

Market Code Schedule 18

Code Subsidiary Document CSD0205

Invoice Period Charge Calculation,
Allocation & Aggregation

Version: ~~78~~.0

Date: 2018-0~~24~~-01

Document Ref: CSD0205

Change History

Version Number	Date of Issue	Reason For Change	Change Control Reference	Sections Affected
1.0	12/05/2007	N/A		
1.1	31/08/2007	Go live version		
1.2	07/01/2009	Improving calculation of EWAs	MCCP021	
1.3	13/07//2009	Meters with Chargeable size of 0mm Stage 1	MCCP030	Section 2.1 and Appendix 2
1.4	17/08/2009	Re-assessed Charges	MCCP035-CC	Section 2.2.1; Section 2.2.3 and Appendix 2
1.5	26/08/2009	To allow additional Settlement Runs	MCCP022	Sections 2.2.2; 2.2.3; 4.1; 4.3 and 4.4
1.6	29/03/2010	Meters with Chargeable size of 0mm Stage 2 and 20mm Premium Burse Meter Accuracy RF Changes	MCCP030, MCCP031 and MCCP038 MCCP039 MCCP046-CC	Sections 2.2.1 and 2.2.3 Appendices 1 and 2
1.7	12/08/2010	Improved explanation of EWA calculation and charging during vacancy and temporary disconnection	MCCP049	Sections 2.1.1, 2.2.1 and 2.2.2
1.8	27/09/2010	Clarification of SGES Discount	MCCP064	
1.9	30/03/2012			
2.0	12/04/2013	Inclusion of a reference to TE Charging	MCCP095	Sections 1, 2
3.0	2015-03-31	Changes and corrections to SGES submissions	MCCP161- CC	App.2
4.0	2015-09-24	Removal of TI Processing	MCCP173	App.1.1
5.0	2017-03-16	Vacancy Charging	MCCP204	Section 2

			MCCP207	
6.0	2017-09-17	Correction to TE Min Charge Calculation and removal of refs to CSD0204.	MCCP213	Sections 2.2 and 2.3
7.0	2018-02-01	Live RVs in settlement	MCCP214-CC	
<u>8.0</u>	<u>2018-04-01</u>	<u>TTRAN and PPDISC</u>	<u>MCCP227-CC</u>	

Table of Contents

1.	Purpose and Scope	5
2.	Charge Calculation, Allocation and Aggregation	6
2.1	Non-Volumetric Charge Calculation	7
2.2	Volumetric Charge Calculation	<u>1244</u>
3.	Process Diagrams	<u>1918</u>
4.	Interface and Timetable Requirements	<u>2221</u>
4.1	Non-Volumetric charge Processing	<u>2221</u>
4.2	Not Used	<u>2322</u>
4.3	Volumetric Charge calculation, allocation and aggregation process	<u>2322</u>
4.4	Not Used	
	Appendix 1 –Transition Arrangements	<u>2524</u>
	APP 1.1: Supply Points with 20 mm Meters	<u>2524</u>
	APP 1.2: Formerly large-user volume agreements (LUVA)	<u>2625</u>
	Appendix 2 –Non-Standard Calculations for Supply Points	<u>2827</u>
	APP 2.1: The Water and Sewerage Services Charges (Exemption) (Scotland) Regulations 2002 as amended	<u>2827</u>
	APP 2.2: Services used for Fire-Fighting purposes	<u>2827</u>
	APP 2.3: Schedule 3 Agreements / D2003 discounts for Pseudo Water Services Supply Points	<u>2928</u>
	APP 2.4: Departures granted under section 29E of the 2002 Act	<u>2928</u>
	APP 2.5: Meters with a chargeable size of 0mm	<u>3029</u>

1. Purpose and Scope

The purpose of this document is to provide details of how the CMA will calculate Wholesale Charges, allocate them to the appropriate Licensed Provider, or to Scottish Water in respect of any SPIDs subject to a Temporary Transfer, performed on a Settlement Day basis, and aggregate them for each Settlement Day in an Invoice Period.

This document describes how the CMA will calculate Wholesale Charges in accordance with the Wholesale Charges Scheme.

Details for the provision of the transition arrangements and other non-standard calculation of Supply Points are provided in Appendix 1 and 2, respectively.

2. Charge Calculation, Allocation and Aggregation

This process details the allocation and aggregation of Wholesale Charges applicable to the following Services, Service Components and Service Elements:

Table one

Service	Service Component	Sub-service Component	Service Element
Water	Measured	Volumetric and Non-volumetric	Meter Charges – Measured Volumetric – Measured Meter Charges – Unmeasured – RV Volumetric – Unmeasured – RV Meter Charges – Reassessed Volumetric - Reassessed
Water	Miscellaneous Services	Non-volumetric	Field Troughs and Drinking Bowls Farm Field Troughs and Drinking Bowls Croft Outside Taps Farm Outside Taps Croft
Sewerage	Foul Sewerage	Volumetric and Non-volumetric	Meter Charges – Measured Volumetric – Measured Meter Charges – Unmeasured – RV Volumetric – Unmeasured – RV Meter Charges – Reassessed Volumetric - Reassessed
Sewerage	Miscellaneous Services	Non-volumetric	Property Drainage Road Drainage
Sewerage	Trade Effluent Charges	Volumetric and Non-Volumetric	Trade Effluent

Table 1. Service breakdown to Service Component Sub-Service Component and Service Element.

The process for the calculation of non-volumetric charges is different from that for volumetric charges. Section 2.1 sets out the process for the calculation of the non-volumetric charges

that will be payable by Licensed Providers and notionally payable by Scottish Water in respect of any SPIDs subject to a Temporary Transfer. Section 2.2 sets out the process for the calculation of the volumetric charges that will be payable by Licensed Providers and notionally payable by Scottish Water in respect of any SPIDs subject to a Temporary Transfer.

Where the CMA uses Daily Volumes in volumetric charge calculations, such Daily Volumes will be calculated by the CMA in accordance with the processes set out in CSD0207 (RF Charge Calculation Allocation and Aggregation).

Scottish Water will provide the Scottish Water Data 20 Business Days (BD) prior to the first preliminary Settlement Run of any Year.

2.1 Non-Volumetric Charge Calculation

Non-Volumetric Charges apply to the Service Elements as outlined in Table 1. The CMA will calculate the total Non-Volumetric Charges payable by each Licensed Provider and notionally payable by Scottish Water in respect of any SPIDs subject to a Temporary Transfer in relation to each Invoice Period in the following four stages:

1. Calculation of the Annual Non-Volumetric Charge for each Supply Point for which Surface Water Drainage Services are provided (which charges will be derived from the Rateable Value attributable to that Supply Point);
2. Calculation of the Daily Non-Volumetric Charge for each Service Element related to a Supply Point using either the Annual Non-Volumetric Charge calculated at step 1, and/or using the Scottish Water Data (where the Non-Volumetric Charge for the Supply Point is not dependent on the Rateable Value);
3. Allocation of the Daily Non-Volumetric Charge for each Service Element to the Licensed Provider to whom that the corresponding Supply Point was Registered on each Settlement Day and calculation of the sum of all the Daily Non-Volumetric Charges for which each Licensed Provider, or Scottish Water in respect of any SPIDs subject to a Temporary Transfer was liable (or notionally liable, in respect of Scottish Water for SPIDs subject to a Temporary Transfer) on each Settlement Day; and
4. Aggregation of the Settlement Day Non-Volumetric Charges for each Invoice Period for each Service Element that each Licensed Provider, or SW in respect of any SPIDs subject to a Temporary Transfer, provides.

CSD0201 (Settlement Timetable and Reporting) provides details about the timing and frequency with which the CMA will report the calculations, allocations and aggregations to Licensed Providers and Scottish Water.

2.1.1 Daily Charge Allocation and Aggregation

In order to calculate the Daily Non-Volumetric Charges for each Supply Point, the relevant annual figures will be identified and converted into daily figures as follows:

Step 1

To calculate the Annual Non-Volumetric Charge for Supply Points for which RV based Services are provided, the CMA will apply a conversion factor to the Rateable Value and/or Live Rateable Value for each Supply Point as follows:

$$ANVC = [(RVF * RV) + (1 - RVF) * LRV] * TR$$

Where:

RV is the Rateable Value for the Supply Point;

LRV is the Live Rateable Value;

RVF is a transitional weighting factor (to provide for a transition from RV to LRV), as defined in the Wholesale Scheme of Charges; and

TR is the non-volumetric rate for the Service Element (as set out in the Wholesale Charges Scheme).

Step 2

The CMA will convert both Annual Non-Volumetric Charges calculated under step 1 above and Annual Non-Volumetric Charges derived using the Scottish Water Data (i.e. where a related Annual Non-Volumetric Charge for a Supply Point does not depend on its Rateable Value and/or on its Live Rateable Value) into Daily Non-Volumetric Charges as follows:

$$DNVC = ANVC / DIY$$

Where:

DNVC is the Daily Non-Volumetric Charge for the Service Element;

ANVC is the Annual Non-Volumetric Charge for the Service Element; and

DIY is the number of days in the relevant Year.

Step 3

The CMA will then allocate the Daily Non-Volumetric Charge for each Service Element related to a Supply Point to the Licensed Provider to whom that Supply Point was Registered or to Scottish Water in respect of any SPIDs subject to a Temporary Transfer, on each Settlement Day. That allocation will be performed in one of the two ways shown below, depending on whether the Supply Point's particular Service Element's Daily Non-Volumetric Charge was calculated on the basis of Rateable Value and/or Live Rateable Value.

Rateable Value and/or Live Rateable Value derived Non-Volumetric Charges

To calculate the Settlement Day Non-Volumetric Charge attributable for a Service Element to any particular Licensed Provider or to Scottish Water in respect of any SPIDs subject to a Temporary Transfer (SDNVC_{LPRV}), the CMA will sum the Daily Non-Volumetric Charge for each Service Element related to a Supply Point –for the Settlement Day on which it was Registered to that Licensed Provider (or to SW) using the following formula:

$$SDNVC_{LPRV} = \sum DNVC_{RV}$$

Where:

$\sum DNVC_{RV}$ is sum of the Daily Non-Volumetric Charges for the Service Element applicable to the Supply Points Registered to the Licensed Provider or to Scottish Water in respect of any SPIDs subject to a Temporary Transfer for the Settlement Day.

Scottish Water Data derived Non-Volumetric Charges

The CMA will allocate the Daily Non-Volumetric Charges that it has calculated using the Scottish Water Data (rather than the Rateable Value of any Supply Point) to the relevant Licensed Provider or to Scottish Water in respect of any SPIDs subject to a Temporary Transfer for each of the Service Elements that the Licensed Provider (or SW) provides, as follows:

$$SDNVC_{LPT} = DNVC_T * NSP_{LPT}$$

Where:

SDNVC_{LPT} is the Settlement Day Non-Volumetric Charge payable by each Licensed Provider or SW for the Service Element that they provide;

DNVC_T is the Daily Non-Volumetric Charge applicable to the Service Element for the Settlement Day; and

NSP_{LPT} is the number of Supply Points (for miscellaneous Service Components) or Meters (for Measured Service Components where charges depend on the Chargeable Meter Size) Registered to that Licensed Provider or to SW for the Service Element on the Settlement Day.

Note that where the Service Element is a Meter whose chargeable size is 0mm, the Daily Non-Volumetric Charges is zero. Further details are set out in Appendix 2, Section 5.

Vacancy and Temporary Disconnection

Non-volumetric charges including:

- Water Charges

- Meter Charges – Measured
- Meter Charges – Unmeasured – RV and/or Live RV
- Meter Charges – Reassessed
- Field Troughs and Drinking Bowls Farm
- Field Troughs and Drinking Bowls Croft
- Outside Taps Farm
- Outside Taps Croft

- Sewerage Charges
 - Meter Charges – Measured
 - Meter Charges – Unmeasured – RV and/or Live RV
 - Meter Charges – Reassessed
 - Property Drainage
 - Road Drainage

continue to apply during periods of Temporary Disconnection. All such charges are suspended (for Invoice Periods prior to 2017-04-01) and remain applicable (for Invoice Periods after 2017-04-01) during periods of vacancy. During periods of Pending Permanent Disconnection, meter based charges will be zero.

2.1.2 Invoice Period Non-Volumetric Charge Aggregation

Step 4

The CMA will aggregate the Settlement Day Non-Volumetric Charges payable by each Licensed Provider and notionally payable by Scottish Water in respect of any SPIDs subject to a Temporary Transfer for each of the Service Elements relating to services that it provides over an Invoice Period as follows:

$$IPNVC = \sum SDNVC$$

Where:

IPNVC is the Invoice Period Non-Volumetric Charge payable by each Licensed Provider or SW for each Service Element that it provides over an Invoice Period; and
 $\sum SDNVC$ is the sum of Settlement Day Non-Volumetric Charges for the Service Element that the Licensed Provider or SW provides over the Invoice Period.

Details of how these aggregated charges are reported are provided in CSD0201 Settlement Timetable and Reporting.

2.2 Volumetric Charge Calculation

The CMA will calculate Volumetric Charges using a combination of Declining Block Charges, the applicable Allocated Tranche and Capacity Volume Charges. The CMA will calculate Volumetric Charges in this way for the following Service Components:

- Measured Water Services; and
- Measured Sewerage Services.

The CMA will aggregate the Volume in relation to each of the Meters that relate to a Multi Meter Supply Point before calculating the Volumetric Charges payable in respect of that Supply Point.

For each Settlement Run in the Year except the Tariff Year Settlement Run the CMA will recalculate the Estimated Weighted Average Unit Rate (EWA) for each Supply Point before the charges are calculated in the Settlement Run¹ as set out in section 2.2.1.

For each Settlement Run in the Year except the Tariff Year Settlement Run, to calculate volumetric charges at this early stage in the settlement process, CMA applies the EWA calculated above to Estimated Daily Volume(s) supplied to the Supply Point for Metered

¹ For the avoidance of doubt no other EWA otherwise calculated or notified to a Licensed Provide at any time shall be used in a Settlement Run

Supply Points. As Meter Reads become available, Actual Daily Volume replaces Estimated Daily Volume in Settlement Runs (typically at R2 for monthly read Meters and R3 for bi-annually read Meters). The process adopted for all Settlement Runs in the Year except the Tariff Year Settlement Run is outlined in more detail at section 2.2.2.

2.2.1 Calculation of the Estimated Weighted Average Unit Rate

Supply Points with Meters

The CMA will identify the T17 Meter Chains associated with each Supply Point at the beginning of the relevant Invoice Period, and for each such T17 Meter Chain the Estimated Annual Volume (EAV) to be supplied to the T17 Meter Chains over the Year. There are various ways in which EAV can be identified and the order of precedence for estimating EAV is as follows:

1. The CMA will attempt to derive EAV using Meter Reads which span a period of greater than or equal to 12 months. The CMA will take the most recent Meter Read for the T17 Meter Chain (“the Last Meter Read”). The CMA will then look at the Meter Reads going back in time from the Last Meter Read (using where necessary both the current and previous meters in the T17 Meter Chain) and pick the first of these Meter Reads (“the First Meter Read”) such that there is a time span of greater than or equal to 12 months between the First Meter Read and the Last Meter Read. For each Settlement Day from the First Meter Read up to and including the day before the Last Meter Read, the CMA will calculate the Actual Daily Volume ADV_{Kd} (compare CSD0207, paragraph 2.3.20) and whether each Settlement Day contributes to the Meter Advance Chargeable Days (compare CSD0207, paragraph 2.3.19) The CMA will convert the sum of the those Actual Daily Volumes and the sum of the Meter Advance Chargeable Days to an Average Daily Volume and then multiply that Average Daily Volume by the number of days in the relevant Year to compute the Estimated Annual Volume; or
2. Where Meter Read history is not sufficient to cover a period of greater than or equal to 12 months, the CMA will attempt to derive EAV using Meter Reads which span a period of less than 12 months. The CMA will take the Last Meter Read for the T17 Meter Chain and the earliest available Meter Read other than the Last Meter read (“the First Meter Read”) (using where necessary both the current and previous meters in the T17 Meter Chain). For each Settlement Day from the First Meter Read up to and including the day before the Last Meter Read, the CMA will calculate the Actual Daily Volume ADV_{Kd} (compare CSD0207, paragraph 2.3.20) and whether each Settlement Day contributes to the Meter Advance Chargeable Days (compare CSD0207, paragraph 2.3.19) The CMA will convert the sum of the those Actual Daily

Volumes and the sum of the Meter Advance Chargeable Days to an Average Daily Volume, then multiply that Average Daily Volume by the number of days in the relevant Year to compute the Estimated Annual Volume; or

3. Where a Licensed Provider to whom a Supply Point is Registered or Scottish Water in respect of any SPIDs subject to a Temporary Transfer has provided the CMA with a forecast YVE for a Meter, the CMA will use that forecast of YVE for the Estimated Annual Volume.
4. Where a Meter relating to a Supply Point has not had a forecast YVE provided, the CMA will use the Industry Estimate Table to derive EAV.

Supply Points with Pseudo Meters

In the case of Supply Points with Pseudo Meters, Meter Reads are not applicable and the CMA will only use the YVE provided by Scottish Water in accordance with Section 7 of CSD0104 (Maintain SPID Data) for the calculation of the Estimated Weighted Average Unit Rate prior to the relevant Settlement Run.

Sewerage Supply Points:- Non-Return to Sewer Allowance

The CMA will build the applicable Non-Return to Sewer Allowance for Sewerage Supply Points into the EAV for a meter or Pseudo Meter related to a Supply Point prior to its use in the calculation of the Estimated Weighted Average Unit Rate as follows:

$$EAV_{SS} = EAV_{WS} * NRS$$

Where:

EAV_{SS} is the Estimated Annual Volume of the sewerage to be supplied to the relevant Meter related to a Supply Point based on a water meter;

EAV_{WS} is the Estimated Annual Volume of the water to be supplied to the Meter related to a Supply Point; and

NRS is the applicable Non-Return to Sewer Allowance expressed a percentage of the water Volume.

Single Meter Supply Points

The CMA will calculate the Estimated Weighted Average Unit Rate for Single Meter Supply Points using the single values associated to each of the relevant Allocated Tranche, Declining Block Charge, and Capacity Volume Charge as follows:

$$EWA = \frac{(CVP * (CVT - VFA)) + (B1 * (V1 - VFA)) + (B2 * (V2 - V1)) + (B3 * (V3 - V2))}{EAV}$$

Where:

VFA is the Volume Limit associated with the relevant Meter's Allocated Tranche;

CVP is the relevant Capacity Volume Price;

CVT is the Volume Limit associated with the relevant Meter's Capacity Volume Charge;

B1 is the Unit Rate for Band one;

V1 is the Volume Limit associated with Band one;

B2 is the Unit Rate for Band two;

V2 is the Volume Limit associated with Band two;

B3 is the Unit Rate for Band three;

V3 is the Volume Limit associated with Band three; and

EAV is the Estimated Annual Volume to be supplied to the Supply Point over the forthcoming Year;

In cases where the value of the Estimated Annual Volume is equal to or less than any Volume Limit the CMA will substitute EAV into the calculation.

The CMA will calculate the Estimated Weighted Average Unit Rate for water and sewerage Supply Points separately.

Multi Meter Supply Points

As Declining Block Charges are applied at Supply Point level, meter based Volumes are also aggregated to Supply Point level for Multi Meter Supply Points.

When the CMA calculates the Estimated Weighted Average Unit Rate for Multi Meter Supply Points, the CMA will substitute V_{FW} and V_C in the foregoing equation with the sum of the Volume Limits applicable to the relevant Allocated Tranche and Capacity Volume Charge applicable to all the Meters related to that Multi Meter Supply Point with chargeable size Meter greater than 0mm; using the following equation:

$$V_{MT} = \sum V_M$$

Where:

V_{MT} is the total Volume Limit for all the Meters related to a Supply Point; and

$\sum V_M$ is the sum of Volume Limits for each the meter related to a Supply Point with a chargeable size greater than 0mm.

Further details on charging arrangements for Meters with a chargeable size of 0mm are set out in Appendix 2, section 5.

The CMA will build any applicable Non-Return to Sewer Allowance into its calculations of the Estimated Weighted Average Unit Rate for Multi Meter Supply Points in the same way as it will in relation to Single Meter Supply Points.

The total Estimated Annual Volume for the Multi Meter Supply Point will be the sum of the Estimated Annual Volume of each meter related to the Supply Point.

$$EAV_{MT} = \sum EAV_M$$

Where:

EAV_{MT} is the total Estimated Annual Volume for all the Meters related to a Supply Point; and $\sum EAV_M$ is the sum of Estimated Annual Volumes for each Meter related to a Supply Point.

2.2.2 Calculation and allocation of charges for volume Settlement Runs

The CMA will calculate the Estimated Daily Volumetric Charge for each Supply Point using the Supply Point's Estimated Weighted Average Unit Rate for the relevant Invoice Period and its Daily Volume. The CMA will perform this calculation and allocate the Estimated Daily Volumetric Charges to the relevant Licensed Provider as part of Settlement Runs P1, R1, R2, R3 and (where applicable) R4.

Estimated Daily Volumetric Charge calculation

The CMA will calculate the Estimated Daily Volumetric Charge for each Supply Point as follows:

$$EDVC = EWA * DV$$

Where:

EDVC is the Estimated Daily Volumetric Charge for the Supply Point;
EWA is the Estimate Weighted Average Unit Rate for the Supply Point for the relevant Invoice Period; and
DV is the Daily Volume for the Supply Point².

For Sewerage Supply Points the Non-Return to Sewer Allowance will be built into the Daily Volume for each Meter related to the Supply Point prior to its use in the calculation.

This Estimated Daily Volumetric Charge value will then be stored, along with Daily Volume for use in Settlement Day based Settlement Runs as part of the Supply Point's Trading Data.

Vacancy, ~~and Temporary Disconnection~~ and Pending Permanent Disocnection

Volumetric charges in respect of:

- Water Charges
 - Volumetric – Measured
 - Volumetric – Unmeasured – RV and/or LRV

² For a Multi Meter Supply Point this will be the sum Daily Volumes for each of the meters related to the Supply Point.

- Volumetric – Reassessed
- Sewerage Charges
 - Volumetric – Measured
 - Volumetric – Unmeasured – RV and/or LRV
 - Volumetric – Reassessed

For Invoice Periods prior to 2017-04-01: do not apply during periods of vacancy or Temporary Disconnection.

For Invoice Periods on or after 2017-04-01, for Measured: do not apply during periods of vacancy, unless there is a positive MAV (which sets a Consumption Indicator to True), within such period, or during periods of Temporary Disconnection.

For Invoice Periods on or after 2017-04-01, for Unmeasured and Reassessed: do not apply during periods of Temporary Disconnection or periods of vacancy and/or Pending Permanent Disconnection.

Daily Allocation and Aggregation

The CMA will allocate each Supply Point's Estimated Daily Volumetric Charge and Volume to the Licensed Provider to whom it was Registered or to Scottish Water in respect of any SPIDs subject to a Temporary Transfer in respect of each Settlement Day. It will aggregate those charges to show the Settlement Day Volumetric Charge and Settlement Day Volume supplied by a Licensed Provider (or SW) for each Service Element (Chargeable Meter Size or in aggregate for Multi Meter Supply Points) in respect of Water or Sewerage Services.

The CMA will perform these aggregations using the following formula:

Charge Formula:

$$SDVC_{LPCMS} = \sum EDC_{CMS}$$

Where:

$SDVC_{LPCMS}$ is the Settlement Day Volumetric Charge payable by the relevant Licensed Provider and notionally payable by Scottish Water in respect of any SPIDs subject to a Temporary Transfer for each Service Element (e.g. Chargeable Meter Size); and $\sum EDC_{CMS}$ is the sum of the Estimated Daily Volumetric Charges payable by the Licensed Provider and notionally payable by Scottish Water in respect of any SPIDs subject to a Temporary Transfer for each Service Element (e.g. Chargeable Meter Size).

Volume Formula

$$SDV_{LPCMS} = \sum DV_{CMS}$$

Where:

SDV_{LPCMS} is Settlement Day Volume for the Licensed Provider or for SW to each Service Element; and $\sum DV_{CMS}$ is the sum of the Daily Volumes supplied by the Licensed Provider or by SW for each Service Element.

Details of how these aggregated charges are reported are provided in CSD0201 Settlement Timetable and Reporting

Invoice Period (Monthly) Aggregation

The CMA will aggregate the Settlement Day Volumetric Charges payable by each Licensed Provider and notionally payable by Scottish Water in respect of any SPIDs subject to a Temporary Transfer for each Invoice Period as follows:

$$IPVC_{LPCMS} = \sum SDVC_{LPCMS}$$

Where:

$IPVC_{LPCMS}$ is the Invoice Period Volumetric Charge payable by the LP or notionally payable by SW for each Service Element over the Invoice Period; and

$\sum SDVC_{LPCMS}$ is the sum of the Settlement Day Volumetric Charges payable by the Licensed Provider or notionally payable by SW for each Service Element over the Invoice Period.

The volume formula will be as follows:

$$IPV_{LPCMS} = \sum SDV_{LPCMS}$$

Where:

IPV_{LPCMS} is the Volume supplied for the Licensed Provider or for SW to each Service Element over the Invoice Period; and

$\sum SDV_{LPCMS}$ is the sum of the Settlement Day Volumes for the Licensed Provider or for SW to each Service Element over the Invoice Period.

Details of how these aggregated charges are reported are provided in CSD0201 Settlement Timetable and Reporting.

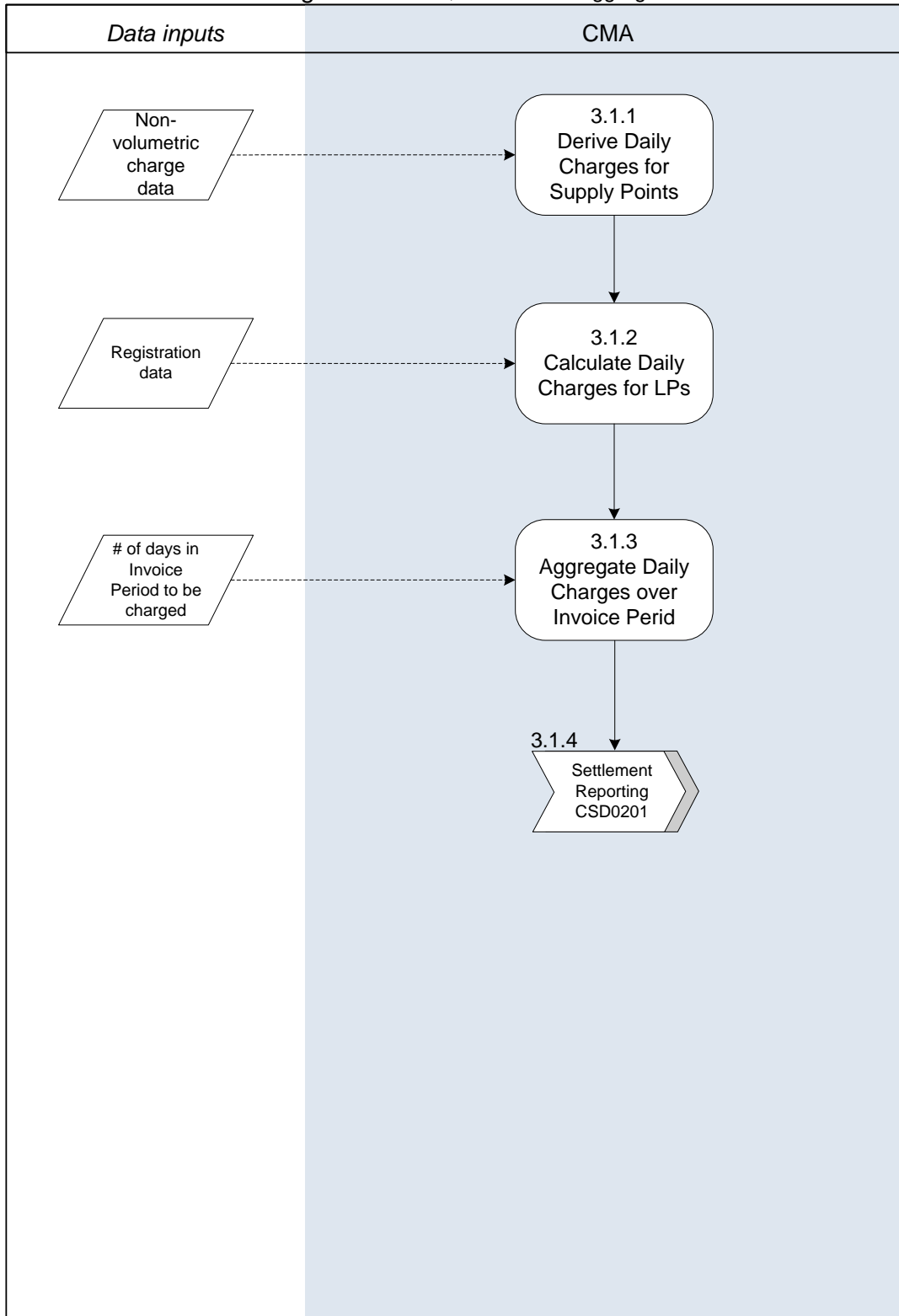
2.3 Trade Effluent Charge Calculations

The CMA will calculate daily Trade Effluent Volumetric and Non-Volumetric charges (ie the Daily Operating Charge and the Daily Availability Charge) in accordance with CSD0207. It will then apply the relevant discounts in accordance with CSD0207, and sum the charges over the Invoice Period.

3. Process Diagrams

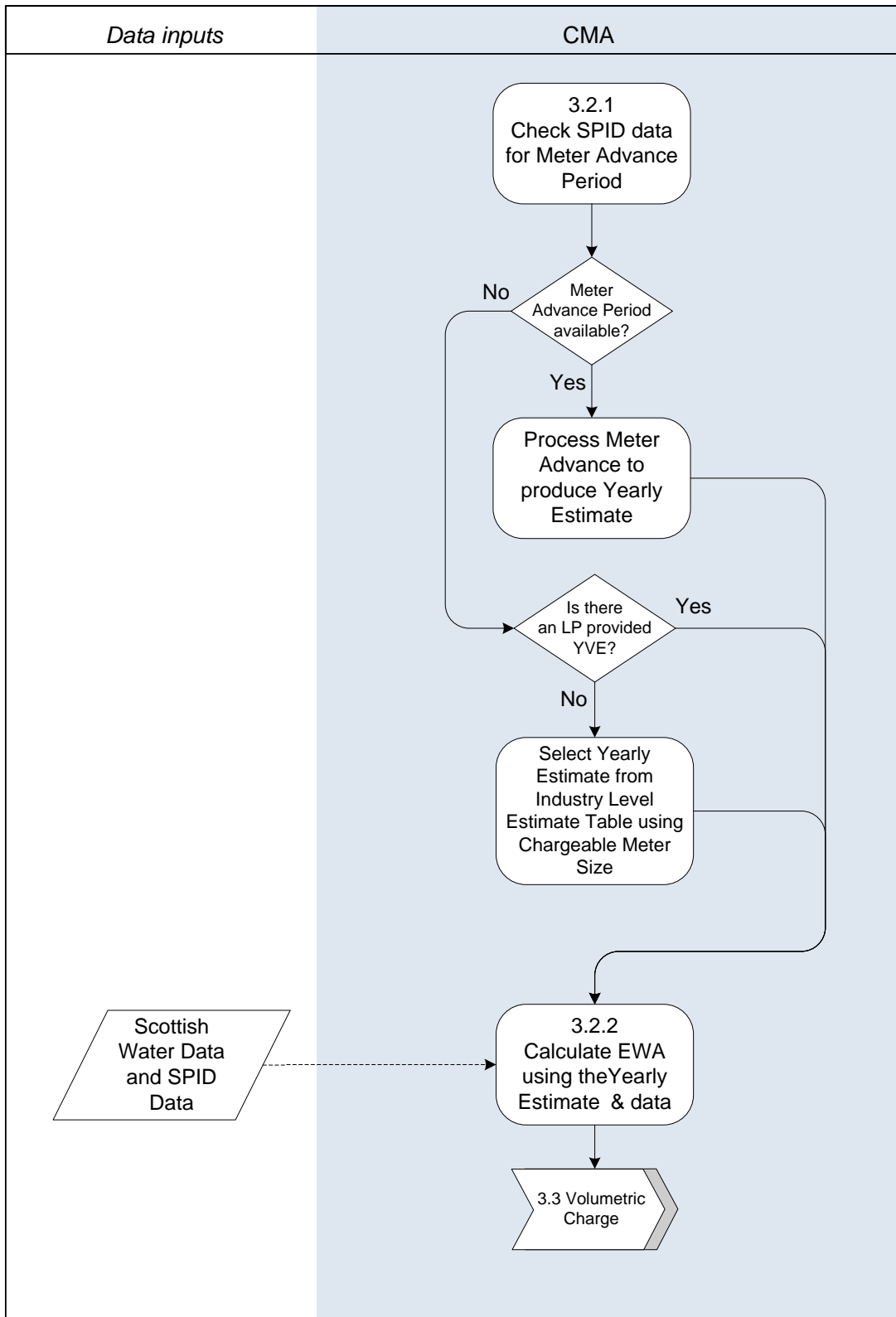
3.1. Non-Volumetric Charge -Calculation, Allocation & Aggregation

Updated 12 Apr 2007



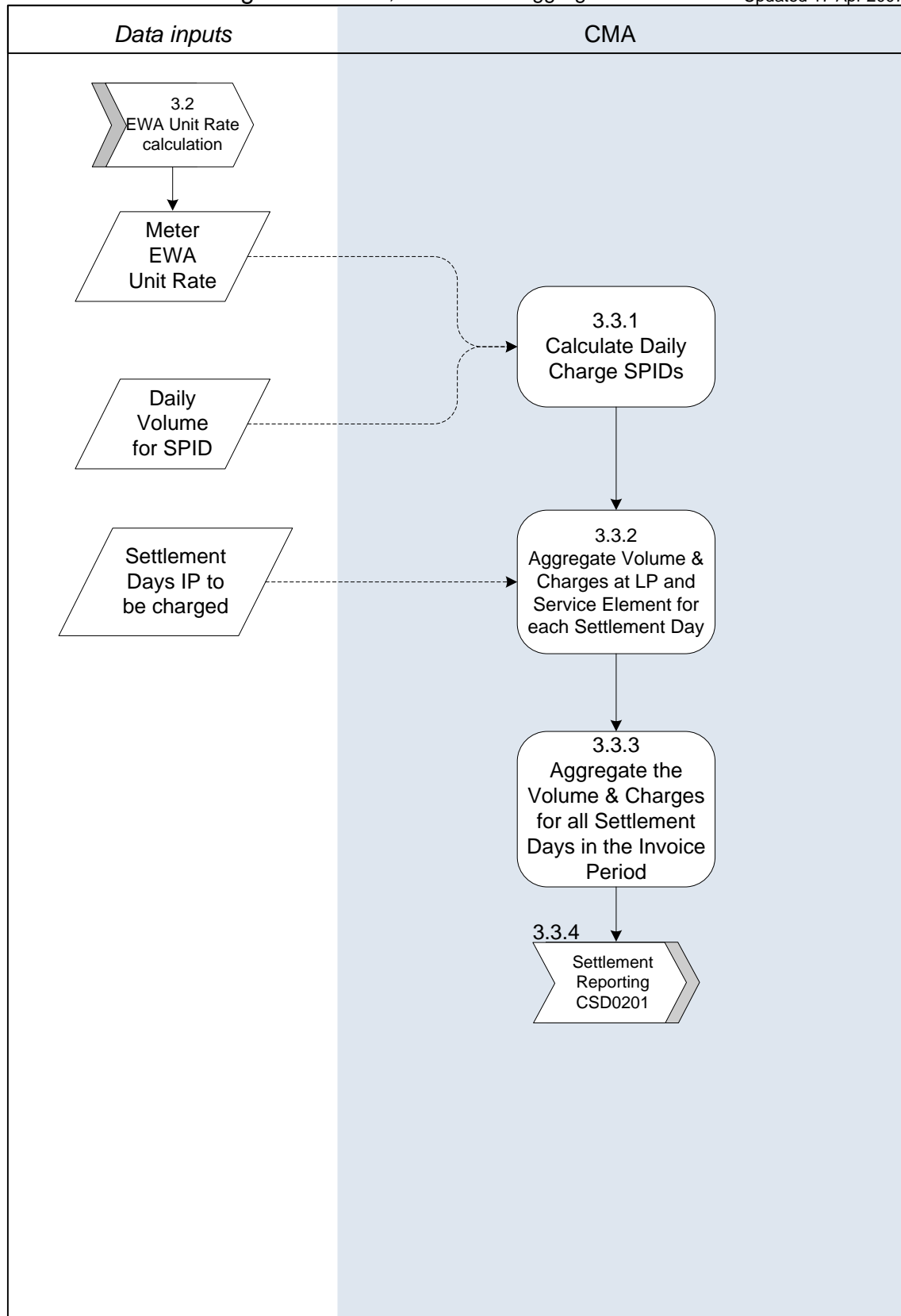
3.2 Calculation of EWA unit cost

Updated 2nd March 2010



3.3 Volumetric Charge -Calculation, Allocation & Aggregation

Updated 17 Apr 2007



4. Interface and Timetable Requirements

4.1 Non-Volumetric charge Processing

Step Ref:	When	Requirement	From	To	Information	Method
3.1.1	As received or updated	Calculate the Daily Non-Volumetric Charges	CMA		Rateable Value Rate	CMA internal
3.1.2		Daily Non-Volumetric Charge production, aggregation and allocation for Settlement Day (SD)	CMA		Applicable Daily Non-Volumetric Charges Number of Supply Points and meters attributable to each Service Element [Licensed Provider registration/ SW] Settlement Day (SD)	CMA internal
3.1.3		Aggregate charges for each Supply Point in the Invoice Period	CMA		Supply Point's Daily Non-Volumetric Charges Settlement Days in Invoice Period	CMA internal
3.1.4	As required for Settlement Runs P1, R1, R2, R3 and (where applicable) R4	Provide data to the Settlement Report function	CMA	CMA	As above in 3.1.3.	CMA internal

4.2 Not Used

4.3 Volumetric Charge calculation, allocation and aggregation process

Step Ref:	When	Requirement	From	To	Information	Method
3.3.1	As new Daily Volumes are derived	Calculate Estimated Daily Volumetric Charge (Service Element level)	CMA		Estimated Weighted Average Unit Rate Daily Volume for Supply Point	CMA internal
3.3.2		Aggregate Daily Volumes and Estimated Daily Volumetric Charges for each Licensed Provider and Service Element for each Settlement Day				CMA internal
3.3.3		Aggregate all Settlement Day Volumes and Volumetric Charges, for each Settlement Day within an Invoice Period				CMA internal
3.3.4	As required for Settlement Runs P1, R1, R2, R3 and (where applicable) R4.	Provide data to the Settlement Report function	CMA	CMA		CMA internal

4.4 Not Used

Appendix 1 –Transition Arrangements

The CMA shall apply the following transition arrangements when calculating Wholesale Charges. Scottish Water shall notify the CMA that each of the transition arrangements is in place (as appropriate), unless otherwise stated.

APP 1.1: Supply Points with 20 mm Meters

Supply Points containing 20mm Meter(s) are subject to a phasing premium on their Water Services volume greater than the allocated tranche and less than the capacity volume threshold. The phasing premium applies to all Meters with a chargeable size between 1mm and 20mm (inclusive). Any reference to 20mm Meters in the remainder of this section applies to all Meters with a chargeable size between 1mm and 20mm (inclusive).

This charge applies to both Rateable Value assessed and Metered Supply Points.

This applies for both the Capacity Volume Charge and the Standard Volume Charge associated to Volume at a Supply Point. The percentage premium is set out in the Wholesale Charges Scheme.

The allocation of this percentage will be performed by adding the following component for each 20mm Meter at a Supply Point to the normal EWA and AWA Unit Rates:

$$P_{20mm} = \frac{PP_Y * (B1 + CVP) * (CVT - VFA)}{EAV}$$

Where:

P_{20mm} is the premium Unit Rate for the 20mm Meter relating to a Supply Point;

PP_Y is the premium percentage for the Year;

B1 is the Unit Rate for Band one;

CVP is the Capacity Volume Price;

CVT is the Volume Limit associated with the Capacity Volume Charge for a 20mm Meter;

VFA is the Volume Limit associated with the Meter's Allocated Tranche; and

EAV is the Estimated Annual Volume supplied to the Supply Point over the Year.

Where the EAV is equal or less than any Volume Limit the CMA will substitute EAV into the calculation.

The 20mm premium is not applicable to any 20mm Meter at a Supply Point that was formerly under a large-user volume agreement.

The charging arrangements for the 20mm premium at a Multi-Meter Supply Point where one of the Meters has a chargeable size of 0mm are set out in Appendix 2, section 5.

APP 1.2: Formerly large-user volume agreements (LUVA)

In order to phase changes in Wholesale Charges, Supply Points at premises that were formerly under a large user volume agreement from Scottish Water will receive an adjustment on their Standard Volume Charge for Water Service volumes greater than 100,000m³.

The percentage changes for the phasing adjustments are shown in the Wholesale Charges Scheme.

Supply Points that were formerly under large-user volume agreements will be notified to the CMA by Scottish Water.

The allocation of this percentage will be performed by adding the following component to the normal EWA and AWA Unit Rates:

$$P_{LUVA} = \frac{(LPP1 * B1 * (V1 - VLL)) + (LPP2 * B2 * (V2 - V1)) + (LPP3 * B3 * (V3 - V2))}{EAV}$$

Where:

P_{LUVA} is the LUVA price adjustment component for the Supply Point;

LPP1, LPP2 and LPP3 are the percentage change for the Year of for the three bands³;

VLL is the Volume Limit associated with the LUVA (i.e. 100,000m³);

B1 is the Unit Rate for Band one;

V1 is the Volume Limit associated with Band one;

B2 is the Unit Rate for Band two;

V2 is the Volume Limit associated with Band two;

B3 is the Unit Rate for Band three; and

V3 is the Volume Limit associated with Band three; and

EAV is the Estimated Annual Volume supplied to the Supply Point over the Year.

Where the EAV is equal or less than any Volume Limit the CMA will substitute EAV into the calculation.

The Commission will arrange notification of the termination of these arrangements to the CMA in a format to be agreed with the CMA.

³ The percentage changes LPP1, LPP2 and LPP3 in the above formula have the same sign as the Wholesale Charges Scheme, but are entered as their negatives in the entry screens to the Central Systems.

Appendix 2 –Non-Standard Calculations for Supply Points

The CMA shall apply the following non-standard arrangements when calculating Wholesale Charges. Scottish Water shall notify the CMA in each case where a non-standard arrangement applies unless otherwise stated. The non-standard arrangements apply to both Water and Sewerage Services unless otherwise stated.

APP 2.1: The Water and Sewerage Services Charges (Exemption) (Scotland) Regulations 2002 as amended

Supply Points relating to premises that qualify for either full or partial exemption under these regulations are either partially or fully exempt from Wholesale Charges for Water and Sewerage Services. The CMA will to be notified of the status, and any subsequent changes of that status, at any Supply Point at premises that are under this status by Scottish Water.

Where any affected Supply Point(s) ceases to qualify for the exemption or begins to qualify for this exemption, or if the degree of exemption changes, Scottish Water shall notify the CMA of this in accordance with CSD0104 (Maintain SPID Data).

The CMA will dis-apply the relevant percentage of the Wholesale Charges for Supply Points at premises that have been notified to the CMA as qualifying for this exemption.

Supply Points relating to premises that qualify for exemption will each be credited as specified in the Wholesale Charges Scheme. This credit will be applied against the Wholesale Charges for the Licensed Provider(s) Registered at the relevant Supply Point(s). Where a Supply Point transfers to another Licensed Provider, this credit will be applied on a pro-rata basis to each Licensed Provider.

APP 2.2: Services used for Fire-Fighting purposes

Scottish Water shall notify the CMA of any adjustment to the Volume of Water and/or Sewerage Services at premises to which wholesale charges apply. Such an adjustment may be a reduction relating to a fire-fighting allowance or a burst allowance agreed under the Operational Code or an adjustment to Volumetric Charges relating to a meter accuracy test in accordance with Section 54 of the Water (Scotland) Act 1980. This shall be notified to the CMA no later than 10 Business Days before the Tariff Year Settlement Run (RF) in accordance with CSD0104 Section 8. The notification will contain the volume adjustment to be applied to the metered volume and the date range for which such adjustment is to be applied, for each of the affected Water and Sewerage Services Supply Points. The adjusted Yearly Volume will be used to derive the AWA Unit Rate and the volume adjustment will be applied in the Meter Advance Period in which it occurred in order to establish the Wholesale Charges that should have been applied to the adjusted Volume

APP 2.3: Schedule 3 Agreements / D2003 discounts for Pseudo Water Services Supply Points

The CMA will be notified of all Supply Points affected by a Schedule 3 Agreement by Scottish Water or Scottish Water Business Stream, as appropriate as part of the dataset provided under the Transitional Duties (Schedule 5 of the Market Code). The Commission will arrange for the percentage discount to be applied to the calculation of Wholesale Charges for each Supply Point and an effective from date (EFD), which will be notified to the CMA in a format to be agreed with the CMA.

In the case of a Pseudo Water Services Supply Point the CMA will be notified of a 100% discount using the D2003 Schedule 3 Data Item as set out in Section 7.2 of CSD0104 (Maintain SPID Data).

The date of termination of the Schedule 3 Agreement shall be notified by Scottish Water in accordance with CSD0104. (Maintain SPID Data). Where any initial notification was in error, notification of revision will be provided in accordance with CSD0105 (Error Rectification and Retrospective Amendments).

As a result the following formula will be used:

$$C_{S3} = C * (1 - P_{S3})$$

Where:

C_{S3} is the charge associated with the Schedule 3 percentage discount for the Service Element;

C is the charge as calculated for the Service Element being discounted; and

P_{S3} is the percentage discount to be applied following the Commission's determination under paragraph 2 of schedule 3 to the Act in relation to that Schedule 3 Agreement.

APP 2.4: Departures granted under section 29E of the 2002 Act

Following notification by Scottish Water under CSD 0101 (Registration New Connections), or CSD0104 (Maintain SPID Data) of any consent granted by the Commission to Scottish Water to depart from the Wholesale Charges Scheme under section 29E of the 2002 Act for a Supply Point, the CMA will apply the percentage discount] for the Year, or part Year, as relevant.

The date of termination of the arrangements or the percentage so notified shall be notified by Scottish Water in accordance with CSD0104. (Maintain SPID Data). Where the initial notification contained any error, notification of revision will be provided in accordance with CSD0105 (Error Rectification and Retrospective Amendments).

The following formula will be used:

$$C_{29e} = C * (1 - P_{29e})$$

Where:

C_{29e} is the charge associated for the 29E percentage discount for the Service Element;

C is the charge as calculated for the Service Element being discounted; and

P_{29e} is the percentage discount to be applied following the consent granted by the Commission to Scottish Water to depart from the Wholesale Charges Scheme under section 29E of the 2002 Act.

APP 2.5: Meters with a chargeable size of 0mm

A combination Meter contains two separate dials which are represented as separate Meters in the Central Systems but is installed on a single supply and should therefore be charged as a single Meter. In this scenario, meter based annual charges are applicable to the larger meter dial, based on its chargeable size, but are suppressed at the smaller dial by applying a chargeable size of 0mm.

Volumetric charges apply to all consumption recorded on both meter dials.

APP 2.5.1 Non-Volumetric Charges

No non-volumetric charges for either water or sewerage are applied to a Meter with a chargeable size of 0mm.

APP 2.5.2 Volumetric Charges

For any Meters with a chargeable meter size of 0mm, all consumption through the Meter is treated as follows:

- The allocated tranche and capacity volume at the 0mm Meter are treated as being zero when calculating the aggregated values across all Meters that apply at the Supply Point. The same arrangements would apply for both Water and Sewerage.
- The 20mm phasing premium (set out in Appendix 1, section 2) does not apply to water consumption at the 0mm Meter.