

Market Process for Data Aggregation

1. Introduction

1.1 Scope

This Procedure describes the process for Data Aggregation for the following classes of meter point:

- QH Metered Embedded Generators, i.e. Generation Units connected to the Distribution Network
- QH Metered Import registered to Suppliers other than ESB PES
- NQH Metered Import registered to Suppliers others than ESB PES

Meter points are excluded from aggregation for settlement dates on which they are registered to ESB PES.

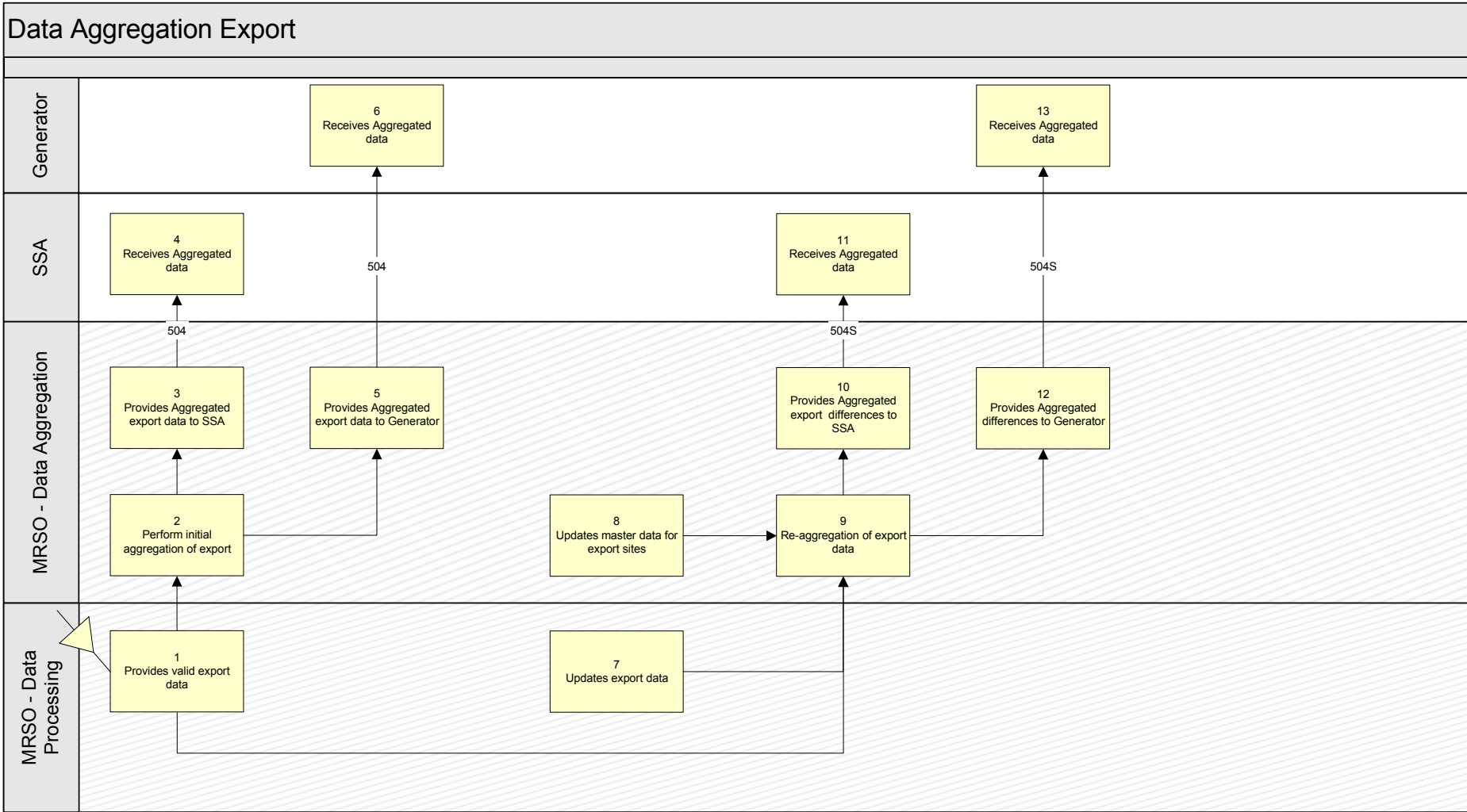
1.2 History of Changes

This Procedure includes the following changes

Source of Change	Description of Change
259	Changes to aggregation approach incorporating re-aggregation and usage factors
	Changes applied since Version 3.1
	Standardisation of use of QH/NQH terminology
	Removed Section 5.9 as this is now covered by MPD 14 – NQH Readings Processing
	Updates arising from Supplier Clarifications

Written Supplier Clarifications 1 B202	Updated title of Process map on page 8 to remove Non Profile reference. Updated text around Steps 7,8 on to clarify process
Written Supplier Clarifications 2	Settlement Interval Period renamed to Settlement Interval for consistency with Data Definitions
Written Supplier Clarification 3, 5	Updated scope of document. Term 'Independent Supplier' removed.
	No changes applied since version 4.0 DRAFT

2. Process Map - Data Aggregation for QH Meter Points - Export



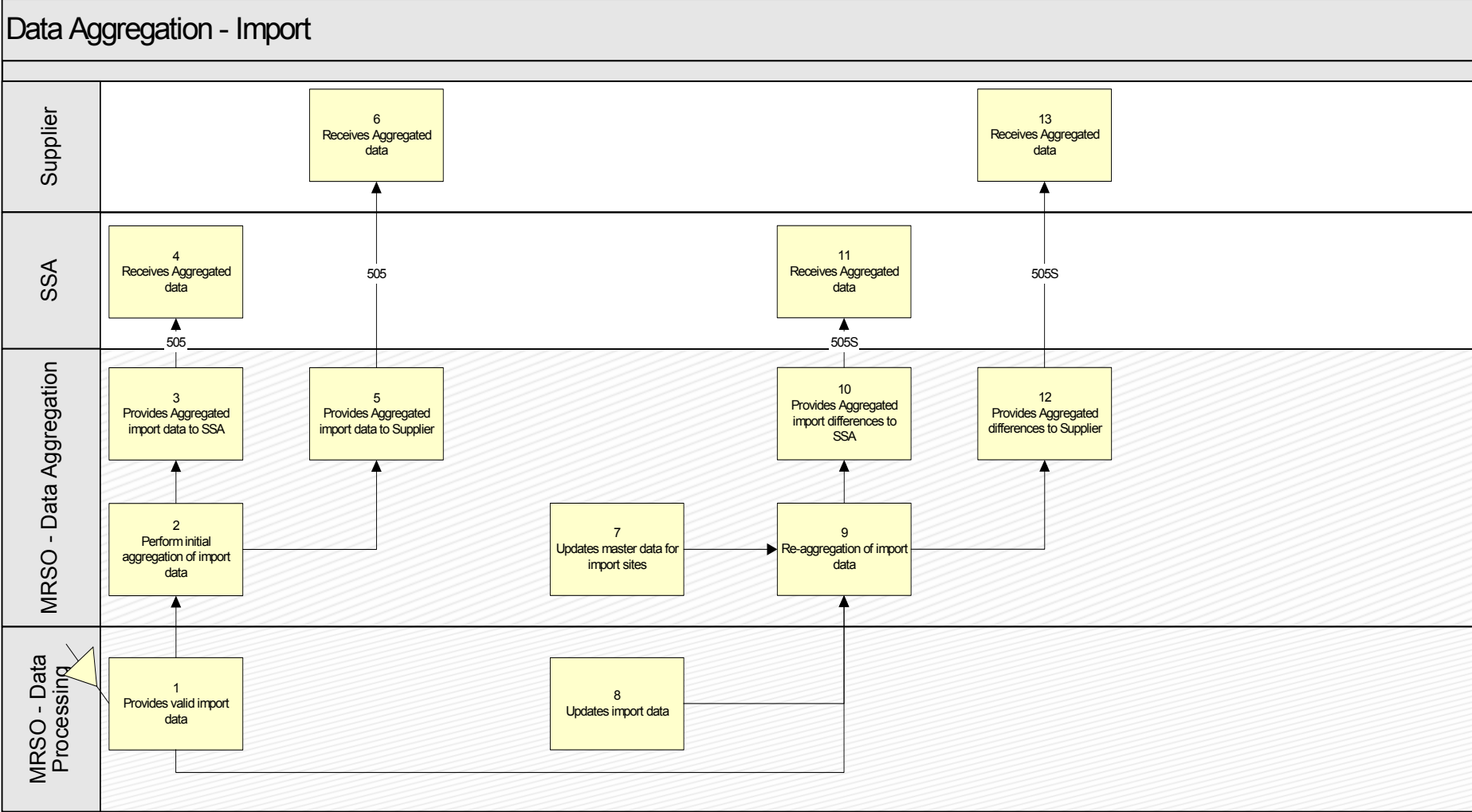
2.1 Process Description

Step	Role	Action	Interface
Step 2, 3, 5	MRSO	<p><u>Initial Aggregation of Export</u></p> <p>MRSO will aggregate export data for Embedded Generators using validated readings and estimates that are received from the Data Collector. Export kW are converted to kWh for aggregation. MRSO will commence aggregation of data for an Embedded Generator export from the acceptance to trade date.</p> <p>Aggregated export data will be sent to the SSA for each Settlement Date, Generation Unit and Settlement Interval.</p> <p>For export sites with Net Aggregation, net export will be aggregated. For all other Meter Points where aggregation of export takes place, gross export will be aggregated.</p> <p>Aggregated data will contain aggregation values both including and excluding the application of DLF applicable to the Generation Unit and Settlement Interval.</p> <p>Aggregated export data sent to the SSA that is relevant to a Generator will also be sent to that Generator.</p>	<p>504 to SSA</p> <p>504 to Generator</p>
Step 7	Data Processor	The data processor may provide new or revised export data following initial aggregation	
Step 8	MRSO	In exceptional circumstances MRSO may update Generation Unit or DLF data following initial aggregation	
Step 9, 10, 12	MRSO	<p><u>Re-Aggregation</u></p> <p>MRSO will periodically perform a re-aggregation of QH meter export, taking into account the latest data provided by the Data Collector and the Generation Unit and DLF data currently recorded for each Meter Point.</p>	

Step	Role	Action	Interface
		<p>MRSO will re-aggregate all export in the agreed Settlement Reconciliation Period¹ using data effective within these periods. Aggregation shall be on the same basis as the initial aggregation. Differences will be calculated for each Settlement Interval within the Settlement Reconciliation Period between the current re-aggregation and the previous aggregation.</p> <p>Aggregated differences will be passed to the SSA and Generators on the same basis as for the initial aggregation. Aggregated differences will contain aggregation values both including and excluding the application of DLF.</p>	504S to SSA / Generator

¹ The Settlement Reconciliation Period defines the Settlement Dates for which Re-Aggregation will be run.

3. Process Map - Data Aggregation for QH Meter Points - Import



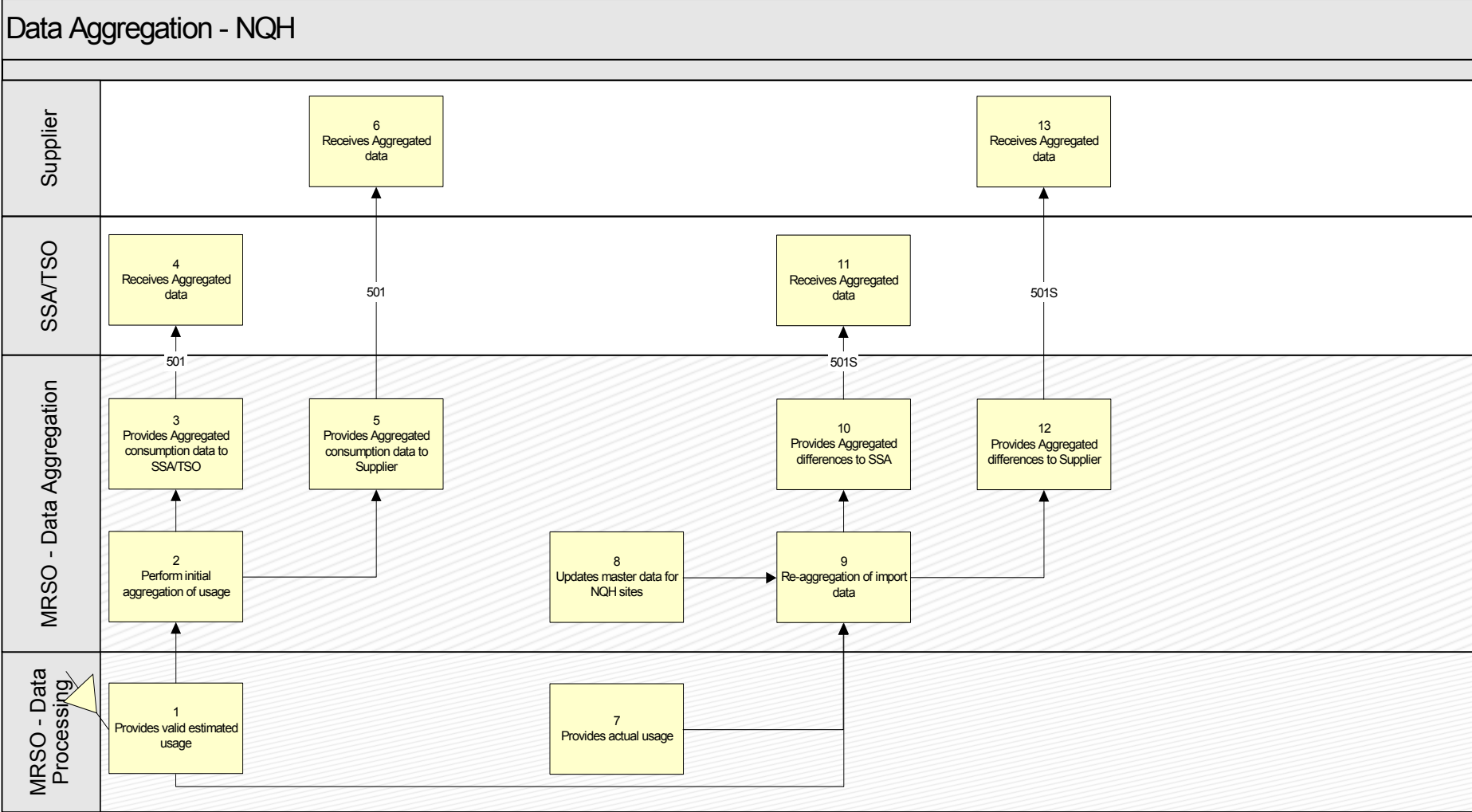
3.1 Process Description

Step	Role	Action	Interface
Step 2, 3, 5	MRSO	<p><u>Initial Aggregation of Import</u></p> <p>MRSO will aggregate import data for Meter Points registered to Suppliers using validated readings and estimates that are received from the Data Collector. Import kW are converted to kWh for aggregation.</p> <p>Aggregated import data will be sent to the SSA for Suppliers summarised by Settlement Date, Settlement Interval, Supplier and SSAC registered on the Settlement Date.</p> <p>For export sites with Net Aggregation, net import will be aggregated. For all other Meter Points where aggregation of import takes place, gross import will be aggregated.</p> <p>Aggregated data will contain values both including and excluding the application of DLF applicable for the DLF Code and Settlement Interval.</p> <p>Aggregated import data sent to the SSA that is relevant to a Supplier will also be sent to that Supplier and will include a breakdown by DLF Code.</p>	<p>505 to SSA</p> <p>505 to Supplier</p>
Step 7	Data Processor	The data processor may provide new or revised import data following initial aggregation	
Step 8	MRSO	In exceptional circumstances MRSO may update Supplier, SSAC or DLF data following initial aggregation	
Step 9,	MRSO	<u>Re-Aggregation</u>	

² The Settlement Reconciliation Period defines the Settlement Dates for which Re-Aggregation will be run.

Step	Role	Action	Interface
10, 12		<p>MRSO will periodically perform a re-aggregation of QH meter import, taking into account the latest data provided by the Data Collector and the Supplier, SSAC and DLF data currently recorded for each Meter Point.</p> <p>MRSO will re-aggregate all import in the agreed Settlement Reconciliation Period² using data effective within these periods. Aggregation shall be on the same basis as the initial aggregation. Differences will be calculated for each Settlement Interval within the Settlement Reconciliation Period between the current re-aggregation and the previous aggregation.</p> <p>Aggregated differences will be passed to the SSA and Suppliers on the same basis as for the initial aggregation. Aggregated differences will contain aggregation values both including and excluding the application of DLF.</p>	505S to SSA / Supplier

4. Process Map – Data Aggregation for NQH Meter Points



4.1 Process Description

Step	Role	Action	Interface
Step 2, 3, 5	MRSO	<p><u>Initial Aggregation</u></p> <p>MRSO will aggregate consumption using the Usage Factors applying to each Timeslot associated with Meter Points registered to Suppliers. Actual Usage Factors will be used if available at the point of time aggregation, otherwise Estimated Usage Factors are used³.</p> <p>MRSO will profile consumption for each Settlement Interval within a Settlement Date by applying to the Usage Factor the interval co-efficients defined for the applicable Derived Load Profile.</p> <p>No estimated usage is aggregated in respect of a Meter Point that is de-energised.</p> <p>Aggregated consumption will be sent to the SSA/TSO for each Settlement Date summarised by Settlement Interval and by the Supplier and SSAC registered on the Settlement Date.</p> <p>Aggregated data will contain values both including and excluding the application of DLF applicable for the DLF Code and Settlement Interval.</p> <p>Aggregated data sent to the SSA that is relevant to a Supplier will also be sent to that Supplier and will include a breakdown by Load Profile and DLF Code.</p>	<p>501 to SSA / TSO</p> <p>501 to Supplier</p>
Step 7	Data Processor	Usage factors may be created or updated following initial aggregation. Typically updates will occur as the result of readings data collection as described in MPD14.	
Step 8	MRSO	In exceptional circumstances MRSO may update Supplier, SSAC, Profile or DLF data following initial aggregation	

³ The application and calculation of Usage Factors is described in MPD 14 – Readings Processing – NQH Meter. For initial aggregation Actual Usage Factors will be available where there has been a recent reading.

Step	Role	Action	Interface
Step 9, 10, 12	MRSO	<p><u>Re-Aggregation</u></p> <p>MRSO will perform a monthly re-aggregation of consumption, taking into account Usage Factors applying to each Timeslot and the Supplier, SSAC, Profile and DLF data recorded for each Meter Point on each date re-aggregated. Actual Usage Factors will be used if available at the point of time aggregation, otherwise Estimated Usage Factors are used.</p> <p>MRSO will re-aggregate all consumption in the agreed Settlement Reconciliation Period⁴ using data effective within this period. No estimated usage is aggregated for Settlement Dates when a Meter Point is de-energised.</p> <p>Differences will be calculated by day-time and by night-time within the Settlement Reconciliation Period between the current re-aggregation and the previous aggregation for the same period⁵.</p> <p>Aggregated day-time and night-time differences will be sent to the SSA and TSO summarised by Supplier and SSAC.</p> <p>Aggregated data will contain values both including and excluding the application of DLF applicable for the DLF Codes applying during Settlement Reconciliation Period.</p> <p>Aggregated data sent to the SSA that is relevant to a Supplier will also be sent to that Supplier and will include a breakdown by Load Profile and DLF Code.</p> <p>Re-aggregation shall not take account of consumption adjustments not reflected in usage factors or meter readings as these are handled in a separate process.</p>	<p>501S to SSA / TSO</p> <p>501S to Supplier</p>

⁴ The Settlement Reconciliation Period defines the start and end dates of the period for which Usage Factors will be aggregated.

⁵ To support monthly reconciliation it is expected that differences will be calculated for each monthly usage within the Settlement Reconciliation Period. For the most recent month the difference is with the initial aggregation, for the previous months the difference is with the re-aggregation for the same month of usage in the previous re-aggregation. Monthly usage is determined according to the Derived Load Profiles applying to each Timeslot.

5. Supplementary Information

5.1 Loss Factors

The DSO will identify the Distribution Loss Factors (DLF) applying to each meter point through the definition of an appropriate DLF Code and DLF value.

For Embedded Generators a site specific DLF will be applied. For other Meter Points, DLF shall be applied according to the connection voltage and settlement class – QH/NQH

5.2 Profile Coefficients

The DSO will identify the profile coefficients applying to each settlement interval for each Load Profile. Profile coefficients will be identified in advance for each year and will take account of weekends and public holidays. Profile coefficients are expected to sum to 1 for a 365 day year.

5.3 Settlement Dates and Intervals

A Settlement Date is the calendar day on which export or import consumption is determined to have occurred. When the Settlement Date is a day in which the clocks are advanced it shall have 23 hours and when the Settlement Date is a day in which the clocks are put back it shall have 25 hours.

A Settlement Interval is defined as a fifteen minute period. There shall normally be 96 Settlement Intervals in a day but there can be 92 or 100 when the clocks are changed.

5.4 Derived Load Profiles

For each Timeslot to be settled a Derived Load Profile will be allocated in accordance with published rules for the combination of:

- For non-MD sites, whether the meter point is rural domestic, urban domestic or non-domestic, as determined by the DUoS Group
- For MD sites, the load factor
- The Timeslot to be settled.

The Derived Load Profile is a set of interval coefficients determined from a researched or sampled Standard Load Profile which are specific to the Timeslot, which sum to the same as the profile from which the derivation is made (1 over a 365-day year). Derived Load Profiles applied at a Meter Point may be determined from more than one Standard Load Profile (e.g. where both 24 hour and night storage meters are installed).

5.5 Day / Night Split for NQH Re-Aggregation

In NQH Aggregation MRSO will use an Actual Usage Factor where available and an Estimated Usage Factor where it is not.

MRSO will determine a day/night split in re-aggregation by using the Derived Load Profile applied to a Timeslot as follows:

- Day time consumption = Usage Factor for the Timeslot * sum of day-time coefficients given by the Derived Load Profile for period
- Night time consumption = Usage Factor for the Timeslot * sum of night-time coefficients given by the Derived Load Profile for period

Day-time coefficients shall apply between the hours of 8am and 11pm GMT (i.e. 8am to 11pm UTC) throughout the year. Night-time coefficients shall apply to the remaining hours of the settlement day.

Where Supplier, SSAC, Derived Load Profile or DLF data changes during the effective period of a usage factor then day and night time consumptions must be calculated in respect of each period where these data remain constant.

5.6 Settlement Reconciliation Period

The Settlement Reconciliation Period is composed of a range of Settlement Dates to be considered in the Re-Aggregation processing. The Settlement Reconciliation Period will be agreed with SSA in respect of both QH and NQH Meter Points.

For NQH Meter Points the Settlement Reconciliation Period is expected to be the previous thirteen months. Any differences that arise in respect of dates prior to the start of the Settlement Reconciliation Period (i.e. due to meter points where there has not been a reading in the period) will be ignored. This proposal is subject to discussion with SSA and other participants

5.7 Records

MRSO will maintain a record of input to Initial and Re-Aggregation runs identifying the Generator, Supplier, SSAC, Loss Factor Code, Profiles and Usage Factor Data used for each Meter Point.

5.8 Timings

Initial aggregation will occur on the tenth day following the Settlement Date.

Re-aggregation will be performed monthly.