# Balancing and Settlement Code

# Half Hourly Instruction Processing Specification

## Version 2.0

## Effective Date: 8 August 2008

# Contents

# 1. Introduction

This specification provides a detailed explanation of HHDA instruction processing[1].

The premises associated with the specification are:

- Metering System identifiers are associated with a Distribution Business such that it appears to the system that Metering Systems can never change Distribution Businesses;
- the appointment of PRS Agents is to a Distribution Business and not to a GSP Group;
- the subject of a refresh of data from a PRS Agent is a Distribution Business;
- instruction file sequence numbers are unique and sequential between source and target;
- instruction sequence numbers are unique and sequential between source and target.

[1] Please refer to the D0209 "Instruction(s) to Non Half Hourly or Half Hourly Data Aggregator" data flow.

# 2. Specification

This section:

- explains the terms “relevant relationship”, “relevant relationship change” and “significant date”;
- describes the use, input/output structure, content and update processing of each instruction type;
- describes instructions life cycle processing.

## 2.1 Relevant Relationship, Relevant Relationship Change and Significant Date

Instructions are required to maintain the set of relationships that are relevant to each HH Data Aggregator. It is therefore necessary to:

- define what relationships are relevant to a HH Data Aggregator;
- define what changes to these relationships constitute a change that the HH Data Aggregator must be informed about;
- provide a method for ensuring the instruction production logic is consistent with the instruction processing logic.

The term “relevant relationship” addresses the first of these bullets; “relevant relationship change” the second; and “significant date” the third.

### 2.1.1 Relevant Relationship

Relevant PRS relationships for a Metering System are defined as:

- the HH Data Aggregator’s *Data Aggregator Appointments* for the Metering System*;*
- the *Registrations* that any of these *Data Aggregator Appointments* are for;
- the *Data Collector* Appointments that are for any of these *Registrations*;
- the Measurement *Class in Registrations* and *Energisation Status in Registrations* that are for any of these *Registrations* and overlap with any of the HH Data Aggregator’s *Data Aggregator Appointments* for the Metering System;
- the *Metering* System *Line Loss Factor Classes* and *Metering System GSP Groups* that overlap with any of the HH Data Aggregator’s *Data Aggregator Appointments* for the Metering System;

Relevant HH Data Collector relationships for a Metering System are defined as:

- the *Half Hourly Period* Metered Consumptions for the Metering System that overlap with any of the HH Data Aggregator’s *Data Aggregator’s Appointments* for the Metering System;

### 2.1.2 Relevant Relationship Change

A relevant relationship change for a HH Data Aggregator is defined as change to a relationship where the relationship:

- is relevant to the HH Data Aggregator post the change taking place; and/or
- was relevant to the HH Data Aggregator prior to the change taking place.

For the avoidance of doubt, the only relationship type that has end dates explicitly maintained by instructions is *Data Aggregator Appointments.* This means, if the source holds end date information about other relationships types and there is an end date change to a relevant relationship of this type, this change on its own does not constitute a relevant relationship change.

### 2.1.3 Significant Date

The significant date for a HH Data Aggregator only has meaning in the context of a relevant relationship change. It is defined as the earliest date for which data in the relationship is not the same prior to the change as it is post the change.

This means that:

- for relationship types without explicit end dates, it is the start date prior to the change or the start date post the change, whichever is the earlier;
- for relationship types with explicit end dates:
  - it is the end date prior to the change or the end date post the change, whichever the earlier - if it is only the end date that has changed;
  - it is the start date prior to the change or the start date post the change, whichever the earlier - if data other than the end date has changed.

The rule for determining the Significant Date for a relationship change can be formalised as follows:

Before: $Start_1$ - $Attributes_1$ - $End_1$

|----------|

After: $Start_2$ - $Attributes_2$ - $End_2$

|----------|

Rule: If $Start_1 = Start_2$ , and $Attributes_1 = Attributes_2$ , then Significant Date = earliest of $\{End_1 , End_2\}$

otherwise, Significant Date = earliest of $\{Start_1 , Start_2\}$.

Examples of this are given below.

Example 1

Prior to the change: |----------

Post the change: |----------

Significant date is the start date prior to the change.

Example 2

Prior to the change: |----------

Post the change: |----------

Significant date is the start date post the change.

Example 3

Prior to the change: |----------

Post the change: |----------|

Significant date is the end date post the change.

Example 4

Prior to the change: |----------|

Post the change: |----------|

Significant date is the end date prior to the change.

Example 5

Prior to the change: |----------||----------

Post the change: |----------

Significant date is the end date of the first relationship prior to the change.

Example 6

Prior to the change: |----------

Post the change:

Significant date is the start date prior to the change.

Example 7

Prior to the change:

Post the change: |----------

Significant date is the start date post the change.

Example 8

Prior to the change: |-----GSP Group 1------

Post the change: |-----GSP Group 2------

Significant date is the start date prior to/post the change.

The significant date for a series of related relationship changes is defined as the earliest significant date of the individual relevant relationship changes.

## 2.2 PRS Instructions

Note that the validation contained in this section is only that necessary to ensure the integrity of instruction processing. Other validation is not affected by these requirements.

### 2.2.1 "Data Aggregator Appointment Details" Instruction Type

a. Use

By a PRS Agent to maintain a HH Data Aggregator's relevant PRS relationships for a Metering System. This includes removal of relationships that the HH Data Aggregator no longer requires.

b. Structure

(See Appendix A.)

c. Content

The Metering System's relevant PRS relationships which span or begin on or after the significant date and the Metering System's relevant Data Collector Appointments which either:

- begin on or after the significant date; or
- begin prior to the significant date and there is no Data Collector Appointment for the same registration with a start date that is both after the start date of the Data Aggregator Appointment being considered and on or prior to the significant date.

d. HH Data Aggregator Update Processing

For the following processing to be valid it is essential that:

- the PRS Agent who sent the instruction is currently appointed to the Distribution Business associated with the Metering System;
- applying the instruction will not result in any of the Metering System's registrations being without a Data Collector Appointment, Measurement Class or Energisation Status at any time during any of its Data Aggregator Appointments;
- applying the instruction will not result in the Metering System being without a GSP Group or Line Loss Factor Class at any time during any of its Data Aggregator Appointments;
- there is not an existing Data Aggregator Appointment which:
    - is not contained in the instruction; and

- begins prior to the significant date and either doesn't end or ends on or after the significant date.

- the content of the instruction is consistent with the collation logic.

If this is not the case, fail the instruction and do not continue with the remaining processing.

| |
|---|
| In order to cater for PRS developments which, because of timescale pressures, cannot support creation of a Data Aggregator Appointment Details instruction as specified when a previously open ended Data Aggregator Appointment has its Effective To Settlement Date set, the following dedicated processing is included. It should be noted that this processing is not considered as part of the instruction processing specification. |
| If: |
| • the instruction contains one and only one Data Aggregator Appointment; and |
| • this Data Aggregator Appointment has an Effective To Settlement Date in the instruction which is equal to the significant date; and |
| • this Data Aggregator Appointment already exists and has an open ended Effective To Settlement Date; then |
| set the Effective To Settlement Date of the Data Aggregator Appointment to the significant date, and do not perform the usual update processing. Delete any relationships of the following type for the Metering System which start after the significant date:<br>• Measurement Class;<br>• Energisation Status;<br>• Line Loss Factor Class;<br>• GSP Group. |

If there is one or more relationships in the instruction and the Metering System doesn't exist, create it.

Delete all the Metering System's Data Aggregation Appointment relationships which span or begin on or after the significant date.

Delete all the Metering System's relationships of the following types which span or begin on or after the significant date and do not overlap with an existing Data Aggregator Appointment prior to the significant date:

- Measurement Class;

- Energisation Status;

- Registration and their Data Collector Appointments;

- Line Loss Factor Class;

- GSP Group.

Insert all the relationships of the following types in the instruction where they do not already exist:

- Registration;
- Data Aggregator Appointment;
- Data Collector Appointment;
- Measurement Class;
- Energisation Status;
- Line Loss Factor Class;
- GSP Group.

If, once all the relationship types associated with the instruction have been processed in this way, the Metering System is left without any details, delete it.

(Note that the significance of an instruction not containing any relationships of a particular relationship type associated with the instruction type is that the Metering System does not have any relationships of this type which are relevant to the HH Data Aggregator on or after the significant date. The above logic supports this by removing superfluous relationships and, if necessary, also removing the Metering System.)

### 2.2.2 "Data Collector Appointment Details" Instruction Type

a. Use

By a PRS Agent to maintain a HH Data Aggregator's relevant PRS relationships for a Metering System's Data Collector Appointments. This includes removal of relationships that the HH Data Aggregator no longer requires.

b. Structure

(See Appendix A.)

c. Content

The Metering System's relevant Data Collector Appointments which either:

- begin on or after the significant date; or
- begin prior to the significant date and there is no Data Collector Appointment for the same registration with a start date that is both after the start date of the Data Aggregator Appointment being considered and on or prior to the significant date.

d. HH Data Aggregator Update Processing

For the following processing to be valid it is essential that:

- the PRS Agent who sent the instruction is currently appointed to the Distribution Business associated with the Metering System;
- the registration for each Data Collector Appointment relationship in the instruction already exists;
- applying the instruction will not result in any of the Metering System's registrations being without a Data Collector Appointment at any time;

- the content of the instruction is consistent with the collation logic.

If this is not the case, fail the instruction and do not continue with the remaining processing.

To apply the instruction:

Delete all the Metering System's Data Collector Appointment relationships which begin on or after the significant date.

Insert all the Data Collector Appointments in the instruction where they do not already exist.

### 2.2.3 "Measurement Class in Registration Details" Instruction Type

a. Use

By a PRS Agent to maintain a HH Data Aggregator's relevant PRS relationships for a Metering System's Measurement Classes. This includes removal of relationships that the HH Data Aggregator no longer requires.

b. Structure

(See Appendix A.)

c. Content

The Metering System's relevant Measurement Class relationships which span or begin on or after the significant date.

d. HH Data Aggregator Update Processing

For the following processing to be valid it is essential that:

- the PRS Agent who sent the instruction is currently appointed to the Distribution Business associated with the Metering System;
- the registration for each Measurement Class relationship in the instruction already exists;
- applying the instruction will not result in any of the Metering System's registrations being without a Measurement Class at any time during a Data Aggregator Appointment;
- the content of the instruction is consistent with the collation logic stated above in c.

If this is not the case, fail the instruction and do not continue with the remaining processing.

To apply the instruction:

Delete all the Metering System's Measurement Class relationships which span or begin on or after the significant date and do not overlap with an existing Data Aggregator Appointment prior to the significant date.

Insert all the Measurement Classes in the instruction where they do not already exist.

### 2.2.4 "Energisation Status in Registration Details" Instruction Type

a. Use

By a PRS Agent to maintain a HH Data Aggregator's relevant PRS relationships for a Metering System's Energisation Statuses. This includes removal of relationships that the HH Data Aggregator no longer requires.

b. Structure

(See Appendix A.)

c. Content

The Metering System's relevant Energisation Status relationships which span or begin on or after the significant date.

d. HH Data Aggregator Update Processing

For the following processing to be valid it is essential that:

- the PRS Agent who sent the instruction is currently appointed to the Distribution Business associated with the Metering System;
- the registration for each Energisation Status relationship in the instruction already exists;
- applying the instruction will not result in any of the Metering System's registrations being without an Energisation Status at any time during a Data Aggregator Appointment;
- the content of the instruction is consistent with the collation logic.

If this is not the case, fail the instruction and do not continue with the remaining processing.

To apply the instruction:

Delete all the Metering System's Energisation Status relationships which span or begin on or after the significant date and do not overlap with an existing Data Aggregator Appointment prior to the significant date.

Insert all the Energisation Status relationships in the instruction where they do not already exist.

### 2.2.5 "GSP Group Details" Instruction Type

a. Use

By a PRS Agent to maintain a HH Data Aggregator's relevant PRS relationships for a Metering System's GSP Groups. This includes removal of relationships that the HH Data Aggregator no longer requires.

b. Structure

(See Appendix A.)

c. Content

The Metering System's relevant GSP Group relationships which span or begin on or after the significant date.

d. HH Data Aggregator Update Processing

For the following processing to be valid it is essential that:

- the PRS Agent who sent the instruction is currently appointed to the Distribution Business associated with the Metering System;
- applying the instruction will not result in the Metering System being without a GSP Group at any time during any of its Data Aggregator Appointments;
- the content of the instruction is consistent with the collation logic.

If this is not the case, fail the instruction and do not continue with the remaining processing.

To apply the instruction:

Delete all the Metering System's GSP Group relationships which span or begin on or after the significant date and do not overlap with an existing Data Aggregator Appointment prior to the significant date.

Insert all the GSP Group relationships in the instruction where they do not already exist.

### 2.2.6 "Line Loss Factor Class Details" Instruction Type

a. Use

By a PRS Agent to maintain a HH Data Aggregator's relevant PRS relationships for a Metering System's Line Loss Factor Classes. This includes removal of relationships that the HH Data Aggregator no longer requires.

b. Structure

(See Appendix A.)

c. Content

The Metering System's relevant Line Loss Factor Class relationships which span or begin on or after the significant date.

d. HH Data Aggregator Update Processing

For the following processing to be valid it is essential that:

- the PRS Agent who sent the instruction is currently appointed to the Distribution Business associated with the Metering System;
- applying the instruction will not result in the Metering System being without a Line Loss Factor Class at any time during any of its Data Aggregator Appointments;
- the content of the instruction is consistent with the collation logic.

If this is not the case, fail the instruction and do not continue with the remaining processing.

To apply the instruction:

Delete all the Metering System's Line Loss Factor Class relationships which span or begin on or after the significant date and do not overlap with an existing Data Aggregator Appointment prior to the significant date.

Insert all the Line Loss Factor Class relationships in the instruction where they do not already exist.

### 2.2.7 PRS Refresh

a. Use

By a PRS Agent to maintain a HH Data Aggregator's relevant PRS relationships in respect of all Metering Systems associated with a Distribution Business.

b. Structure

(See Appendix A.)

c. Content

All relevant PRS relationships which span or begin on or after the significant date for all Metering Systems associated with a Distribution Business.

d. HH Data Aggregator Update Processing

For the following processing to be valid it is essential that:

- the PRS Agent who sent the instruction is currently appointed to the Distribution Business associated with the Metering System;
- applying the instruction will not result in any of the Metering System's registrations being without a Data Collector Appointment, Measurement Class or Energisation Status at any time during any of its Data Aggregator Appointments;
- applying the instruction will not result in the Metering System being without a GSP Group or Line Loss Factor Class at any time during any of its Data Aggregator Appointments;
- the content of the instruction is consistent with the collation logic.

If this is not the case, fail the instruction and do not continue with the remaining processing.

If there is one or more relationships in the instruction and the Metering System doesn't exist, create it.

If there is an existing Data Aggregator Appointment which begins prior to the significant date and either doesn't end or ends on or after the significant date and this Data Aggregator Appointment is not included in the instruction, set its Effective To Settlement Date to one day before the significant date and log an exception.

Delete all the Metering System's Data Aggregation Appointment relationships which span or begin on or after the significant date.

Delete all the Metering System's relationships of the following types which span or begin on or after the significant date and do not overlap with an existing Data Aggregator Appointment prior to the significant date:

- Measurement Class;
- Energisation Status;
- Registration and their Data Collector Appointments;
- Line Loss Factor Class;
- GSP Group.

Delete all the Metering System's Data Collector Appointments which begin on or after the significant date.

Insert all the relationships of the following types in the instruction where they do not already exist:

- Registration;
- Data Aggregator Appointment;
- Data Collector Appointment;
- Measurement Class;
- Energisation Status;
- Line Loss Factor Class;
- GSP Group.

If, once all the relationship types associated with the instruction have been processed in this way, the Metering System is left without any details, delete it.

For each Metering System associated with the Distribution Business in the instruction but not included in the instruction, remove any superfluous relationships for it as follows:

Delete all of the Metering System's Data Aggregator Appointment relationships which span or begin on or after the significant date.

Delete all the Metering System's relationships of the following types which span or begin on or after the significant date and do not overlap with an existing Data Aggregator Appointment prior to the significant date:

- Measurement Class;
- Energisation Status;
- Registration and their Data Collector Appointments;
- Line Loss Factor Class;
- GSP Group.

Delete all the Metering System's Data Collector Appointments which begin on or after the significant date.

If the Metering System is left without any details, delete it.

## 2.3 HH Data Collector Interface

This interface is a data file interface and not an instruction file interface. It is included here only for the purpose of completeness and is not subject to instruction processing.

a. Use

By a HH Data Collector to maintain a HH Data Aggregator's relevant Half Hourly Period Metered Consumptions.

b. Structure

(See Appendix A.)

c. Content

The Metering System's relevant Half Hourly Period Metered Consumptions which the HH Data Aggregator needs to be advised about because of new or revised consumption figures. The smallest unit of content for a Metering System is the set of consumption figures for a complete settlement date.

d. HH Data Aggregator Update Processing

The consumption data in the data file is inserted after being validated in accordance with the relevant validation. It replaces any consumption data for the same Metering Systems/settlement dates as the most up to date consumption.

## 2.4 Instruction Life Cycle Processing

### 2.4.1 Instruction File Processing

Consider four distinct repository areas for instruction files: one for files received and awaiting processing; one for error files; one for valid files; and one for corrupt files.

Instruction files sent to a HH Data Aggregator are placed in the receipt area which is polled at regular intervals. The set of files in this area at polling time are validated and processed as follows.

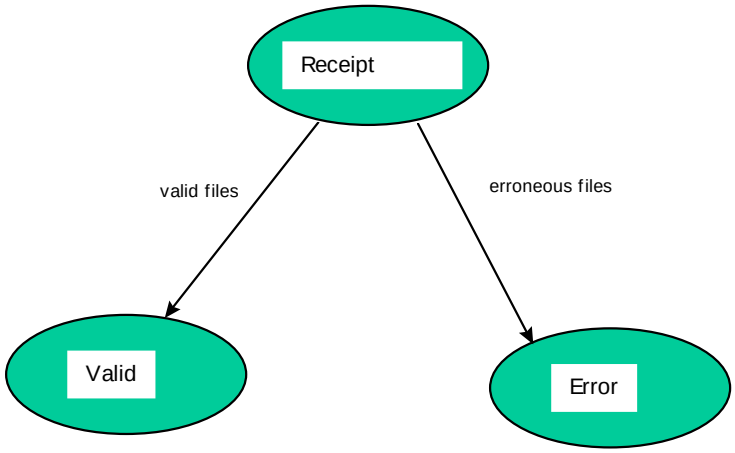
First of all, the integrity of instruction file sequence numbers is validated. Files with an instruction file sequence number equal to that of any other instruction file which is both received from the same source and is not in the corrupt area are moved out of the receipt area to the error area. The processing of files from the sources of these erroneous files is disabled. Files with an instruction file sequence number two or more greater than the next highest instruction file sequence number of instruction files received from the same source are left unprocessed in the receipt area and the HH Data Aggregator is warned that this has happened.

Files whose instruction file sequence number integrity has been established in this way are processed in strict instruction file sequence number order for each source. Each file is validated in accordance with its definition. This includes checking that the file contains contiguous instruction sequence numbers with the lowest sequence number being one more than the highest sequence number of instructions from the same source currently assuming

any one of the valid instruction states. Files that fail any of this validation are moved out of the receipt area into the error area. The processing of files from the sources of these erroneous files is disabled.

Instructions files which pass all their validation are moved out of the receipt area into a valid area. All instructions in them enter instruction processing and are placed in an unprocessed state.

The automated movement of files between repository areas is shown below:




### 2.4.2 Instruction File Processing - Problem Resolution

A failure that caused a file to be placed in the error area and the processing of files from its source to be disabled may be because of:

- a problem on the part of the HH Data Aggregator;
- a problem on the part of the source;
- a transmission problem.

The exact cause is determined by the HH Data Aggregator in conjunction with the source (through discussion) and is resolved as described below.

a. Problem on the Part of the HH Data Aggregator

The HH Data Aggregator resolves the problem and moves the file from the error area back to the receipt area for reprocessing (flow 1 - see diagram below).

b. Problem on the Part of the Source

The source:

- resolves the problem;
- generates a revised file containing all instructions required to rectify the situation bearing in mind that the erroneous file and any subsequent files sent are void;
- advises the HH Data Aggregator of the file sequence number of the revised file;

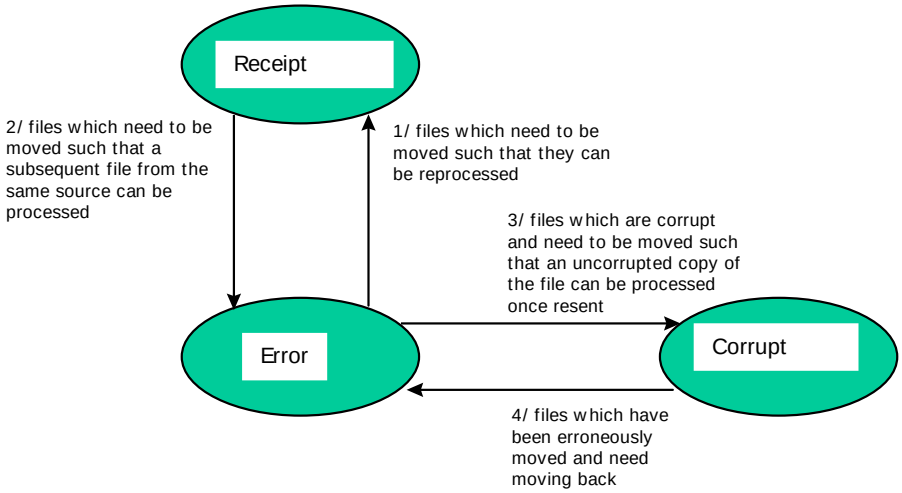
- sends the revised file to the HH Data Aggregator.

In order that this revised file can be processed, the HH Data Aggregator moves any files in the receipt area from the same source and with a file sequence number less than the file sequence number of the revised file into the error area (flow 2 - see diagram below).

c. Transmission Problem

The HH Data Aggregator moves the corrupt file from the error area into a corrupt area (flow 3 - see diagram below) and the source resends an exact copy of the uncorrupted file (with the same file sequence number).

The valid movement of files between repository areas through operator intervention is shown below. These facilities are only available if the processing of files from the source is disabled.




Note that the HH Data Aggregator can also move files in the corrupt area back to the error area (flow 4). This is to rectify any incorrect movement of files to the corrupt area.

For each problem resolved in this way, the HH Data Aggregator enters a textual explanation of what they have done and why. This forms part of a full audit of the HH Data Aggregator's file processing intervention.

Once the problem has been resolved to the satisfaction of the HH Data Aggregator, the processing of files from the source is re-enabled.

### 2.4.3 Instruction Processing

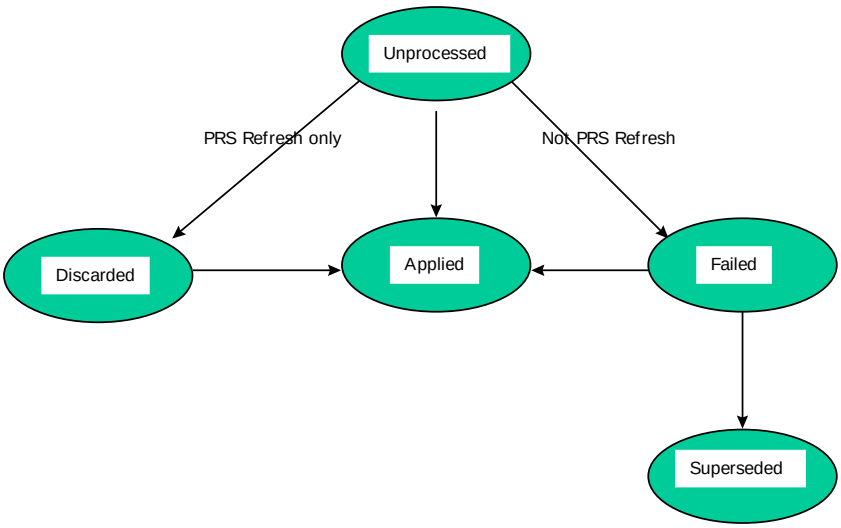
As Half Hourly Data Aggregators do not use a centrally-maintained system, the instruction processing cycle described in this section is not intended to be prescriptive. This section is intended to show a typical example of what instruction processing looks like.

Instructions may have a state of:

- unprocessed;
- applied;
- failed;

- superseded;
- discarded.

The valid state transition diagram is as follows:




Unprocessed instructions are processed (application attempt) in strict instruction number sequence for each instruction source.

Successful application of an instruction marks it as applied and moves into a superseded state the appropriate set of failed instructions as described below.

Application of a PRS Refresh instruction type supersedes failed instructions which satisfy all of the below:

- have a significant date on or after the significant date of the applied instruction;
- are for a Metering System associated with the Distribution Business in the applied instruction;
- are either:
    - from the same PRS Agent as the applied instruction and have an instruction sequence number less than that of the applied instruction; or
    - from a different PRS Agent than the applied instruction and this different PRS Agent does not have a future appointment to the Distribution Business.

Application of a Data Aggregator Appointment Details instruction type supersedes failed instructions which satisfy all of the below:

- have a significant date on or after the significant date of the applied instruction;
- are for the same Metering System;
- are either:

- from the same PRS Agent as the applied instruction and have an instruction sequence number less than that of the applied instruction; or
- from a different PRS Agent than the applied instruction and this different PRS Agent does not have a future appointment to the Metering System's Distribution Business.

Application of any other PRS instruction type (Data Collector Appointment Details, Measurement Class in Registration Details, Energisation Status in Registration Details, GSP Group Details and Line Loss Factor Class Details) supersedes failed instructions which satisfy all of the below:

- have a significant date on or after the significant date of the applied instruction;
- are for the same Metering System;
- are either:
  - from the same PRS Agent as the applied instruction and have an instruction sequence number less than that of the applied instruction; or
  - from a different PRS Agent than the applied instruction and this different PRS Agent does not have a future appointment to the Metering System's Distribution Business.
- are of the same instruction type as the applied instruction.

Unsuccessful application of a PRS Refresh instruction marks it as discarded. Unsuccessful application of any other instruction type marks it as failed.

### 2.4.4 Instruction Processing - Problem Resolution

Unsuccessful processing of instructions may be because of a problem on the part of the HH Data Aggregator or a problem on the part of the source. The procedure for resolving failed instructions is described below.

In order that the HH Data Aggregator can manage failed and discarded instructions an instruction problem management log is utilised. The log holds the latest information about all instructions that are currently in a failed or discarded state. This information includes:

- the Metering System identifier;
- the instruction number;
- instruction type;
- instruction source;
- latest processing attempt date/time;
- the reasons for failure/discard encountered in the latest processing attempt;
- whether the HH Data Aggregator is able resolve each reason for failure/discard;
- whether each reason for failure/discard that the HH Data Aggregator is able to resolve has been resolved;
- whether the HH Data Aggregator wants the instruction to be reprocessed (only allowed when valid);
- whether the HH Data Aggregator wants data in the instruction to be resent by the appropriate PRS Agent (only allowed for failed instructions);
- whether the PRS Agent has been asked to resend data in the instruction since the latest processing attempt and if so when the request was issued to them.

Information in bullets 5-8 are maintained by the HH Data Aggregator. If in maintaining this data they indicate that they want an instruction reprocessed, it could be reprocessed during the next instruction processing run. If they indicate that they want the data in the instruction resent, a request could be issued to the appropriate PRS Agent during collation of the next set instruction failure reports.

a. Reprocessing Instructions

Failed and discarded instructions may be reprocessed unless the application of subsequent instructions invalidates this. The instructions which it is valid to reprocess are:

- failed Data Aggregator Appointment Details instructions from a PRS Agent where:
  - no subsequent instructions for the Metering System and from the same PRS Agent have been applied; and
  - no subsequent PRS Refresh instructions for the Distribution Business associated with the Metering System and from the same PRS Agent have been applied;
- other failed instructions from a PRS Agent where:
  - no subsequent instructions of the same type for the Metering System and from the same PRS Agent have been applied; and

- no subsequent Data Aggregator Appointment Details instructions for the Metering System and from the same PRS Agent have been applied; and
- no subsequent PRS Refresh instructions for the Distribution Business associated with the Metering System and from the same PRS Agent have been applied;

- discarded PRS Refresh instructions from a PRS Agent where:
  - no subsequent PRS Refresh instructions for the Distribution Business and from the same PRS Agent have been applied; and
  - no subsequent instructions for any Metering Systems associated with the Distribution Business and from the same PRS Agent have been applied.

(Note that this reprocessing does support change of a Distribution Business' PRS Agent. If the PRS Agent for a Distribution Business changes between creation of an instruction and processing of the instruction (including reprocessing), the instruction will fail or be discarded because it will not pass the validation that the sending PRS Agent is the appointed PRS Agent.)

b. Resending Data

There will be situations where the HH Data Aggregator wants the data in a failed instruction sent again. It may be that one or more of the reasons for failure is outside of HH Data Aggregator's control or that the HH Data Aggregator has resolved all reasons for failure but it is no longer valid to apply the instruction. The HH Data Aggregator can therefore collate an instruction failure report for each source advising them of the reasons for failure that they are required to resolve and the data they are required to resend.

This is currently achieved using the D0023 "Failed Instructions" data flow. The process is described below.

PRS Agents

For each PRS Agent the following processing is performed:

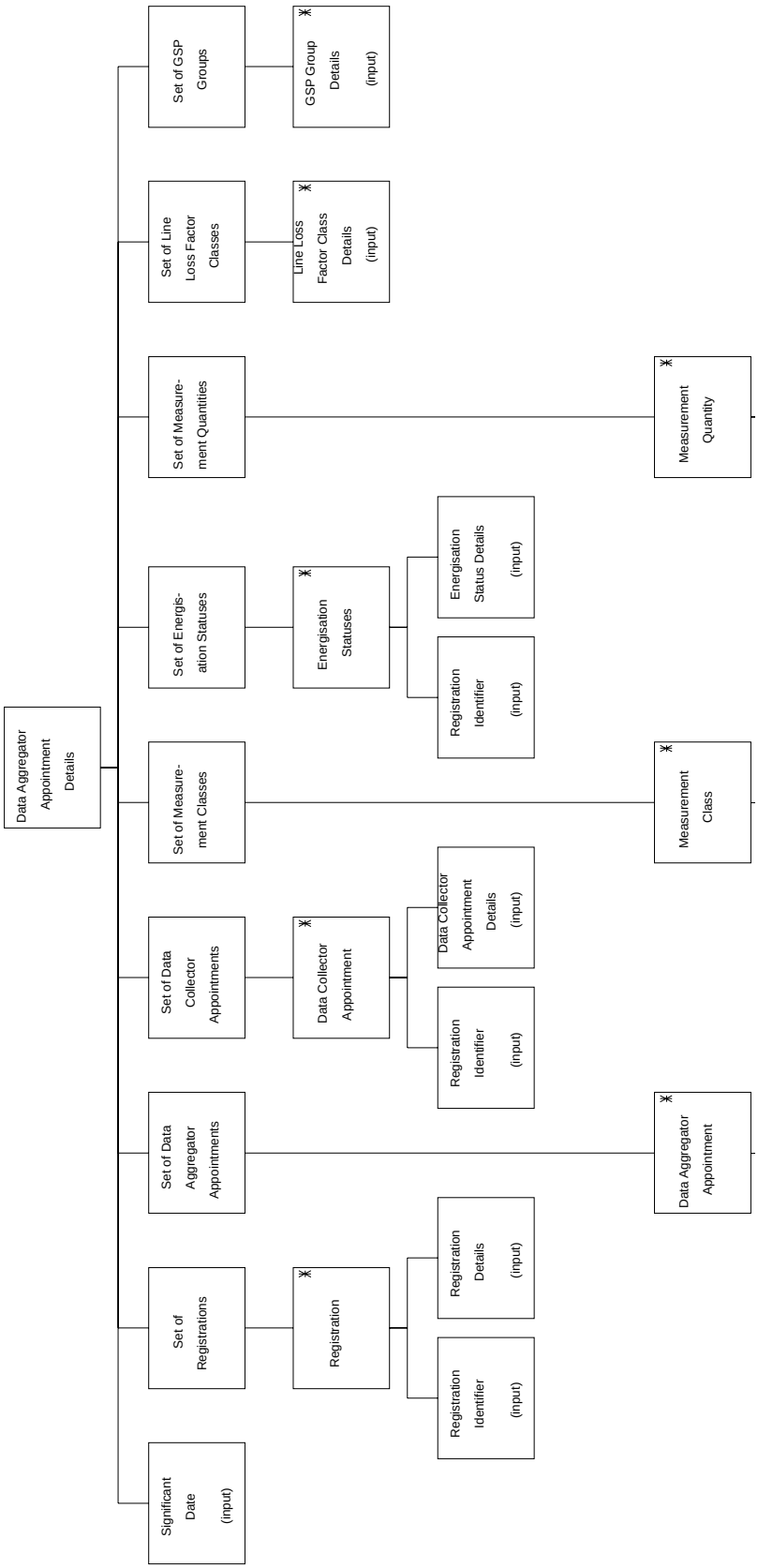
The following information is determined for the set of Metering Systems that are both associated with a Distribution Business that the PRS Agent is currently appointed to and have a failed PRS instruction that the HH Data Aggregator wants data resent for:

- the Metering System identifier;
- the earliest significant date across the set of failed instructions that:
  - are for the Metering System; and
  - are from a PRS Agent; and
  - the HH Data Aggregator wants data resent for;
- the instruction number and its reasons for failure which the HH Data Aggregator cannot resolve for all failed instructions that:
  - are for the Metering System; and
  - are from a PRS Agent; and
  - the HH Data Aggregator has requested a resend of data for.

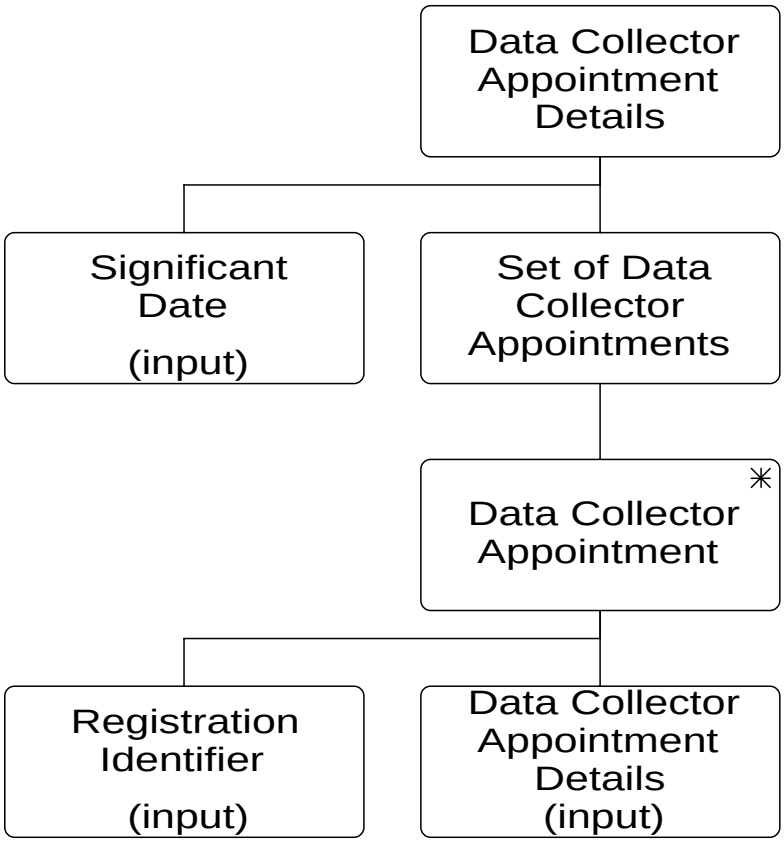
This data is sent to the PRS Agent. They then resolve the reasons for failure, create an instruction of the same type or of Data Aggregator Appointment type for the Metering System with the same or an earlier significant date and send it to the HH Data Aggregator.

# APPENDIX A – INSTRUCTION FORMAT

## Data Aggregator Appointment Details

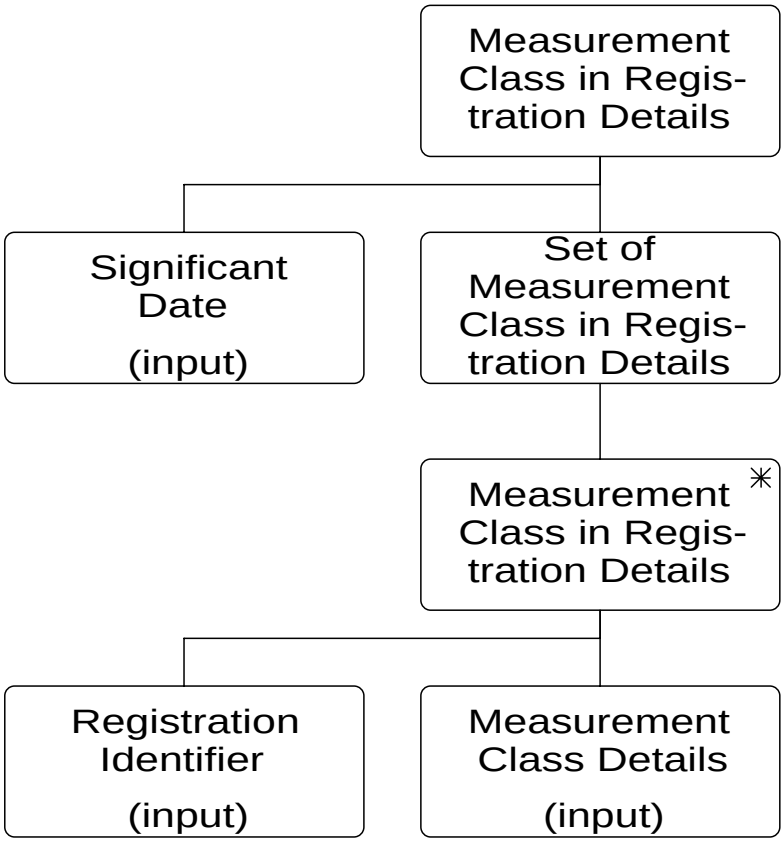


## Data Collector Appointment Details



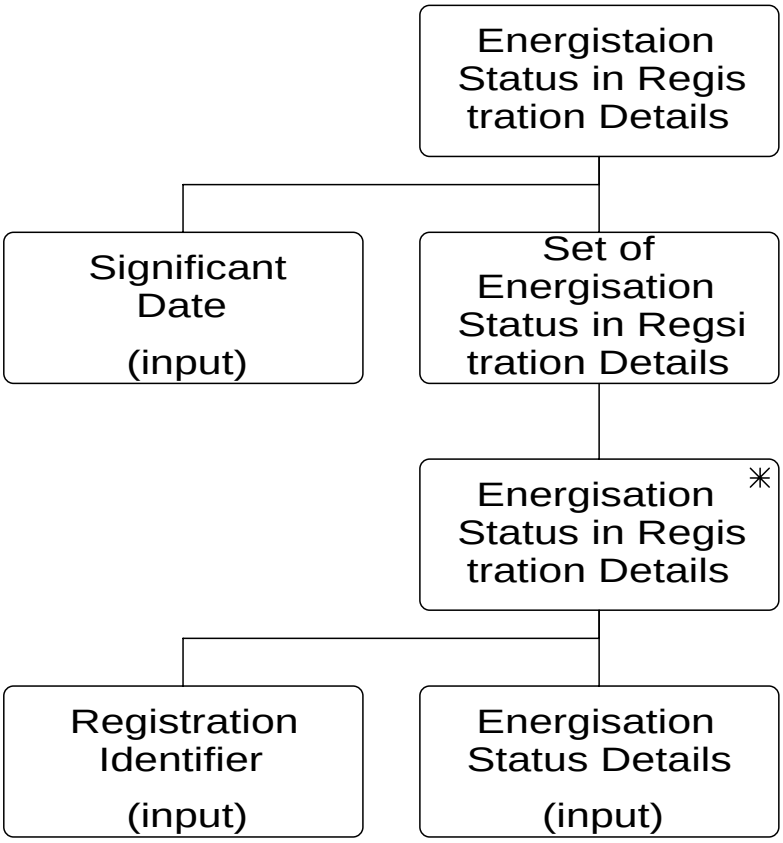

Metering System Id included as the "subject" in the instruction Header

### Measurement Class in Registration Details



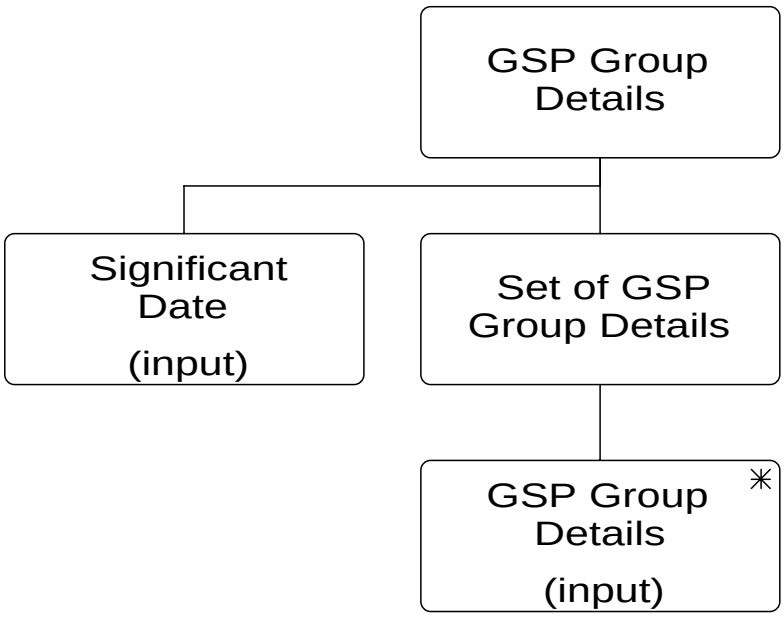

Metering System Id included as the "subject" in the instruction Header

### Energisation Status in Registration Details



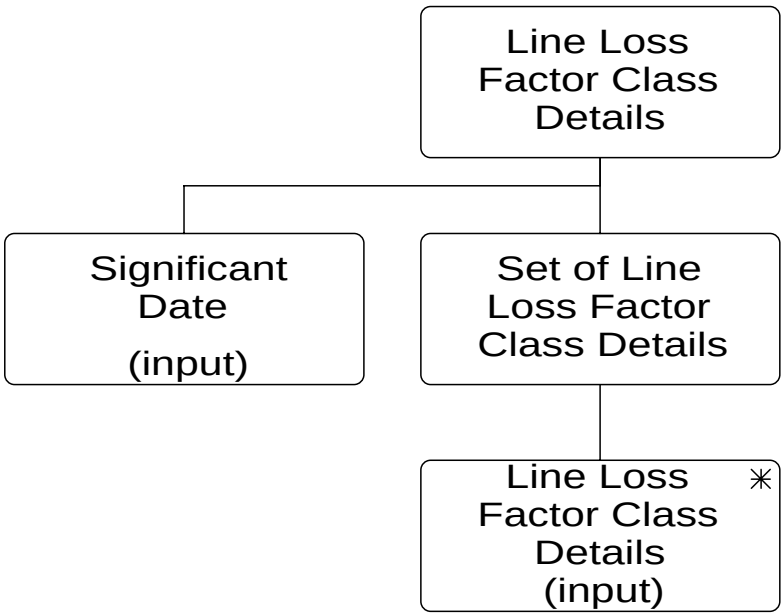

Metering System Id included as the "subject" in the instruction Header

### GSP Group Details




Metering System Id included as the "subject" in the instruction Header

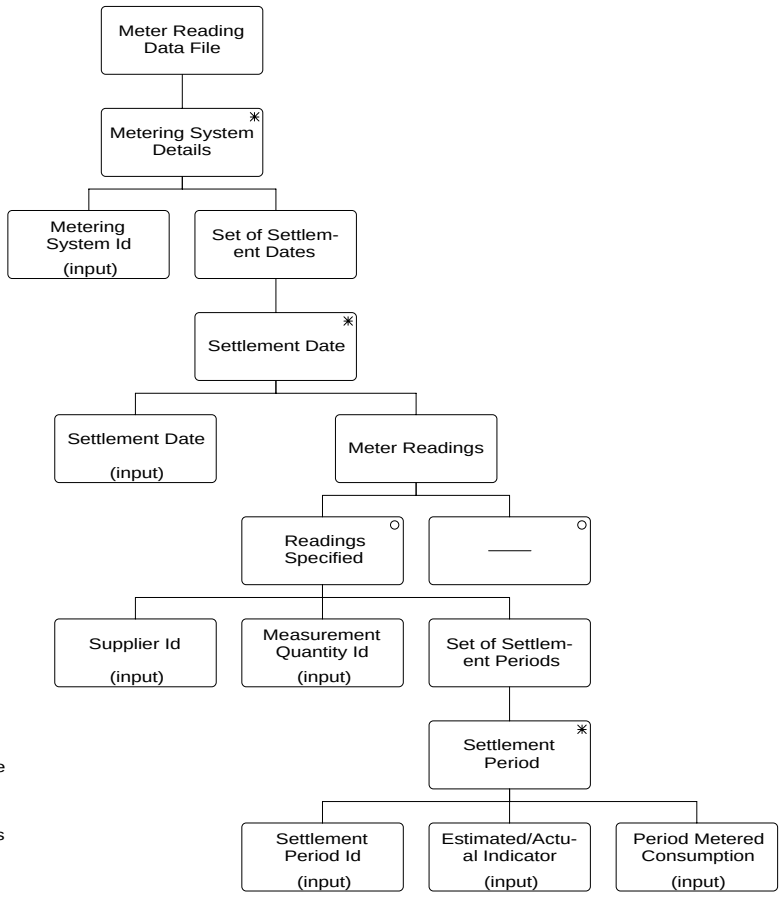
### Line Loss Factor Class Details




Metering System Id included as the "subject" in the instruction Header

## HH Consumption Details

Note this is a data file and not an instruction.




Note: The content of the file header is as defined in the Data Interfaces document (005PAT). This includes the Data Collector Id and Timestamp

## I/O Structure Data Group Data Items

| Data Group | Data Items |
|---|---|
| Data Aggregator Appointment Details | Effective From Settlement Date {DAA}<br>Effective To Settlement Date {DAA} |
| Data Collector Appointment Details | Data Collector Id<br>Effective From Date {DCA} |
| Energisation Status Details | Energisation Status<br>Effective From Settlement Date {ESR} |
| GSP Group Details | GSP Group Id<br>Effective From Settlement Date {MSGG} |
| Line Loss Factor Class Details | Distributor Id<br>Line Loss Factor Class Id<br>Effective From Settlement Date {MSLLFC} |
| Measurement Class Details | Measurement Class Id<br>Effective From Settlement Date {MCR} |
| Registration Details | Supplier Id |
| Registration Identifier | Effective From Settlement Date {REGI} |

# APPENDIX B - EXAMPLES

To show how the instructions are created according to this specification, several examples have been prepared covering the normal day to day business events expected.

In the examples, several assumptions and simplifications have been made:

- all the details shown are included in the same instruction. This is important in the case of the Data Aggregator Appointments where there are two sources for the PRS information which may provide the data in different timescales.
  Note that the Data Aggregator will fail any instructions without all the required relevant relationships;

- objection processing is not considered;

- the values used are in no way representative or valid examples of the data expected for each data item;

- dates have been abbreviated to two digits for the year;

- instruction sequence numbers are not shown in the instructions contents.

# 1. New Metering System

A new Metering System with an Id of MS200 is registered in PRS and is registered to Supplier S1 from 3 October 1998.

The section below details the instruction that PRS would generate.

### PRS Details for Metering System before change:

None.

### PRS Details for Metering System after change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| Data Aggregator Appointment | 3 Oct 98 | DA 1 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| GSP Group | 3 Oct 98 | G7 |

### Content of instruction sent to Data Aggregator DA1:

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 3 Oct 98 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Registration | 3 Oct 98 | N/A | S1 |
| Data Aggregator Appointment | 3 Oct 98 | 3 Oct 98 | N/A |
| Data Collector Appointment | 3 Oct 98 | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | N/A | DB1, LLF 2 |
| GSP Group | 3 Oct 98 | N/A | G7 |

## 2. Change of Line Loss Factor Class

A Metering System with an Id of MS200 changes Line Loss Factor Class on 1 Jan 1999.

The section below details the instruction that PRS would generate.

### PRS Details for Metering System before change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| Data Aggregator Appointment | 3 Oct 98 | DA 1 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| GSP Group | 3 Oct 98 | G7 |

### PRS Details for Metering System after change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| Data Aggregator Appointment | 3 Oct 98 | DA 1 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| | 1 Jan 99 | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | G7 |

### Content of instruction sent to Data Aggregator DA1:

| Instruction Type | Line Loss Factor Class Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 1 Jan 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Line Loss Factor Class | 1 Jan 99 | N/A | DB1, LLF 5 |

# 3. Change of Supplier and Data Aggregator

A Metering System with an Id of MS200 changes Supplier on 1 Apr 1999. The new Supplier elects to use a different Data Aggregator.

The section below details the instruction that PRS would generate.

### PRS Details for Metering System before change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| Data Aggregator Appointment | 3 Oct 98 | DA 1 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| | 1 Jan 99 | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | G7 |

### PRS Details for Metering System after change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| | 1 Apr 99 | S2 |
| Data Aggregator Appointment | 3 Oct 98 to 31 Mar 99 | DA 1 |
| | 1 Apr 99 | DA 2 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| | 1 Apr 99 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| | 1 Apr 99 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| | 1 Apr 99 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| | 1 Jan 99 | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | G7 |

Note that as GSP Group and Line Loss Factor Class are related to the Metering System and not the registration, they will not be affected by the change of Supplier.

### Content of instruction sent to Data Aggregator DA1:

There are two options for the PRS systems in this instance. In both cases, the significant date is the 31 Mar 99, as the first change to data held by DA 1 is caused by the change in the end of their appointment to this Metering System. As all start and end dated are inclusive, this will cause the Data Aggregator Appointment end date to be set to 31 Mar 99. The options are as follows:

**Option 1** as per the instruction collation logic, all relevant relationships which span or overlap the significant date.

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 31 Mar 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Registration | 3 Oct 98 | N/A | S1 |
| Data Aggregator Appointment | 3 Oct 98 to 31 Mar 99 | 3 Oct 98 | N/A |
| Data Collector Appointment | 3 Oct 98 | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | 3 Oct 98 | E |
| Line Loss Factor Class | 1 Jan 99 | N/A | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | N/A | G7 |

**Option 2** as per the special circumstances detailed in the “Data Aggregator Appointment Details” instruction on page 9.

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 31 Mar 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Data Aggregator Appointment | 3 Oct 98 to 31 Mar 99 | 3 Oct 98 | N/A |

### Content of instruction sent to Data Aggregator DA2:

A Data Aggregator Appointment instruction with details of all relationships which span or start on or after the significant date. In this instruction, the significant date is 1 Apr 99.

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 1 Apr 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Registration | 1 Apr 99 | N/A | S2 |
| Data Aggregator Appointment | 1 Apr 99 | 1 Apr 99 | N/A |
| Data Collector Appointment | 1 Apr 99 | 1 Apr 99 | DC 1 |
| Measurement Class | 1 Apr 99 | 1 Apr 99 | MC 3 |
| Energisation Status | 1 Apr 99 | 1 Apr 99 | E |
| Line Loss Factor Class | 1 Jan 99 | N/A | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | N/A | G7 |

# 4. Change of Supplier with no change of Data Aggregator

A Metering System with an Id of MS200 changes Supplier on 1 Apr 1999. The new Supplier elects to use the same Data Aggregator.

The section below details the instruction that PRS would generate.

### PRS Details for Metering System before change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| Data Aggregator Appointment | 3 Oct 98 | DA 1 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| | 1 Jan 99 | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | G7 |

### PRS Details for Metering System after change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| | 1 Apr 99 | S2 |
| Data Aggregator Appointment | 3 Oct 98 to 31 Mar 99 | DA 1 |
| | 1 Apr 99 | DA 1 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| | 1 Apr 99 | DC 1 |
| | 1 Apr 99 | I |
| Measurement Class | 3 Oct 98 | MC 3 |
| | 1 Apr 99 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| | 1 Apr 99 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| | 1 Jan 99 | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | G7 |

### Content of instruction sent to Data Aggregator DA1:

As in the above example, there are two options for the PRS systems in this instance. In both cases, the significant date is the 31 Mar 99, as the change to data held by DA 1 is caused by the change in the end of their appointment to this Metering System's registration to Supplier S1. As all start and end dated are inclusive, this will cause the Data Aggregator Appointment end date to be set to 31 Mar 99. The options are as follows:

**Option 1** as per the instruction collation logic, all relevant relationships which span or overlap the significant date.

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 31 Mar 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Registration | 3 Oct 98 | N/A | S1 |
| | 1 Apr 99 | N/A | S2 |
| Data Aggregator Appointment | 3 Oct 98 to 31 Mar 99 | 3 Oct 98 | N/A |
| | 1 Apr 99 | 1 Apr 99 | N/A |
| Data Collector Appointment | 3 Oct 98 | 3 Oct 98 | DC 1 |
| | 1 Apr 99 | 1 Apr 99 | DC 1 |
| | 1 Apr 99 | 1 Apr 99 | I |
| Measurement Class | 3 Oct 98 | 3 Oct 98 | MC 3 |
| | 1 Apr 99 | 1 Apr 99 | MC 3 |
| Energisation Status | 3 Oct 98 | 3 Oct 98 | E |
| | 1 Apr 99 | 1 Apr 99 | E |
| Line Loss Factor Class | 1 Jan 99 | N/A | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | N/A | G7 |

**Option 2** as per the special circumstances detailed in the "Data Aggregator Appointment Details" instruction on page 9. This will require two instructions to be sent to the same Data Aggregator.

First Instruction:

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 31 Mar 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Data Aggregator Appointment | 3 Oct 98 to 31 Mar 99 | 3 Oct 98 | N/A |

Second Instruction:

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 1 Apr 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Registration | 1 Apr 99 | N/A | S2 |
| Data Aggregator Appointment | 1 Apr 99 | 1 Apr 99 | N/A |
| Data Collector Appointment | 1 Apr 99 | 1 Apr 99 | DC 1 |
| Measurement Class | 1 Apr 99 | 1 Apr 99 | MC 3 |
| Energisation Status | 1 Apr 99 | 1 Apr 99 | E |
| Line Loss Factor Class | 1 Jan 99 | N/A | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | N/A | G7 |

# 5. Change of Data Aggregator with no Change of Supplier

A Metering System with an Id of MS200 is registered to Supplier S1 from 3 Oct 98. The Supplier elects to use a different Data Aggregator from 1 APR 99.

The section below details the instruction that PRS would generate.

### PRS Details for Metering System before change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| Data Aggregator Appointment | 3 Oct 98 | DA 1 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| | 1 Jan 99 | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | G7 |

### PRS Details for Metering System after change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| Data Aggregator Appointment | 3 Oct 98<br>to<br>31 Mar 99 | DA 1 |
| | 1 Apr 99 | DA 2 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| | 1 Jan 99 | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | G7 |

### Content of instruction sent to Data Aggregator DA1:

There are two options for the PRS systems in this instance. In both cases, the significant date is the 31 Mar 99, as the first change to data held by DA 1 is caused by the change in the end of their appointment to this Metering System. As all start and end dated are inclusive, this will cause the Data Aggregator Appointment end date to be set to 31 Mar 99. The options are as follows:

**Option 1** as per the instruction collation logic, all relevant relationships which span or overlap the significant date.

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 31 Mar 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Registration | 3 Oct 98 | N/A | S1 |
| Data Aggregator Appointment | 3 Oct 98 to 31 Mar 99 | 3 Oct 98 | N/A |
| Data Collector Appointment | 3 Oct 98 | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | 3 Oct 98 | E |
| Line Loss Factor Class | 1 Jan 99 | N/A | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | N/A | G7 |

**Option 2** as per the special circumstances detailed in the "Data Aggregator Appointment Details" instruction on page 9.

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 31 Mar 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Data Aggregator Appointment | 3 Oct 98 to 31 Mar 99 | 3 Oct 98 | N/A |

### Content of instruction sent to Data Aggregator DA2:

A Data Aggregator Appointment instruction with details of all relationships which span or start on or after the significant date. In this instruction, the significant date is 1 Apr 99.

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 1 Apr 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Registration | 3 Oct 98 | N/A | S1 |
| Data Aggregator Appointment | 1 Apr 99 | 3 Oct 98 | N/A |
| Data Collector Appointment | 3 Oct 98 | 3 Oct 98 | DC 1 |

| | | | |
|---|---|---|---|
| Measurement Class | 3 Oct 98 | 3 Oct 98 | I |
| Measurement Class | 3 Oct 98 | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | 3 Oct 98 | E |
| Line Loss Factor Class | 1 Jan 99 | N/A | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | N/A | G7 |

# 6. Correction to Relationship Start Date

A Metering System with an Id of MS202 was recorded as being energised on 1 April 1998 and de-energised on 15 December 1998. However, due to operational problems, the Metering System was actually de-energised on the 20 December.

In this case, the significant date will be the 15 December as it is the date of the first change to the data held by the Data Aggregator. This will cause the Data Aggregator to delete the erroneous relationship and insert the correct one.

The section below details the instruction that PRS would generate.

### PRS Details for Metering System before change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 1 Apr 98 | S5 |
| Data Aggregator Appointment | 1 Apr 98 | DA 1 |
| Data Collector Appointment | 1 Apr 98 | DC 2 |
| Measurement Class | 1 Apr 98 | MC 1 |
| Energisation Status | 1 Apr 98 | E |
| | 15 Dec 98 | D |
| Line Loss Factor Class | 1 Apr 98 | DB1, LLF 7 |
| GSP Group | 1 Apr 98 | G3 |

### PRS Details for Metering System after change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 1 Apr 98 | S5 |
| Data Aggregator Appointment | 1 Apr 98 | DA 1 |
| Data Collector Appointment | 1 Apr 98 | DC 2 |
| Measurement Class | 1 Apr 98 | MC 1 |
| Energisation Status | 1 Apr 98 | E |
| | 20 Dec 98 | D |
| Line Loss Factor Class | 1 Apr 98 | DB1, LLF 7 |
| GSP Group | 1 Apr 98 | G3 |

### Content of instruction sent to Data Aggregator DA1:

| Instruction Type | Energisation Status Details | | |
|---|---|---|---|
| Metering System Id | MS202 | | |
| Significant Date | 15 Dec 98 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Energisation Status | 1 April 98 | 1 Apr 98 | E |
| | 20 Dec 98 | 1 Apr 98 | D |

# 7. Registration Withdrawn

A Metering System with an Id of MS200 is registered in PRS and the details are sent to Data Aggregator DA1. PRS receives a new registration to the Metering System and sends these details to DA1 in accordance with the previous "Change of Supplier with no Change of Data Aggregator" example. Either the registration is invalid in business terms or is in some way erroneous. The PRS system needs to withdraw the details from Data Aggregator DA 1 and reinstate the position prior to the "Change of Supplier with no Change of Data Aggregator" taking place.

The section below details the instruction that PRS would generate.

## PRS Details for Metering System before change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| | 1 Apr 99 | S2 |
| Data Aggregator Appointment | 3 Oct 98 to 31 Mar 99 | DA 1 |
| | 1 Apr 99 | DA 1 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| | 1 Apr 99 | DC 1 |
| | 1 Apr 99 | I |
| Measurement Class | 3 Oct 98 | MC 3 |
| | 1 Apr 99 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| | 1 Apr 99 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| | 1 Jan 99 | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | G7 |

## PRS Details for Metering System after change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| Data Aggregator Appointment | 3 Oct 98 to 31 Mar 99 | DA 1 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | E |

| | | |
|---|---|---|
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| | 1 Jan 99 | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | G7 |

### Content of instruction sent to Data Aggregator DA1:

In this instance, the Significant Date is the 31 March 99, as the first change to data held by the Data Aggregator is the removal of the end date on the original Data Aggregator Appointment.

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 31 Mar 99 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Registration | 3 Oct 98 | N/A | S1 |
| Data Aggregator Appointment | 3 Oct 98 | 3 Oct 98 | N/A |
| Data Collector Appointment | 3 Oct 98 | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | 3 Oct 98 | E |
| Line Loss Factor Class | 1 Jan 99 | N/A | DB1, LLF 5 |
| GSP Group | 3 Oct 98 | N/A | G7 |

## 8. Details sent to incorrect Data Aggregator

A Metering System with an Id of MS200 is registered in PRS and the details are sent to Data Aggregator DA1. At some point, the Supplier notices that he appointed the wrong Data Aggregator. The PRS system needs to withdraw the details from Data Aggregator DA 1 and provide them to DA 2.

The section below details the instruction that PRS would generate.

### PRS Details for Metering System before change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| Data Aggregator Appointment | 3 Oct 98 | DA 1 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| GSP Group | 3 Oct 98 | G7 |

### PRS Details for Metering System after change:

| Relationship Type | From | Value |
|---|---|---|
| Registration | 3 Oct 98 | S1 |
| Data Aggregator Appointment | 3 Oct 98 | DA 2 |
| Data Collector Appointment | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | DB1, LLF 2 |
| GSP Group | 3 Oct 98 | G7 |

### Content of instruction sent to Data Aggregator DA1:

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 3 Oct 98 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |

### Content of instruction sent to Data Aggregator DA2:

| Instruction Type | Data Aggregator Appointment Details | | |
|---|---|---|---|
| Metering System Id | MS200 | | |
| Significant Date | 3 Oct 98 | | |
| **Relationship Type** | **Item 1** | **Item 2** | **Item 3** |
| Registration | 3 Oct 98 | N/A | S1 |
| Data Aggregator Appointment | 3 Oct 98 | 3 Oct 98 | N/A |
| Data Collector Appointment | 3 Oct 98 | 3 Oct 98 | DC 1 |
| Measurement Class | 3 Oct 98 | 3 Oct 98 | MC 3 |
| Energisation Status | 3 Oct 98 | 3 Oct 98 | E |
| Line Loss Factor Class | 3 Oct 98 | N/A | DB1, LLF 2 |
| GSP Group | 3 Oct 98 | N/A | G7 |