRS Agent and is not "PRS Refresh" or "Data Aggregator Appointment Details" and:

- failed Instruction is for the same Metering System as the current Instruction and

- the failed Instruction is the same type as the current Instruction and

- either failed Instruction is from the same PRS Agent as the current Instruction and has an earlier Instruction Sequence Number,

- or failed Instruction is from a PRS Agent which has no future appointment to the Distribution Business

  - If the Significant Date of the failed Instruction is earlier than that of the current (successfully applied) Instruction, set Reprocess Flag to "cannot reprocess"; otherwise set the Instruction Status of the failed Instruction to "Superseded".

If current Instruction is from a PRS Agent and is not "PRS Refresh" or "Data Aggregator Appointment Details" and:

- failed Instruction is for the same Metering System as the current Instruction and

- the failed Instruction is "Data Aggregator Appointment Details", and

- either failed Instruction is from the same PRS Agent as the current Instruction and has an earlier Instruction Sequence Number,

- or failed Instruction is from a PRS Agent which has no future appointment to the Distribution Business

  - Set Reprocess Flag to "cannot reprocess".

If current Instruction is from a PRS Agent and:

- failed Instruction is a "PRS Refresh" for the Distribution Business associated with the Metering System of the current Instruction and

- either failed Instruction is from the same PRS Agent as the current Instruction and has an earlier Instruction Sequence Number,

- or failed Instruction is from a PRS Agent which has no future appointment to the Distribution Business

  - Set Reprocess Flag to "cannot reprocess".

If current Instruction is "EAC/AA & MS Details" and:

- failed Instruction is for the same Metering System as the current Instruction and

- failed Instruction is from the same Data Collector as the current Instruction and has an earlier Instruction Sequence Number,

  - If the Significant Date of the failed Instruction is earlier than that of the current (successfully applied) Instruction, set Reprocess Flag to "cannot reprocess"; otherwise set the Instruction Status of the failed Instruction to "Superseded".

Refresh Instruction Failure and all associated Refresh Instruction Failure Reasons will be deleted if the Refresh Instruction and the Refresh Instruction Failure meet the following criteria:

- Current Instruction is "Data Aggregator Appointment Details" or "PRS Refresh" and

- Refresh Instruction Failure is for the same Metering System as the current Instruction and

- either Refresh Instruction is from the same PRS Agent as the current Instruction and has an earlier Instruction Sequence Number,

- or Refresh Instruction is from a PRS Agent which has no future appointment to the Distribution Business

- The Significant Date of the Refresh Instruction is equal to or later than that of the current Instruction.

3.36.4   Error Handling

Validation failures are detailed within the processing description

3.36.5   Common Processing

NC003 Update Batch Audit Log

3.36.6   Volumes

On average, in each year there will be

- 1 PRS Instructions per Metering System

- 1 "PRS Refresh" from each PRS Agent

- 4 Data Collector Instructions per Metering System

3.36.7   Events

Delete Consumptions(DC)

Delete Data Aggregator Appointments

Delete Data Collector Appointments

Delete Metering System

Delete Metering SystemDC Details

Delete Metering System Energisation Statuses

Delete Metering System GSP Groups

Delete Metering System Line Loss Factor Classes

Delete Metering System Measurement Classes

Delete Metering System Profile Classes

Delete Registrations and Data Collector Appointments

Delete Settlement Configurations

Insert Data Aggregator Appointment

Insert Data Collector Appointment

Insert Estimated Annual Consumption(DC)

Insert Meter Advance Consumption(DC)

Insert Metering System Energisation Status

Insert Metering System Energisation Status(DC)

Insert Metering System GSP Group

Insert Metering System GSP Group(DC)

Insert Metering System Line Loss Factor Class

Insert Metering System Measurement Class

Insert Metering System Measurement Class(DC)

Insert Metering System Profile Class

Insert Metering System Profile Class(DC)

Insert Registration

Insert Registration(DC)

Insert Settlement Configuration

Insert Settlement Configuration(DC)

Insert Settlement Register(DC)

Instruction Status Reason entered

Instruction Status Reasons deleted

Refresh Instruction Failure Deleted

Refresh Instruction Failure Reason Deleted

Update Data Aggregator Appointment

Update Instruction

3.36.8 Event Frequency

Each Instruction will normally result in several Enquiries and Events, it is not possible to predict the frequencies.

3.36.9 Enquiries

Check for Energisation Status

Check for GSP Group Existence

Check for Line Loss Factor Class Existence

Check for Measurement Class

Check for Market Participant Existence

Check for Profile Class Existence

Check for Standard Settlement Configuration Existence

Check for Valid Profile Class/Standard Settlement Configuration Existence

Check Metering System has Details

Lookup Data Aggregator Appointment

Lookup Data Collector Appointment

Lookup Failed Instructions from Data Collector

Lookup Failed Instructions from PRS for Distribution Business

Lookup Failed Instructions from PRS for Metering System

Lookup latest Estimated Annual Consumption before Date

Lookup Measurement Requirements

Lookup Meter Advance Period

Lookup Meter Advance Period spanning Date

Lookup Metering System Energisation Status

Lookup Metering System Energisation Status(DC)

Lookup Metering System GSP Group

Lookup Metering System GSP Group(DC)

Lookup Metering System Line Loss Factor Class

Lookup Metering System Measurement Class

Lookup Metering System Measurement Class(DC)

Lookup Metering System Profile Class

Lookup Metering System Profile Class(DC)

Lookup PRS Agent for Distribution Business

Lookup PRS View of Metering System

Lookup Registration

Lookup Registration(DC)

Lookup Settlement Configuration

Lookup Settlement Configuration(DC)

3.36.10 Enquiry Frequency

Each Instruction will normally result in several Enquiries and Events, it is not possible to predict the frequencies.

3.36.11 Requirements Catalogue Ref.

F5, F6, F11, F13, F14, F18, F19, F24, F26, F27, N4, N7

3.36.12 User Roles

None

3.36.13 I/O Structures

None

3.37   N0034 Manage Refresh Instructions

3.37.1   Function Type

On-line   Update   User initiated

3.37.2   Function Description

This function is invoked by an NHHDA user to allow application of a "PRS Refresh" Instruction.

All Refresh Instructions which have an Instruction Status of "Unprocessed" are displayed (these are the ones which have not been applied); all Refresh Instructions with an Instruction Status of "Validation Errors" are displayed (these are the ones which have been attempted but for which there were validation errors preventing all Metering Systems from being updated); also all Refresh Instructions which have an Instruction Status of "Discarded" and which are not flagged as "cannot reprocess" are also displayed (these are the ones which have failed or been manually discarded but which may still legally by applied.

The user selects one Instruction and chooses whether to attempt to apply the instruction (if currently Unprocessed or Discarded) or to mark it as "Discarded" (if currently Unprocessed) or to accept the validation errors and mark it as "Applied" (if currently has Validation Errors).

When an Instruction with a status of "Validation Errors" is selected, summary information is output.

3.37.3   Processing Description

For "Set to Discard" and "Set to Applied":

- Update Instruction status as requested;

- Processing is complete.

For "Apply":

Validation:

- For each Metering System Information set:

  - Check that the Distribution Business identified by the Distributor Short Code embedded within the Metering System Id matches the Distribution Business associated with the Instruction

  - Validate the Data Aggregator Appointment Details for the Metering System as described in Validation of Data Aggregator Appointment Details section of N0032 Process Instructions

  - If any validation check fails, do not update the Metering System, but enter a Refresh Instruction Failure with Refresh Instruction Failure Reasons for each failed check and count the failure.

- For each Metering System on the database for the Distribution Business associated with the Instruction but which is not included in the instruction

- Validate an empty set of Data Aggregator Appointment Details for the Metering System as described in Validation of Data Aggregator Appointment Details section of N0032 Process Instructions

- If any validation check fails, do not update the Metering System, but enter a Refresh Instruction Failure with Refresh Instruction Failure Reasons for each failed check and count the failure.

Apply PRS Refresh:

- for each Metering System in the Instruction which passes validation checks:

  - snapshot the current state of the Metering System (starting with the Significant Date)

  - Apply the Data Aggregator Appointment Details as described in Apply Data Aggregator Appointment Details section of N0032 Process Instructions

  - compare the current state of the Metering System with the snapshot and report differences

  - Apply supersede processing for the Metering System as described in Supersede Instructions section of N0032 Process Instructions

- for each Metering system associated with the Distribution Business which is the subject of the PRS Refresh Instruction which exists on the system but was not included in the Instruction

  - snapshot the current state of the Metering System (starting with the Significant Date)

  - Apply Data Aggregator Appointment Details (as described in Apply Data Aggregator Appointment Details section of N0032 Process Instructions) with no data present on or after the Significant Date (this will delete any associations with Effective From Settlement Date greater or equal to the Significant Date)

  - compare the current state of the Metering System with the snapshot and report differences

  - Apply supersede processing for the Metering System as described in Supersede Instructions section of N0032 Process Instructions

If severe errors occur (such as due to illegal file format) set the Instruction Status to "Discarded".

If no severe errors were encountered then

- If there were any validation errors encountered, set the Instruction status to "Validation Errors"

- If there were no validation errors, set the Instruction status to "Applied"

3.37.4   Error Handling

Only instructions with a status of "Validation Errors" may be changed to "Applied".

Only instructions with a status of "Unprocessed" or "Discarded" may be attempted.

Only instructions with a status of "Unprocessed" may be changed to "Discarded".

3.37.5   Common Processing

NC002 Update On-Line Audit Log

NC006 Restrict On-line Access

N0032 Process Instructions (Validate Data Aggregator Appointment, Apply Data Aggregator Appointment)

3.37.6   Volumes

A "PRS Refresh" Instruction will be received from each PRS Agent approximately once a year.

3.37.7   Events

Update Instruction

Refresh Instruction Failure Entered

Refresh Instruction Failure Reason Entered (plus events invoked by N0032 Process Instructions - Apply Data Aggregator Appointment).

3.37.8   Event Frequency

Update Instruction occurs once for each Refresh Instruction action (apply, discard or accept) performed.

Refresh Instruction Failure Entered occurs once for each Metering System on the database in the Instruction's subject Distribution Business for which validation fails during the application of a Refresh Instruction.

Refresh Instruction Failure Reason Entered occurs once for each failure reason associated with a Refresh Instruction failure (i.e., one or more times for each Refresh Instruction Failure Entered event).

3.37.9   Enquiries

Browse Instruction

3.37.10   Enquiry Frequency

1

3.37.11   Requirements Catalogue Ref.

F5, F6, F11, F13, F14, F18, F19, N7

3.37.12   User Roles

Exception Administrator.

3.37.13   I/O Structures

```
                    ┌─────────────────────┐
                    │   Manage Refresh    │
                    │    Instruction      │
                    └─────────────────────┘
                               │
         ┌─────────────────────┼─────────────────────┐
         │                     │                     │
┌─────────────────┐  ┌─────────────────┐  ┌─────────────────┐
│                 │  │ Refresh Instruction │ │                 │
│ Refresh Instructions │  │     Key         │  │ Refresh Summary │
│                 │  │    (input)      │  │                 │
└─────────────────┘  └─────────────────┘  └─────────────────┘
         │                                          │
┌─────────────────┐ ✱                    ┌─────────────────┐ ✱
│ Refresh Instruction │                  │  Refresh Summary  │
│     Details     │                      │     Details     │
│    (output)     │                      │    (output)     │
└─────────────────┘                      └─────────────────┘
```
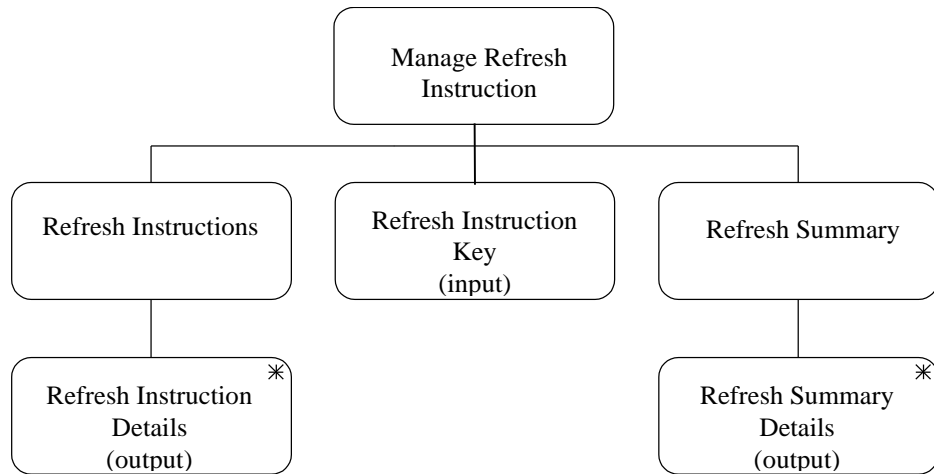
I/O Structure Element	Data Items
Refresh Instruction Key	Instruction Sequence Number
	Market Participant id
	Market Participant Role Code
Refresh Instruction Details	Instruction Sequence Number
	Source Market Participant id
	Source Market Participant Role Code
	Significant Date
	Distributor Market Participant id
	Distributor Market Participant Role Code
	Instruction Status
Refresh Summary Details	Metering System count
	Metering System Failed count
	Metering Systems to Delete count
	Metering Systems to Delete Failed count

3.38   N0035 Manage Instruction Files

3.38.1   Function Type

On-line   Update   User initiated

3.38.2   Function Description

This function is invoked by an NHHDA user to resolve failures of Instruction files. The user can enter a source and role to restrict the list of partipants displayed. The selection of a participant from the list displays instruction file details associated with the selected participant. Instruction files displayed can be restricted to a status of 'Rejected', 'Received' or 'Processed'.

It is possible to sort the list of files by using the sort buttons at the top of each column.

The user may select one or more files. The user chooses how to resolve the error:

- attempt to reprocess the file as if it had arrived again,

- mark the file as corrupt or

- skip the file, and also skip other files.

Alternatively, if a source has been specified, the user may skip the next expected file for the specified source, and also skip other files.

3.38.3   Processing Description

For each file meeting the selection criteria, it is possible to sort the list of files by using the sort buttons at the top of each column. The user may:

3.38.3.1   Attempt to reprocess the file as if it had arrived again

Validate and load the file according to NC010 Process Received Instruction File

3.38.3.2   Mark the file as corrupt

Update the File Status to "Corrupt".

3.38.3.3   Skip the file; and which file to process next

The user enters the File Sequence Number of the next Instruction file to be processed.

For each File Sequence Number (with status not in 'Processed', Loaded' or Skipped) from the current Instruction file up to but not including the number entered by the user

If there is an Instruction File with the File Sequence Number, set File Status to "Skip"

otherwise, create an empty Instruction File with a File Status of "Skip"

If there is an Instruction file with a File Sequence Number equal to the number entered by the user with a File Status of "Received", validate and load that file according to NC010 Process Received Instruction File.

3.38.3.4   Error Handling

The File Sequence Number of the Instruction File entered for the skip option must be greater than that of the current instruction.

3.38.4   Common Processing

NC002 Update On-line Audit Log

NC006 Restrict On-line Access

NC007 Update File Log

NC010 Process Received Instruction File

3.38.5   Volumes

Rarely invoked - about once a week.

3.38.6   Events

Update File

Metering System entered

Instruction entered

Instruction File entered

3.38.7   Event Frequency

The precise frequency cannot be determined.

At least one of Instruction File entered and Instruction File updated will be invoked by the processing within this function, in addition to the following when file(s) are reprocessed:

1 Instruction entered per Instruction found in a valid Instruction File;

1 Metering System entered per non PRS Refresh Instruction entered where the Metering System subject of the Instruction does not already exist;

1 Instruction File updated per file other than when file is not processed because there is an earlier file missing.

3.38.8   Enquiries

Lookup Instruction File

Check Metering System Exists

3.38.9   Enquiry Frequency

Lookup Instruction File will be invoked at least once by this function, the precise frequency cannot be determined.

1 per non PRS Refresh Instruction entered

3.38.10   Requirements Catalogue Ref.

F13, N24

3.38.11   User Roles

Exception Administrator.

3.38.12   I/O Structures
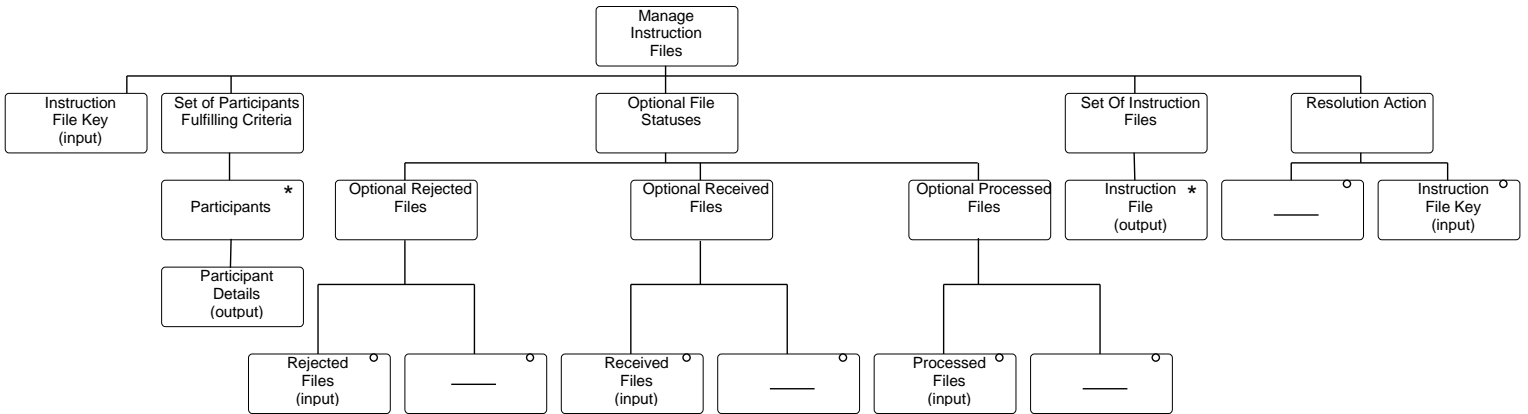
I/O Structure Element	Data Items
Instruction File	Market Participant id
	Market Participant Role Code
	File Name
	File Content Code
	Instruction File Sequence Number
	Instruction Sequence Number
	File Status
	File Sent or Received Timestamp
Instruction File Key	Market Participant id
	Market Participant Role Code
	File Sequence Number
Participant Details	Market Participant id
	Market Participant Role Code
	Market Participant Name
Rejected Files	File Status
Received Files	File Status
Processed Files	File Status

3.39   N0036 Load Pool Market Domain Data

3.39.1   Function Type

On-line   Update   User initiated

3.39.2   Function Description

Pool Market Domain Data (also known as MDD), will be loaded into NHHDA using this function. The MDD will be input into NHHDA using the logical flow D0269 (Market Domain Data Complete Set). Version 2 of the D0269 is the only valid version that can be loaded (D0269002).

3.39.3   Processing Description

3.39.3.1   Common File Validation

When a Market Domain Data (MDD) file arrives it will be validated using common file validation. Common file validation will check the file structure is correct and that only the relevant field values, adhere to valid domain values.

Once the file has been validated the processing audit log will be updated and details regarding receipt status of the file and file processing, will be updated on the database.

If the data file creation timestamp is less than that of the last MDD file loaded the file is not processed.

3.39.3.2   Market Domain Data Load Processing

Once the file has passed common file validation the MDD Load Process may be initiated using the standard batch processing interface. The Data can be processed in two modes, 'Validation Only' or 'Validation and Apply'. Changes to the database will <u>not</u> be permitted during the 'Validation Only' process.

The focus of the load process will be at GSP Group level and all data relevant to the GSP Group. If data in the file is for a GSP Group not known to NHHDA then it will be ignored and consequently not processed.

3.39.3.3   Validation Only

Validate Only is the default mode for loading of the Market Domain Data Complete Set file. Validate the data contained within the file against the data held on the database and any corresponding related data <u>already</u> successfully validated/processed within the file itself. This validation is carried out as specified in section Market Domain Data Item Processing.

Errors will be raised as exceptions which are further categorised into various different levels of exception. It is important to note that any errors captured at Medium and High Level will cause the file to **not** load during 'Validation and Apply'. If there are only Low Level warnings the data within the file can be loaded successfully using the 'Validation and Apply' process and where applicable a report of exception 'Warnings' will be generated.

Each exception generated will be categorised into either a low (warning), medium (missing parent entity related data) or high (data failure or affecting metering system data to be used in aggregation) level exception. The MDD

version number will be included in the exception report that is generated.

All exceptions will be available in a machine readable format which may be transformed to a human readable format using the CRP subsystem.

<u>Low Level Exception Type (Warning)</u>

A low level exception is classed as an application 'Warning'. This means that file processing can continue but there will be a list of Warning exceptions. E.g. this type of exception would be generated if there are differences between the GSP Groups contained in the file and those GSP Groups held on the database. In this scenario the operator would have to add the GSP Group to the database using the runtime Form 'Edit GSP Groups'.

If after processing of a group of data, there will be data on the database that was not within the file, a Low Level Exception will be raised with appropriate information.

<u>Medium Level Exception Type (Missing Parent Entity Related Data)</u>

If a data item in the file is identified as invalid based on missing parent entity related data e.g. where a Profile Class / SSC relationship (VSCPC as specified in 'Process Valid Settlement Configuration Profile Class Details') is present but the Profile Class in the file has not been successfully validated, then an exception will be generated.

<u>High Level Exception Type (Data in use by Metering Systems)</u>

If a metering system is using data that is due to be changed by data in the file, during a date period a high level exception will be raised to indicate this to be the case. In such a case an appropriate data item exception will be generated.

3.39.3.4   Validate and Apply (commit changes if no errors found)

The 'Validate and Apply' option will read the data from the file and check the data for any exceptions. If any Medium or High Level Exceptions are generated then the data will <u>not</u> be loaded into NHHDA. If the file contains only Low Level Exceptions then the data will be loaded into NHHDA.

Deletions are not permitted during the Market Domain Data Load.

If validation is successful or only Low exceptions are encountered, changes made in the MDD will be reported on at the end of the Load MDD report.

3.39.3.5   Market Domain Data Item Processing

Before the data within the file is loaded into the database each data item must be validated/processed. If any data item fails for a particular reason the failure will be categorised into a relevant level of exception. Validation processing will be carried out in the order specified in sections 3.39.4 to 3.39.10 The processing order will ensure that child entity related detail is not validated before all parent entity related detail has been validated.

Where one or more Medium or High level Exceptions have been raised, it is not necessary to process corresponding child record details.

Each processing section also specifies at what level within the file the validation is applied to and consequently the order of precedence. If an

exception condition occurs at File Level 1 then any exception conditions at lower levels within the file for the same group, will not be checked.

When the MDD file is read, all data that is date based will be checked to see if the data is relevant at the time of the load. The Start Date of the relevant date range will be based on the last archive date (i.e. the earliest date for which NHHDA holds full Settlement Date based data) and the End Date of the date range will be the current date (the date that the file is loaded) plus the number of days as specified by the system parameter 'MDD Load Advance Period'. The date range between the Start Date and End Date will be known as the 'MDD Load Window'. Any date based data with 'To Date' before the Start Date of the 'MDD Load Window' will be ignored. Any such data with 'From Date' after the End Date of the 'MDD Load Window' will also be ignored.

In the following sections 3.39.3.6 to 3.39.10.5 processing is described for the 'Validation and Apply' process only. The 'Validation Only' process would only validate the data and report exceptions without making any changes to the database.

3.39.3.6 Reprocess Market Domain Data Complete Set File

Reprocessing of a Market Domain Data Complete Set File can be carried out on the last file where the status of the file is 'Processed'. Unless the 'Validate and Apply' mode has been specified the reprocessing of the file will be carried out in default 'Validate Only' mode.

3.39.3.7 Order of Processing

As the file may contain multiple records for the same time (but with different date ranges), all records for such multiples are considered together so that overlap checks can be complete.

3.39.4 Market Participant Group Details

3.39.4.1   Process Market Participants Details

File Level 1 Processing

The following data will be specified for each Market Participant:-

- Id

- Description

- Pool Member ID **(Ignored)**

Market Participant Details is the parent detail of Market Participant Roles data (i.e. each Market Participant may have one to many Market Participant Roles). For each record retrieved and validated by 'Process Market Participant Details' validation of the Market Participants Roles will be carried out by 'Process Market Participants Roles'.

Insert New Market Participant

For each Market Participant that does not exist on the database check for valid Market Participant Roles as specified in 'Process Market Participant Role Details'.

Update Existing Market Participant

For each Market Participant that exists on the database check for valid Market Participant Roles as specified in 'Process Market Participant Role Details'. If a Market Participant already exists on the database with the same Market Participant ID and has a relevant valid role, and where Market Participant Name has changed then update the database accordingly.

Error Handling

Error handling is carried out at Market Participant Role Validation Level (File Level 2 Processing)

3.39.4.2   Process Market Participant Roles

File Level 2 Processing

Only data that is active during the current 'MDD Load Window' is loaded as specified in section 'Market Domain Data Item Processing'.

The following data will be specified for each Market Participant Role :-

- Market Participant Role Code

- Distributor Business ID (known to NHHDA as Distributor Short Code and only populated when Market Participant Role Code is equal to R)

- Effective From Date

- Effective To Date

Market Participant Role Records are only considered if their date range includes the current date or if the date range is active during the current 'MDD Load Window' ('MDD Load Window' as specified in section 'Market Domain Data Item Processing'). The MDD Load Window is used to determine the date period, in which a Market Participant acting in a market role is relevant, based on the date that the data is being loaded.

Market Participant Role records for roles not relevant to NHHDA (as specified within this section 'Process Market Participant Roles') will be ignored. The Roles to be checked are as follows:-

1. Supplier Role

2. NHH Data Collector Role

3. ISR Agent Role

4. Pool MDDA Role (Pool Market Domain Data Agent)

5. PRS Agent Role

6. Distributor Role

Insert Market Participant Role Details

Check each role within the MDD Market Participant Role record in the file exists for that Market Participant within the database. If it does not exist create the Market Participant with relevant Market Participant Role information. If there are no valid roles for a Market Participant within the flow then the Market Participant will be ignored.

If a Market Participant on the database is currently acting in a role that does not exist in the D0269 flow then raise a Low Level Exception.

If the Market Participant is a new Distributor then modify the database to specify the new role as active. In this case the Distributor Short Code will be updated using the corresponding data item from the D0269 flow.

Special Case:- Update Market Participant as Role Distributor

If the Market Participant is an existing Distributor, a change to the short code is permitted, if and only if the current Distributor short code held on the database is not being used by any Metering Systems. If a Metering System exists with the same Distributor short code then a High Level Exception will be generated.

Error Handling

Both the Market Participant ID and Market Participant Name must be specified.

Market Participant Details Updates are restricted to name and Distributor Short Code (Distributor Business ID) only.

Low Level Exception

- If a Market Participant exists on the database with a Role Code where that Market Participant does not appear in the file with the same Role Code, a Low Level exception will be generated. {MPRL1}

Medium Level Exception

Not applicable at Market Participant Role Level as it has no parent entity related details.

High Level Exception

- A Distributor Short Code for a Market Participant acting as Distributor cannot be changed if it is in use by at least one metering System. {MPRH1}

- A PRS Agent is being created without the corresponding Distributor {MPRH2}

- A Distributor is being created without the corresponding PRS Agent {MPRH3}

- A Distributor Short Code for a Market Participant acting as Distributor cannot be changed or inserted if it is not unique{MPRH4}.

3.39.5   Threshold Parameter Group Details

3.39.5.1   Process Threshold Parameter

File Level 1 Processing

Only data that is active during the current 'MDD Load Window' is loaded as specified in section 'Market Domain Data Item Processing'.

The following data will be specified for each Threshold Parameter Set:-

- Threshold Parameter

- Effective From Settlement Date

Insert Threshold Parameter

Insert new distinct Effective From Settlement Date and Threshold Parameter Value.

Update Threshold Parameter

If a Threshold Parameter exists with Effective From Settlement Date equal to that in the input flow then modify the Threshold Parameter value with the new settlement value.

Error Handling

Both the Effective From Settlement Date and Threshold Parameter must be created to enter a new record.

Low Level Exception

- Threshold Parameters that are to be changed for dates which have already been used in a "Final Initial Settlement" will cause a Low Level Exception to be generated. {THPL1}

- If a Threshold Parameter with an Effective From Settlement Date, exists on the database that is not in the file will cause a Low Level Exception to be generated. { THPL2 }

Medium Level Exception

Not applicable for Threshold Parameter Group Data.

High Level Exception

Not applicable for Threshold Parameter Group Data.

3.39.6 GSP Group Details

3.39.6.1   Process GSP Group Details

File Level 1 Processing

The following data will be specified for each GSP Group Set:-

- GSP Group ID

- GSP Group Name

Insert GSP Group Details

If a GSP Group does not exist on the database with a GSP Group ID equal to that of the GSP Group ID within the file then issue a Warning. No details of this GSP Group will be processed.

Update GSP Group Details

If a GSP Group already exists on the database with the same GSP Group ID then modification of the GSP Group Name only, is allowed.

Error Handling

Both the GSP Group ID and GSP Group Name must be specified.

Updates are restricted to GSP Group Name only

GSP Groups cannot be deleted.

Low Level Exception

- GSP Group within input file is currently <u>not</u> on database {GSGL1}. If there is an entry in the file for a GSP Group that is not present on the database then a Low Level Exception will be raised. If it is required that the business load details for this GSP Group then a manual entry should be made using the existing manual interface functionality (as specified in Function Definition 'Define GSP Groups' to add the new GSP Group to the database. Once this has been done the file can be reprocessed).

- GSP Group on database is not within input file {GSGL2}. If a GSP group is on the database but not contained within the file then this will also raise a Low Level Exception. In this scenario the system would require a manual deletion of the GSP Group details in order to resolve the exception (using existing manual interface functionality).

Medium Level Exception

GSP Group data has no parent entity related detail data and as such will not cause a Medium Level Exception to be raised.

High Level Exception

As a consequence of updates only being allowed on GSP Group Name, by definition this cannot affect metering system data, therefore no High Level Exceptions will be raised.

3.39.6.2 Process GSP Group/Distributor Relationship

File Level 2 Processing

Only data that is active during the current 'MDD Load Window' is loaded as specified in section 'Market Domain Data Item Processing'.

The following data will be specified for the Distributor of the GSP Group:-

- Distributor ID

- MP Role code

- Effective From Settlement Date (Market Participant Role)

- Effective From Settlement Date

- Effective To Settlement Date

Insert GSP Group/Distributor Relationship

If the Market Domain Data flow contains a new GSP Group/Distributor relationship, then a new distinct Effective From Settlement Date for this GSP Group/Distributor combination must be included and an optional Effective to Settlement Date.

Market Participant Details of the Distributor must have already been validated by 'Process Market Participant Details', and can be identified as a distributor using the Market Participant ID, Market Participant Role Code, Distributor flag/role code and the distributor short code.

If the Distributor being inserted does not exist, a Medium Level Exception will be raised.

If a corresponding record does not exist for a PRS Agent appointment to this Distributor then a Medium Level Exception will be raised.

If the Distributor is re-appointed to the same GSP Group then a High Level Exception will be raised.

GSP Group Distributor Appointment details will be inserted according to the following rule:

- Records from the file which do not match any in the database will be <u>inserted</u>;

Update GSP Group/Distributor Relationship

If the MDD flow contains a Distributor appointment to a GSP Group that has the same Effective From Settlement Date, this is considered an appointment update e.g. replacing the current distributor appointment.

GSP Group Distributor Appointment details will be updated according to the following rules:

- Records from the file which match those on the database (ie. have same participant Id and effective from date) but which have different values (ie. effective to date) will be updated;

- Records from the file which match those on the database and which have identical values will not be updated.

If the GSP Group Distributor Appointment Effective From Settlement Dates are not less than or equal to Effective To Settlement Dates in the file, a High Level Exception will be raised.

If any Distributor re-appointments for the same GSP Group exist in the file, a High Level Exception will be raised.

Error Handling

If the processed GSP Group does not have an entry on the database the corresponding GSP Group/Distributor relationship in the flow would not be validated as a data item. As such, checks for valid GSP Group details in the context of this data group is not necessary.

Low Level Exception

- If a GSP Group/ Distributor relationship with an Effective From Settlement Date exists on the database but is not in the file.{ GGDL1 }

Medium Level Exception

- If the Distributor details being inserted do not exist in the list of successfully validated Market Participant Details and Market Participant Role Details, a Medium Level Exception will be raised. { GGDM1 }

- If there is a Distributor Appointment for the GSP Group without a corresponding PRS Agent Appointment. { GGDM2 }

High Level Exception

- When amending Distributor appointments to a GSP Group, ensure that none of the DAAs for metering systems associated with the GSP Group have an Effective To Date after the Effective To Date of the Distributor appointment. In this scenario a High Level Exception will be generated (as specified in NHHDA Function Definition in section 'Define GSP Groups'){GGDH1}

- Effective To Date is less than the Effective From Date for GSP Group Distributor Appointment. {GGDH2}

- Effective From Date of Distributor Appointment on database does not match the Effective From Date of the Distributor Appointment in the file for the same GSP Group. {GGDH4}

- Reappointment of the same Distributor in the same GSP Group.{GGDH5}

3.39.6.3   Process PRS Agent Appointment

File Level 2 Processing

Only data that is active during the current 'MDD Load Window' is loaded as specified in section 'Market Domain Data Item Processing'.

The following data will be specified for each PRS Agent Appointment for a GSP Group.

- PRS Agent ID

- MP Role Code

PRS Agent Appointments are assigned to a Distribution business within a particular GSP Group. As a consequence of this the GSP Group Distributor relationship specified within the file must be used to translate the PRS Agent Appointment.

Insert PRS Agent Appointment

Market Participant Details of the PRS agent must have already been validated by 'Process Market Participant Details', and can be identified as a PRS agent using the Market Participant ID, Market Participant Role Code and the PRS agent flag/role.

If the PRS agent being inserted does not exist, a Medium Level Exception will be raised.

If a corresponding distributor record does not exist for this PRS agent appointment then a Medium Level Exception will be raised.

If the PRS agent is re-appointed to the same GSP Group then a High Level Exception will be raised.

PRS Agent Appointment details will be inserted according to the following rule:

- Records from the file which do not match any in the database will be <u>inserted</u>;

Update PRS Agent Appointment

PRS Agent Appointment details will not be updated as the record will already match those on the database.

Error Handling

Medium Level Exception

The PRS Agent will be associated with the Distributor that is contained within the GGD record group which is at the same level in the file structure.

- If the PRS Agent for the appointment to the distributor being inserted has not been successfully validated by 'Process Market Participant Group Details', a Medium Level Exception will be raised. { PAAM1 }

- If there is no Distributor Appointment for the GSP Group corresponding to some or all of the PRS Agent Appointment, then a Medium Level Exception will be generated. { PAAM2 }

High Level Exception

- Reappointment of the same PRS Agent in the same GSP Group.{PAAH5}

3.39.6.4   Process ISR Agent Appointment

File Level 2 Processing

Only data that is active during the current 'MDD Load Window' is loaded as specified in section 'Market Domain Data Item Processing'.

The following data will be specified for each ISR Agent Appointment for the GSP Group:-

- ISR Agent ID

- MP Role code

- Effective From Settlement Date (Market Participant Role)

- Effective From Settlement Date

- Effective To Settlement Date

Insert ISR Agent Appointment

If the Market Domain Data flow contains a new ISR Agent Appointment then a new distinct Effective From Settlement Date must be included and an optional Effective To Settlement Date. Date overlap checks will be carried out to ensure correct termination of any previous ISR Agent appointments.

ISR Agent Appointment details will be inserted according to the following rule:

- Records from the file which do not match any in the database will be inserted;

Update ISR Agent Appointment

If the MDD flow contains an ISR Agent appointment that has the same Effective From Settlement Date already stored on the database, this is considered an appointment update e.g. replacing the current ISR Agent appointment.

ISR Agent Appointment details will be updated according to the following rules:

- Records from the file which match those on the database but which have different values and/or 'to' dates will be updated;

- Records from the file which match those on the database and which have identical values and 'to' dates will not be updated.

If the ISR Agent Appointment Effective From Settlement Dates are not less than or equal to Effective To Settlement Dates in the file, a High Level Exception will be raised.

If any ISR Agent Appointments for the same GSP Group exist in the file containing date overlaps, a High Level Exception will be raised.

If an ISR Agent Appointment overlaps an existing appointment on the database then a High Level Exception will be raised.

Error Handling

Low Level Exception

- If an ISR Agent for the GSP Group with an Effective From Date and Effective To Date period, exists on the database but is not within the file. {IAAL1}

Medium Level Exception

- If the ISR Agent for the ISR Agent Appointment to the GSP Group to be inserted, has not been successfully validated in 'Process Market Participant Group Details' a Medium Level Exception will be raised. {IAAM1}

High Level Exception

- Effective To Date is less than the Effective From Date for ISR Agent Appointment. {IAAH1}

- Date overlap exists between two or more ISR Agent Appointments for the same GSP Group.{IAAH2}

- ISR Agent Appointment on database overlaps an Appointment in the file for the same GSP Group. {IAAH3}

3.39.7   Profile Class Details

3.39.7.1   Process Profile Classes

File Level 1 Processing

Only data that is active during the current 'MDD Load Window' is loaded as specified in section 'Market Domain Data Item Processing'.

The following data will be specified for each Profile Class:-

- Profile Class ID

- Profile Class Description

- Effective From Settlement Date

- Effective To Settlement Date

Insert New Profile Class

If a Profile Class does not already exist on the database, with a Profile Class ID equal to that of the Profile Class within the file then insert Profile Class ID and Profile Class Description.

Update Existing Profile Class

If a Profile Class already exists on the database with the same Profile Class ID then modification of the Profile Class Description only, is allowed.

Error Handling

New Profile Class ID's must be distinct from existing ID's.

Both the Profile Class ID and Profile Class Description must be specified.

Updates are restricted to Profile Class Description only.

Low Level Exception

- If a Profile Class exists on the database but is not within the file a Low Level Exception will be raised { PFCL1 }

Medium Level Exception

Not applicable for Profile Class as there is no parent entity related detail to be pre-validated.

High Level Exception

Not applicable as a consequence of updates only, being allowed on Profile Class Description. By definition, this cannot affect metering system data and therefore no High Level Exceptions will be generated.

Refer to the NHHDA Function Definition 'Define Profile Classes' for any further details on Profile Class Validation.

3.39.8   Time Pattern Regime Details

3.39.8.1   Process Time Pattern Regimes

File Level 1 Processing

The following data will be specified for each Time Pattern Regime:-

- GMT Indicator **(Ignored)**
- Time Pattern Regime ID
- Tele-Switch Clock Indicator **(Ignored)**

Insert New Time Pattern Regime

If a Time Pattern Regime does not already exist on the database, with a Time Pattern Regime ID equal to that of the Time Pattern Regime within the file then insert Time Pattern Regime ID.

Update Existing Time Pattern Regime

If a Time Pattern Regime already exists on the database with the same Time Pattern Regime ID then modification is not required.

Error Handling

The Time Pattern Regime must be specified.

Low Level Exception

- If a Time Pattern Regime exists on the database but is not within the file then a Low Level Exception will be raised. { TPDL1 }

Medium Level Exception

Not applicable to validation of Time Pattern Regime.

High Level Exception

Not applicable as a consequence of inserts only, being allowed on Time Pattern Regime. By definition, this cannot affect Metering System data and therefore no High Level Exceptions will be generated.

Refer to the NHHDA Function Definition 'Define Time Pattern Regime' for any further details on Profile Class Validation.

3.39.9 Line Loss Factor Class Details

3.39.9.1   Process Line Loss Factor Classes

File Level 1 Processing

Only data that is active during the current 'MDD Load Window' is loaded as specified in section 'Market Domain Data Item Processing'.

Only data where the LLF Class Indicator is applicable to Non-Half Hourly metering systems is loaded. Only LLF Class Indicators A and C will be loaded.

- A - General LLF Class Import
- C - General LLF Class Export

The following data will be specified for each Line Loss Factor Class:-

- Distributor ID
- Market Participant Role Code
- Effective From Settlement Date (Market Participant Role)
- LLF ID
- LLF Description
- MS specific LLF Class indicator
- Effective From Settlement Date
- Effective To Settlement Date

Insert New Line Loss Factor Class

If there does not exist a Line Loss Factor Class with a Line Loss Factor Class ID and Distributor ID equal to that of the Line Loss Factor Class ID and Distributor ID within the file, then insert the new Distributor ID, Line Loss Factor Class ID and Line Loss Factor Class Description.

Update Existing Line Loss Factor Class

If a Line Loss Factor Class already exists on the database with the same Line Loss Factor Class ID and Distributor ID then modification of the Line Loss Factor Class Description only, is allowed.

Error Handling

The Distributor ID (where the Distributor ID is equivalent to Market Participant ID of the Distributor), Line Loss Factor Class ID, Line Loss Factor Class Description, must be specified.

Updates are restricted to Line Loss Factor Class Description only.

Low Level Exception

- If a LLF/Distributor exists on the database that is not within the file a Low Level Exception will be generated. { LLFL1 }

Medium Level Exception

- If the Distributor ID in the file does not exist on the database or has not been successfully validated within 'Process Maket Participant Group Details' as a Market Participant acting as Distributor in the market and with the same 'Market Participant Role Effective From Settlement Date' then a Medium Level Exception will be raised. {LLFM1}

High Level Exception

As a consequence of updates only, being allowed on Line Loss Factor Class Description, by definition, this cannot affect metering system data and therefore no High Level Exceptions will be generated.

Refer to the NHHDA Function Definition 'Define Line Loss Factor Classes' for any further details on Line Loss Factor Class Validation.

3.39.10   Standard Settlement Configuration Group Details

3.39.10.1   Process Standard Settlement Configuration

File Level 1 Processing

Only data that is active during the current 'MDD Load Window' is loaded as specified in section 'Market Domain Data Item Processing'.

The following data will be specified for each SSC:-

- SSC ID

- SSC Description

- Effective From Settlement Date

- Effective To Settlement Date

Insert New Standard Settlement Configuration

If a Standard Settlement Configuration does not exist with a Standard Settlement Configuration ID equal to that of the Standard Settlement Configuration within the file then insert the Standard Settlement Configuration ID and the Standard Settlement Configuration Description.

Update Existing Standard Settlement Configuration

If a Standard Settlement Configuration already exists on the database with the same Standard Settlement Configuration ID then modification of the Standard Settlement Configuration Description only, is allowed.

Error Handling

Both the Standard Settlement Configuration ID and a Standard Settlement Configuration Description must be specified.

Updates are restricted to a Standard Settlement Configuration Description only.

Low Level Exception

- If an SSC exists on the database that is not in the file then a Low Level Exception will be raised. { SCIL1 }

Medium Level Exception

Not applicable to validation of Standard Settlement Configuration.

High Level Exception

As a consequence of updates only being allowed on a Standard Settlement Configuration Description, by definition, this cannot affect Metering System data and therefore no High Level Exceptions will be generated.

Refer to the NHHDA Function Definition 'Define a Standard Settlement Configuration' for any further details on a Standard Settlement Configuration Validation.

3.39.10.2   Process Measurement Requirement Time Pattern Regime Details

File Level 2 Processing

The following data will be specified for each TPR in the SSC

- TPR ID

Insert Measurement Requirement Details (SSC and TPR)

The insertion of a set of Measurement Requirements will occur if the SSC value is of a new SSC or for an SSC value that exists on the database but that has no Measurement Requirements on the database.

This section refers to insertion of a set of Measurement Requirements for an SSC. The validation only associates an existing or previously validated SSC with an existing or previously validated TPR to form a valid Measurement Requirement.

Changes to an SSC set of Measurement Requirements is illegal if the SSC is in use by a Metering System or if Average Fraction of Yearly Consumption are already specified for the SSC. If the flow contains an SSC set of revised Measurement Requirements for an SSC that is in use by a Metering System then this will raise a High Level Exception (see {TPRH1} Exception in the Error Handling section) . The user will not be able to resolve the problem unless Metering System references to the SSC are removed.

Error Handling

Low Level Exception

- A Measurement Requirement that exists on the database that is not in the file will cause a Low Level Exception to be generated. {TPRL1}

Medium Level Exception

- The Time Pattern Regime ID for the Measurement Requirement must already exist on the database or have been successfully validated as previously specified within the file itself, before the Measurement Requirement is loaded. If the value does not exist a Medium Level Exception will be generated. { TPRM1 }

- If there are multiple SCI records for the same Standard Settlement Configuration, the Measurement Requirements specified with each SCI must be identical. {TPRM2}

- A Time Pattern Regime ID must not be repeated within a set of Measurement Requirements. {TPRM3}

High Level Exception

- Illegal change to Measurement Requirement as Metering Systems exist with consumption using SSC. { TPRH1 }

- Illegal change to Measurement Requirements as one or more AFYC sets already exist for this SSC (using the current Measurement Requirements). {TPRH2}

All other validation is as specified in the NHHDA Function Definition in section 'Define Standard Settlement Configuration'.

3.39.10.3   Process Valid Settlement Configuration Profile Class Details

File Level 2 Processing

Only data that is active after the Start Date of the current 'MDD Load Window' is loaded as specified in section 'Market Domain Data Item Processing'.

The following data will be specified for each VSCPC in the SSC:-

- Profile Class id

- Effective From Settlement Date (VSCPC)

- Effective To Settlement Date (VSCPC)

Insert Valid Settlement Configuration Profile Class (VSCPC)

The validation only associates existing or previously validated SSCs with an existing or previously validated Profile Class to form a Valid Settlement Configuration Profile Class. As a consequence of this, inserts of new VSCPCs only are performed, if the VSCPC does not already exist on the database. It should be noted that the Effective From Settlement Date (VSCPC) and the Effective To Settlement Date (VSCPC) are not stored on the NHHDA database.

The PC ID that forms part of the VSCPC must be a new PC ID that has been validated by Process Profile Classes, or it must be a valid PC ID from the database of known Profile Classes.

Error Handling

Low Level Exception

- If a VSCPC exists on the database that is not in the file a Low Level Exception will be generated.{ VSDL1 }

Medium Level Exception

- The Profile Class ID for the VSCPC must already exist on the database or have been successfully validated before the VSCPC is loaded. If the value does not exist a Medium Level Exception will be generated. { VSDM1 }

High Level Exception

Not applicable as there are no updates to VSCPC's High Level Exceptions will not be raised.

All other validation is as specified in the NHHDA Function Definition in section 'Define Standard Settlement Configuration'.

3.39.10.4 Process AFYCS Details

File Level 3 Processing

Only data that is active during or after the current 'MDD Load Window' is loaded as specified in section 'Market Domain Data Item Processing'.

The following data will be specified for each set of AFYC data:-

- GSP Group ID

- Effective From Settlement Date

- Effective To Settlement Date

Before the AFYC data can be committed to the database all dates after the Effective From Date of the first AFYC set being inserted or modified must be checked.

Insert AFYCS Details

The database does not contain an entity equivalent to AFYC sets. Consequently, Average Fractions of Yearly Consumption will be inserted according to the following rules:

- Records from the file which do not match any in the database will be inserted;

Update AFYCS Details

Average Fractions of Yearly Consumption will be updated according to the following rules:

- Records from the file which match those on the database but which have different values and/or 'to' dates will be updated;

- Records from the file which match those on the database and which have identical values and 'to' dates will not be updated.

For all Metering System data, ensure that for every date covered by a DAA (PRS data), there is a set of AFYC values (one per Measurement Requirement) for the corresponding GSP/SSC/PC set. The last AFYC set Effective To Date for the GSP Group in the file may be open ended.

If there is any date which is within an AFYC set on the database for a GSP Group, but is not covered by the sets in the file, then if there is a Metering System with the same GSP, SSC, PC, on that date and a DAA including that date, a High Level exception will be raised.

If the Effective From Settlement Dates are not less than or equal to Effective To Settlement Dates a High Level Exception will be raised.

AFYCS for the same GSP Group containing date overlaps will cause a High Level Exception to be generated.

If after the changes are made there are sets of AFYCs, that exist on the database that are not in the file i.e. only a subset of the data is contained within the file then a Low Level Exception will be raised.

Changes will not be applied until 'Process Average Fraction of Yearly Consumption Details' for set of Time Pattern Regime SSC and PC has completed successfully.

Deletion of AFYCS are not permitted:-

- If an AFYC set on the database DOES NOT overlap any in the file (for the same SSC, PC, GSP group) In this scenario a Low Level Exception would be generated.

- If an AFYC set on the database DOES overlap any in the file (for the same SSC, PC and GSP Group). In this scenario a High Level Exception would be generated.

Error Handling

Low Level Exception

- Changes to AFYCS data for settlement dates that have already been used in a "Final Initial Settlement" will cause a Low Level Exception to be generated. {ASDL1}. The exception will only occur where the database will change as a result of this processing i.e. if the data inserted or modified before the Final Initial Settlement date is not exactly replaced, or if data is inserted before the Final Initial Settlement Date.

- AFYC sets exist on the database but are not contained within file (i.e. AFYCS does not overlap any AFYCS in the file) will generate a Low Level exception. {ASDL2}

Medium Level Exception

If the GSP Group ID had not existed on the database file processing would not reach File Level 3 Validation. If either Profile Class or SSC had not existed on the database or if they had not been successfully validated from the file, file processing would not reach File Level 3 validation.

High Level Exception

- AFYC data load will result in missing data for settlement date range for an existing Metering System DAA appointment. {ASDH1}.

- Effective To Settlement Date is less than Effective From Settlement date for AFYCS Details. {ASDH2}

- Dates overlap exists between two or more sets of AFYCS for the same GSP Group.{ASDH3}

- AFYC set on database overlaps an AFYC set in the file (for the same SSC, PC and GSP Group. {ASDH4}.

Refer to function definition 'Define Average Fraction of Yearly Consumption' for further information on validation and data usage.

3.39.10.5   Process Average Fraction of Yearly Consumption Details

File Level 4 Processing

There must be an AFYC value for each Measurement Requirement TPR.

The following data will be specified for each Measurement Requirement AFYC record:-

- TPR ID

- AFYC value

For each given combination of GSP Group ID and Valid Settlement Configuration Profile Class and Effective From Settlement Date (AFYCS) and Effective To Settlement Date (AFYCS) period specified, insert the Average Fraction of Yearly Consumption (AFYC) for each Valid Measurement Requirement for the given combination of the SSC.

Error Handling

Inserts of AFYCs are only permitted if the TPR exists as a Measurement Requirement for the SSC and if all other Measurement Requirements are present. The sum of the set of valid AFYCs must be equal to 1.0000 (numeric one).

For all validated Standard Settlement Configuration details, the measurement requirements must exactly match those already previously validated.

Low Level Exception

Not applicable for AFYC consumption details.

Medium Level Exception

- The system will validate that the set of AFYCs specified, sum to exactly 1 (i.e. for a given GSP Group ID, Effective From Settlement Date, Valid Settlement Configuration Profile Class (VSCPC)). If the values do not sum to one then a Medium Level Exception will be generated. {AFDM1 }

- If any set of values includes a TPR which is not a measurement requirement for the SSC, a Medium Level Exception will be generated. {AFDM2}

- If any set of values includes the same TPR more than once, a Medium Level Exception will be generated. {AFDM3}

- If any set of values does not include a TPR which is a measurement requirement for the corresponding SSC, a Medium Level Exception will be generated. {AFDM4}

High Level Exception

Not applicable for AFYC consumption details.

3.39.11 Error Handling

Error handling is carried out for each relevant record group within the MDD file. For details of how errors are handled please refer to appropriate record group file processing, within the N0036 Load Pool Market Domain Data function.

3.39.12 Common Processing

NC003 Update Batch Audit Log

NC004 Check File Header

NC009 Restrict Off-line Access

NC007 Update File Log

3.39.13 Volumes

Each file can be processed an unlimited amount of times until all data has been successfully validated.

3.39.14 Events

(All of the following events are as specified in [CONMOD] section 2 Event Descriptions).

Average Fractions of Yearly Consumption Entered

Average Fractions of Yearly Consumption Updated

Distributor Assigned to a GSP Group

Distributor Details Entered

Distributor Details Updated

GSP Group Amended

GSP Group Entered

ISR Agent Appointed to GSP Group

ISR Agent Appointment Amended

ISR Agent Details Entered

ISR Agent Details Updated

Line Loss Factor Class Details Entered

Line Loss Factor Class Details Updated

Pool Market Domain Data Received

Profile Class Details Entered

Profile Class Details Updated

PRS Agent Appointed

PRS Agent Amended

PRS Agent Details Entered

PRS Agent Details Updated

Standard Settlement Configuration Assigned to Profile Class

Standard Settlement Configuration Entered

Standard Settlement Configuration Updated

Supplier Details Entered

Supplier Details Updated

Threshold Parameter Entered

Threshold Parameter Updated

Time Pattern Assigned to Standard Sett Config

Time Pattern Regime Entered

3.39.15   Event Frequency

Pool Market Domain Data received typically once every two weeks.

3.39.16   Enquiries

None

3.39.17   Enquiry Frequency

N/A

3.39.18   Requirements Catalogue Ref.

Change Requests LCRA109 and LCR207.

Modification Proposal P62

3.39.19   User Roles

NHHDA Operator, NHHDA Operations Supervisor, NHHDA Standing Data Manager

3.39.20   I/O Structures

```
                        ┌──────────────┐
                        │  MDD Load    │
                        │  Exception   │
                        │  File        │
                        └──────┬───────┘
              ┌────────────────┴────────────────┐
      ┌───────┴────────┐              ┌──────────┴──────────┐
      │ Exception File │              │ Set Of MDD Load     │
      │ Header         │              │ Exceptions          │
      │ (Output)       │              └──────────┬──────────┘
      └────────────────┘              ┌──────────┴──────────┐
                                      │ MDD Load         *  │
                                      │ Exceptions          │
                                      └──────────┬──────────┘
                              ┌──────────────────┴────────┐
                     ┌────────┴────────┐         ┌─────────┴────────┐
                     │ MDD Load        │         │ Set of           │
                     │ Version ID      │         │ Exceptions       │
                     │ (Output)        │         └─────────┬────────┘
                     └─────────────────┘         ┌─────────┴────────┐
                                                 │              *   │
                                                 │ Exception        │
                                                 └─────────┬────────┘
```

Exception 1 | Exception 2 | Exception 3 | Exception 4 | Exception 5 | Exception 6 | Exception 7 | Exception 8 | Exception 9 | Exception 10

Exception 11 | Exception 13 | Exception 14 | Exception 15 | Exception 16 | Exception 17 | Exception 18 | Exception 19 | Exception 20 | Exception 21 | Exception 22 | Exception 23

Exception 24 | Exception 25 | Exception 26 | Exception 27 | Exception 28 | Exception 29 | Exception 30 | Exception 31 | Exception 32 | Exception 33 | Exception 34 | Exception 35

Exception 36 | Exception 37 | Exception 38 | Exception 39 | Exception 40 | Exception 41 | Exception 42 | Exception 43 | Exception 44 | Exception 45 | Exception 46 | Exception 47

3.39.21   I/O Structure Data Items

I/O Structure Element	I/O Data Items
Market Domain Data Version	MDD Version Number
	MDD Publication Date
Threshold Parameter	Threshold Parameter
	Effective from settlement date
GSP Group Details	GSP Group ID
	GSP Group Name
GSP Group/ Distributor Relationship	Distributor ID
	Market Participant Role Code
	Effective From Settlement Date (MPR)
	Effective from settlement date (GGD)
	Effective to settlement date (GGD)
PRS Agent Appointment	PRS Agent ID
	Market Participant Role Code
ISR Agent Appointment	ISR Agent ID
	Market Participant Role Code
	Effective from date (MPR)
	Effective from date (IAA)
	Effective to date (IAA)
Line Loss Factor Classes	Distributor ID
	Market Participant Role Code
	Effective from date (MPR)
	LLFC ID
	LLFC Description
	MS Specific LLF Class Indicator
	Effective From Settlement Date (LLFC)
	Effective To Settlement Date (LLFC)
Profile Class Details	Profile Class ID
	Profile Class Description
	Effective From Settlement Date (PCLA)
	Effective To Settlement Date (PCLA)
Standard Settlement Configuration Details	SSC ID
	SSC Description
	Effective From Settlement Date (SSC)
	Effective To Settlement Date (SSC)
Measurement Requirements	Time Pattern Regime ID
VSCPC Details	Profile Class ID
	Effective From Settlement Date (VSCPC)
	Effective To Settlement Date (VSCPC)
AFYCS Details	GSP Group ID
	Effective from settlement date (AFOYCS)
	Effective to settlement date (AFOYCS)
AFYC Consumption Details	AFYC
	Time Pattern Regime ID
Market Participant	Market Participant ID
	Market Participant Name
Market Participants Roles	Market Participants Role Code
	Effective From Date
	Effective To Date
	Distributor Business ID
Exception 1	Exception Type MPRL1
Exception 2	Exception Type MPRH1
Exception 3	Exception Type THPL1
Exception 4	Exception Type THPL2
Exception 5	Exception Type GSGL1

Exception 6	Exception Type GSGL2
Exception 7	Exception Type GGDL1
Exception 8	Exception Type GGDM1
Exception 9	Exception Type GGDH1
Exception 10	Exception Type GGDH2
Exception 14	Exception Type PAAM1
Exception 15	Exception Type PAAM2
Exception 19	Exception Type IAAL1
Exception 20	Exception Type IAAM1
Exception 21	Exception Type IAAH1
Exception 22	Exception Type IAAH2
Exception 23	Exception Type IAAH3
Exception 24	Exception Type PFCL1
Exception 25	Exception Type TPDL1
Exception 26	Exception Type LLFL1
Exception 27	Exception Type LLFM1
Exception 28	Exception Type SCIL1
Exception 29	Exception Type TPRL1
Exception 30	Exception Type TPRM1
Exception 31	Exception Type TPRH1
Exception 32	Exception Type VSDL1
Exception 33	Exception Type VSDM1
Exception 34	Exception Type ASDL1
Exception 35	Exception Type ASDL2
Exception 36	Exception Type ASDH1
Exception 37	Exception Type ASDH2
Exception 38	Exception Type ASDH3
Exception 39	Exception Type ASDH4
Exception 40	Exception Type AFDM1
Exception 41	Exception Type AFDM2
Exception 42	Exception Type AFDM3
Exception 43	Exception Type AFDM4
Exception 44	Exception Type TPRH2
Exception 45	Exception Type TPRM2
Exception 46	Exception Type TPRM3
Exception 48	Exception Type MPRH2
Exception 49	Exception Type MPRH3
Exception 50	Exception Type GGDM2
Exception 51	Exception Type GGDH4
Exception 52	Exception Type GGDH5
Exception 54	Exception Type PAAH5
Exception 55	Exception Type MPRH4

3.40   N0037 Manage Refresh Instruction Failures

3.40.1   Function Type

On-line   Enquiry   User initiated

3.40.2   Function Description

This function is invoked by the NHHDA user to allow for the selection of PRS Refresh Instructions with validation failures for return to their source, along with their reasons for failure.

The system presents a list of all Refresh Instruction Failures satisfying the selection criteria. The user may specify zero or more of the following criteria.

- the associated Instruction's source (PRS Agent);
- the subject Metering System Id.;
- the status of the Resend Request Flag;
- include or exclude Refresh Instruction Failures with a Resend Request Date between two given dates.

The list is sorted by Instruction Sequence Number and then Metering System Id.

The user may select individual Refresh Instruction Failures for inclusion or exclusion when returning the associated Instruction to its source. Inclusion of a Refresh Instruction Failure sets the Include Reason Flag of all associated Refresh Instruction Failure Reasons, exclusion clears all of these flags.

When a Refresh Instruction Failure is selected, the system presents a list of the Refresh Instruction Failure Reasons for that failure, sorted by their sequence numbers.

The user may select individual Refresh Instruction Status Reasons for inclusion or exclusion when returning the associated Instruction to its source.

When selecting Refresh Instruction Failures and Refresh Instruction Failure Reasons for inclusion, the user has the fast path option of "select all" and "deselect all" (not shown on the I/O Structure).

3.40.3   Processing Description

For each Refresh Instruction Failure selected for inclusion:

- set the Resend Request Flag to "Yes".

For each Refresh Instruction Failure deselected for inclusion:

- set the Resend Request Flag to "No".

For each Refresh Instruction Failure Reason selected for inclusion:

- set the Include Reason Flag to "Yes".

For each Refresh Instruction Failure Reason deselected for inclusion:

- set the Include Reason Flag to "No".

3.40.4   Error Handling

None

3.40.5   Common Processing

NC002 - Update On-line Audit Log

NC006 - Restrict On-line Access

3.40.6   Volumes

Very low. Refresh Instruction Fails will be managed on an ad-hoc basis.

3.40.7   Events

Update Refresh Instruction Failure

Update Refresh Instruction Failure Reason

3.40.8   Event Frequency

The exact frequency cannot be determined but the sum of the frequencies of the events and enquiries is 1.

3.40.9   Enquiries

Browse Refresh Instruction Failures

3.40.10   Enquiry Frequency

The exact frequency cannot be determined but the sum of the frequencies of the events and enquiries is 1.

3.40.11   Requirements Catalogue Ref.

F5, F6, F11, F13, F14, N17, N24

3.40.12   User Roles

Exception Administrator

3.40.13   I/O Structures
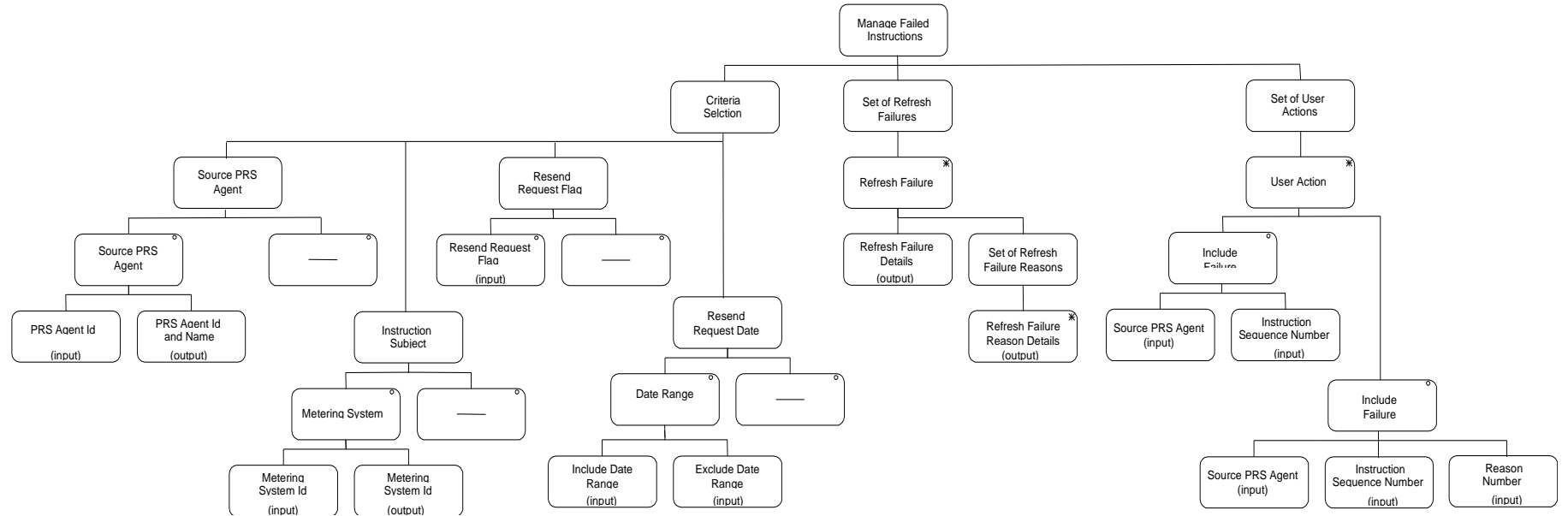
I/O Structure Elements	Data Items
PRS AgentId.	Market ParticipantId. (Source)
PRS AgentId. and Name	Market Participant Id. (Source)
	Market Participant Name (Source)
Metering SystemId.	Metering SystemId.
Resend Request Flag	Resend Request Flag
Include DateRange	Start Date
	End Date
ExcludeDateRange	Start Date
	End Date
Refresh Failure Details	Metering System Id.
	Market Participant Id. (Source)
	Market Participant Name (Source)
	Instruction Sequence Number
	Significant Date
	Resend Request Flag
	Resend Request Date
Refresh Failure Reason Details	Reason Number
	Instruction Status Reason
	Include Reason Flag
Instruction Sequence Number	Instruction Sequence Number
Reason Number	Reason Number

3.41   N1001 Browse MS Energisation Statuses (PRS and DC)

3.41.1   Function Type

On-line   Enquiry   User initiated

3.41.2   Function Description

This function is invoked by an NHHDA user to allow browsing of MS Energisation Statuses (PRS and DC).

The user enters a Metering System Id.

3.41.3   Processing Description

For both entities, Energisation Statuses and their Effective From Settlement Date {Metering System Energisation Status}s are displayed, together with, for Metering System Energisation Status (DC) entity only, their Data Collector Ids.

3.41.4   Error Handling

None

3.41.5   Common Processing

NC006 Restrict On-line Access

3.41.6   Volumes

An indeterminate number of MS Energisation Statuses (PRS and DC) will be browsed on an ad hoc basis.

3.41.7   Events

None

3.41.8   Event Frequency

N/A

3.41.9   Enquiries

Browse MS Energisation Statuses (PRS and DC).

3.41.10   Enquiry Frequency

1

3.41.11   Requirements Catalogue Ref.

N17.

3.41.12   User Roles

Exception Administrator

Auditor

3.41.13   I/O Structures
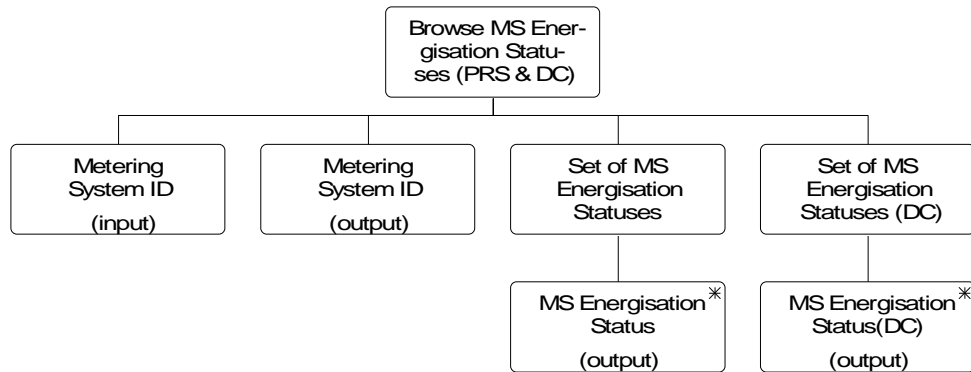
```
                          ┌─────────────────┐
                          │  Browse MS Ener- │
                          │ gisation Statu-   │
                          │  ses (PRS & DC)   │
                          └─────────────────┘
         ┌──────────────┬──────────┴──────────┬──────────────┐
  ┌────────────┐ ┌────────────┐ ┌────────────┐ ┌────────────┐
  │  Metering   │ │  Metering   │ │  Set of MS  │ │  Set of MS  │
  │  System ID  │ │  System ID  │ │ Energisation│ │ Energisation│
  │             │ │             │ │   Statuses  │ │Statuses (DC)│
  │   (input)   │ │  (output)   │ │             │ │             │
  └────────────┘ └────────────┘ └────────────┘ └────────────┘
                                       │              │
                              ┌────────────┐ ┌────────────┐
                              │MS Energisation*│ │MS Energisation*│
                              │   Status    │ │  Status(DC) │
                              │             │ │             │
                              │  (output)   │ │  (output)   │
                              └────────────┘ └────────────┘
```

I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS Energisation Status	Energisation Status
	X MSES Effective From Settlement Date {MSES}
MS Energisation Status(DC)	Data Collector Id
	Energisation Status
	X MSESDC Effective From Settlement Date {MSESDC}

3.42   N1002 Browse MS Settlement Configurations (PRS and DC).

3.42.1   Function Type

On-line   Enquiry   User initiated

3.42.2   Function Description

This function is invoked by an NHHDA user to allow browsing of MS Settlement Configurations.

The user enters a Metering System Id.

3.42.3   Processing Description

For both entities, Standard Settlement Configuration Ids and their Effective From Settlement Date {Settlement Configuration}s are displayed, together with, for Settlement Configuration (DC) entity only, their Data Collector Ids.

3.42.4   Error Handling

None

3.42.5   Common Processing

NC006 Restrict On-line Access

3.42.6   Volumes

An indeterminate number of MS Settlement Configurations will be browsed on an ad hoc basis

3.42.7   Events

None

3.42.8   Event Frequency

N/A

3.42.9   Enquiries

Browse MS Settlement Configurations (PRS and DC).

3.42.10   Enquiry Frequency

1

3.42.11   Requirements Catalogue Ref.

N17.

3.42.12   User Roles

Exception Administrator

Auditor

3.42.13   I/O Structures
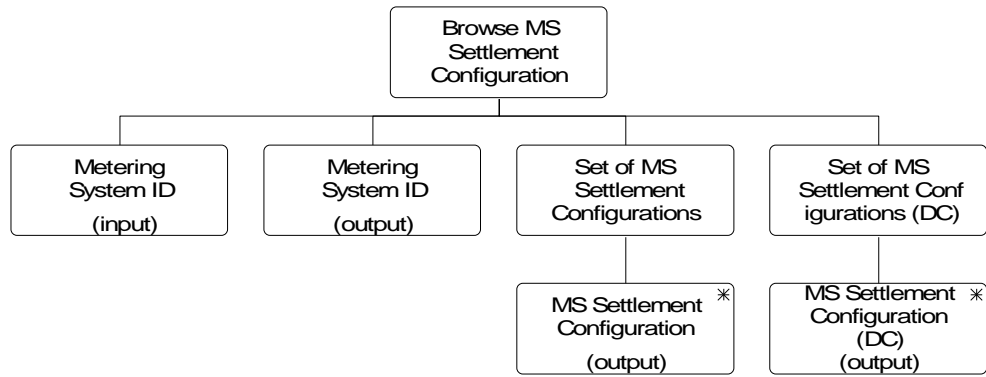
I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS Settlement Configuration	Standard Settlement Configuration Id
	Standard Settlement Configuration Description
	X SCON Effective From Settlement Date {SCON}
MS Settlement Configuration (DC)	Data Collector Id
	Standard Settlement Configuration Id
	Standard Settlement Configuration Description
	X SCDC Effective From Settlement Date {SCDC}

3.43   **N1003 Browse MS Profile Classes (PRS and DC).**

3.43.1   **Function Type**

On-line   Enquiry   User initiated

3.43.2   **Function Description**

This function is invoked by an NHHDA user to allow browsing of MS Profile Classes.

The user enters a Metering System Id.

3.43.3   **Processing Description**

For both entities, the Profile Class Ids and their Effective From Settlement Date {Metering System Profile Class}s are displayed, together with, for Metering System Profile Class (DC) entity only, their Data Collector Ids.

3.43.4   **Error Handling**

None

3.43.5   **Common Processing**

NC006 Restrict On-line Access

3.43.6   **Volumes**

An indeterminate number of MS Profile Classes will be browsed on an ad hoc basis.

3.43.7   **Events**

None

3.43.8   **Event Frequency**

N/A

3.43.9   **Enquiries**

Browse MS Profile Classes (PRS and DC).

3.43.10   **Enquiry Frequency**

1

3.43.11   **Requirements Catalogue Ref.**

N17.

3.43.12   **User Roles**

Exception Administrator

Auditor

3.43.13   I/O Structures
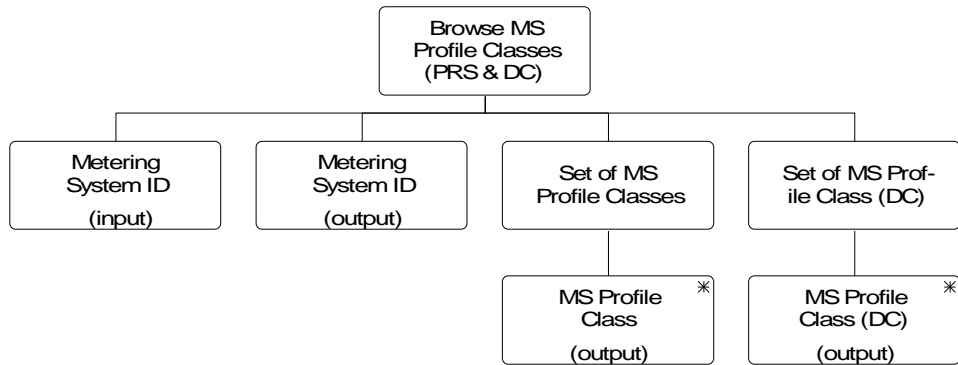
```
                        ┌─────────────────┐
                        │    Browse MS    │
                        │ Profile Classes │
                        │   (PRS & DC)    │
                        └────────┬────────┘
        ┌────────────────┬───────┴────────┬────────────────────┐
┌───────┴────────┐ ┌─────┴──────────┐ ┌───┴────────────┐ ┌─────┴──────────┐
│    Metering    │ │    Metering    │ │   Set of MS    │ │ Set of MS Prof-│
│   System ID    │ │   System ID    │ │ Profile Classes│ │ ile Class (DC) │
│    (input)     │ │    (output)    │ │                │ │                │
└────────────────┘ └────────────────┘ └───────┬────────┘ └───────┬────────┘
                                       ┌───────┴────────┐ ┌───────┴────────┐
                                       │   MS Profile  ✳│ │   MS Profile  ✳│
                                       │     Class      │ │   Class (DC)   │
                                       │    (output)    │ │    (output)    │
                                       └────────────────┘ └────────────────┘
```

I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS Profile Class	Profile Class Id
	X MSPC Effective From Settlement Date {MSPC}
MS Profile Class(DC)	Data Collector Id
	Profile Class Id
	X MSMCDC Effective From Settlement Date {MSMCDC}

3.44   N1004 Browse MS Regns (PRS and DC) & DC & DA Appts .

3.44.1   Function Type

On-line   Enquiry   User initiated

3.44.2   Function Description

This function is invoked by an NHHDA user to allow browsing of MS Regns (PRS and DC) & DC & DA Appts .

The user enters a Metering System Id.

3.44.3   Processing Description

For both Registration entities, the Supplier Id and their Effective From Settlement Date {Registration}s are displayed, together with, for Registration (DC) entity only, their data Collector ids. For the Registration entity the associated Data Aggregator Appointments (Effective From Settlement Date {Data Aggregator Appointment } and Effective To Settlement Date {Data Aggregator Appointment}) and Data Collector Appointments (Data Collector Id and Effective From Settlement Date {Data Collector Appointment}) are displayed.

3.44.4   Error Handling

None

3.44.5   Common Processing

NC006 Restrict On-line Access

3.44.6   Volumes

An indeterminate number of MS Regns (PRS and DC) & DC & DA Appts will be browsed on an ad hoc basis.

3.44.7   Events

None

3.44.8   Event Frequency

N/A

3.44.9   Enquiries

Browse MS Regns (PRS and DC) & DC & DA Appts.

3.44.10   Enquiry Frequency

1

3.44.11   Requirements Catalogue Ref.

N17

3.44.12   User Roles

Exception Administrator

Auditor

3.44.13   I/O Structures
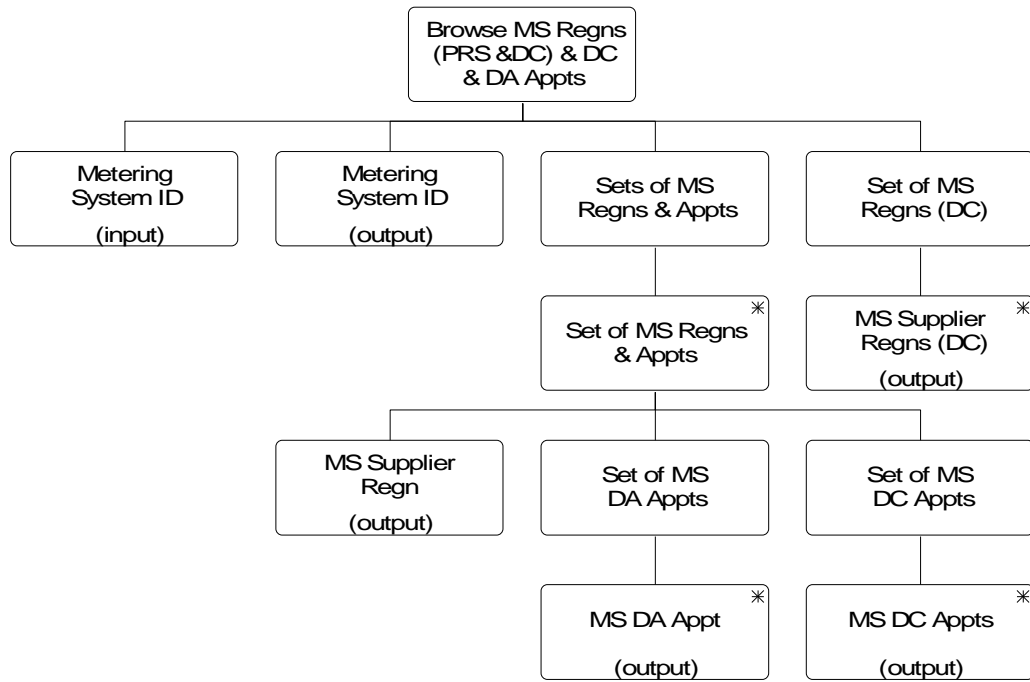
```
                        ┌─────────────────┐
                        │ Browse MS Regns │
                        │ (PRS &DC) & DC  │
                        │   & DA Appts    │
                        └────────┬────────┘
        ┌─────────────────┬──────┴──────┬─────────────────┐
┌───────────────┐ ┌───────────────┐ ┌───────────────┐ ┌───────────────┐
│   Metering    │ │   Metering    │ │  Sets of MS   │ │   Set of MS   │
│  System ID    │ │  System ID    │ │ Regns & Appts │ │  Regns (DC)   │
│               │ │               │ │               │ │               │
│    (input)    │ │   (output)    │ │               │ │               │
└───────────────┘ └───────────────┘ └───────┬───────┘ └───────┬───────┘
                                     ┌───────────────┐* ┌───────────────┐*
                                     │ Set of MS Regns│ │  MS Supplier  │
                                     │    & Appts     │ │  Regns (DC)   │
                                     │                │ │               │
                                     │                │ │   (output)    │
                                     └───────┬────────┘ └───────────────┘
                    ┌───────────────┬────────┴──────┬─────────────────┐
            ┌───────────────┐ ┌───────────────┐ ┌───────────────┐
            │  MS Supplier  │ │   Set of MS   │ │   Set of MS   │
            │     Regn      │ │   DA Appts    │ │   DC Appts    │
            │               │ │               │ │               │
            │   (output)    │ │               │ │               │
            └───────────────┘ └───────┬───────┘ └───────┬───────┘
                              ┌───────────────┐* ┌───────────────┐*
                              │   MS DA Appt   │ │  MS DC Appts  │
                              │                │ │               │
                              │   (output)     │ │   (output)    │
                              └───────────────┘ └───────────────┘
```

I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS Supplier Regn	Supplier Id
	Supplier Name
	X REGI Effective From Settlement Date {REGI}
MS DA Appt	X DAA Effective From Settlement Date {DAA}
	Y DAA Effective To Settlement Date {DAA}
MS DC Appts	Data Collector Id
	Data Collector Name
	Effective From Date {DCA}
MS Supplier Regns (DC)	Data Collector Id
	Data Collector Name
	Supplier Id
	Supplier Name
	X RDC Effective From Settlement Date {RDC}

3.45   N1005 Browse MS GSP Groups (PRS and DC)

3.45.1   Function Type

On-line   Enquiry   User initiated

3.45.2   Function Description

This function is invoked by an NHHDA user to allow browsing of MS GSP Groups (PRS and DC).

The user enters a Metering System Id.

3.45.3   Processing Description

For both entities, GSP Group Id and their Effective From Settlement Date {Metering System GSP Group}s are displayed, together with, for Metering System GSP Group (DC) entity only, their Data Collector Ids.

3.45.4   Error Handling

None

3.45.5   Common Processing

NC006 Restrict On-line Access

3.45.6   Volumes

An indeterminate number of MS GSP Groups (PRS and DC) will be browsed on an ad hoc basis.

3.45.7   Events

None

3.45.8   Event Frequency

N/A

3.45.9   Enquiries

Browse MS GSP Groups (PRS and DC).

3.45.10   Enquiry Frequency

1

3.45.11   Requirements Catalogue Ref.

N17.

3.45.12   User Roles

Exception Administrator

Auditor

3.45.13   I/O Structures
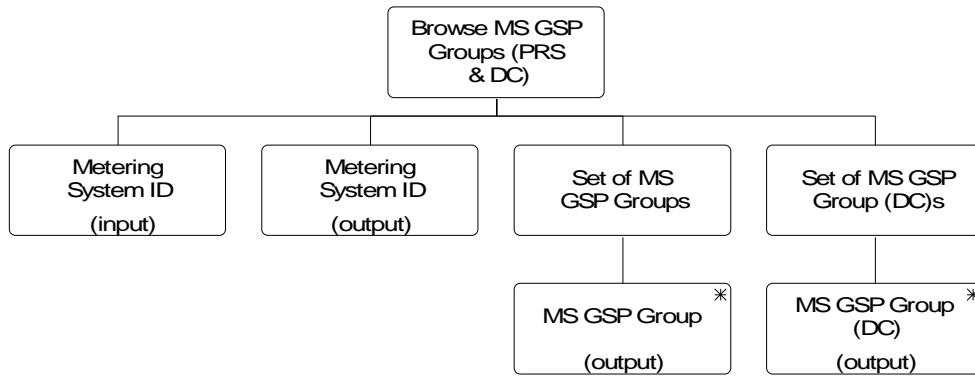
I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS GSP Group	GSP Group Id
	X MSGG Effective From Settlement Date {MSGG}
MS GSP Group (DC)	Data Collector I
	GSP Group Id
	X MSGGDC Effective From Settlement Date {MSGGDC}

3.46   N1006 Browse MS Measurement Classes (PRS and DC).

3.46.1   Function Type

On-line   Enquiry   User initiated

3.46.2   Function Description

This function is invoked by an NHHDA user to allow browsing of MS Measurement Classes (PRS and DC).

The user enters a Metering System Id.

3.46.3   Processing Description

For both entities, Measurement Class Id and their Effective From Settlement Date {Metering System Measurement Class}s are displayed, together with, for Metering System Measurement Classes (DC) entity only, their Data Collector Ids.

3.46.4   Error Handling

None

3.46.5   Common Processing

NC006 Restrict On-line Access

3.46.6   Volumes

An indeterminate number of MS Measurement Classes (PRS and DC) will be browsed on an ad hoc basis.

3.46.7   Events

None

3.46.8   Event Frequency

N/A

3.46.9   Enquiries

Browse MS Measurement Classes (PRS and DC).

3.46.10   Enquiry Frequency

1

3.46.11   Requirements Catalogue Ref.

N17.

3.46.12   User Roles

Exception Administrator

Auditor

3.46.13   I/O Structures
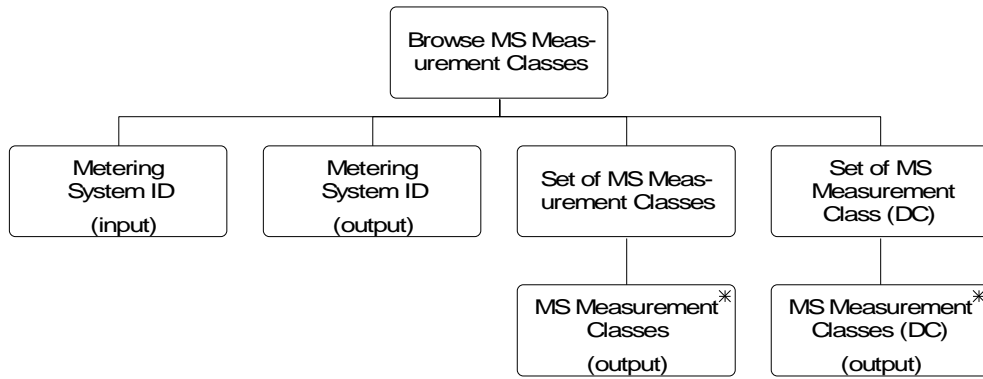
```
                          ┌─────────────────┐
                          │  Browse MS Meas-│
                          │ urement Classes │
                          └─────────────────┘
         ┌──────────────┬───────────┴────────┬──────────────┐
  ┌────────────┐  ┌────────────┐  ┌────────────┐  ┌────────────┐
  │  Metering  │  │  Metering  │  │ Set of MS Meas-│ Set of MS  │
  │ System ID  │  │ System ID  │  │ urement Classes│Measurement │
  │            │  │            │  │            │  │ Class (DC) │
  │  (input)   │  │  (output)  │  └────────────┘  └────────────┘
  └────────────┘  └────────────┘        │               │
                                 ┌────────────┐  ┌────────────┐
                                 │MS Measurement*│MS Measurement*│
                                 │  Classes   │  │ Classes (DC)│
                                 │  (output)  │  │  (output)  │
                                 └────────────┘  └────────────┘
```

I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS Measurement Classes	Measurement Class Id
	X MSMC Effective From Settlement Date {MSMC}
MS Measurement Classes (DC)	Data Collector Id
	Measurement Class Id
	X MSMCDC Effective From Settlement Date {MSMCDC}

3.47   N1007 Produce Ad-Hoc Reports

3.47.1   Function Type

On-line   Enquiry   User initiated

3.47.2   Function Description

This function is invoked by the NHHDA user to define a query of the data held in the system and a layout for the result of the query, to produce a report by running the query, and to save the query and the report.

3.47.3   Processing Description

A user will define queries based on entities and attributes they have access to, and as part of each query a layout for its output will be specified. A set of queries and its associated layout may then be saved.

Users may then produce a report on the data held on the system by running it.

3.47.4   Error Handling

None

3.47.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.47.6   Volumes

An indeterminate number of reports will be produced on an ad hoc basis.

3.47.7   Events

None

3.47.8   Event Frequency

N/A

3.47.9   Enquiries

Produce Ad hoc reports,

3.47.10   Enquiry Frequency

1

3.47.11   Requirements Catalogue Ref.

N17

3.47.12   User Roles

Auditor

Exception Administrator

Market Domain Data Administrator

Superior Market Domain Data Administrator

System Manager

3.47.13   I/O Structures

An I/O structure has not been created as it is inappropriate for this function.

3.48   N1008 Produce Ad-Hoc Audit Reports

3.48.1   Function Type

On-line   Enquiry   User initiated

3.48.2   Function Description

This function is invoked by the NHHDA user to define a query of the audit data held in the system and a layout for the result of the query, to produce a report by running the query, and to save the query and the report.

3.48.3   Processing Description

A user will define queries based on audit data held in the system, and as part of each query a layout for its output will be specified. A set of queries and its associated layout may then be saved.

Users may then produce a report on the data held on the system by running it.

3.48.4   Error Handling

None

3.48.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.48.6   Volumes

An indeterminate number of reports will be produced on an ad hoc basis.

3.48.7   Events

None

3.48.8   Event Frequency

N/A

3.48.9   Enquiries

Produce Ad hoc Audit Reports

3.48.10   Enquiry Frequency

1

3.48.11   Requirements Catalogue Ref.

N17

3.48.12   User Roles

Auditor

3.48.13   I/O Structures

An I/O structure has not been created as it is inappropriate for this function.

3.49   N1009 Browse Data Aggregation Run Schedule

3.49.1   Function Type

On-line   Enquiry   User initiated

3.49.2   Function Description

This function is invoked by the NHHDA user to allow browsing of the Data Aggregation Run Schedule. The schedule is held in the Data Aggregation Run entity and the GSP Groups included in each run are held in entity GSP Group In Aggregation Run.

3.49.3   Processing Description

The user selects a range of Settlement Dates or a range of Data Aggregation Run Dates.

If a Settlement Date range is specified:

- all Settlements within the specified date range are displayed;

- the user selects a Settlement and all runs scheduled for that Settlement are displayed;

- the user selects a Run and all GSP Groups included in that Run are displayed.

If a Data Aggregation Run Date range is specified:

- all Settlements for which a run is scheduled within the specified date range are displayed;

- the user selects a Settlement and all runs scheduled for that Settlement to run within the specified date range are displayed;

- the user selects a Run and all GSP Groups included in that Run are displayed.

3.49.4   Error Handling

None

3.49.5   Common Processing

NC006 Restrict On-line Access.

3.49.6   Volumes

An indeterminate, but high, number of Data Aggregation Runs will be browsed on an ad hoc basis

3.49.7   Events

None

3.49.8   Event Frequency

N/A

3.49.9   Enquiries

Browse Data Aggregation Run Status

3.49.10   Enquiry Frequency

1

3.49.11   Requirements Catalogue Ref.

N17

3.49.12   User Roles

Auditor

Data Aggregation Administrator

Exception Administrator

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.49.13   I/O Structures

See "Data Aggregation Run Browsed" branch of N0022

3.50   N1011 Browse File Loading Statuses

3.50.1   Function Type

On-line   Enquiry   User initiated

3.50.2   Function Description

This function is invoked by the NHHDA user to allow browsing of the loading status of files received by the system.

3.50.3   Processing Description

The user selects the file type and / or source and the date or range of dates on which they were received; or all files which have been received but not loaded.

For each qualifying file, the source, date received, type, file sequence numbers, both Instruction sequence numbers (first and last) and loading status (awaiting loading, loaded successfully, or rejected) are displayed.

The list of files displayed can be sort by using the buttons at the top of each column.

As each file is selected, additional information about each file − the id, name, original name and last processed date is displayed.

The user is able to display the contents of a file (if they have not been archived) by selecting the 'View' button.

For successfully loaded instruction files, the total number of instructions in the file and the number and percentage of instructions of each possible instruction status (unprocessed, failed, Validation errors, discarded, superseded or applied) are displayed.

3.50.4   Error Handling

When viewing a file, the user will be presented with a warning message iif the size of the machine readable file (in bytes) is larger than the allowed size set in the system parameter. The user will also be presented with an error message if the physical file does not exist.

3.50.5   Common Processing

NC006 Restrict On-line Access

3.50.6   Volumes

File loading statuses will be browsed on an ad hoc basis.

3.50.7   Events

None

3.50.8   Event Frequency

N/A

3.50.9   Enquiries

Browse File Loading Statuses

3.50.10　Enquiry Frequency

1

3.50.11　Requirements Catalogue Ref.

N01, N17

3.50.12　User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

Auditor

System Manager

System Operator

Exception Administrator

3.50.13   I/O Structures
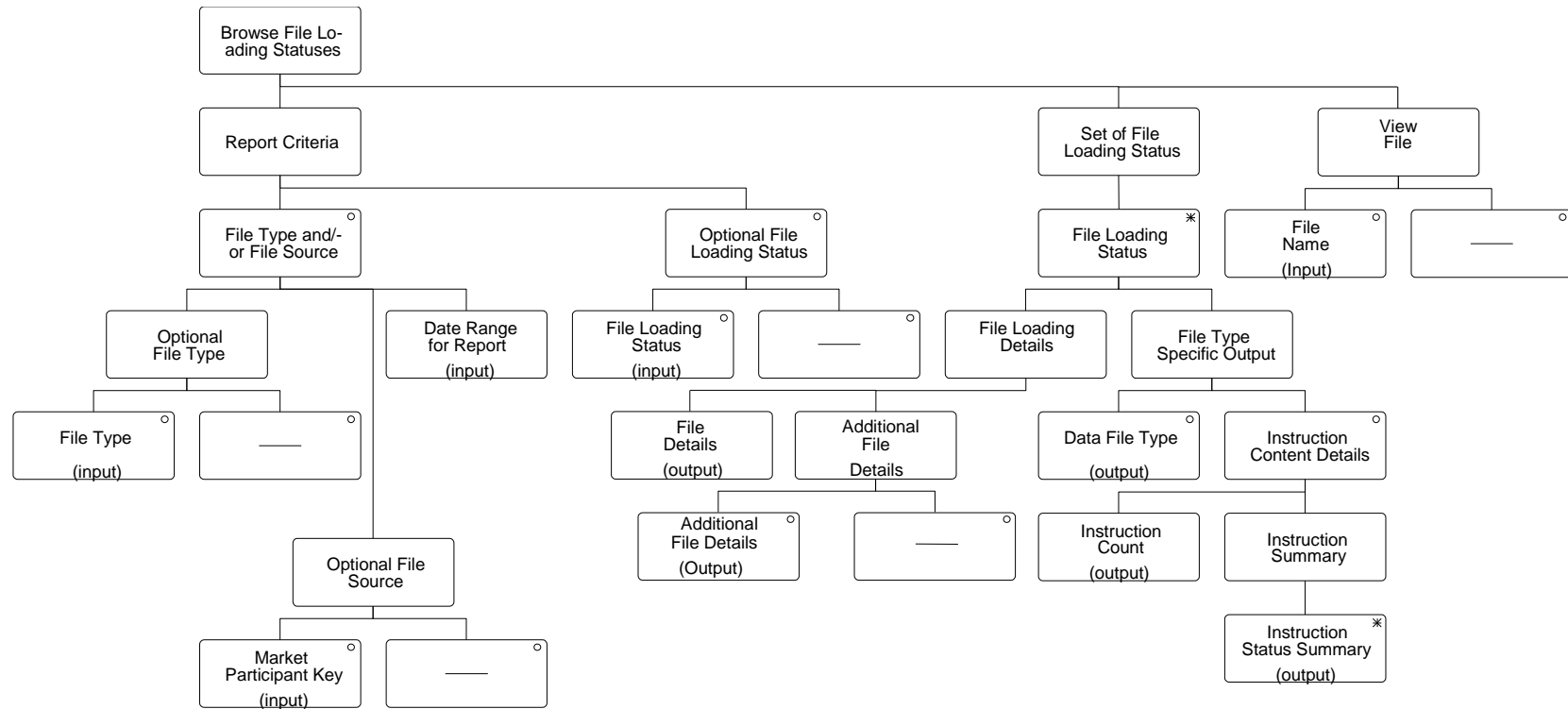
I/O Structure Element	Data Items
File Type	File Content Code
Market Participant Key	Market Participant Id
	Market Participant Role
DateRange for Report	Start Date for Selection
	End Date for Selection
File Loading Status	File Status
File Loading Details	
	File Sent or Received Timestamp
	Market Participant Id
	Market Participant Role Code
	File Content Code
	File Status
	Instruction Sequence Number
	File Sequence number
	First Instruction Sequence Number
	Last Instruction Sequence Number
Additional File Details	File ID
	File Name
	Original File Name
	File Processed Timestamp
Instruction Count	Instruction Count
Instruction Status Summary	Instruction Status
	Instruction Count with Status
	Instruction Percentage with Status

3.51   N1014 Report GSP Groups.

3.51.1   Function Type

On-line   Enquiry   User initiated

3.51.2   Function Description

This function is invoked by an NHHDA user to allow reporting of the set of valid GSP Groups.

3.51.3   Processing Description

A list of GSP Group Ids is displayed. The user selects one, a range, or all of them to report. The GSP Group Id and Name are reported.

3.51.4   Error Handling

None

3.51.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.51.6   Volumes

An indeterminate number of GSP Groups will be reported on an ad-hoc basis.

3.51.7   Events

None

3.51.8   Event Frequency

N/A

3.51.9   Enquiries

Report GSP Group

3.51.10   Enquiry Frequency

1

3.51.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.51.12   User Roles

Auditor

Exception Administrator

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.51.13   I/O Structures

```
                        ┌─────────────────┐
                        │   Report on     │
                        │   GSP Groups    │
                        └────────┬────────┘
                 ┌───────────────┴───────────────┐
        ┌────────┴────────┐             ┌─────────┴────────┐
        │   Set of GSP    │             │   Set of GSP     │
        │   Group Ids     │             │   Group Ids      │
        │                 │             │   and Names      │
        └────────┬────────┘             └─────────┬────────┘
        ┌────────┴────────┐ ✳           ┌─────────┴────────┐ ✳
        │                 │             │                  │
        │  GSP Group Id   │             │  GSP Group Id    │
        │                 │             │  and Name        │
        │   (input)       │             │   (output)       │
        └─────────────────┘             └──────────────────┘
```

I/O Structure Element	Data Items
GSP Group Id	GSP Group Id
GSP Group Id and Name	GSP Group Id
	GSP Group Name

3.52   N1015 Report Profile Classes

3.52.1   Function Type

On-line   Enquiry   User initiated

3.52.2   Function Description

This function is invoked by an NHHDA user to allow reporting of the set of valid Profile Classes and their associated GSP Group Profile Class Researched Default EACs.

A list of Profile Class Ids is displayed. The user selects one, a range, or all of them to report.

3.52.3   Processing Description

The Profile Class Id and Profile Class Description are reported, together with the GSP Group Id, Effective From Settlement Date and Researched Default EAC for all associated GSP Group Profile Class Researched Default EACs, if any.

3.52.4   Error Handling

None

3.52.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.52.6   Volumes

An indeterminate number of Profile Classes and their associate GSP Group Profile Class Researched Default EACs will be reported on an ad hoc basis.

3.52.7   Events

None

3.52.8   Event Frequency

N/A

3.52.9   Enquiries

Report Profile Classes

3.52.10   Enquiry Frequency

1

3.52.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.52.12   User Roles

Exception Administrator

Auditor

Market Domain Data Administrator

Superior Market Domain Data Administrator.

3.52.13   I/O Structures
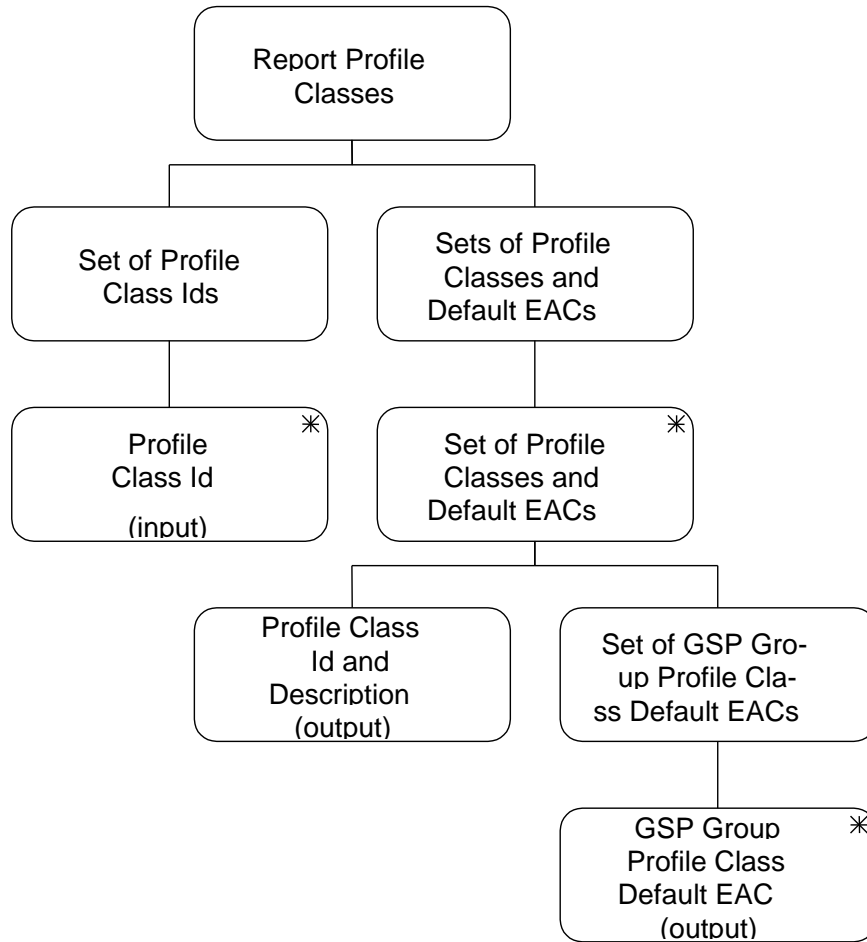
```
                    ┌─────────────────────┐
                    │   Report Profile    │
                    │      Classes        │
                    └─────────────────────┘
                              │
              ┌───────────────┴───────────────┐
    ┌─────────────────┐           ┌─────────────────────┐
    │ Set of Profile  │           │  Sets of Profile    │
    │   Class Ids     │           │   Classes and       │
    │                 │           │   Default EACs      │
    └─────────────────┘           └─────────────────────┘
              │                             │
    ┌─────────────────┐ ✳       ┌─────────────────────┐ ✳
    │     Profile     │           │  Set of Profile     │
    │    Class Id     │           │   Classes and       │
    │                 │           │   Default EACs      │
    │     (input)     │           └─────────────────────┘
    └─────────────────┘                     │
                              ┌─────────────┴─────────────┐
                    ┌─────────────────┐       ┌─────────────────────┐
                    │  Profile Class  │       │  Set of GSP Gro-    │
                    │    Id and       │       │  up Profile Cla-    │
                    │  Description    │       │  ss Default EACs    │
                    │    (output)     │       └─────────────────────┘
                    └─────────────────┘                 │
                                              ┌─────────────────────┐ ✳
                                              │    GSP Group        │
                                              │   Profile Class     │
                                              │   Default EAC       │
                                              │    (output)         │
                                              └─────────────────────┘
```

I/O Structure Element	Data Items
Profile Class Id	Profile Class Id
Profile Class id & Desc	Profile Class Id
	Profile Class Description
GSP profile class Researched Default EACs	GSP Group Id
	Researched Default EAC
	X GGPCDE Effective From Settlement Date {GGPCDE}

3.53   N1016 Report Standard Settlement Configuration.

3.53.1   Function Type

On-line   Enquiry   User initiated

3.53.2   Function Description

This function allows reporting of a set Standard Settlement Configurations with associated Measurement Requirements, Valid Settlement Configuration Profile Classes and Average Fractions of Yearly Consumptions.

A list of Standard Settlement Configurations is displayed. The user selects one, a range, or all of them to report.

3.53.3   Processing Description

For each selected Standard Settlement Configuration, the Id and Description are output. For each Valid Settlement Configuration Profile Class the Profile Class Id and Description are output. For each Measurement Requirement the Time Pattern Regime Id is output. All Average Fractions of Yearly Consumption are output, ordered by Profile Class, GSP Group, Time Pattern Regime and Effective From Settlement Date.

3.53.4   Error Handling

None

3.53.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.53.6   Volumes

An indeterminate number of Standard Settlement Configurations will be reported on an ad hoc basis.

3.53.7   Events

None

3.53.8   Event Frequency

N/A

3.53.9   Enquiries

Report Standard Settlement Configuration.

3.53.10   Enquiry Frequency

1

3.53.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.53.12   User Roles

Exception Administrator

Auditor

Market Domain Data Administrator

Superior Market Domain Data Administrator.

3.53.13   I/O Structures
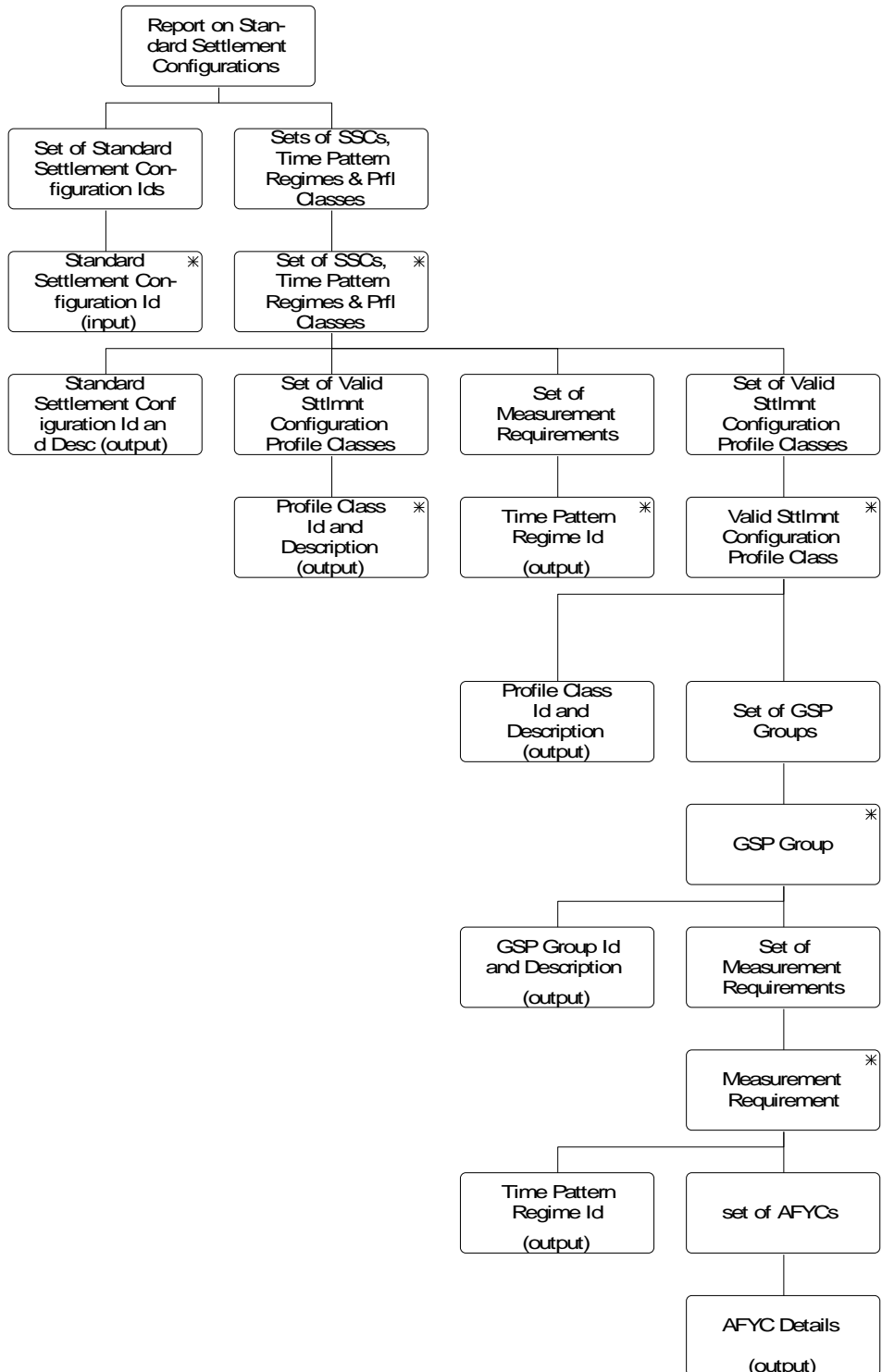
I/O Structure Element	Data Items
Standard Settlement Configuration Id	Standard Settlement Configuration Id
Standard Settlement Configuration Id and Desc	Standard Settlement Configuration Id
	Standard Settlement Configuration

	Description
Profile Class Id and Description	Profile Class Id
	Profile Class Description
GSP Group Id and Description	GSP Group Id
	GSP Group Description
Time Pattern Regime Id	Time Pattern Regime Id
AFYC Details	X AFYC Effective From Settlement Date {AFYC}
	Average Fraction of Yearly Consumption

3.54   N1018 Report Average Fractions of Yearly Consumption

3.54.1   Function Type

On-line   Enquiry   User initiated

3.54.2   Function Description

This function allows reporting of a set of Average Fractions Of Yearly Consumption.

A list of existing GSP Group Ids and descriptions is displayed. The user selects one of them to report.

A list of Profile Class Ids and is displayed and the user selects one, a range, or all.

A list of existing Standard Settlement Configuration Ids and descriptions is displayed for the selected Profile Class (as recorded in Valid Settlement Configuration Profile Class). The user selects one, a range, or all of them to report. (These three lists are not shown on the I/O structure)

3.54.3   Processing Description

A list of all the Time Pattern Regime Ids is Reported for the selected Profile Class and Standard Settlement Configurations (as recorded in Valid Settlement Requirement Profile Class) together with their Average Fraction of Yearly Consumption, Effective From Settlement Date {AFYC}s and Effective To Settlement Date {AFYC}s for the selected GSP Group, if any (from entity Average Fraction of Yearly Consumption).

3.54.4   Error Handling

None

3.54.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.54.6   Volumes

An indeterminate number of Average Fractions of Yearly Consumption will be reported on an ad hoc basis.

3.54.7   Events

None

3.54.8   Event Frequency

N/A

3.54.9   Enquiries

Report Average Fractions of Yearly Consumption.

3.54.10   Enquiry Frequency

1

3.54.11 **Requirements Catalogue Ref.**

N17, N18, N19, N20, N21

3.54.12 **User Roles**

Exception Administrator

Auditor

Market Domain Data Administrator

Superior Market Domain Data Administrator.

3.54.13 **I/O Structures**

```
                    ┌─────────────────────┐
                    │     Report on       │
                    │  Average Fracti-    │
                    │   ons of Yearly     │
                    │   Consumption       │
                    └─────────────────────┘
                      │                 │
         ┌────────────────┐      ┌──────────────────┐
         │                │      │  Set of Standard │
         │ Set of AFYC Ids│      │    Settlement    │
         │                │      │  Configurations  │
         └────────────────┘      └──────────────────┘
              │                        │
    ┌──────────────────┐ *    ┌──────────────────┐ *
    │   Id of a set of │      │ Standard Settl-  │
    │   AFYCs for a    │      │ ement Configur-  │
    │ GSPG, SSC & Prf  │      │  ation Detail    │
    │  l Class (input) │      └──────────────────┘
    └──────────────────┘          │           │
              ┌──────────────────┐     ┌──────────────┐
              │   GSP Group,     │     │ Set of AFYC  │
              │  Profile Class   │     │    sets      │
              │   and SSC        │     └──────────────┘
              │   (output)       │            │
              └──────────────────┘    ┌──────────────┐ *
                                      │   AFYC set   │
                                      └──────────────┘
                                        │         │
                              ┌──────────────┐ ┌──────────────┐
                              │  AFYC set    │ │ Set of Time  │
                              │  identifier  │ │   Pattern    │
                              │   (output)   │ │ Requirements │
                              └──────────────┘ └──────────────┘
                                                      │
                                              ┌──────────────┐ *
                                              │    AFYC      │
                                              │   (output)   │
                                              └──────────────┘
```

I/O Structure Element	**Data Items**
AFYC	Average Fraction of Yearly Consumption
	Time Pattern Regime Id
Id of set of AFYCs, GSPG, SSC, Prf Cls	GSP Group Id
	Profile Class Id
	Standard Settlement Configuration Id
GSP Group, Profile Class and SSC	GSP Group Id
	GSP Group Name
	Profile Class Id
	Profile Class Description
	Standard Settlement Configuration Id
	Standard Settlement Configuration Description
AFYC Set Identifier	Effective From Settlement Date {AFYC}
	Effective To Settlement Date {AFYC}

3.55   N1021 Browse Metering Systems & Associated Items.

3.55.1   Function Type

On-line   Enquiry   User initiated

3.55.2   Function Description

This function allows browsing of a set of Metering Systems & Associated Items.

The user enters a Metering System Id to browse. The user also enters the date for which they wish to see the information. The Supplier Registration in effect for the Metering System on the entered date is determined and a list of all Data Collectors appointed during the Registration is displayed for the user to select one of them.

3.55.3   Processing Description

The Supplier Id and Name and Data Collector Id and Name are displayed, together with details of the entities selected below.

One occurrence of each of the following entities is selected, where its effective date is the latest one prior or equal to the entered date:

Settlement Configuration & Settlement Configuration (DC)

Metering System Profile Class and Metering System Profile Class (DC)

Metering System Line Loss Factor Class

Metering System GSP Group and Metering System GSP Group (DC)

Metering System Energisation Status and Metering System Energisation Status (DC)

Metering System Measurement Class and Metering System Measurement Class (DC)

Registration (DC) (Registration has already been selected above).

NB The following data items occur as attributes in two of the displayed entities, but Select only allows them to be included in the data group once:

Standard Settlement Configuration Id

Profile Class Id

GSP Group Id

Energisation Status

Measurement Class Id

Supplier Id.

3.55.4   Error Handling

None

3.55.5   Common Processing

NC006 Restrict On-line Access

3.55.6   Volumes

An indeterminate number of Metering Systems & Associated Items will be browsed on an ad hoc basis.

3.55.7   Events

None

3.55.8   Event Frequency

N/A

3.55.9   Enquiries

Browse Metering Systems & Associated Items

3.55.10   Enquiry Frequency

1

3.55.11   Requirements Catalogue Ref.

N17

3.55.12   User Roles

Exception Administrator

Auditor.

3.55.13   I/O Structures
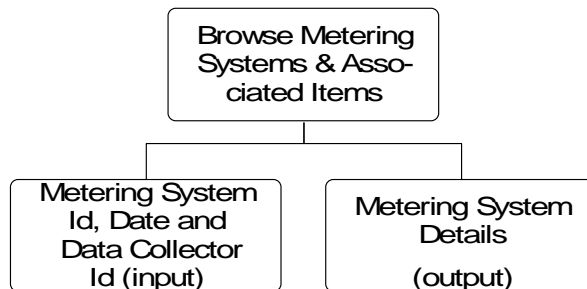
```
              ┌─────────────────┐
              │ Browse Metering │
              │ Systems & Asso- │
              │   ciated Items  │
              └────────┬────────┘
          ┌────────────┴────────────┐
┌─────────────────┐       ┌─────────────────┐
│ Metering System │       │ Metering System │
│   Id, Date and  │       │     Details     │
│  Data Collector │       │                 │
│    Id (input)   │       │     (output)    │
└─────────────────┘       └─────────────────┘
```

The following data items occur as attributes in two of the displayed entities, but Select only allows them to be included in the data group once:
Standard Settlement Configuration Id and Description
Profile Class Id and Description
GSP Group Id and Name
Energisation Status Id and Description
Measurement Class Id and Description
Supplier Id and Name

I/O Structure Element	Data Items
MS Id, Date & Data Collector Id	Data Collector Id
	Date for which Metering System Details Required
	Metering System Id
Metering System Details	Data Collector Id

I/O Structure Element	Data Items
	Data Collector Name
	Distributor Id
	Distributor Name
	Energisation Status
	Energisation Status Description
	GSP Group Id
	GSP Group Name
	Line Loss Factor Class Id
	Line Loss Factor Class Description
	Measurement Class Id
	Measurement Class Description
	Metering System Id
	Profile Class Id
	Profile Class Description
	Standard Settlement Configuration Id
	Standard Settlement Configuration Description
	Supplier Id
	Supplier Name
	X MSES Effective From Settlement Date {MSES}
	X MSESDC Effective From Settlement Date {MSESDC}
	X MSGG Effective From Settlement Date {MSGG}
	X MSGGDC Effective From Settlement Date {MSGGDC}
	X MSLLFC Effective From Settlement Date {MSLLFC}
	X MSMC Effective From Settlement Date {MSMC}
	X MSMCDC Effective From Settlement Date {MSMCDC}
	X MSPC Effective From Settlement Date {MSPC}
	X MSPCDC Effective From Settlement Date {MSPCDC}

I/O Structure Element   **Data Items**

X RDC Effective From Settlement Date
    {RDC}

X REGI Effective From Settlement Date
    {REGI}

X SCDC Effective From Settlement Date
    {SCDC}

X SCON Effective From Settlement Date
    {SCON}

I/O Structure Element   **Data Items**

3.56   N1023 Report Line Loss Factor Classes.

3.56.1   Function Type

On-line   Enquiry   User initiated

3.56.2   Function Description

This function is invoked by an NHHDA user to allow reporting of the set of valid Line Loss Factor Classes.

The user selects a Distributor Id from a pick list (not shown on the I/O structure). A list of Line Loss Factor Classes for that Distributor is displayed. The user selects one, a range, or all of them to report.

3.56.3   Processing Description

The Distributor Id, Line Loss Factor Class Id and Line Loss Factor Class Description are reported.

3.56.4   Error Handling

None

3.56.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.56.6   Volumes

An indeterminate number of Line Loss Factor Classes will be reported on an ad hoc basis.

3.56.7   Events

None

3.56.8   Event Frequency

N/A

3.56.9   Enquiries

Report Line Loss Factor Class.

3.56.10   Enquiry Frequency

1

3.56.11   Requirements Catalogue Ref.
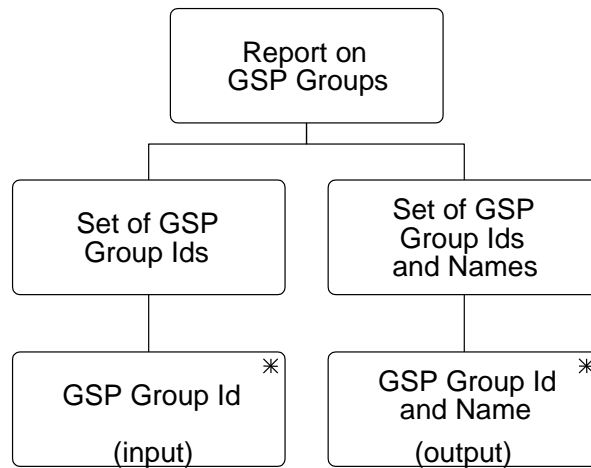
N17, N18, N19, N20, N21

3.56.12   User Roles

Exception Administrator

Auditor

Market Domain Data Administrator

Superior Market Domain Data Administrator.

3.56.13   I/O Structures

```
                    ┌─────────────────┐
                    │  Report on Line │
                    │   Loss Factor   │
                    │    Classes      │
                    └─────────────────┘
                  ┌──────────┴──────────┐
        ┌─────────────────┐    ┌─────────────────┐
        │ Line Loss Fact- ✳│   │    Set of      ✳│
        │  or Class Key    │   │  Distributors   │
        │                  │   │  and Line Loss  │
        │     (input)      │   │ Factor Classes  │
        └─────────────────┘    └─────────────────┘
                         ┌──────────┴──────────┐
               ┌─────────────────┐    ┌─────────────────┐
               │  Distributor Id │    │   Set of Line   │
               │                 │    │  Loss Factor    │
               │    (output)     │    │    Classes      │
               └─────────────────┘    └─────────────────┘
                                               │
                                     ┌─────────────────┐
                                     │ Line Loss Fact- ✳│
                                     │ or Class Id and │
                                     │  Description    │
                                     │    (output)     │
                                     └─────────────────┘
```
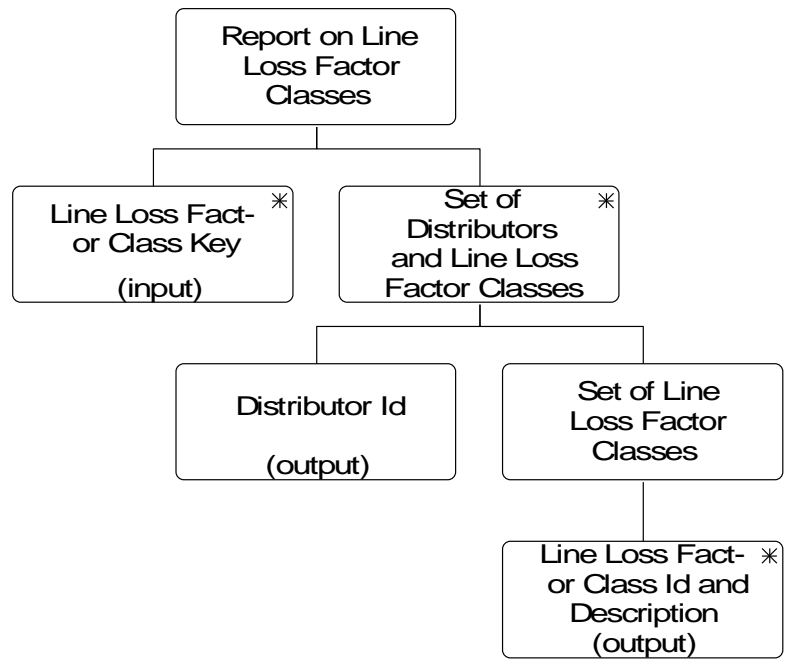
I/O Structure Element	Data Items
Line Loss Factor Class Key	Distributor Id
	Line Loss Factor Class Id
Distributor Id, LLFC Id & Desc	Distributor Id
	Line Loss Factor Class Description
	Line Loss Factor Class Id

3.57   **N1025 Report on Metering Systems and Associated Items**

3.57.1   **Function Type**

On-line   Enquiry   User initiated

3.57.2   **Function Description**

This function is invoked by the NHHDA user to allow reporting of all the information held about a Metering System for a selected settlement date.

The user enters a Metering System Id to report.

The user also enters the date for which they wish to see the information.

The supplier Registration in effect for the Metering System on the entered date is determined and a list of all the Data Collectors appointed during the Registration is displayed and the user selects one to report.

A report is produced reporting the items associated to the Metering System on the Date according to the PRS Agent and the specified Data Collector.

3.57.3   **Processing Description**

The output consists of the Metering System Id, Supplier Id and Name and Data Collector Id and Name, together with details of the entities selected below. One occurrence of each of the following entities is selected, where its effective date is the latest one prior or equal to the entered date:

Settlement Configuration & Settlement Configuration (DC)

Metering System Profile Class and Metering System Profile Class (DC)

Metering System Line Loss Factor Class

Metering System GSP Group and Metering System GSP Group (DC)

Metering System Energisation Status and Metering System Energisation Status (DC)

Metering System Measurement Class and Metering System Measurement Class (DC)

Registration and Registration (DC) (Registration already selected).

3.57.4   **Error Handling**

None

3.57.5   **Common Processing**

NC006 Restrict On-line Access

NC008 Create Report Header

3.57.6   **Volumes**

An indeterminate number of Metering System Detail reports will be produced on an ad hoc basis.

3.57.7   **Events**

None

3.57.8   Event Frequency

N/A

3.57.9   Enquiries

Report Metering Systems & Associated Items

3.57.10   Enquiry Frequency

1

3.57.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.57.12   User Roles

Exception Administrator

Auditor

3.57.13   I/O Structures

```
                        ┌─────────────────────┐
                        │ Report on Mete-     │
                        │ ring System & A     │
                        │ ssociated Items     │
                        └─────────────────────┘
             ┌───────────────────┬────────────────────┐
    ┌────────────────┐  ┌────────────────┐  ┌──────────────┐
    │ Metering System│  │ Metering System│  │ Associated   │
    │ Id, Date and   │  │ Id, Date and   │  │ Items        │
    │ Data Collector │  │ Data Collector │  │              │
    │ Id (input)     │  │ Id (output)    │  │              │
    └────────────────┘  └────────────────┘  └──────────────┘
```
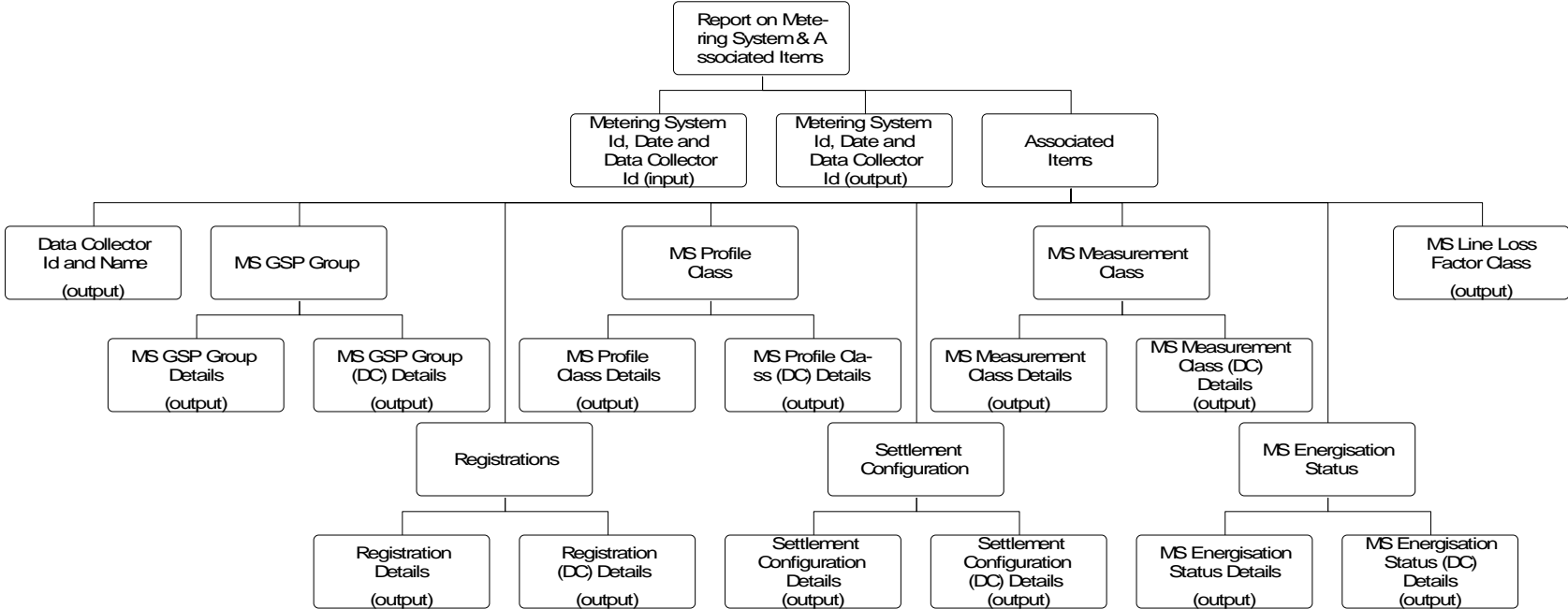
Report on Metering Systems and Associated Items

I/O Structure Element	Data Items
Data Collector Id and Name	Data Collector Id
	Data Collector Name
MS Energisation Status Details	Energisation Status Id
	Energisation Status Description
	X MSES Effective From Settlement Date {MSES}
MS Energisation Status (DC) Details	Energisation Status Id
	Energisation Status Description
	X MSESDC Effective From Settlement Date {MSESDC}
MS GSP Group Details	GSP Group Id
	GSP Group Name
	X MSGG Effective From Settlement Date {MSGG}
MS GSP Group (DC) Details	GSP Group Id
	GSP Group Name
	Data Collector Id
	X MSGGDC Effective From Settlement Date {MSGGDC}
MS Id, Date and Data Collector Id	Metering System id
	Data Collector Id
	Date for which MS details required
MS Line Loss Factor Class	Line Loss Factor Class Id
	Line Loss Factor Class Description
	Distributor Id
	Distributor Name
	X MSLLFC Effective from Settlement Date {MSLLFC}
MS Measurement Class Details	Measurement Class Id
	Measurement Class Description
	X MSMC Effective From Settlement Date {MSMC}
MS Measurement Class (DC) Details	Measurement Class Id
	Measurement Class Description
	X MSMCDC Effective From Settlement Date

I/O Structure Element	Data Items
	{MSMCDC}
MS Profile Class Details	Profile Class Id
	Profile Class Description
	X MSPC Effective From Settlement Data {MSPC}
MS Profile Class (DC) Details	Profile Class Id
	Profile Class Description
	Data Collector Id
	X MSPCDC Effective From Settlement Data {MSPCDC}
Settlement Configuration Details	Standard Settlement Configuration Id
	Standard Settlement Configuration Description
	X SCON Effective From Settlement Date {SCON}
Settlement Configuration (DC) Details	Standard Settlement Configuration Id
	Standard Settlement Configuration Description
	X SCDC Effective From Settlement Date {SCDC}
Registration Details	Metering System Id
	Supplier Id
	Supplier Name
	X REGI Effective From Settlement Date {REGI}
Registration (DC) Details	Supplier Id
	Supplier Name
	X RDC Effective From Settlement Date {RDC}

3.58   N1026 Report MS Energisation Statuses (PRS and DC).

3.58.1   Function Type

On-line   Enquiry   User initiated

3.58.2   Function Description

This function is invoked by an NHHDA user to allow reporting of MS Energisation Statuses (PRS and DC) for a single Metering System.

The user enters a Metering System Id to report.

3.58.3   Processing Description

For both entities, the report shows Energisation Statuses and their Effective From Settlement Date {Metering System Energisation Status)s, together with, for Metering System Energisation Status (DC) entity only, their Data Collector ids.

3.58.4   Error Handling

None

3.58.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.58.6   Volumes

An indeterminate number of MS Energisation Statuses (PRS and DC) will be Reported on an ad hoc basis.

3.58.7   Events

None

3.58.8   Event Frequency

N/A

3.58.9   Enquiries

Report MS Energisation Statuses (PRS and DC).

3.58.10   Enquiry Frequency

1

3.58.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.58.12   User Roles

Exception Administrator

Auditor

3.58.13   I/O Structures
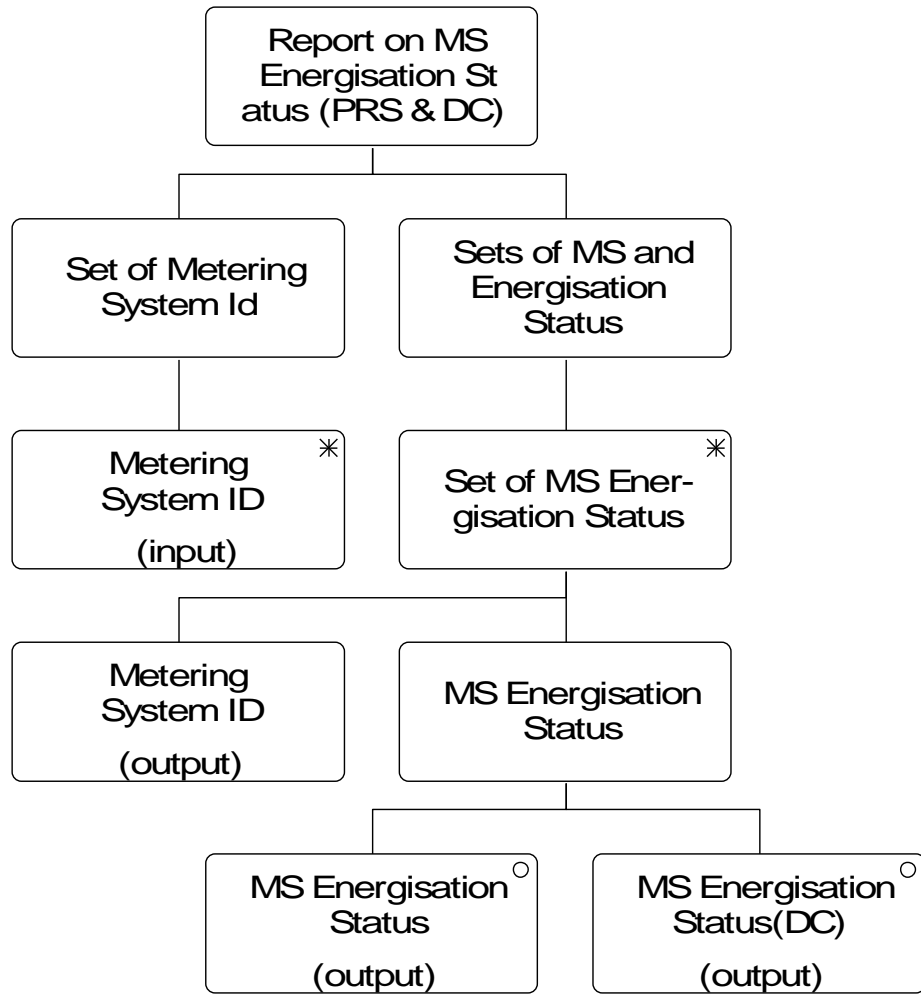
I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS Energisation Status	Energisation Status
	X MSES Effective From Settlement Date {MSES}
MS Energisation Status(DC)	Data Collector Id
	Energisation Status
	X MSESDC Effective From Settlement Date {MSESDC}

3.59   N1027 Report MS Profile Classes (PRS and DC).

3.59.1   Function Type

On-line   Enquiry   User initiated

3.59.2   Function Description

This function is invoked by an NHHDA user to allow reporting of MS Profile Classes for a single Metering System.

The user enters a Metering System Id report.

3.59.3   Processing Description

For both entities, the report shows Profile Class Ids and their Effective From Settlement Date {Metering System Profile Class}s, together with, for Metering System Profile Class (DC) entity only, their Data Collector ids.

3.59.4   Error Handling

None

3.59.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.59.6   Volumes

An indeterminate number of MS Profile Classes will be Reported on an ad hoc basis.

3.59.7   Events

None

3.59.8   Event Frequency

N/A

3.59.9   Enquiries

Report MS Profile Class (PRS and DC).

3.59.10   Enquiry Frequency

1

3.59.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.59.12   User Roles

Exception Administrator

Auditor

3.59.13   I/O Structures
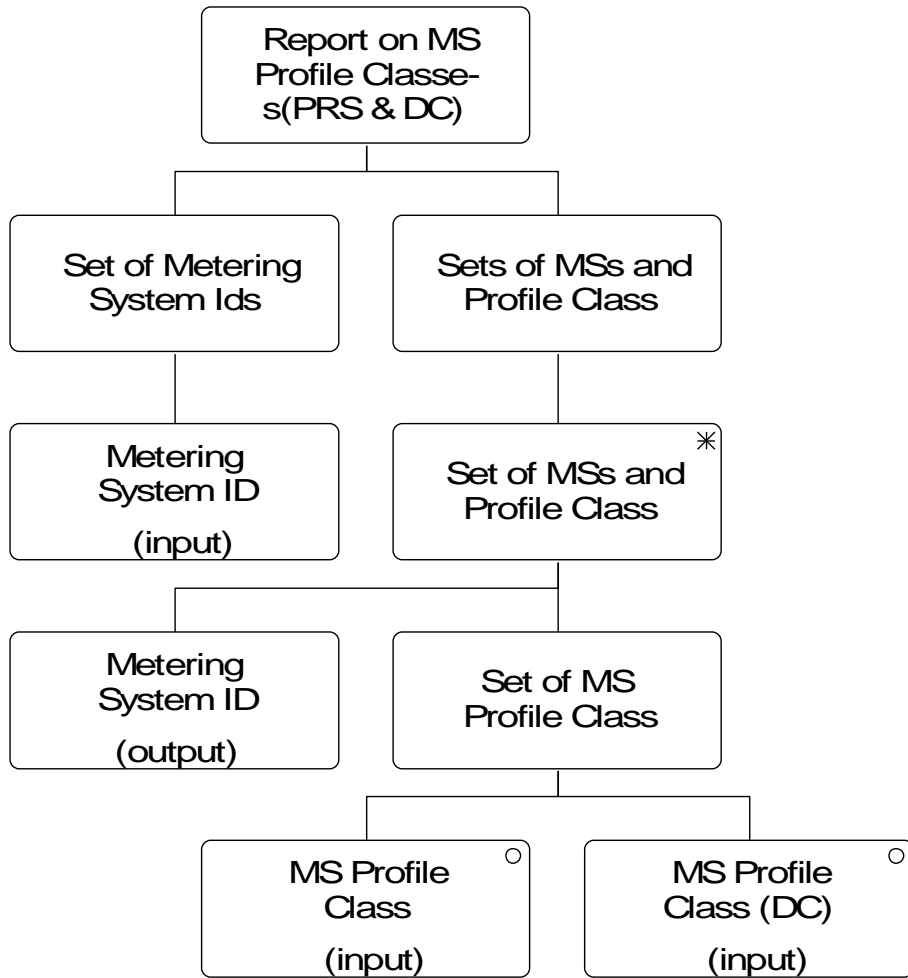
```
                    ┌─────────────────┐
                    │   Report on MS  │
                    │  Profile Classe-│
                    │   s(PRS & DC)   │
                    └────────┬────────┘
              ┌──────────────┴──────────────┐
    ┌─────────┴─────────┐         ┌─────────┴─────────┐
    │  Set of Metering  │         │   Sets of MSs and │
    │    System Ids     │         │    Profile Class  │
    └─────────┬─────────┘         └─────────┬─────────┘
    ┌─────────┴─────────┐         ┌─────────┴─────────┐ *
    │     Metering      │         │    Set of MSs and │
    │    System ID      │         │    Profile Class  │
    │                   │         │                   │
    │     (input)       │         │                   │
    └─────────┬─────────┘         └─────────┬─────────┘
    ┌─────────┴─────────┐         ┌─────────┴─────────┐
    │     Metering      │         │     Set of MS     │
    │    System ID      │         │   Profile Class   │
    │                   │         │                   │
    │     (output)      │         │                   │
    └───────────────────┘         └─────────┬─────────┘
                              ┌──────────────┴──────────────┐
                    ┌─────────┴─────────┐ ○     ┌─────────┴─────────┐ ○
                    │    MS Profile     │       │    MS Profile     │
                    │      Class        │       │    Class (DC)     │
                    │                   │       │                   │
                    │     (input)       │       │     (input)       │
                    └───────────────────┘       └───────────────────┘
```

I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS Profile Class	Profile Class Id
	X MSPC Effective From Settlement Date {MSPC}
MS Profile Class(DC)	Data Collector Id
	Profile Class Id
	X MSMCDC Effective From Settlement Date {MSMCDC}

3.60   N1028 Report MS Regns (PRS and DC) & DC & DA Appts.

3.60.1   Function Type

On-line   Enquiry   User initiated

3.60.2   Function Description

This function is invoked by an NHHDA user to allow reporting of MS Regns (PRS and DC) & DC & DA Appts for a single Metering System.

The user enters a Metering System Id to report.

3.60.3   Processing Description

For both Registration entities, the report shows Supplier Id and their Effective From Settlement Date {Registration}s, together with, for Registration (DC) entity only, their data Collector ids. For the Registration entity the associated Data Aggregator Appointments (Effective From Settlement Date {Data Aggregator Appointment } and Effective To Settlement Date {Data Aggregator Appointment}) and Data Collector Appointments (Data Collector Id and Effective From Settlement Date {Data Collector Appointment}) are displayed.

3.60.4   Error Handling

None

3.60.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.60.6   Volumes

An indeterminate number of MS Regns (PRS and DC) & DC & DA Appts will be reported on an ad hoc basis.

3.60.7   Events

None

3.60.8   Event Frequency

N/A

3.60.9   Enquiries

Report MS Regns (PRS and DC) & DC & DA Appts.

3.60.10   Enquiry Frequency

1

3.60.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.60.12   User Roles

Exception Administrator

Auditor

3.60.13   I/O Structures
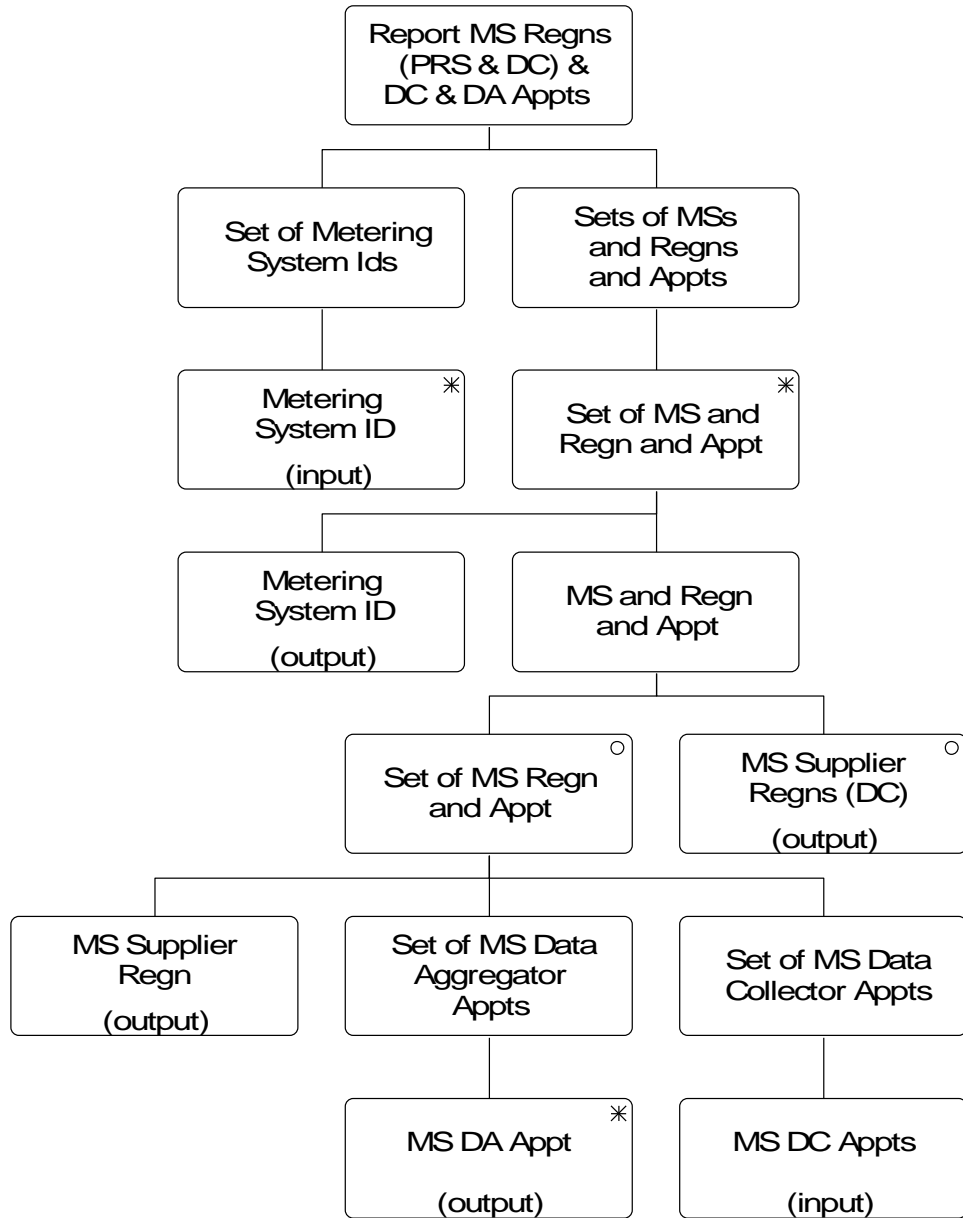
```
                    ┌─────────────────────┐
                    │  Report MS Regns    │
                    │   (PRS & DC) &      │
                    │   DC & DA Appts     │
                    └──────────┬──────────┘
              ┌────────────────┴────────────────┐
     ┌────────┴────────┐              ┌──────────┴──────────┐
     │ Set of Metering │              │   Sets of MSs       │
     │  System Ids     │              │   and Regns         │
     │                 │              │   and Appts         │
     └────────┬────────┘              └──────────┬──────────┘
     ┌────────┴────────┐ *            ┌──────────┴──────────┐ *
     │   Metering      │              │   Set of MS and     │
     │  System ID      │              │   Regn and Appt     │
     │   (input)       │              │                     │
     └─────────────────┘              └──────────┬──────────┘
     ┌─────────────────┐         ┌───────────────┴─────────┐
     │   Metering      │         │   MS and Regn           │
     │  System ID      │         │   and Appt              │
     │   (output)      │         │                         │
     └─────────────────┘         └───────────┬─────────────┘
                         ┌───────────────────┴───────────────┐
              ┌──────────┴──────────┐ ○            ┌──────────┴──────────┐ ○
              │  Set of MS Regn     │              │  MS Supplier        │
              │  and Appt           │              │  Regns (DC)         │
              │                     │              │   (output)          │
              └──────────┬──────────┘              └─────────────────────┘
        ┌────────────────┼────────────────────┐
 ┌──────┴──────┐  ┌──────┴────────┐   ┌────────┴────────┐
 │ MS Supplier │  │ Set of MS Data│   │ Set of MS Data  │
 │   Regn      │  │  Aggregator   │   │ Collector Appts │
 │  (output)   │  │   Appts       │   │                 │
 └─────────────┘  └──────┬────────┘   └────────┬────────┘
              ┌──────────┴──────────┐ *  ┌──────┴──────────┐
              │   MS DA Appt        │    │  MS DC Appts    │
              │                     │    │                 │
              │   (output)          │    │   (input)       │
              └─────────────────────┘    └─────────────────┘
```

I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS Supplier Regn	Supplier Id
	Supplier Name
	PRS Agent Id
	PRS Agent Name
	X REGI Effective From Settlement Date {REGI}
MS DA Appt	X DAA Effective From Settlement Date {DAA}
	Y DAA Effective To Settlement Date {DAA}
MS DC Appts	Data Collector Id
	Data Collector Name
	Effective From Date {DCA}
MS Supplier Regns (DC)	Data Collector Id
	Date Collector Name
	Supplier Id
	Supplier Name
	X RDC Effective From Settlement Date {RDC}

3.61   N1029 Report MS GSP Groups (PRS and DC)

3.61.1   Function Type

On-line   Enquiry   User initiated

3.61.2   Function Description

This function is invoked by an NHHDA user to allow reporting of MS GSP Groups (PRS and DC) for a single Metering System.

The user enters a Metering System Id to report.

3.61.3   Processing Description

For both entities, the report shows GSP Group Id and their Effective From Settlement Date {Metering System GSP Group}s, together with, for Metering System GSP Group (DC) entity only, their Data Collector ids.

3.61.4   Error Handling

None

3.61.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.61.6   Volumes

An indeterminate number of MS GSP Groups (PRS and DC) will be reported on an ad hoc basis.

3.61.7   Events

None

3.61.8   Event Frequency

N/A

3.61.9   Enquiries

Report MS GSP Groups (PRS and DC).

3.61.10   Enquiry Frequency

1

3.61.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.61.12   User Roles

Exception Administrator

Auditor

3.61.13 I/O Structures
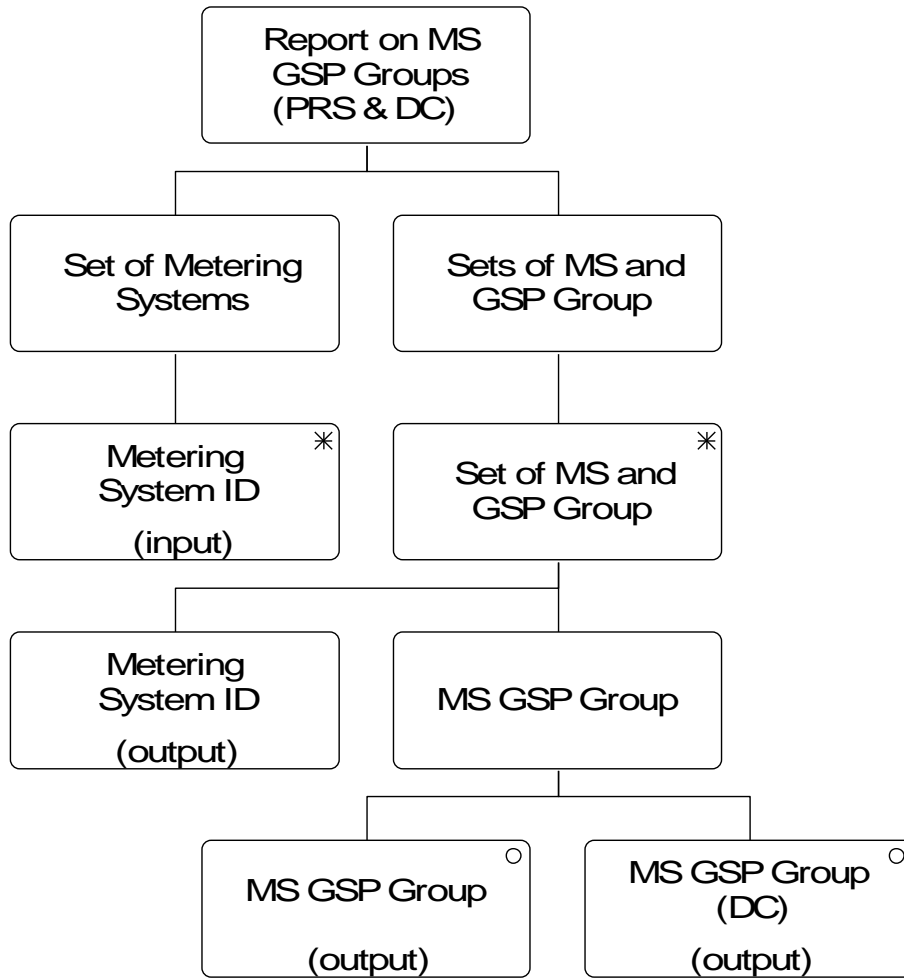
I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS GSP Group	GSP Group Id
	X MSGG Effective From Settlement Date {MSGG}
MS GSP Group (DC)	Data Collector I
	GSP Group Id
	X MSGGDC Effective From Settlement Date {MSGGDC}

3.62   N1030 Report MS Measurement Classes (PRS and DC).

3.62.1   Function Type

On-line   Enquiry   User initiated

3.62.2   Function Description

This function is invoked by an NHHDA user to allow reporting of   MS Measurement Classes (PRS and DC) for a single Metering System..

The user enters a Metering System Id to report.

3.62.3   Processing Description

For both entities, the report shows Measurement Class Id and their Effective From Settlement Date {Metering System Measurement Class}s, together with, for Metering System Measurement Classes (DC) entity only, their Data Collector ids.

3.62.4   Error Handling

None

3.62.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.62.6   Volumes

An indeterminate number of MS Measurement Classes (PRS and DC) will be reported on an ad hoc basis.

3.62.7   Events

None

3.62.8   Event Frequency

N/A

3.62.9   Enquiries

Report MS Measurement Classes (PRS and DC).

3.62.10   Enquiry Frequency

1

3.62.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.62.12   User Roles

Exception Administrator

Auditor

3.62.13   I/O Structures
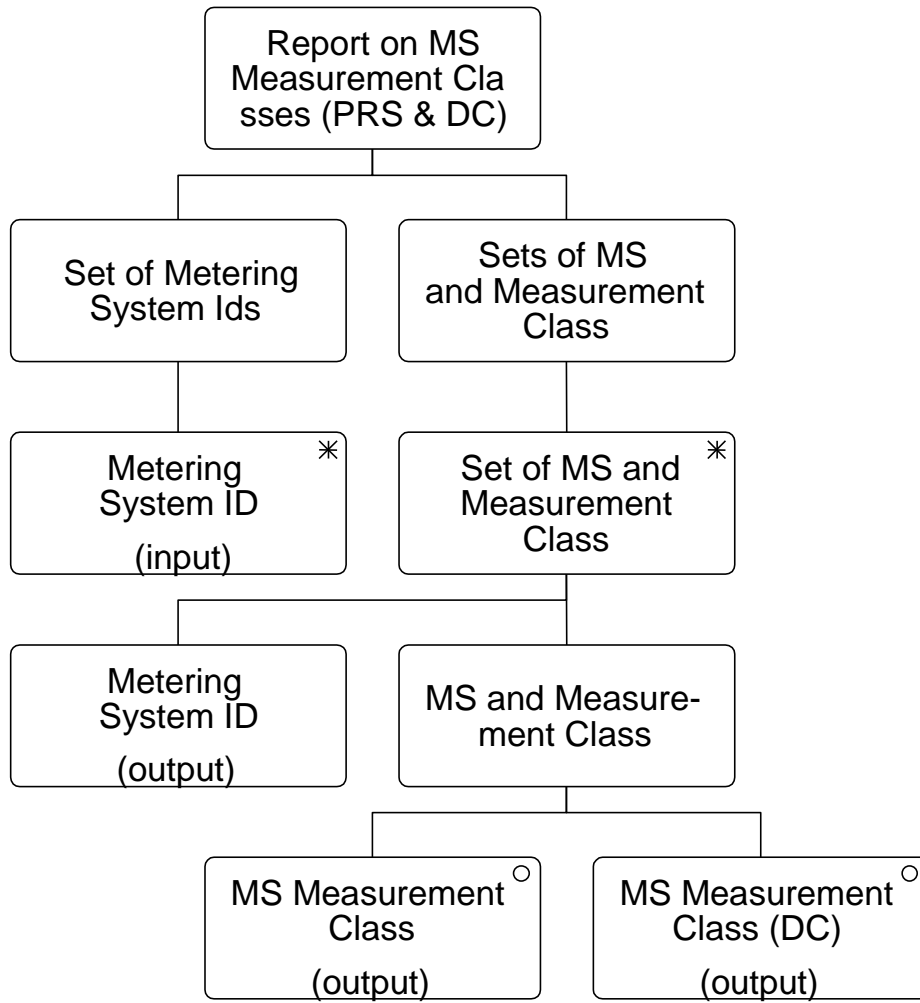
```
                    ┌─────────────────────┐
                    │    Report on MS     │
                    │  Measurement Cla    │
                    │  sses (PRS & DC)    │
                    └─────────────────────┘
              ┌──────────────┴──────────────┐
     ┌─────────────────┐          ┌─────────────────┐
     │ Set of Metering │          │    Sets of MS   │
     │   System Ids    │          │  and Measurement│
     │                 │          │      Class      │
     └─────────────────┘          └─────────────────┘
              │                            │
     ┌─────────────────┐ *        ┌─────────────────┐ *
     │    Metering     │          │   Set of MS and │
     │   System ID     │          │   Measurement   │
     │                 │          │      Class      │
     │    (input)      │          │                 │
     └─────────────────┘          └─────────────────┘
              │                            │
     ┌─────────────────┐          ┌─────────────────┐
     │    Metering     │          │  MS and Measure-│
     │   System ID     │          │    ment Class   │
     │                 │          │                 │
     │    (output)     │          │                 │
     └─────────────────┘          └─────────────────┘
                              ┌────────────┴────────────┐
                    ┌─────────────────┐ ○      ┌─────────────────┐ ○
                    │ MS Measurement  │        │ MS Measurement  │
                    │     Class       │        │  Class (DC)     │
                    │                 │        │                 │
                    │    (output)     │        │    (output)     │
                    └─────────────────┘        └─────────────────┘
```

I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS Measurement Classes	Measurement Class Id
	X MSMC Effective From Settlement Date {MSMC}
MS Measurement Classes (DC)	Data Collector Id
	Measurement Class Id
	X MSMCDC Effective From Settlement Date {MSMCDC}

3.63   N1031 Report MS Settlement Configurations (PRS and DC).

3.63.1   Function Type

On-line   Enquiry   User initiated

3.63.2   Function Description

This function is invoked by an NHHDA user to allow reporting of MS Settlement Configurations for a single Metering System.

The user enters a Metering System Id to browse

3.63.3   Processing Description

For both entities, the report shows Standard Settlement Configuration Ids and their Effective From Settlement Date {Settlement Configuration}s, together with, for Settlement Configuration (DC) entity only, their Data Collector ids.

3.63.4   Error Handling

None

3.63.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.63.6   Volumes

An indeterminate number of MS Settlement Configurations will be Reported on an ad hoc basis.

3.63.7   Events

None

3.63.8   Event Frequency

N/A

3.63.9   Enquiries

Report MS Settlement Configurations (PRS and DC).

3.63.10   Enquiry Frequency

1

3.63.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.63.12   User Roles

Exception Administrator

Auditor

3.63.13   I/O Structures
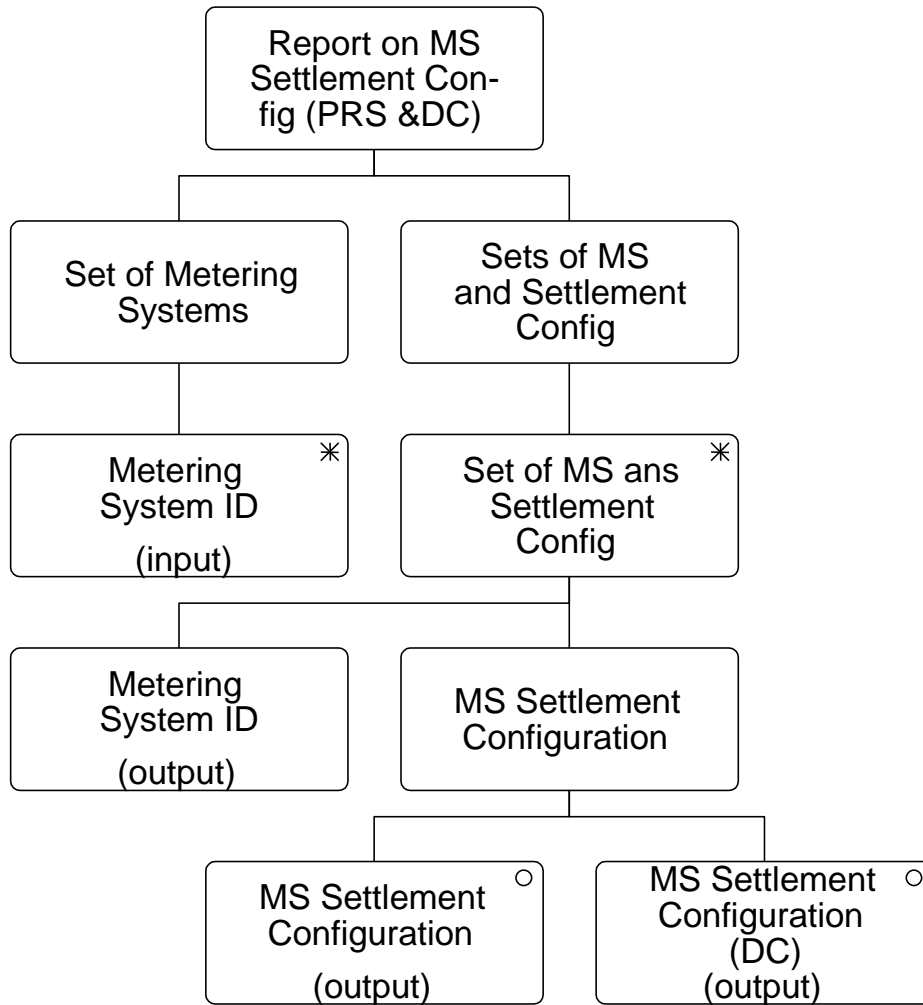
```
                  ┌─────────────────────┐
                  │     Report on MS    │
                  │  Settlement Con-    │
                  │    fig (PRS &DC)    │
                  └──────────┬──────────┘
              ┌──────────────┴──────────────┐
  ┌───────────────────┐         ┌───────────────────┐
  │  Set of Metering  │         │     Sets of MS    │
  │     Systems       │         │  and Settlement   │
  │                   │         │      Config       │
  └─────────┬─────────┘         └─────────┬─────────┘
  ┌───────────────────┐ *       ┌───────────────────┐ *
  │     Metering      │         │    Set of MS ans  │
  │    System ID      │         │    Settlement     │
  │                   │         │      Config       │
  │     (input)       │         └─────────┬─────────┘
  └───────────────────┘                   │
  ┌───────────────────┐         ┌───────────────────┐
  │     Metering      │         │   MS Settlement   │
  │    System ID      │         │   Configuration   │
  │                   │         │                   │
  │     (output)      │         └─────────┬─────────┘
  └───────────────────┘         ┌─────────┴─────────┐
                        ┌───────────────────┐ ○  ┌───────────────────┐ ○
                        │   MS Settlement   │    │   MS Settlement   │
                        │   Configuration   │    │   Configuration   │
                        │                   │    │       (DC)        │
                        │     (output)      │    │     (output)      │
                        └───────────────────┘    └───────────────────┘
```

I/O Structure Element	Data Items
Metering System ID	Metering System ID
MS Settlement Configuration	Standard Settlement Configuration Id
	X SCON Effective From Settlement Date {SCON}
MS Settlement Configuration (DC)	Data Collector Id
	Standard Settlement Configuration Id
	X SCDC Effective From Settlement Date {SCDC}

3.64   N1032 Browse Instructions

3.64.1   Function Type

On-line   Enquiry   User initiated

3.64.2   Function Description

This function is invoked by NHHDA user to allow browsing of instructions received by the system.

The user may select any combination of:

- instruction source and sequence number range;

- received date range;

- instruction type;

- instruction subject (instruction subjects are all metering systems, except for the "PRS Refresh" instruction which acts on a Distribution Business);

- instruction status.

3.64.3   Processing Description

For each instruction meeting the selection criteria, the following items are displayed: date received, source, sequence number, type, subject, Significant Date, status and the reasons for being in this state.

3.64.4   Error Handling

None

3.64.5   Common Processing

NC006 Restrict On-line Access

3.64.6   Volumes

An indeterminate number of instructions will be browsed on an ad hoc basis.

3.64.7   Events

None

3.64.8   Event Frequency

N/A

3.64.9   Enquiries

Browse Instructions

3.64.10   Enquiry Frequency

1

3.64.11   Requirements Catalogue Ref.

F11, N17

3.64.12   User Roles

Exception Administrator

Auditor

3.64.12   User Roles

Exception Administrator

Auditor

3.64.13   I/O Structures
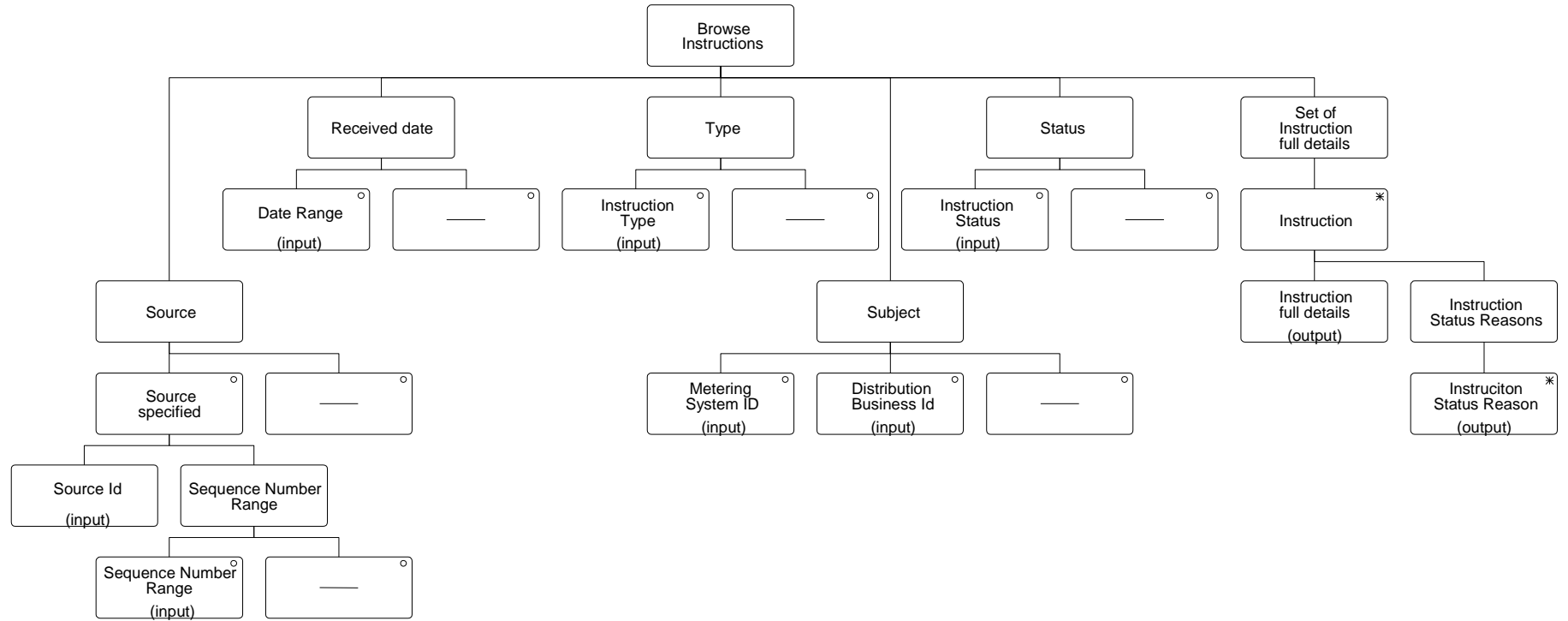
I/O Structure Element	Data Items
DateRange	Start Date for Selection
	End Date for Selection
Distribution Business Id	Market Participant Id (subject)
	Market Participant Role Code (subject)
Instruction full details	Instruction Sequence Number
	Instruction Type
	Instruction Status
	Market Participant Id (source)
	Market Participant Role Code (source)
	Market Participant Id (subject)
	Market Participant Role Code (subject)
	Metering System Id
	File Sent or Received Timestamp
	Significant Date
Instruction Status	Instruction Status
Instruction Status Reason	Instruction Status Reason
Instruction Type	Instruction Type
Metering System Id	Metering System Id
SequenceNumberRange	Instruction Sequence Number (start)
	Instruction Sequence Number (end)
Source Id	Market Participant Id (source)
	Market Participant Role Code (source)

3.65   N1033 Report Instructions

3.65.1   Function Type

On-line   Enquiry   User initiated

3.65.2   Function Description

This function is invoked by NHHDA user to allow reporting of the instructions received by the system.

The user may select any combination of:

- instruction source and sequence number range;

- received date range;

- instruction type;

- instruction subject (instruction subjects are all metering systems, except for the "PRS Refresh" instruction which acts on a Distribution Business);

- instruction status.

3.65.3   Processing Description

For each instruction meeting the selection criteria, the following items are reported: date received, source, sequence number, type, subject, Significant Date, status and the reasons for being in this state.

3.65.4   Error Handling

None

3.65.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.65.6   Volumes

An indeterminate number of instructions will be reported on an ad hoc basis.

3.65.7   Events

None

3.65.8   Event Frequency

N/A

3.65.9   Enquiries

Report on Instructions

3.65.10   Enquiry Frequency

1

3.65.11   Requirements Catalogue Ref.

F11, N17, N18, N19, N20, N21

3.65.12   User Roles

Exception Administrator

Auditor

3.65.13   I/O Structures
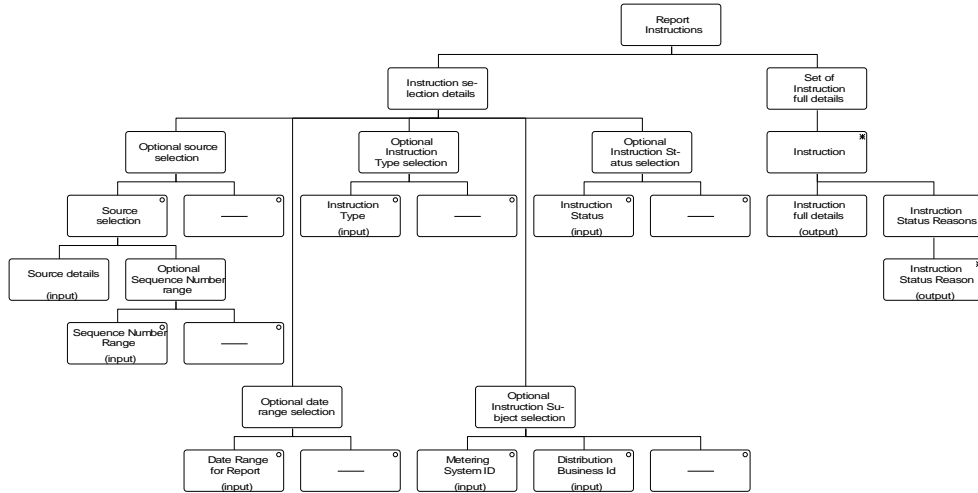
I/O Structure Element	Data Items
DateRange for Report	Start Date for Selection
	End Date for Selection
Distribution Business Id	Market Participant Id
	Market Participant Role Code
Instruction full details	Instruction Sequence Number
	Instruction Type
	Instruction Status Reason
	Market Participant Id (source)
	Market Participant Role Code (source)
	Metering System Id (subject)
	Market Participant Id (subject)
	Metering System Id
	File Sent or Received Timestamp
	Significant Date
Instruction Status	Instruction Status
Instruction Status Reason	Instruction Status Reason
Instruction Subject	Instruction Subject
Instruction Type	Instruction Type
Metering System Id	Metering System Id

I/O Structure Element	Data Items
SequenceNumberRange	Instruction Sequence Number (first)
	Instruction Sequence Number (last)
Source details	Market Participant Id (source)
	Market Participant Role Code (source)

3.66   N1036 Browse MS Line Loss Factor Classes

3.66.1   Function Type

On-line   Enquiry   User initiated

3.66.2   Function Description

This function is invoked by the NHHDA user to allow browsing of the MS Line Loss Factor Classes. These are held in entity Metering System Line Loss Factor Class. The user enters a Metering System Id to browse.

3.66.3   Processing Description

The Line Loss Factor Class Ids, Distributor Ids and Effective From Settlement Date {Metering System Line Loss Factor Class}s are displayed.

3.66.4   Error Handling

None

3.66.5   Common Processing

NC006 Restrict On-line Access.

3.66.6   Volumes

An indeterminate number of Metering System Line Loss Factor Classes will be browsed on an ad hoc basis

3.66.7   Events

None

3.66.8   Event Frequency

N/A

3.66.9   Enquiries

Browse Metering System Line Loss Factor Classes

3.66.10   Enquiry Frequency

1

3.66.11   Requirements Catalogue Ref.

N17

3.66.12   User Roles

Exception Administrator

Auditor

3.66.13   I/O Structures
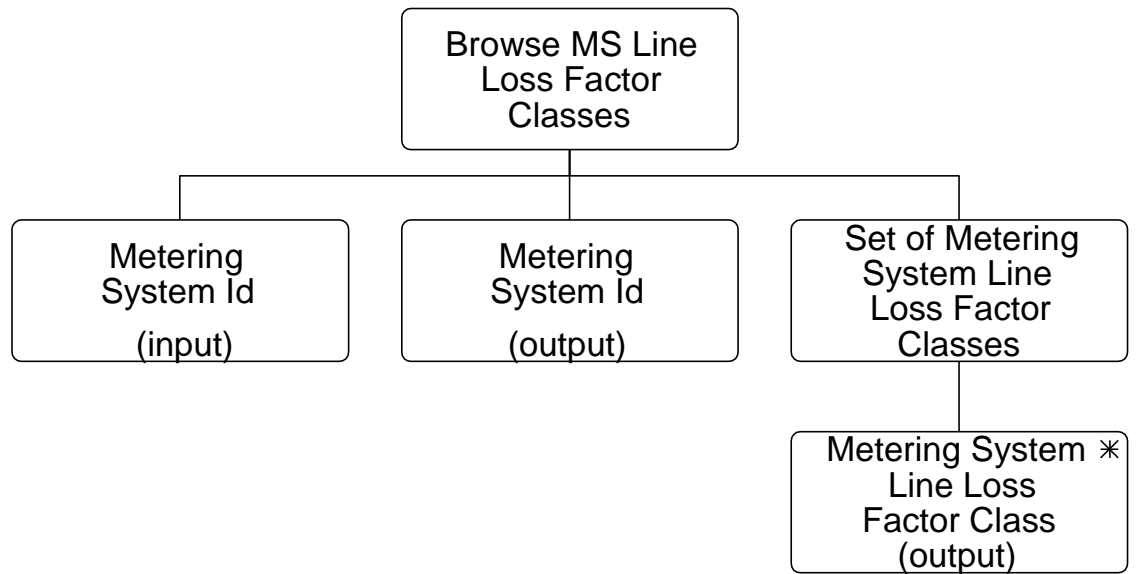
```
                    ┌─────────────────┐
                    │  Browse MS Line │
                    │  Loss Factor    │
                    │  Classes        │
                    └────────┬────────┘
          ┌──────────────────┼──────────────────────┐
┌─────────┴────────┐ ┌───────┴────────┐  ┌──────────┴──────────┐
│   Metering       │ │   Metering     │  │  Set of Metering    │
│   System Id      │ │   System Id    │  │  System Line        │
│                  │ │                │  │  Loss Factor        │
│   (input)        │ │   (output)     │  │  Classes            │
└──────────────────┘ └────────────────┘  └──────────┬──────────┘
                                             ┌───────┴──────────┐
                                             │ Metering System ✳│
                                             │ Line Loss        │
                                             │ Factor Class     │
                                             │ (output)         │
                                             └──────────────────┘
```

I/O Structure Element	Data Items
MS Line Loss Factor Classes	Distributor Id
	Line Loss Factor Class Id
	X MSLLFC Effective From Settlement Date {MSLLFC}
Metering System Id	Metering System Id

3.67   N1037 Report MS Line Loss Factor Classes

3.67.1   Function Type

On-line   Enquiry   User initiated

3.67.2   Function Description

This function is invoked by the NHHDA user to allow reporting of the MS Line Loss Factor Classes. These are held in entity Metering System Line Loss Factor Class. The user enters a Metering System Id to report.

3.67.3   Processing Description

The Line Loss Factor Class Ids, Distributor Ids and Effective From Settlement Date {Metering System Line Loss Factor Class}s are displayed.

3.67.4   Error Handling

None

3.67.5   Common Processing

NC006 Restrict On-line Access.

NC008 Create Report Header

3.67.6   Volumes

An indeterminate number of Metering System Line Loss Factor Classes will be reported on an ad hoc basis

3.67.7   Events

None

3.67.8   Event Frequency

N/A

3.67.9   Enquiries

Report Metering System Line Loss Factor Classes

3.67.10   Enquiry Frequency

1

3.67.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.67.12   User Roles

Exception Administrator

Auditor

3.67.13   I/O Structures

```
                    ┌─────────────────┐
                    │   Report on MS  │
                    │    Line Loss    │
                    │  Factor Classes │
                    └────────┬────────┘
            ┌────────────────┴────────────────┐
   ┌────────┴────────┐              ┌──────────┴────────┐
   │  Set of Metering│              │      Sets of      │
   │   System Ids    │              │  Metering System  │
   │                 │              │   s & LLF Classes │
   └────────┬────────┘              └──────────┬────────┘
   ┌────────┴────────┐  ✳           ┌──────────┴────────┐ ✳
   │    Metering     │              │  Set of Metering  │
   │   System Id     │              │   Systems & Line  │
   │                 │              │    Loss Factor    │
   │    (input)      │              │      Classes      │
   └─────────────────┘              └──────────┬────────┘
                            ┌──────────────────┴──────────┐
                   ┌────────┴────────┐          ┌──────────┴────────┐
                   │    Metering     │          │  Set of Metering  │
                   │   System Id     │          │   System Line     │
                   │                 │          │    Loss Factor    │
                   │    (output)     │          │      Classes      │
                   └─────────────────┘          └──────────┬────────┘
                                             ┌─────────────┴────────┐
                                             │  Metering System   ✳ │
                                             │     Line Loss        │
                                             │   Factor Class       │
                                             │     (output)         │
                                             └──────────────────────┘
```

I/O Structure Element	Data Items
MS Line Loss Factor Classes	Distributor Id
	Line Loss Factor Class Id
	X MSLLFC Effective From Settlement Date {MSLLFC}
Metering System Id	Metering System Id

3.68   N1038 Browse Metering System EACs and AAs

3.68.1   Function Type

On-line   Enquiry   User initiated

3.68.2   Function Description

This function is invoked by the NHHDA user to allow browsing of the Annualised Advances and Estimated Annual Consumption figures for a Settlement Register. The information is held in entities Meter Advance Consumption (DC) and Estimated Annual Consumption (DC)

The user enters a Metering System Id. A list of Settlement Registers is displayed in Data Collector Id within Time Pattern Regime Id within Standard Settlement Configuration Id sequence (this list is not shown in the I/O Structure, the user may enter wildcards to narrow down the search criteria) and the user selects one to browse.

3.68.3   Processing Description

The Data Collector Id, Metering System Id, Time Pattern Regime Id and Standard Settlement Configuration Id are displayed for the selected Settlement Register(s); together with a list of Annualised Advances with start and end dates and a list of Estimated Annual Consumption values with start dates.

3.68.4   Error Handling

None

3.68.5   Common Processing

NC006 Restrict On-line Access

3.68.6   Volumes

An indeterminate number of Metering System EACs and AAs will be browsed on an ad hoc basis.

3.68.7   Events

None

3.68.8   Event Frequency

N/A

3.68.9   Enquiries

Browse EACs and AAs

3.68.10   Enquiry Frequency

1

3.68.11   Requirements Catalogue Ref.

N17

3.68.12   User Roles

Data Aggregation Administrator

Exception Administrator

Auditor

3.68.13   I/O Structures

```
                            ┌─────────────────┐
                            │  Browse Metering │
                            │   System EACs    │
                            │     and AAs      │
                            └─────────────────┘
        ┌──────────────────┬───────┴──────────┬──────────────────┐
┌───────────────┐ ┌───────────────┐ ┌───────────────┐ ┌───────────────┐
│ Settlement Reg-│ │ Settlement Reg-│ │               │ │               │
│ ister (DC) Key │ │ ister (DC) Key │ │   Set of AAs  │ │  Set of EACs  │
│               │ │               │ │               │ │               │
│    (input)    │ │   (output)    │ │               │ │               │
└───────────────┘ └───────────────┘ └───────────────┘ └───────────────┘
                                            │                  │
                                    ┌───────────────┐ ┌───────────────┐
                                    │            ✳  │ │            ✳  │
                                    │      AA       │ │      EAC      │
                                    │               │ │               │
                                    │   (output)    │ │   (output)    │
                                    └───────────────┘ └───────────────┘
```
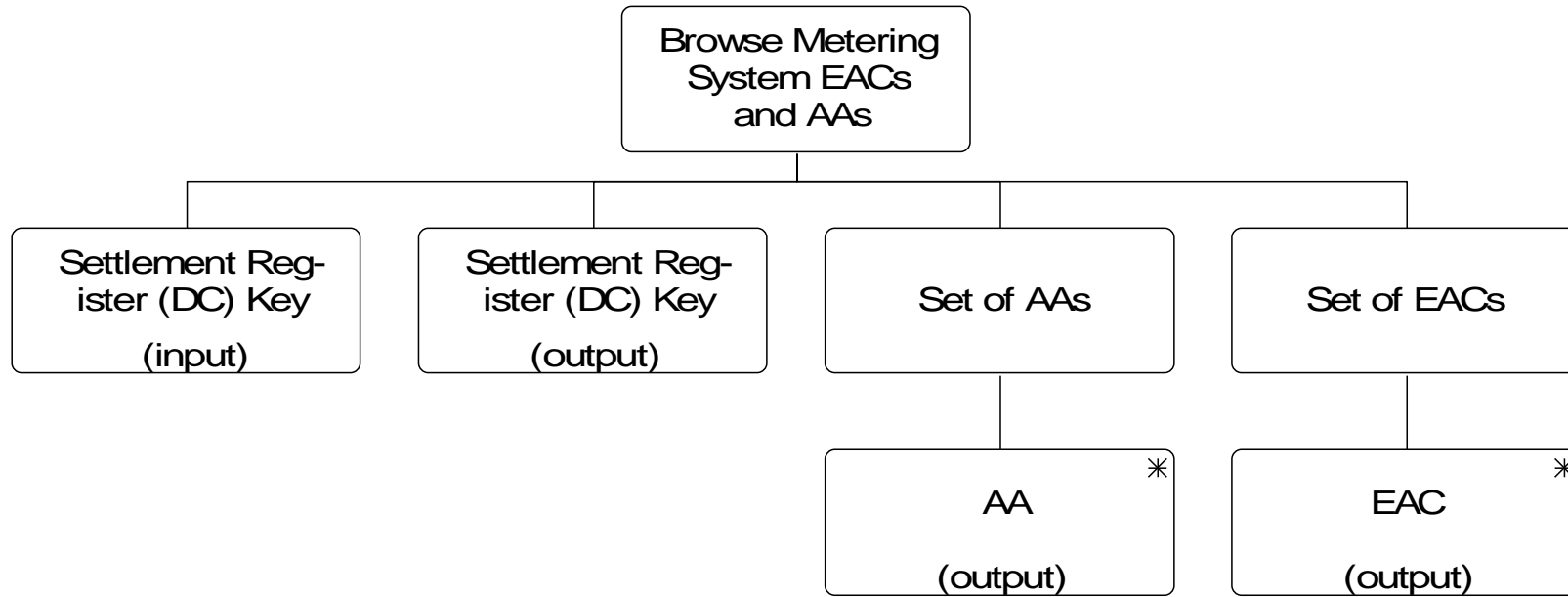
Browse Metering System EACs and AAs

I/O Structure Element	**Data Items**
AA	Annualised Advance
	Effective From Settlement Date {MACDC}
	Effective To Settlement Date {MACDC}
EAC	Estimated Annual Consumption
	Effective From Settlement Date {EACDC}
Settlement Register (DC) Key	Data Collector Id
	Metering System Id
	Standard Settlement Configuration Id
	Time Pattern Regime Id

3.69   N1039 Report on Metering System EACs and AAs

3.69.1   Function Type

On-line   Enquiry   User initiated

3.69.2   Function Description

This function is invoked by the NHHDA user to allow reporting of the Annualised Advances and Estimated Annual Consumption figures for one or more Settlement Registers. The information is held in entities Meter Advance Consumption (DC) and Estimated Annual Consumption (DC).The user enters a Metering System Id. A list of Settlement Registers is displayed in Data Collector Id within Time Pattern Regime Id within Standard Settlement Configuration Id sequence (this list is not shown in the I/O Structure, the user may enter wildcards to narrow down the search criteria) and the user selects one or a range to report.

3.69.3   Processing Description

The Data Collector Id, Metering System Id, Time Pattern Regime Id and Standard Settlement Configuration Id are printed for the selected Settlement Register(s); together with a list of Annualised Advances with start and end dates and a list of Estimated Annual Consumption values with start dates.

3.69.4   Error Handling

None

3.69.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.69.6   Volumes

An indeterminate number of Metering System EAC and AA reports will be produced on an ad hoc basis.

3.69.7   Events

None

3.69.8   Event Frequency

N/A

3.69.9   Enquiries

Report EACs and AAs

3.69.10   Enquiry Frequency

1

3.69.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.69.12   User Roles

Data Aggregation Administrator

Exception Administrator

Auditor

3.69.13   I/O Structures

```
                    ┌───────────────────┐
                    │  Report Metering  │
                    │   System EACs     │
                    │     and AAs       │
                    └───────────────────┘
              ┌──────────────┴──────────────┐
    ┌─────────────────┐           ┌─────────────────┐
    │     Set of      │           │ Sets of Settle- │
    │ Settlement Reg- │           │ ment Register   │
    │  ister (DC) Key │           │                 │
    └─────────────────┘           └─────────────────┘
            │                             │
    ┌─────────────────┐ *         ┌─────────────────┐ *
    │ Settlement Reg- │           │     Set of      │
    │ ister (DC) Key  │           │   Settlement    │
    │    (input)      │           │  Register (DC)  │
    └─────────────────┘           └─────────────────┘
            │                             │
    ┌─────────────────┐           ┌─────────────────┐
    │ Settlement Reg- │           │   Settlement    │
    │ ister (DC) Key  │           │    Register     │
    │    (output)     │           │                 │
    └─────────────────┘           └─────────────────┘
                              ┌───────────┴───────────┐
                    ┌─────────────────┐     ┌─────────────────┐
                    │   Annualised    │ ○   │ Estimated Annu- │ ○
                    │     Advance     │     │ al Consumption  │
                    │    (output)     │     │    (output)     │
                    └─────────────────┘     └─────────────────┘
```

I/O Structure Element	Data Items
AA	Annualised Advance
	Effective From Settlement Date {MACDC}
	Effective To Settlement Date {MACDC}
EAC	Estimated Annual Consumption
	Effective From Settlement Date {EACDC}
Settlement Register (DC) Key	Data Collector Id
	Metering System Id
	Standard Settlement Configuration Id
	Time Pattern Regime Id

3.70   N1040 Browse File Extraction and Transmission Statuses

3.70.1   Function Type

On-line   Enquiry   User initiated

3.70.2   Function Description

This function is invoked by the NHHDA user to allow reporting of the extraction and transmission status of files generated by the system (except those files associated with Aggregation).

The user can display all files displayed by selecting one or more of the following criteria:

Date / Date Rane that files were extracted for and / or File Type, Market Role, Participant or File Status.

3.70.3   Processing Description

For each file meeting the selection criteria, the market role, participant, date extracted, date transmitted, type and status are displayed. As each file is selected, additional information about the file is displayed.

The 'View' button will allow the display of a file's contents (if it has not been archived). Files can be resent by the use of the 'Resend' button. On clicking 'Resend', the user will be presented with a warning to say the file is about to be resent.

It is possible to sort the list of files by using the sort buttons at the top of each column.

The Resend and Report buttons and report bevel will be greyed out and disabled until an appropriate file type is selected.

The selection of a Failed Instructions File   will enable the 'Resend' button.

The selection of a D0095001 file will enable the 'Resend' button, but will also give the user the option of generating a report via the 'Report' button. If a metering system number is entered, then the report will only generate data relevant to that metering system number.

3.70.4   Error Handling

When viewing a file, the user will be presented with a warning message if the size of the machine readable file (in bytes) is larger than the allowed size set in the system parameter. The user will also be presented with an error message if the physical file does not exist.

3.70.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.70.6   Volumes

File extraction and transmission statuses will be browsed on an ad hoc basis

3.70.7   **Events**

None

3.70.8   **Event Frequency**

N/A

3.70.9   **Enquiries**

Browse File Extraction and Transmission Statuses

3.70.10   **Enquiry Frequency**

1

3.70.11   **Requirements Catalogue Ref.**

N02, N17

3.70.12   **User Roles**

System Manager

System Operator

Exception Administrator

Auditor

Data Aggregation Administrator

3.70.13   I/O Structures

I/O Structure Element	Data Items
File Type	File Format Code
	File Content Code
Market Participant Key	Market Participant Id
	Market Participant Role
DateRange for Report	Start Date for Selection
	End Date for Selection
File Extraction Status	File Status
File Details	Market Participant Id
	Market Participant Name
	File Format Code
	File Content Code
	File Status
	File Creation Timestamp
	File Send or Received Timestamp
Additional file details	File Name
Data Collector Extraction Details	Metering System Id
	Exception Type

3.71   N1042 Report Data Aggregation Run Schedule

3.71.1   Function Type

On-line   Enquiry   User initiated

3.71.2   Function Description

This function is invoked by an NHHDA user to allow reporting of Settlements and associated Data Aggregation Runs for each GSP Group listed for that Aggregation Run.

3.71.3   Processing Description

The user will select a range of Settlement Dates or a range of Data Aggregation Run Dates.

For each Data Aggregation Run meeting the selection criteria, the run details are output along with the GSP Groups included in each run.

3.71.4   Error Handling
None

3.71.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.71.6   Volumes

An indeterminate number of Settlements their associated Data Aggregation Runs and GSP Groups will be reported on an ad-hoc basis.

3.71.7   Events

None

3.71.8   Event Frequency

N/A

3.71.9   Enquiries

Report Settlements

3.71.10   Enquiry Frequency

1

3.71.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.71.12   User Roles

Auditor

Data Aggregation Administrator

Market Domain Data Administrator

Exception Administrator

Superior Market Domain Data Administrator

3.71.13   I/O Structures

```
                    ┌──────────────────┐
                    │    Report on     │
                    │   Settlements    │
                    └──────────────────┘
              ┌──────────────┴──────────────┐
    ┌──────────────────┐          ┌──────────────────┐
    │    Selection     │          │  Set ot Aggrega- │
    │    Criteria      │          │    tion Runs     │
    └──────────────────┘          └──────────────────┘
       ┌──────┴──────┐                     │
┌────────────┐ ┌────────────┐   ┌──────────────────┐ ✳
│ Settlement │○│Aggregation │○  │                  │
│ Date Range │ │ Run        │   │  Aggregation Run │
│            │ │ Date Range │   │                  │
│  (input)   │ │  (input)   │   └──────────────────┘
└────────────┘ └────────────┘      ┌──────┴──────┐
                            ┌────────────┐ ┌────────────┐
                            │Aggregation │ │ Set of GSP │
                            │Run Details │ │   Groups   │
                            │            │ │            │
                            │ (output)   │ └────────────┘
                            └────────────┘        │
                                          ┌────────────┐ ✳
                                          │ GSP Group  │
                                          │  Details   │
                                          │            │
                                          │ (output)   │
                                          └────────────┘
```

Report on Settlements

I/O Structure Element	Data Items
SettlementDateRange	Start Date for Selection
	End Date for Selection
AggregationDateRange	Start Date for Selection
	End Date for Selection
Aggregation Run Details	ISR Notification Date
	Settlement Code
	Settlement Date
	Data Aggregation Run Number
	Data Aggregation Run Date
	Data Aggregation Run Time
	Data Aggregation Run Status
GSP Group Details	GSP Group Id
	GSP Group Name

3.72   N1045 Report GSP Group Distributors.

3.72.1   Function Type

On-line   Enquiry   User initiated

3.72.2   Function Description

This function is invoked by an NHHDA user to allow reporting of GSP Group Distributors for each of a set of GSP Groups.

A list of GSP Group Ids is displayed. The user selects one, a range, or all of them to report.

3.72.3   Processing Description

The GSP Group Id and Name are reported, together with its distributor assignment details.

3.72.4   Error Handling

None

3.72.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.72.6   Volumes

 1

3.72.7   Events

None

3.72.8   Event Frequency

N/A

3.72.9   Enquiries

Report GSP Group Distributors.

3.72.10   Enquiry Frequency

1

3.72.11   Requirements Catalogue Ref.
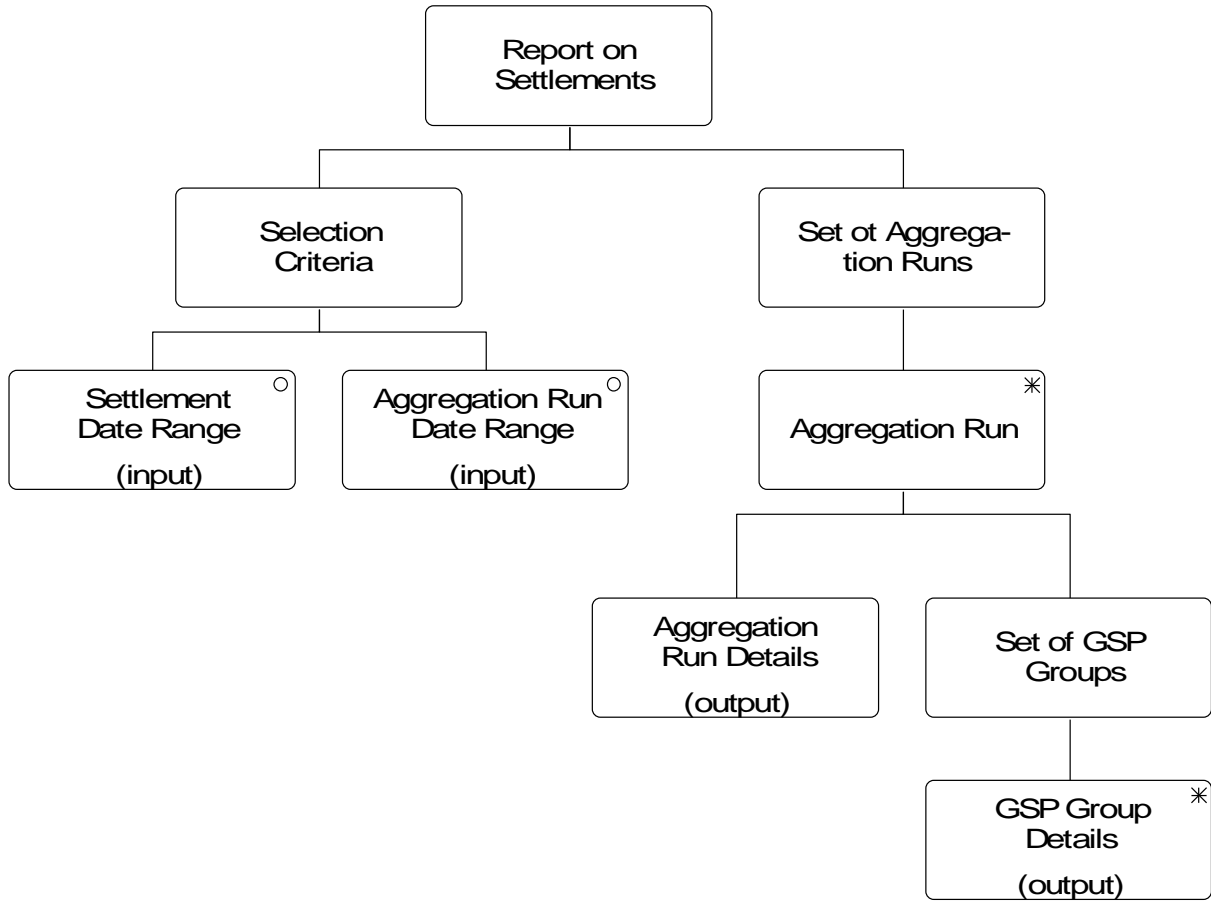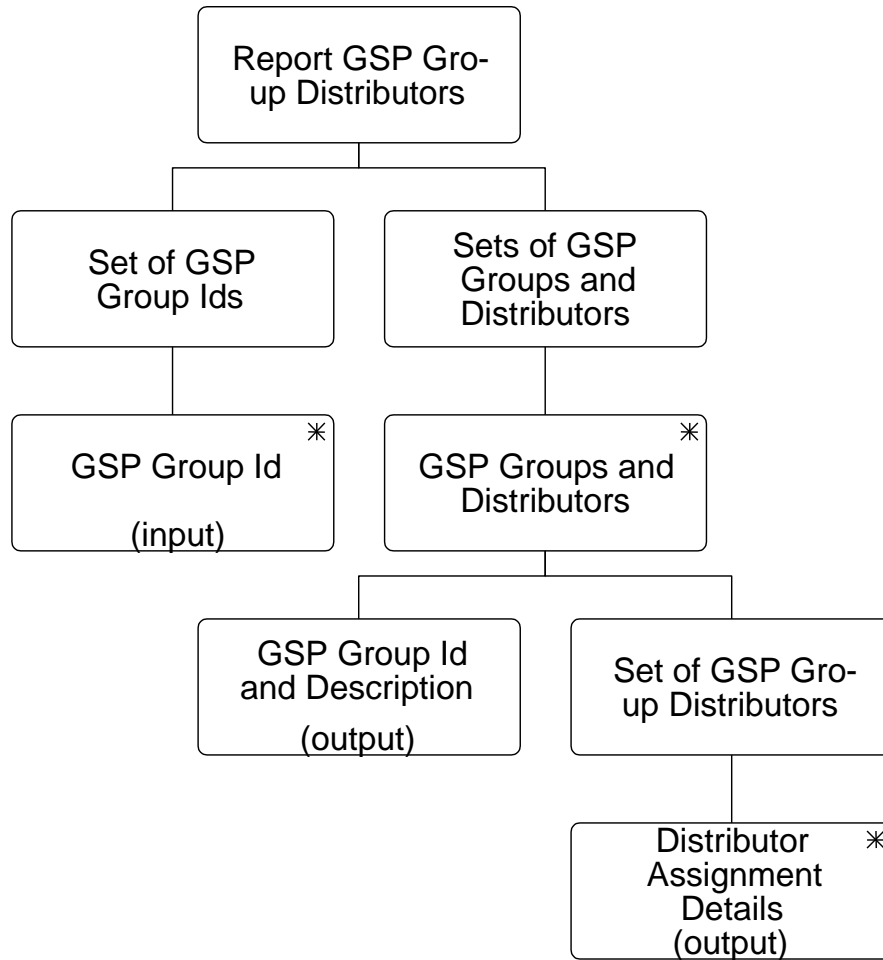
N17, N18, N19, N20, N21

3.72.12   User Roles

Auditor

Exception Administrator

Market Domain Data Administrator

Superior Market Domain Data Administrator

3.72.13   I/O Structures

```
                    ┌──────────────────────┐
                    │  Report GSP Gro-     │
                    │  up Distributors     │
                    └──────────┬───────────┘
              ┌────────────────┴────────────────┐
    ┌─────────┴──────────┐         ┌────────────┴─────────┐
    │  Set of GSP        │         │  Sets of GSP         │
    │  Group Ids         │         │  Groups and          │
    │                    │         │  Distributors        │
    └─────────┬──────────┘         └────────────┬─────────┘
    ┌─────────┴──────────┐ ✳      ┌────────────┴─────────┐ ✳
    │  GSP Group Id      │         │  GSP Groups and      │
    │                    │         │  Distributors        │
    │  (input)           │         │                      │
    └────────────────────┘         └────────────┬─────────┘
                           ┌────────────────────┴──────────────────┐
                 ┌─────────┴──────────┐         ┌──────────────────┴───┐
                 │  GSP Group Id      │         │  Set of GSP Gro-     │
                 │  and Description   │         │  up Distributors     │
                 │  (output)          │         │                      │
                 └────────────────────┘         └──────────┬───────────┘
                                              ┌────────────┴─────────┐ ✳
                                              │  Distributor         │
                                              │  Assignment          │
                                              │  Details             │
                                              │  (output)            │
                                              └──────────────────────┘
```

I/O Structure Element	Data Items
GSP Group Id	GSP Group Id
GSP Group Id and Name	GSP Group Id
	GSP Group Name
Distributor Assignment Details	Distributor Id
	Distributor Name
	X GGD Effective From Settlement Date {GGD}
	Y GGD Effective To Settlement Date {GGD}

3.73 **N1046 Report ISR Agent Appointments.**

3.73.1 **Function Type**

On-line Enquiry User initiated

3.73.2 **Function Description**

This function is invoked by an NHHDA user to allow reporting of ISR agent appointments for each of a set of GSP Group.

A list of GSP Group Ids is displayed. The user selects one, a range, or all of them to report.

3.73.3 **Processing Description**

The GSP Group Id and Name are reported, together with its ISR agent appointment details.

3.73.4 **Error Handling**

None

3.73.5 **Common Processing**

NC006 Restrict On-line Access

NC008 Create Report Header

3.73.6 **Volumes**

1

3.73.7 **Events**

None

3.73.8 **Event Frequency**

N/A

3.73.9 **Enquiries**

Report ISR Agent Appointments.

3.73.10 **Enquiry Frequency**

1

3.73.11 **Requirements Catalogue Ref.**
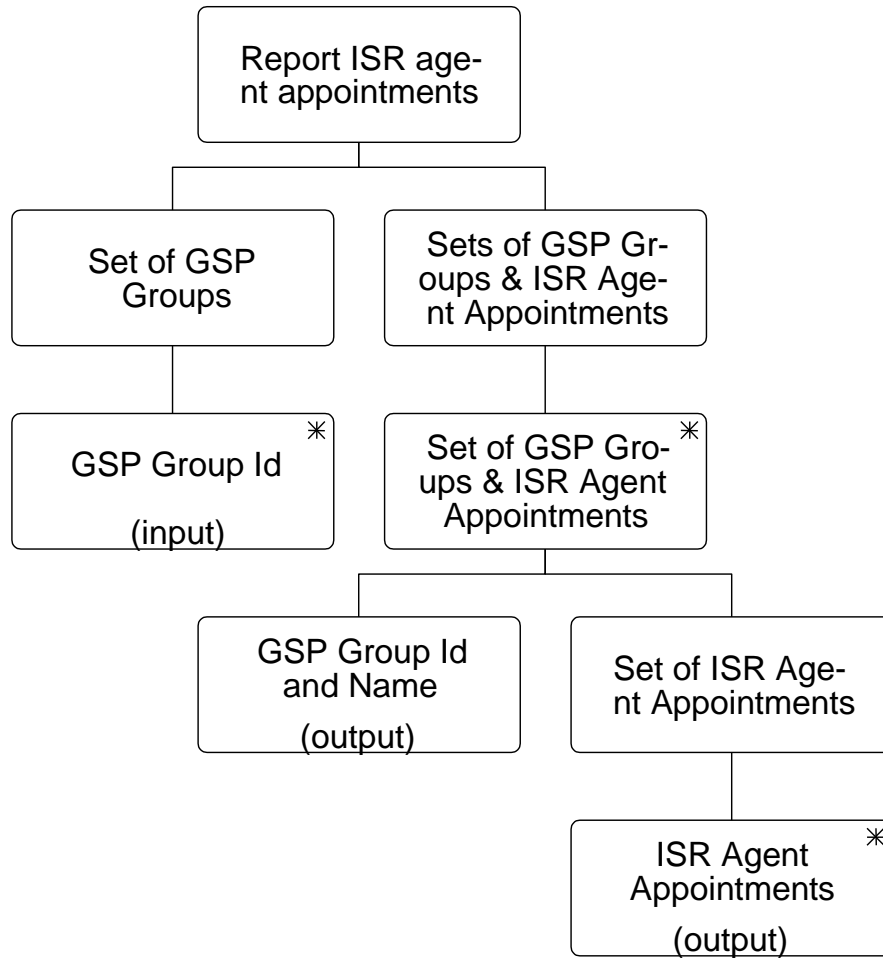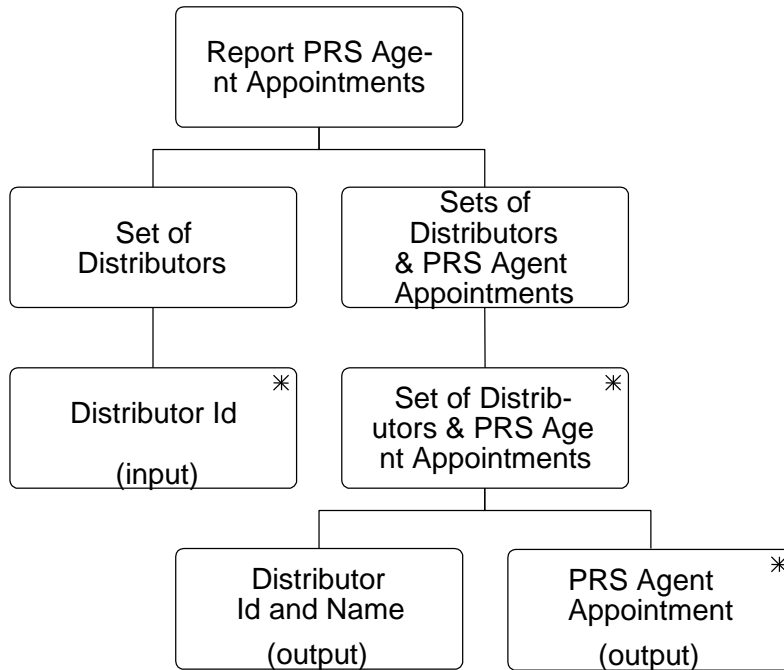
N17, N18, N19, N20, N21

3.73.12 **User Roles**

Exception Administrator

Auditor

Market Domain Data Administrator

Superior Market Domain Data Administrator.

3.73.13 I/O Structures

```
                    ┌─────────────────────┐
                    │   Report ISR age-   │
                    │  nt appointments    │
                    └─────────────────────┘
              ┌──────────────┴──────────────┐
    ┌─────────────────┐         ┌─────────────────────┐
    │  Set of GSP     │         │  Sets of GSP Gr-    │
    │   Groups        │         │  oups & ISR Age-    │
    │                 │         │  nt Appointments    │
    └─────────────────┘         └─────────────────────┘
            │                             │
    ┌─────────────────┐*        ┌─────────────────────┐*
    │  GSP Group Id   │         │  Set of GSP Gro-    │
    │                 │         │  ups & ISR Agent    │
    │   (input)       │         │  Appointments       │
    └─────────────────┘         └─────────────────────┘
                              ┌──────────┴──────────┐
                    ┌─────────────────┐   ┌─────────────────┐
                    │  GSP Group Id   │   │  Set of ISR Age-│
                    │   and Name      │   │  nt Appointments│
                    │   (output)      │   │                 │
                    └─────────────────┘   └─────────────────┘
                                                   │
                                        ┌─────────────────┐*
                                        │   ISR Agent     │
                                        │  Appointments   │
                                        │   (output)      │
                                        └─────────────────┘
```

I/O Structure Element	Data Items
GSP Group Id	GSP Group Id
GSP Group Id and Name	GSP Group Id
	GSP Group Name
ISR Agent Appointments	Effective From Date {IAA}
	Effective To Date {IAA}
	ISR Agent Name
	ISR Agent Id

3.74   N1047 Report PRS agent appointments.

3.74.1   Function Type

On-line   Enquiry   User initiated

3.74.2   Function Description

This function is invoked by an NHHDA user to allow reporting of the PRS agent appointment for each of a set of Distributors.

A list of Distributor Ids is displayed. The user selects one, a range, or all of them to report.

3.74.3   Processing Description

The Distributor Id and Name are reported, together with its PRS Agent Appointment details.

3.74.4   Error Handling

None

3.74.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.74.6   Volumes

 1

3.74.7   Events

None

3.74.8   Event Frequency

N/A

3.74.9   Enquiries

Report PRS Agent Appointments.

3.74.10   Enquiry Frequency

1

3.74.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.74.12   User Roles

Exception Administrator

Auditor

Market Domain Data Administrator

Superior Market Domain Data Administrator.

3.74.13   I/O Structures

```
            ┌──────────────────┐
            │  Report PRS Age-  │
            │  nt Appointments  │
            └──────────────────┘
                 │          │
        ┌────────┘          └────────┐
   ┌──────────┐              ┌──────────────┐
   │  Set of  │              │   Sets of    │
   │Distributors│            │ Distributors │
   └──────────┘              │ & PRS Agent  │
        │                    │Appointments  │
        │                    └──────────────┘
        │                          │
   ┌──────────┐  ✳         ┌──────────────┐ ✳
   │Distributor Id│        │ Set of Distrib-│
   │            │          │ utors & PRS Age-│
   │  (input)   │          │ nt Appointments │
   └──────────┘            └──────────────┘
                              │          │
                    ┌─────────┘          └─────────┐
              ┌──────────────┐          ┌──────────────┐ ✳
              │  Distributor  │          │  PRS Agent   │
              │  Id and Name  │          │ Appointment  │
              │   (output)    │          │   (output)   │
              └──────────────┘          └──────────────┘
```

I/O Structure Element	Data Items
Distributor Id	Distributor Id
Distributor Id and Name	Distributor Id
	Distributor Name
PRS Agent Appointments	PRS Agent Name
	PRS Agent Id

3.75   N1048 Report Refresh Instruction Failures

3.75.1   Function Type

On-line   Enquiry   User initiated

3.75.2   Function Description

This function is invoked by the NHHDA user to allow reporting of outstanding PRS Refresh Instruction validation failures.

The user may specify zero or more of the following selection criteria.

- the associated Instruction's source (PRS Agent);

- the subject Metering System Id.;

- the status of the Resend Request Flag;

- include or exclude Refresh Instruction Failures with a Resend Request Date between two given dates.

3.75.3   Processing Description

A report is produced containing the following items for each Refresh Instruction Failure satisfying the selection criteria.

- Date associated Instruction received;

- source PRS Agent;

- Instruction Sequence Number;

- subject Metering System;

- Significant Date;

- Resend Request Date;

- associated Refresh Instruction Failure Reasons.

3.75.4   Error Handling

None

3.75.5   Common Processing

NC006 - Restrict On-line Access

NC008 - Create Report Header

3.75.6   Volumes

An indeterminate number of validation fails will be reported on an ad-hoc basis.

3.75.7   Events

None

3.75.8   Event Frequency

N/A

3.75.9   Enquiries

Report on Instructions

3.75.10   Enquiry Frequency

1

3.75.11   Requirements Catalogue Ref.

F11, N17, N18, N19, N20, N21

3.75.12   User Roles

Exception Administrator

Auditor

3.75.13   I/O Structures
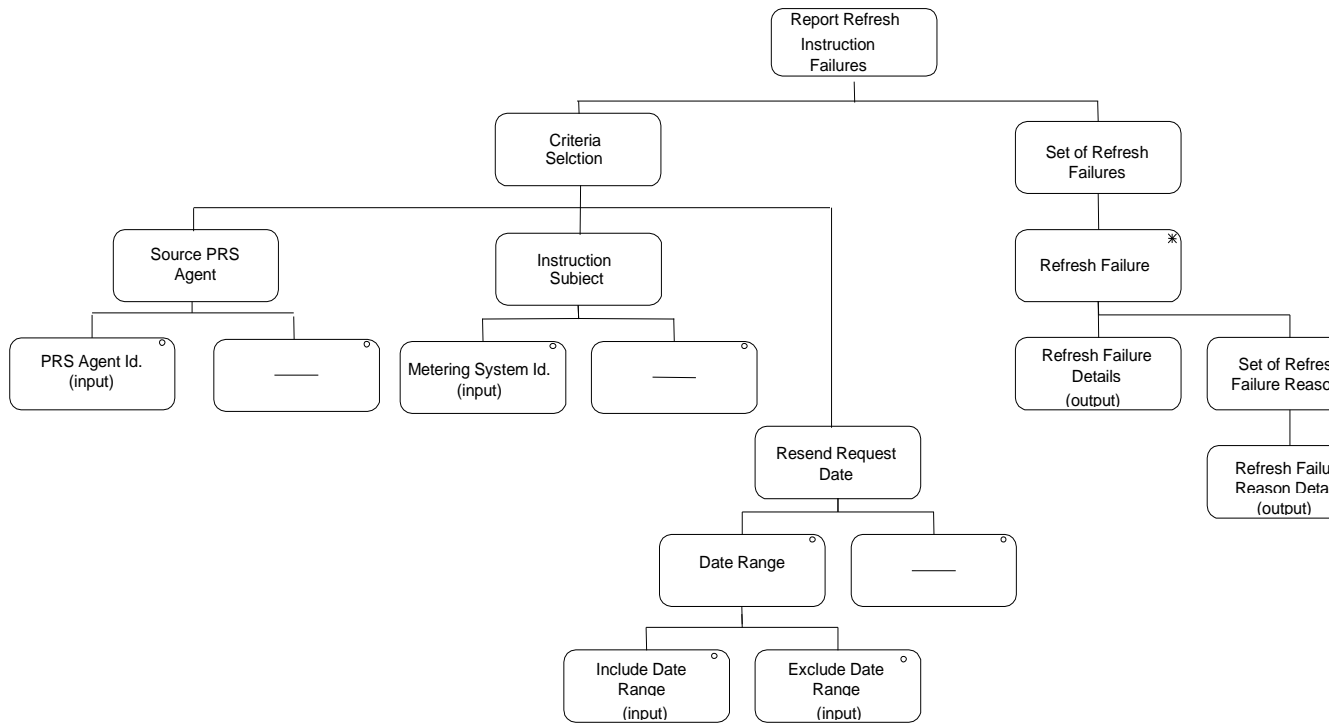
I/O Structure Element	Data Items
PRS AgentId.	Market ParticipantId. (Source)
Metering SystemId.	Metering SystemId.
Include DateRange	Start Date
	End Date
ExcludeDateRange	Start Date
	End Date
Refresh Failure Details	Instruction Received Timestamp
	Market ParticipantId. (Source)
	Instruction Sequence Number
	Metering SystemId.
	Significant Date
Refresh Failure Reason Details	Reason Number
	Instruction Status Reason

3.76   N1049 Browse Activity Schedule

3.76.1   Function Type

On-line   Enquiry   User initiated

3.76.2   Function Description

This function is invoked by the user to allow browsing of scheduled NHHDA activities.

Since these activities are a consequence of the physical design and implementation of NHHDA and do not exist logically, this function is included here for the sake of completeness only. There are no corresponding entities, data items, events or enquiries.

3.76.3   Processing Description

The user specifies a date range and whether or not sub-activities are to be included. Optionally, the user may specify a single activity queue, otherwise, activities on all queues are included.

The system displays a list of all activities meeting the above selection criteria along with their scheduled date and time, activity identifier, type, status and exit code.

The user may select an activity from the list and view or print the associated activity log.

3.76.4   Error Handling

None.

3.76.5   Common Processing

NC006 Restrict On-line Access

3.76.6   Volumes

The activity schedule will be browse on an ad-hoc basis.

3.76.7   Events

N/A

3.76.8   Event Frequency

N/A

3.76.9   Enquiries

N/A

3.76.10   Enquiry Frequency

N/A

3.76.11   Requirements Catalogue Ref.

N/A

3.76.12   User Roles

System Operator

3.76.13   I/O Structures

I/O structures are not appropriate for this function since its existence is a consequence of the physical design and implementation of NHHDA.

3.77   N1050 Browse Activity Queue Statuses

3.77.1   Function Type

On-line   Enquiry   User initiated

3.77.2   Function Description

This function is invoked by the user to allow browsing of the NHHDA activity queue statuses.

Since these queues are a consequence of the physical design and implementation of NHHDA and do not exist logically, this function is included here for the sake of completeness only. There are no corresponding entities, data items, events or enquiries.

3.77.3   Processing Description

For each activity queue, the system displays the queue's identifier along with its width (the maximum number of activities which may run concurrently on the queue), the number of running activities, the number of activities waiting to run with a start date-time that has passed and the number of activities waiting to run with a start date-time which has not yet passed.

3.77.4   Error Handling

None.

3.77.5   Common Processing

NC006 Restrict On-line Access

3.77.6   Volumes

The activity schedule will be browse on an ad-hoc basis.

3.77.7   Events

N/A

3.77.8   Event Frequency

N/A

3.77.9   Enquiries

N/A

3.77.10   Enquiry Frequency

N/A

3.77.11   Requirements Catalogue Ref.

N/A

3.77.12   User Roles

System Operator

3.77.13   I/O Structures

I/O structures are not appropriate for this function since its existence is a consequence of the physical design and implementation of NHHDA.

3.78   N1051 Browse Operator and Error Logs

3.78.1   Function Type

On-line   Enquiry   User initiated

3.78.2   Function Description

This function is invoked by the user to allow viewing and printing of the operator and error log files produced by NHHDA.

Since these log files are a consequence of the physical design and implementation of NHHDA and do not exist logically, this function is included here for the sake of completeness only.   There are no corresponding entities, data items, events or enquiries.

3.78.3   Processing Description

The system presents a list of the available operator and error log files along with their creation date-time and size.

The user may select a row from the list and view or print the associated log file.

3.78.4   Error Handling

None.

3.78.5   Common Processing

NC006 Restrict On-line Access

3.78.6   Volumes

The activity schedule will be browse on an ad-hoc basis.

3.78.7   Events

N/A

3.78.8   Event Frequency

N/A

3.78.9   Enquiries

N/A

3.78.10   Enquiry Frequency

N/A

3.78.11   Requirements Catalogue Ref.

N/A

3.78.12   User Roles

Market Domain Data Administrator

Superior Market Domain Data Administrator

Data Aggregation Administrator

Exception Administrator

System Operator

System Manager

Auditor

3.78.13   I/O Structures

I/O structures are not appropriate for this function since its existence is a consequence of the physical design and implementation of NHHDA.

3.79   N1052 Report on NHHDC Performance

3.79.1   Function Type

Batch   Enquiry   System initiated

3.79.2   Function Description

This function reports counts of EACs and AAs for a settlement day, broken down by NHHDC and Supplier. It is initiated automatically by the function Aggregate EACs and AAs.

3.79.3   Processing Description

For each Supplier for which data has been aggregated during the Aggregation Run, this function reports the SPM Default EAC MSID Count, the SPM Default Unmetered MSID Count, the SPM Total AA MSID Count, the SPM Total EAC MSID Count and the SPM Total Unmetered MSID Count. For each NHHDC, it reports the sum over Suppliers of each of these counts.

3.79.4   Error Handling

None

3.79.5   Common Processing

NC008 Create Report Header

3.79.6   Volumes

One NHHDC Report will be generated for each Aggregation run (see section 3.8.6).

3.79.7   Events

None

3.79.8   Event Frequency

N/A

3.79.9   Enquiries

None

3.79.10   Enquiry Frequency

N/A

3.79.11   Requirements Catalogue Ref.

N17, N18, N19, N20, N21

3.79.12   User Roles

N/A

3.79.13   I/O Structures

```
                        ┌─────────────────┐
                        │    Report on     │
                        │     NHHDC        │
                        │   Performance    │
                        └────────┬────────┘
               ┌─────────────────┴─────────────────┐
      ┌────────┴─────────┐              ┌──────────┴────────┐
      │ Aggregation Run  │              │  Sets of NHHDCs   │
      │                  │              │                   │
      │    (output)      │              │                   │
      └──────────────────┘              └─────────┬─────────┘
                                        ┌─────────┴─────────┐ ✳
                                        │  Set of NHHDCs    │
                                        │                   │
                                        └─────────┬─────────┘
              ┌──────────────────────────────────┼──────────────────────────┐
    ┌─────────┴────────┐            ┌─────────────┴──────┐        ┌──────────┴────────┐
    │      NHHDC       │            │  Set of Suppliers  │        │  Total for all    │
    │    (output)      │            │                    │        │    suppliers      │
    │                  │            │                    │        │    (output)       │
    └──────────────────┘            └─────────┬──────────┘        └───────────────────┘
                                    ┌─────────┴──────────┐ ✳
                                    │ Supplier Details   │
                                    │                    │
                                    │    (output)        │
                                    └────────────────────┘
```
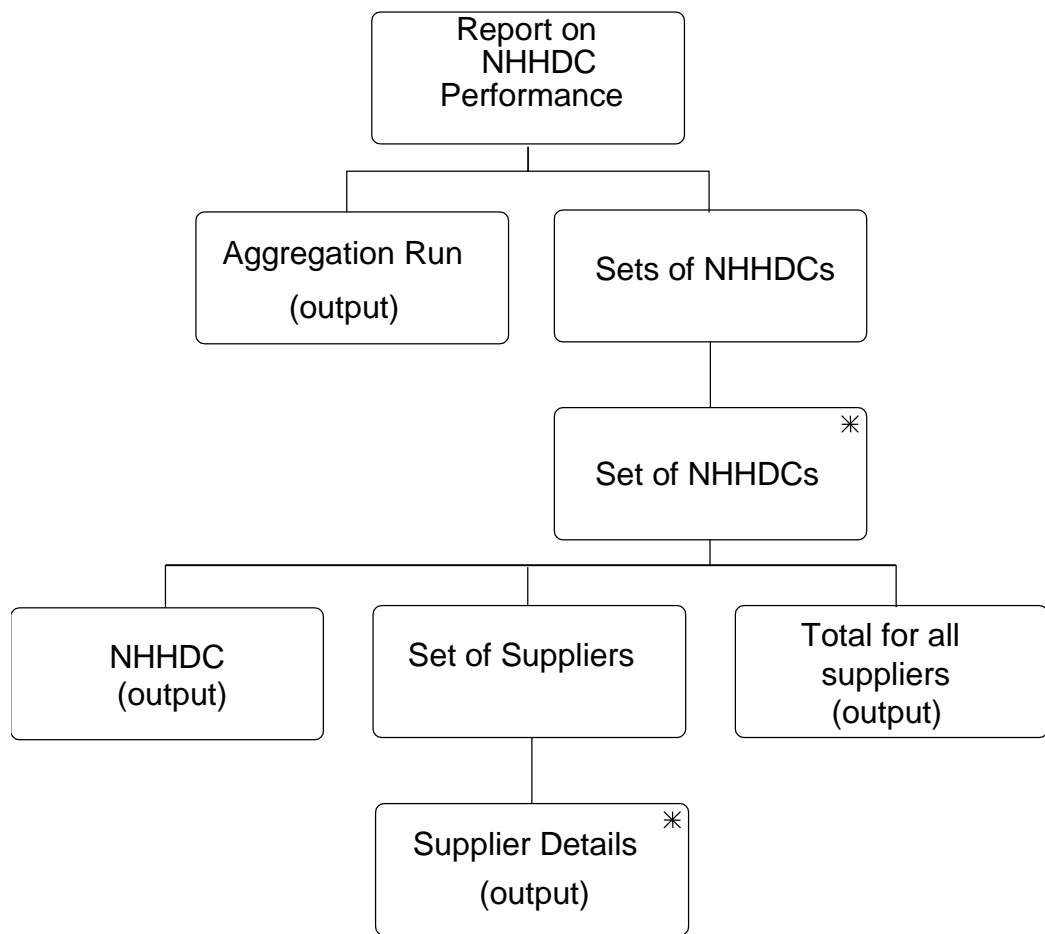
I/O Structure Element	Data Items
Aggregation Run	Settlement Date for Aggregation Run
	Settlement Code for Aggregation Run
	Run Type Code
	Run Number
NHHDC	NHHDC id
	Market Participant Name
Supplier Details	Supplier Id
	SPM Default EAC MSID Count
	SPM Default Unmetered MSID Count
	SPM Total AA MSID Count
	SPM Total EAC MSID Count
	SPM Total Unmetered MSID Count
Total for all Suppliers	SPM Default EAC MSID Count
	SPM Default Unmetered MSID Count
	SPM Total AA MSID Count
	SPM Total EAC MSID Count
	SPM Total Unmetered MSID Count

I/O Structure Element	Data Items

3.80   N1053 Browse Aggregation Files

3.80.1   Function Type

On-line   Enquiry   User initiated

3.80.2   Function Description

This function is invoked by the NHHDA user to allow reporting of the Aggregation files generated by the system.

For all files, the user can select the date or range of dates on which they were extracted and / or transmitted, or select all files which have been extracted and not transmitted.

3.80.3   Processing Description

For each file meeting the selection criteria, the market role, participant, date extracted, date transmitted, type, GSP group and status are displayed. As each file is selected, additional information about the file – name, Settlement Date, Settlement Code, Data Aggregator Run Number, AA Percentage – is displayed.

It is possible to sort the list of files by using the sort buttons at the top of each column.

The 'View' button will allow the display of a file's contents (if it has not been archived). It is possible to sort the list of files by using the sort buttons at the top of each column.

The selection of a Supplier Purchase Matrix Data File will enable the 'Resend' button. On clicking 'Resend', the user will be presented with a warning to say the file is about to be resent. The same file will give the user the option of generating an an SPM report via the 'Report' button, with the optional options to report on SSC, Distributor and LLF, PC , Supplier.

The selection of an Aggregation Exception Log will present the user with the option to produce a report optionally on MSID (or all MSIDs) and, or one or more Exception Types. The submission of the report will result in a report for all the partitions in this aggregation run.

3.80.4   Error Handling

When viewing a file, the user will be presented with a warning message if the size of the machine readable file (in bytes) is larger than the allowed size set in the system parameter. The user will also be presented with an error message if the physical file does not exist.

3.80.5   Common Processing

NC006 Restrict On-line Access

NC007 Update File Log

NC008 Create Report Header

3.80.6   Volumes

Browse Aggregation Files will be browsed on an ad hoc basis

3.80.7   Events

None

3.80.8   Event Frequency

N/A

3.80.9   Enquiries

Browse Aggregation Files

3.80.10   Enquiry Frequency

1

3.80.11   Requirements Catalogue Ref.

N02, N17

3.80.12   User Roles

System Manager

System Operator

Exception Administrator

Auditor

Data Aggregation Administrator
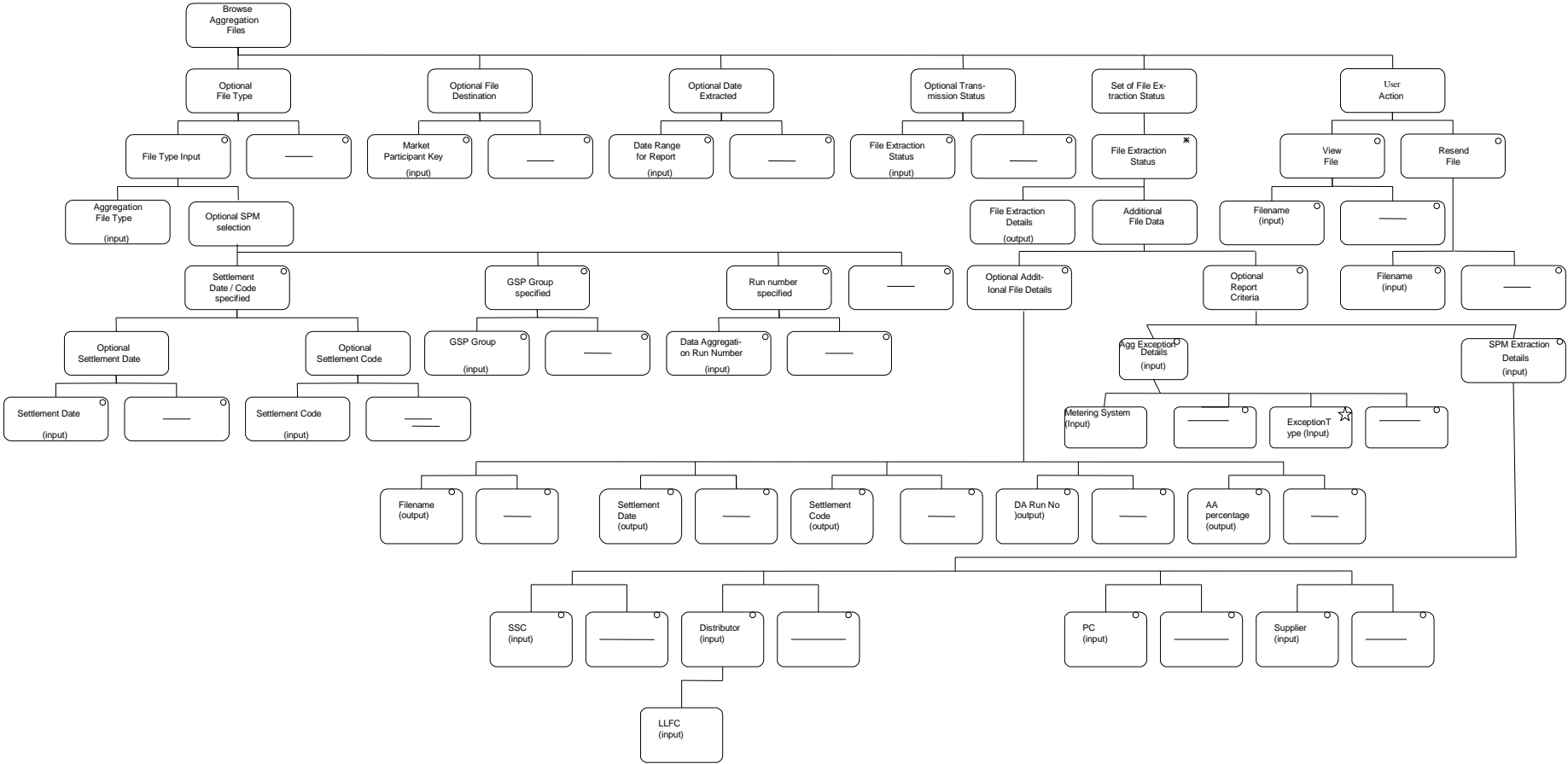
3.80.13   I/O Structures

I/O Structure Element	Data Items
Additional File Details	File Name
	Settlement Date
	Settlement Code
	Data Aggregator Run Number
	AA Percentage
File Type	File Format Code
	File Content Code
Market Participant Key	Market Participant Id
	Market Participant Role
DateRange for Report	Start Date for Selection
	End Date for Selection
File Extraction Status	File Status
File Details	Market Participant Id
	Market Participant Name
	File Format Code
	File Content Code
	File Creation Timestamp
	File Send or Received Timestamp
	File Status
	GSP Group
SPM Extraction Details (D0041001 only)	Standard Settlement Configuration Id
	Distributor Id
	Line Loss Factor Class
	Profile Class
	Supplier Id
Aggregation Exception Extraction Details (L0037001 only)	Metering System Id
	Exception Type

3.81   N1054 Monthly Report on D0095 Reports

3.81.1   Function Type

On-Line   Enquiry   User initiated

3.81.2   Function Description

This function is invoked by the NHHDA user on a monthly basis to provide a summary report of D0095 exceptions.

The user enters file creation from and to dates for inclusion in the report. On selecting the 'Report' button a report is created.

3.81.3   Processing Description

The report is populated using data from the D0095 file extraction runs. The report contents include the D0095 file creation date, Supplier ID, Data Collector ID, From Settlement Date and To Settlement Date. For each supplier, it outputs a count of metering systems with at least one exception of each exception type (E01 – E14) and a count of metering systems with at least one exception.

3.81.4   Error Handling

To Date specified must not be earlier than the From Date.

3.81.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.81.6   Volumes

User initiated process on a monthly basis

3.81.7   Events

N/A

3.81.8   Event Frequency

N/A

3.81.9   Enquiries

D0095 Monthly Report

3.81.10   Enquiry Frequency

Initiated Monthly by user

3.81.11   Requirements Catalogue Ref.

F28

3.81.12   User Roles

Exception Administrator

Auditor

3.81.13   I/O Structures

```
                          ┌──────────────┐
                          │ Monthly Report│
                          │  On D0095     │
                          │  Reports      │
                          └───────┬──────┘
              ┌───────────────────┴──────────────────────┐
     ┌────────┴────────┐                        ┌─────────┴────────┐
     │  Date Range     │                        │   D0095          │
     │  (input)        │                        │   Exceptions     │
     └─────────────────┘                        └─────────┬────────┘
                                                ┌─────────┴────────┐
                                                │ D0095 Exception *│
                                                │ Details          │
                                                │ (output)         │
                                                └──────────────────┘
```
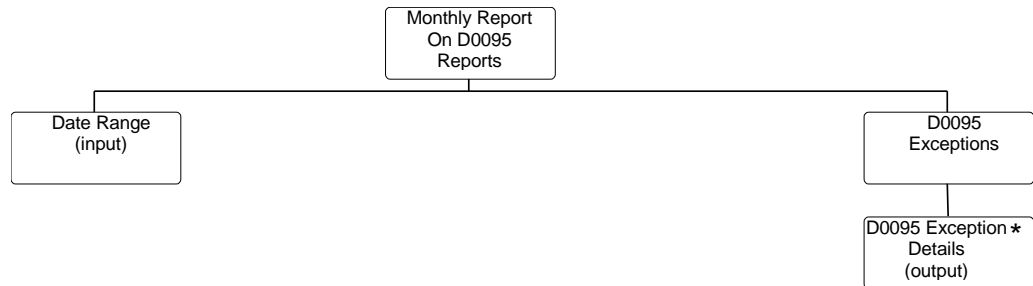
I/O Structure Element	Data Items
DateRange	Start File Creation Date for Selection
	End File Creation Date for Selection
D0095 Exception Details	Supplier ID
	Data Collector ID
	From Settlement Date
	To Settlement Date
	Exception Type
	Count of Metering Systems; i.e. a count of metering systems for this exception type
	Count of Metering Systems with at least one exception

3.82   N1055 Report On EAC Data To Distributor

3.82.1   Function Type

On-line   Enquiry   User initiated

3.82.2   Function Description

This function is invoked by an NHHDA user to allow reporting of EAC data to Distributors.

A list of participants who are defined as Distributors is displayed. The user selects one or more Distributors who want to receive the report.

3.82.3 Processing Description

This process generates a report containing EAC consumption data together with Distributor Id, Settlement Date for the report, Energisation Status Id, GSP Group Id, Line Loss Factor Class Id, Metering System Id, Profile Class Id, Standard Settlement Configuration Id and Time Pattern Regime. The data reported is that which is effective on the Settlement Date equal to the specified report date; which will be no more than a few days before the current day.The Metering Systems included are those for which the Data Aggregator is appointed on this Settlement Date, and only those Metering Systems registered with the Distributor on this Settlement Date will be reported.

In the event that PRS and the Data Collector disagree over the GSP Group, Supplier, Energisation Status, Measurement Class, Profile Class, or Standard Settlement Configuration of a Metering System, the PRS data will be treated as definitive.

At the end of gathering the Metering System and consumption data, those Distributors having no valid Metering Systems for the report date will not have a report generated; this action will be reported to the Operator Log.

In order to do this, for each Distributor included in the run, identify all Metering Systems for which the Data Aggregator is appointed on the report date, and for which the PRS Agent is registered on the report date. Process is as follows:-

- lookup the PRS view and the set of Measurement Requirements relating to that Metering System on the Settlement Date, and lookup the set of Data Collector Appointments relating to that Metering System which begin on or before the current Calendar Date (enquiry Lookup PRS View, DC Appts and Measurement Reqts);

- for each Data Collector appointment, lookup the Estimated Annual Consumption provided by the Data Collector for one Measurement Requirement of the Metering System which applies to the Settlement Date (enquiry Lookup Current EAC);

- if more than one of the appointed Data Collectors has provided data, determine which of those consumptions to use:

  - use the EAC with the latest Effective From Settlement Date; if this identifies more than one EAC, use the one from the Data Collector with the latest appointment start date;

- if the above logic has identified an EAC from a Data Collector:

  - lookup that Data Collector's consumption data for all other Measurement Requirements (if any) (enquiry Lookup Current EAC);

  - lookup that Data Collector's view of the Metering System for the Settlement Date (enquiry Lookup Data Collector View);

  - compare the PRS and DC views reporting exceptions as specified in Error Handling;

- for each Measurement Requirement the following will be done:

Data found	Metered		Unmetered	
	Energised	De-energised	Energised	De-energised
EAC	Report value	Do not include this meter in the report	Report value	Do not include this meter in the report
no data	Log exception: no data for meter, default used	Do not include this meter in the report	Log exception: no data for meter, default used	Do not include this meter in the report

Table 1 : Where to include a Metering System's data

- if no consumption could be found then calculate the Default Metered Consumption (DEM). Lookup the GSP Group Profile Class Researched Default EAC (GGPCDEAC) and the Average Fraction of Yearly Consumption (AFYC) (enquiry: Lookup PC Researched Default EAC and AFYC):

$$DEM = GGPCDEAC * AFYC$$

3.82.4   Error Handling

An exception log is always produced identifying the outcome of the request for the report for the selected Distributors, and confirming if a report was generated for each Distributor. The following Exception Conditions encountered during the report creation will be recorded:

- exceptions due to the absence of Metering System details from the PRS Agent or Data Collector which are required for reporting;

- exceptions resulting from comparison of PRS view with the view of the Data Collector whose data is used in the report:

  - mismatch of the Metering System's Profile Class as advised by the PRS Agent and that advised by the Data Collector;

  - mismatch of the Metering System's GSP Group as advised by the PRS Agent and that advised by the Data Collector;

  - mismatch of the Metering System's Standard Settlement Configuration as advised by the PRS Agent and that advised by the Data Collector;

  - mismatch of the Metering System's Supplier Registration as advised by the PRS Agent and that advised by the Data Collector;

  - mismatch of the Metering System's Measurement Class as advised by the PRS Agent and that advised by the Data Collector;

- mismatch of the Metering System's Energisation Status as advised by the PRS Agent and that advised by the Data Collector;

- exceptions resulting from received data which is inconsistent with the Metering System's Energisation Status or Measurement Class (as established in Table 1 : Where to include a Metering System's data):

  - missing EAC/AA for the Metering System resulting in a default EAC being used;

- exception due to missing Average Fraction of Yearly Consumption data;

- exception resulting from missing Researched Default EAC data.

3.82.5   Common Processing

NC006 Restrict On-line Access

NC008 Create Report Header

3.82.6   Volumes

The report will be produced quarterly for an indeterminate number of Distributors.

3.82.7   Events

None

3.82.8   Event Frequency

N/A

3.82.9   Enquiries

Lookup Current EAC

Lookup Data Collector View

Lookup PC Researched Default EAC and AFYC

Lookup PRS View, DC Appts and Measurement Reqts

3.82.10   Enquiry Frequency

Lookup PRS View, DC Appts and Measurement Reqts are invoked once per Distributor per run.

Lookup Current EAC is invoked at least once per Settlement Register in a Data Aggregation Run.

Lookup Data Collector View is invoked once per Metering System for which Data Collector Data is found.

Lookup PC Researched Default EAC and AFYC is invoked once per Metering System for which actual EAC values cannot be found.

3.82.11   Requirements Catalogue Ref.

BRS Modification Proposal P222 section 5.3.

3.82.12   User Roles

Data Aggregation Administrator

Exception Administrator

3.82.13   I/O Structures

```
                          ┌─────────────────┐
                          │ Report EAC data │
                          │ to Distributors │
                          └─────────────────┘
                 ┌─────────────────┴─────────────────────┐
         ┌───────────────┐                   ┌──────────────────────┐
         │ Input Criteria│                   │ Set of Metering Systems│
         └───────────────┘                   │  for the Distributor* │
             ┌────┴─────┐               ┌──────────────┴───────────┐
    ┌──────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
    │Distributor│ │Settlement Date│ │Set of Metering│ │Settlement Date│
    │  (input)  │ │   (input)    │ │System Details*│ │   (output)   │
    └──────────┘  └──────────────┘  └──────────────┘  └──────────────┘
```
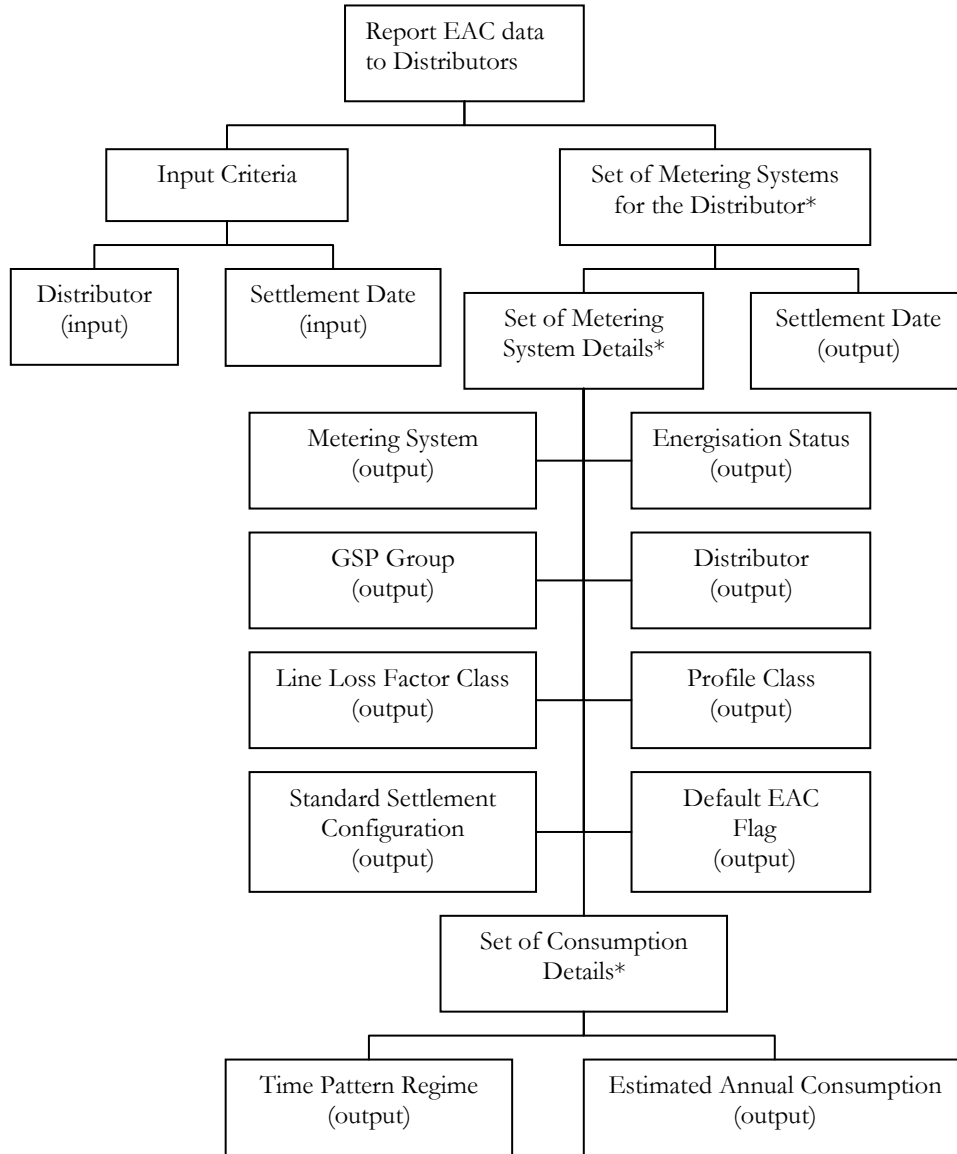
I/O Structure Element	Data Items
Default EAC Flag	Default EAC Flag
Distributor	Distributor Id
Energisation Status	Energisation Status Id
Estimated Annual Consumption	Estimated Annual Consumption
GSP Group	GSP Group Id
Line Loss Factor Class	Line Loss Factor Class Id
Metering System	Metering System Id

I/O Structure Element	Data Items
Profile Class	Profile Class Id
Standard Settlement Configuration	Standard Settlement Configuration Id
Settlement Date	Settlement Date
Time Pattern Regime	Time Pattern Regime Id

3.83   N0038 Load Demand Control Event

3.83.1   Function Type

On-line   Update   User initiated

3.83.2   Function Description

Demand Control Event will be loaded into NHHDA using this function. The Distributors will be input into NHHDA using the logical flow P0238.

3.83.3   Processing Description

3.83.3.1   Common File Validation

When a Demand Control Event file arrives it will be validated using common file validation. Common file validation will check the file structure is correct and that only the relevant field values, adhere to valid domain values.

Once the file has been validated the details regarding receipt status of the file and file processing, will be updated on the database.

3.83.3.2   Demand Control Event (DCE) Load Processing

Once the file has passed common file validation the DCE Load Process may be initiated using the standard batch processing interface.

3.83.3.3   Demand Control Event Item Processing

Before the data within the file is loaded into the database each data item must be validated/processed. If any data item fails for a particular reason the failure will be categorised into a relevant level of exception.

Where one or more Medium or High level Exceptions have been raised, it is not necessary to process corresponding child record details.

When the DCE file is read, it checks if the DCE for a particular Distributor already exists in the database. If so, the MSIDs related to the combination of DCE id and Distributor Id stored in the database will be deleted and the revised set of MSIDs will be loaded into database.

3.84   N0039 Estimated HH demand disconnection volume

3.84.1   Function Type

On-line   Update   User initiated

3.84.2   Function Description

The estimated HH demand disconnection volume will be loaded into NHHDA using this function. The SVAA will be input into NHHDA using the logical flow D0375.

3.84.3   Processing Description

3.84.3.1   Common File Validation

When an estimated HH demand disconnection volume file arrives it will be validated using common file validation. Common file validation will check the file structure is correct and that only the relevant field values adhere to valid domain values.

Once the file has been validated the details regarding receipt status of the file and file processing, will be updated on the database.

3.84.3.2   Estimated HH demand disconnection volume Load Processing

Once the file has passed common file validation the estimated HH demand disconnection volume Load Process may be initiated using the standard batch processing interface.

3.84.3.3   Estimated HH demand disconnection volume Item Processing

Before the data within the file is loaded into the database each data item must be validated/processed. If any data item fails for a particular reason the failure will be categorised into a relevant level of exception.

Where one or more Medium or High level Exceptions have been raised, it is not necessary to process corresponding child record details.

When the DCE file is read, it will be rejected if the DCE already exists in the database or if the start date and time is NULL.

4   Common Processes

4.1   NC002 Update On-line Audit Log

4.1.1   Processing Description

All data changes made on line are logged using an audit entity (not shown on the LDM). Each on-line audit entity has the same attributes as the main entity (to hold the after image) and additional attributes to hold: the action (insert, update, delete); the updating function; the user id of the user causing the change; and the time stamp (including date) of the change. On deletion, there is no after image, but the key is stored, together with the additional attributes listed above.

This process is automatically invoked whenever an on-line update function changes any system data.

4.1.2   Error Handling

See Processing Description.

4.1.3   Other Common Processing

No other common processes invoked.

4.1.4   Functions

N0001 Define Profile Classes

N0004 Manage Failed Instructions

N0006 Define Suppliers

N0011 Define Average Fractions of Yearly Consumption

N0012 Define Data Collectors

N0013 Define Distributors and PRS Agents

N0014 Define GSP Groups

N0015 Define ISR Agents

N0016 Define Line Loss Factor Classes

N0019 Define Standard Settlement Configurations

N0020 Define Threshold Parameter

N0022 Schedule Aggregation Run

N0023 Specify Data Accessible To Ad Hoc Reports

N0029 Maintain System Configuration Data

N0034 Manage Refresh Instructions

N0035 Manage Instruction Files

4.1.5   Requirements Catalogue Ref.

N24

4.1.6   I/O Structures

Not applicable.

4.2   NC003 Update Batch Audit Log

4.2.1   Processing Description

Data changes made by instruction processing are logged using an audit entity (not shown on the LDM). Attributes to hold: the action (insert, update, delete); the updating function; the file id and/or instruction id that caused the change and the timestamp (including date) of the change.

The details of the change made will be determined from the audit record which will reference the instruction and file that caused the change and will include the subject of the instruction and the instruction type. The new status and any reason codes are also audited. The actual database changes may be determined by examining the referenced instruction.

This process is automatically invoked whenever a batch update function changes any system data.

4.2.2   Error Handling

See Processing Description.

4.2.3   Other Common Processing

No other common processes invoked.

4.2.4   Functions

N0008 Aggregate EACs and AAs

N0024 Load Pool Settlement Timetable

N0031 Instruction File Arrival

N0032 Process Instructions

N0036 Load Pool Market Domain Data

4.2.5   Requirements Catalogue Ref.

N24, N7, N13, N14

4.2.6   I/O Structures

Not applicable.

4.3   **NC004 Check File Header**

4.3.1   **Processing Description**

First, the type of file being checked is established using the File Format Code (either DAT or PRT). Having determined this, the headers are checked as detailed below.

Instruction Files:

Source Address identifies a known PRS Agent or Non Half Hourly Data Collector;

Target Address identifies the receiving Non Half Hourly Data Aggregator;

File Sequence Number is a valid number and a file with the same number has not previously been received from the same source;

File Creation Timestamp is valid and is prior to the current time.

Data Files:

File Format Code is DAT;

File Content Code identifies the file as containingData Aggregation and Settlement Timetable or Market Domain Data Complete Set..

Source Address identifies the Pool Market Domain Data Agency;

Target Address identifies the receiving Non Half Hourly Data Aggregator or null for 'Broadcast' file.

File Creation Timestamp is valid and is prior to the current time.

4.3.2   **Error Handling**

Any file whose header fails validation is not processed any further. A log is written recording the reason for failure. The file is stored.

4.3.3   **Other Common Processing**

No other common processes invoked

4.3.4   **Functions**

N0036 Load Pool Market Domain Data

N0024 Load Pool Settlement Timetable

N0031 Instruction File Arrival

4.3.5   **Requirements Catalogue Ref.**

N/A

4.3.6   I/O Structures
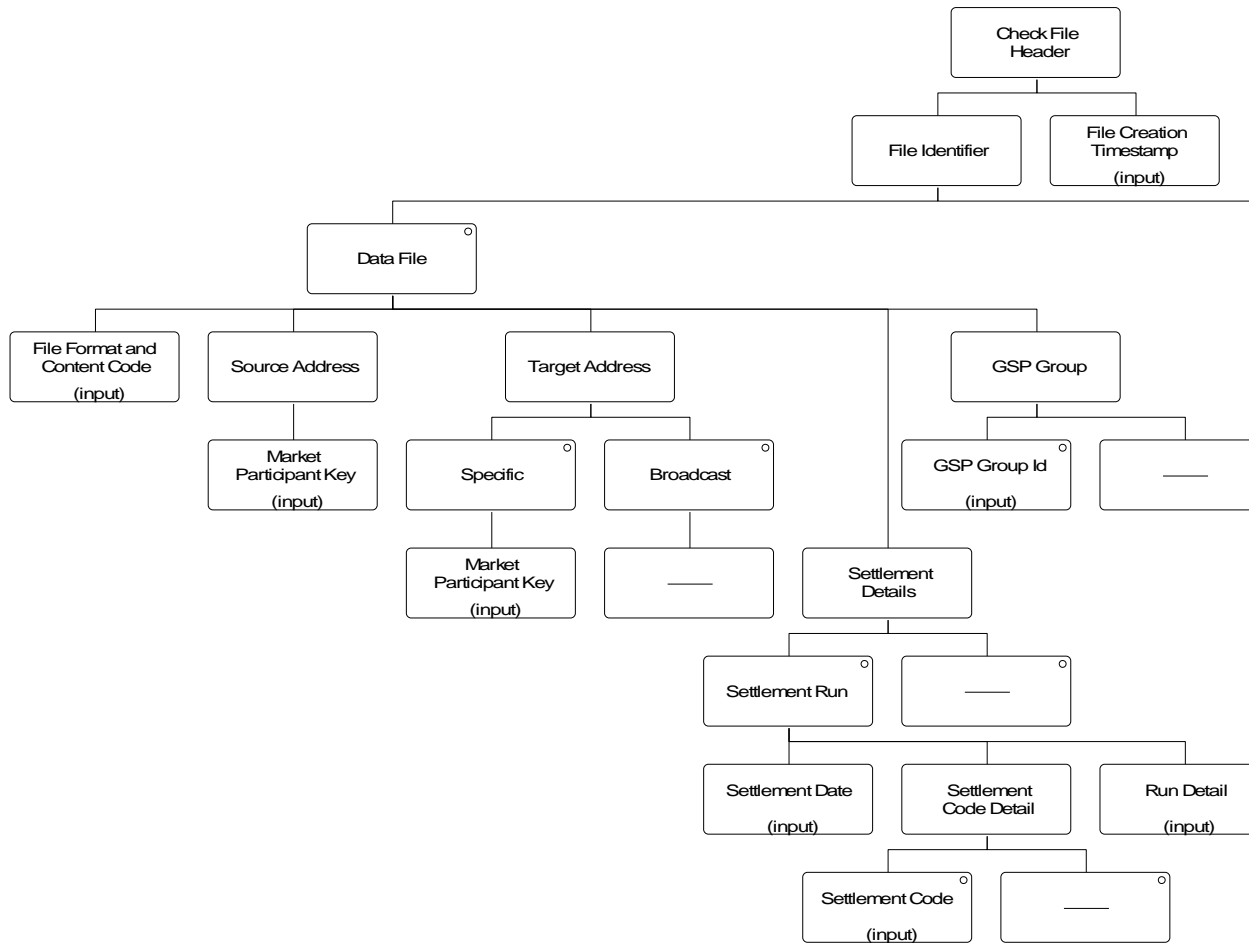
I/O Structure Element	**Data Items**
File Format and Content Code	File Content Code
	File Format Code
Market Participant Key	Market Participant Id
	Market Participant Role Code
Settlement Date	Settlement Date
Settlement Code	Settlement Code
Run Detail	Run Number
	Run Type Code
GSP Group Id	GSP Group Id
File Sequence Number	File Sequence Number
File Creation Timestamp	File Creation Timestamp

4.4   NC005 Create File Header

4.4.1   Processing Description

File Format Code is set to DAT or PRT as appropriate (Supplier Purchase Matrices and files returning failed instructions to Data Collectors or PRS Agents are always DAT, but the Data Collector Exception Report may be DAT or PRT).

File Content Code is set to the appropriate abbreviation for a SPM, exception report,r failed instructions file, NHHDC performance report or monthly D0095 report..

Source Address is set to identify the sending Non Half Hourly Data Aggregator.

Target Address is set to identify the recipient (either the ISR Agent for SPMs or the relevant Supplier for exception reports or the relevant Data Collector or PRS Agent for failed instructions).

Settlement Date, Settlement Code and Run Detail are null for exception reports and failed instruction files or set to identify the settlement / reconciliation run to which a SPM applies - in this case the Run Number is the Data Aggregation Run Number and the Run Type is Non Half Hourly Data Aggregation. The Settlement Date is set for the monthly D0095 report.

GSP Group Id is the GSP group for which the SPM applies (null otherwise).

File Creation Timestamp is set to the current date and time.

4.4.2   Error Handling

See Processing Description.

4.4.3   Other Common Processing

No other common processes invoked

4.4.4   Functions

N0004   Manage Failed Instructions

N0005   Generate Supplier Purchase Matrices

N0010   Check Data Collector Data

N0026   Automatically Send Supplier Purchase Matrix

N1052   Report on NHHDC Performance

N1054   Monthly Report on D0095 Reports

4.4.5   Requirements Catalogue Ref.

N/A

4.4.6   I/O Structures
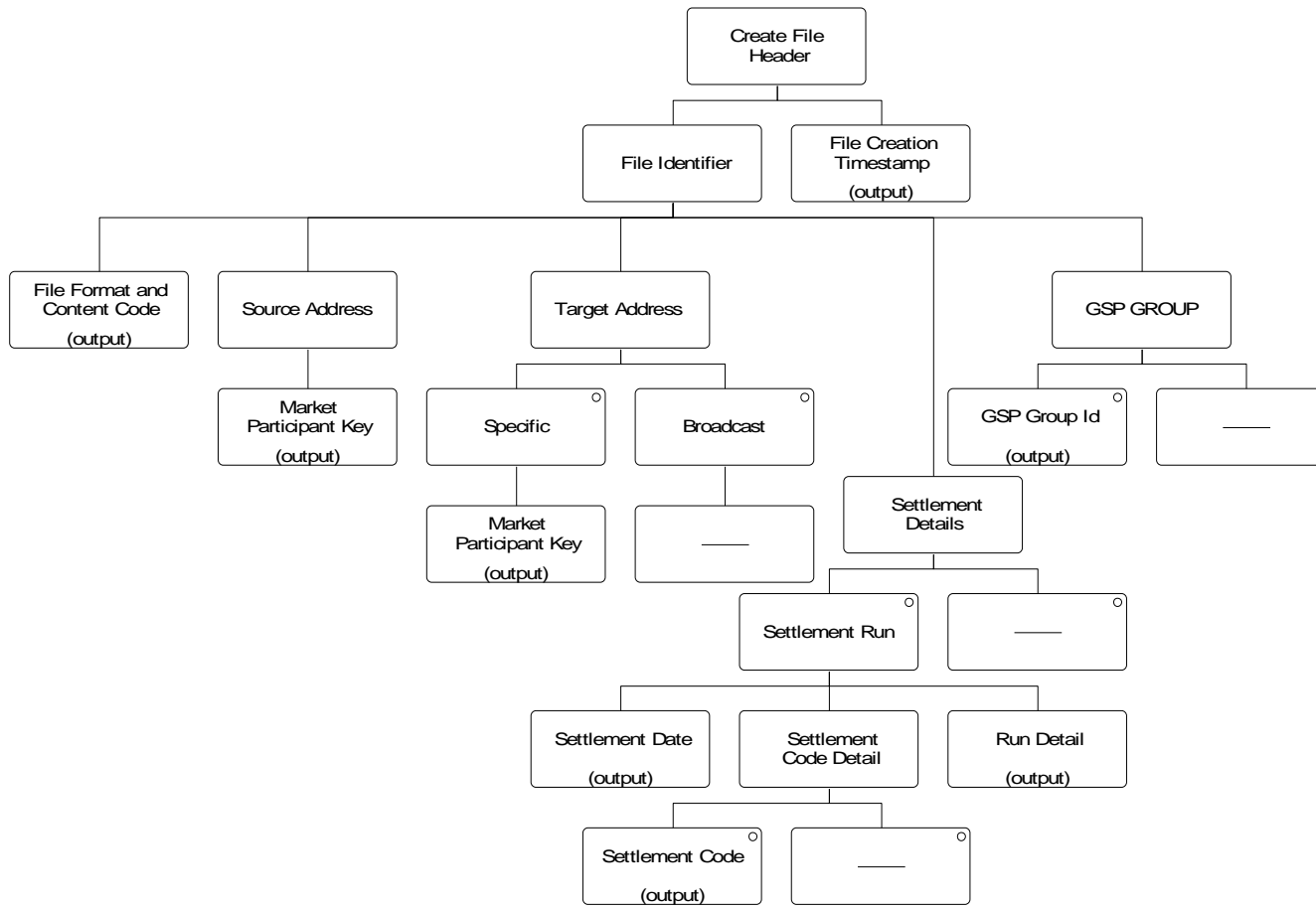
I/O Structure Element	Data Items
File Format and Content Code	File Content Code
	File Format Code
Market Participant Key	Market Participant Id
	Market Participant Role Code
Settlement Date	Settlement Date
Settlement Code	Settlement Code
Run Detail	Run Number
	Run Type Code
GSP Group Id	GSP Group Id
File Creation Timestamp	File Creation Timestamp

4.5   NC006 Restrict On-Line Access

4.5.1   Processing Description

From the User Id of the user attempting to access a function, determine their User Role. If this is a valid user role for the function, allow them access otherwise do not allow them access, log the attempted breach of access rights and alert system manager to the attempted violation.

4.5.2   Error Handling

None

4.5.3   Other Common Processing

None.

4.5.4   Functions

N0001	Define Profile Classes
N0001E	Browse Profile Classes
N0003	Restore
N0004	Manage Failed Instructions
N0005	Generate Supplier Purchase Matrices
N0006	Define Suppliers
N0006E	Browse Suppliers
N0009	Archive Settlement Data
N0010	Check Data Collector Data
N0011	Define Average Fractions of Yearly Consumption
N0011E	Browse Average Fractions of Yearly Consumption
N0012	Define Data Collectors
N0012E	Browse Data Collectors
N0013	Define Distributors and PRS Agents
N0013E	Browse Distributors and PRS Agents
N0014	Define GSP Groups
N0014E	Browse GSP Groups
N0015	Define ISR Agents
N0015E	Browse ISR Agents
N0016	Define Line Loss Factor Classes
N0016E	Browse Line Loss Factor Classes
N0019	Define Standard Settlement Configurations
N0019E	Browse Standard Settlement Configurations
N0020	Define Threshold Parameter
N0020E	Browse Threshold Parameter

N0022   Schedule Aggregation Run

N0023   Specify Data Accessible To Ad Hoc Reports

N0027   Browse Exception Data

N0028   Report on Exception Data

N0029   Maintain System Configuration Data

N0030   System Initialisation

N0034   Manage Refresh Instructions

N0035   Manage Instruction Files

N0037   Manage Refresh Instruction Failures

N1001   Browse MS Energisation Statuses (PRS and DC)

N1002   Browse MS Settlement Configurations (PRS and DC)

N1003   Browse MS Profile Classes (PRS and DC)

N1004   Browse MS Regns (PRS and DC) & DC & DA Appts

N1005   Browse MS GSP Groups (PRS and DC)

N1006   Browse MS Measurement Classes (PRS and DC)

N1007   Produce Ad Hoc Reports

N1008   Produce Ad Hoc Audit Reports

N1009   Browse Data Aggregation Run Schedule

N1011   Browse File Loading Statuses

N1014   Report on GSP Groups

N1015   Report on Profile Classes

N1016   Report on Standard Settlement Configurations

N1018   Report on Average Fractions of Yearly Consumption

N1021   Browse Metering System & Associated Items

N1023   Report on Line Loss Factor Classes

N1025   Report on Metering Systems & Associated Items

N1026   Report on MS Energisation Statuses (PRS and DC)

N1027   Report on MS Profile Classes (PRS and DC)

N1028   Report on MS Regns (PRS and DC) & DC & DA Appts

N1029   Report on MS GSP Groups (PRS and DC)

N1030   Report on MS Measurement Classes (PRS and DC)

N1031   Report on MS Settlement Configurations (PRS and DC)

N1032   Browse Instructions

N1033   Report on Instructions

N1036	Browse MS Line Loss Factor Classes
N1037	Report on MS Line Loss Factor Classes
N1038	Browse Metering System EACs and AAs
N1039	Report on Metering System EACs and AAs
N1040	Browse File Extraction & Transmission Statuses
N1042	Report Data Aggregation Run Schedule
N1045	Report GSP Group Distributors
N1046	Report ISR Agent Appointments
N1047	Report PRS Agent Appointments
N1048	Report Refresh Instruction Failures
N1049	Browse Activity Schedule
N1050	Browse Activity Queue Statuses
N1051	Browse Operator and Error Logs
N1052	Report NHHDC Performance
N1053	Browse Aggregation Files
N1054	Monthly Report on D0095 reports

4.5.5   Requirements Catalogue Ref.

N15, N16, N22, N23, N25

4.5.6   I/O Structures

None

4.6   NC007 Update File Log

4.6.1   Processing Description

This process is called for any file sent from or received by NHHDA.

Creates a record in the File entity (and the Instruction File and Data File sub-entities).

4.6.2   Error Handling

None

4.6.3   Other Common Processing

None

4.6.4   Functions

N0004   Manage Failed Instructions

N0005   Generate Supplier Purchase Matrices

N0010   Check Data Collector Data

N0024   Load Pool Settlement Timetable

N0026   Automatically Send Supplier Purchase Matrix

N0031   Instruction File Arrival

N0035   Manage Instruction Files

N0036   Load Pool Market Domain Data

N1052   Report on NHHDC Performance

N1054   Monthly Report on D0095 Reports

4.6.5   Requirements Catalogue Ref.

N1, N2

4.6.6   I/O Structures

None

4.7　　　　NC008 Create Report Header

4.7.1　　Processing Description

Receive the three letter abbreviation of the report to be produced, the format (machine readable or human readable), and the User Id of the user requesting it. Create a report header in the required format giving the full title of the report, the name of the user and the date and time of production.

4.7.2　　Error Handling

None

4.7.3　　Other Common Processing

None

4.7.4　　Functions

N0028　　Report Exception Data

N1007　　Produce Ad Hoc Reports

N1008　　Produce Ad Hoc Audit Reports

N1014　　Report GSP Groups.

N1015　　Report Profile Classes

N1016　　Report Standard Settlement Configuration

N1018　　Report Average Fractions of Yearly Consumption.

N1023　　Report Line Loss Factor Classes.

N1025　　Report on Metering Systems & Associated Items

N1026　　Report MS Energisation Statuses (PRS and DC).

N1027　　Report MS Profile Classes (PRS and DC).

N1028　　Report MS Regns (PRS and DC) & DC & DA Appts.

N1029　　Report MS GSP Groups (PRS and DC)

N1030　　Report MS Measurement Classes (PRS and DC).

N1031　　Report MS Settlement Configurations (PRS and DC).

N1033　　Report Instructions

N1037　　Report MS Line Loss Factor Classes

N1039　　Report on Metering System EACs and Aas

N1040　　Browse File Extraction & Transmission Statuses

N1042　　Report Data Aggregation Run Schedule

N1045　　Report GSP Group Distributors.

N1046　　Report ISR Agent Appointments.

N1047　　Report PRS agent appointments.

N1048　　Report Refresh Instruction Failures

N1052　　Report NHHDC Performance

N1053   Browse Aggregation files

N1054   Monthly Report on D0095 reports

4.7.5   Requirements Catalogue Ref.

N18

4.7.6   I/O Structures

None

4.8   NC009 Restrict Off-Line Access

4.8.1   Processing Description

Ensure that an external party attempting to load file(s) is allowed to load file(s) of these type(s).

Alert system manager to any attempted violation and do not permit the files to be loaded.

4.8.2   Error Handling

None.

4.8.3   Other Common Processing

None.

4.8.4   Functions

N0024   Load Pool Settlement Timetable

N0031   Instruction File Arrival

N0036   Load Pool Market Domain Data

4.8.5   Requirements Catalogue Ref.

N6, N23, N25

4.8.6   I/O Structures

None

4.9   **NC010 Process Received Instruction File**

4.9.1   **Processing Description**

The following checks are performed until one fails:

If the file is not from a <u>known</u> PRS Agent or Data Collector, set File Status = "Rejected". Notify the Data Aggregator. Do not process this file.

If the source is a PRS Agent and the last Instruction from that PRS Agent is a "PRS Refresh" with a status of "Unprocessed" or "Validation Errors", notify the data aggregator that processing is prevented due to outstanding refresh instruction. Do not process this file.

If one or more Instruction Files exist with the same source and the same Instruction File Sequence Number as the current file, and with a File Status of "Skip", set File Status = "Skip". Notify the Data Aggregator that a received file has been skipped. Do not process this file.

If one or more Instruction Files exist with the same source and an Instruction File Sequence Number greater or equal to that of the current file, and with a File Status other than "Corrupt", set File Status = "Rejected". Notify the Data Aggregator that a received file is in error due to its sequence number. Do not process this file.

If an Instruction File does not exist with the same source and an Instruction File Sequence Number one less than that of the current file, and with a File Status of "Received" or "Skip", leave File Status as "Received". Notify the Data Aggregator that a received file is not being processed as an earlier file has not been processed/received. Do not process this file.

Validate that:

- the first Instruction Sequence Number is one greater than that of the previous Instruction received from the originator;

- Instruction Sequence Numbers in the file are contiguous;

- the count and checksum in the file footer section are correct;

- if the originator is a PRS Agent, the Instruction Type is one of the following:

  - Metering System's NHH Data Aggregator Appointment Details;

  - Metering System's Data Collector Appointment Details;

  - Metering System's Profile Class and/or Standard Settlement Configuration Details;

  - Metering System's Measurement Class Details;

  - Metering System's Energisation Status Details;

  - Metering System's GSP Group Details;

  - Metering System's Line Loss Factor Class Details;

  - PRS Refresh.

- if the originator is a Data Collector, the Instruction Type is:

- EAC/AA and Metering System Details.

- If the instruction is a PRS refresh:

  - check that the Distributor matches the PRS Agent ID in the file header

  - check there is only one instruction in the file

- check that MSH records are only provided for Refresh Instructions.

- check that the Distributor short code 22 for each of the Metering Systems specified (ZIN or MSH records) exists in the database.

If all checks pass,

- Instructions other than PRS Refresh

  - if no record exists for the Metering System, create one;

  - load all instructions setting the Status to "Unprocessed";

  - set File Status = "Received";

  - look for another file from the same source with an Instruction File Sequence Number one greater than that of the file being processed. If such a file is found, repeat the above processing for that file.

- PRS refresh Instruction

  - load the instruction setting the Status to "Unprocessed"

  - set File Status = "Received";

  - Notify the Data Aggregator that a refresh is pending.

If any check fails,

  - set File Status = "Rejected";

4.9.2   Error Handling

The following conditions give rise to an error report to the Data Aggregator and the file not being processed:

- file source is not known to the Data Aggregator;

- file received with the same file sequence number as a file previously sent by the same source;

- file received with a file sequence number greater than the next due to be processed from the file's source (warning only);

- file received which has been flagged to be skipped (warning only);

- file does not contain a contiguous set of Instructions, starting with the next Instruction Sequence Number expected from the source;

- file footer details do not match the file contents;

---

22 The Distributor Short Code is identified from the first two digits of the Metering System ID.

- file from PRS Agent contains Instruction Types which are not valid from a PRS Agent;

- file from Data Collector contains Instruction Types which are not valid from a Data Collector;

- file contains more than one Instruction when there is a PRS Refresh;

- file is from a PRS Agent and there is a previous refresh instruction which has not yet been applied (warning only).

Note that the Instruction Sequence Number will never wrap round.

4.9.3 Other Common Processing

NC009   Restrict Off-line Access

4.9.4 Functions

N0031   Instruction File Arrival

N0035   Manage Instruction Files

4.9.5 Requirements Catalogue Ref.

F5, F11, F14, F17, F25

4.9.6 I/O Structures

None

Appendix A   Format of a Function Definition

A Function Definition comprises the components described below.

Function Id and Function Name

The paragraph heading for each function shows a unique identifier for the function and a descriptive name.

Function Type

A combination of the three following types of function:

- user-initiated/system-initiated;

- update/enquiry;

- on-line/batch.

Function Description

A description of the function, particularly the user interface aspects, including the circumstances in which it is invoked. For complex on-line functions with multiple windows, a windows navigation description will be included to show navigation between windows within a function.

Processing Description

A description of the processing required for the function, including any algorithms.

Error Handling

A description of error handling not already described within the Logical Data Model and Data Catalogue. It may cross-refer to error-handling described within the Processing Description.

Common Processing

A list of common processes used by the function.

Volumes

Estimated frequency of use of the function.

Events

A list of events which trigger the function.

Event Frequency

The frequency of an event for each occurrence of the function.

Enquiries

A list of enquiries implemented by the function.

Enquiry Frequency

For functions containing an enquiry this will describe the frequency of the enquiry or enquiries.

Requirements Catalogue Ref.

The identifier of the Requirements Catalogue entry (or entries) which the function satisfies, either in full or in part.

User Roles

For user-initiated functions, a list of User Roles who will access the function.

I/O Structures

The I/O Structure diagrams which show the data items input to and output from a function. The data items are structured into Jackson-like diagrams showing a sequence, selection and iteration of grouping of data items. For on-line functions which will be implemented using the Graphical User Interface (GUI), the sequences may not be strictly enforced unless there is a valid reason for doing so, as the GUI style generally allows the user more freedom in the sequence of user interface interactions.

Top level iterations have been omitted from the I/O Structures. However, a single invocation of a function may be able to process many files or data records.

In on-line functions where items can be selected, eg: standing data for update, deletion or viewing or files for loading, the use of a "pick list" on a screen is assumed from which the user can select the item in question. These, however, are not shown in the function's associated I/O Structures.

For functions which contain I/O Structures for files where the sequence of data is already determined, the I/O Structures are annotated with a note that the order of data items shown is to be preserved in the file.

For files, the I/O structure does not show the file header - the common processes NC004 Check File Header and NC005 Create File Header detail the Header Structure for received and sent files.