

DCC User Gateway Interface Design Specification

Annex - Service Request Definitions 1 – Product Management Service

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1 Product Management Service (1 – PMS)

This section sets out the full content of the DCC Product Management Service by providing the overarching service content that includes: service request and response message types, data content items and User access roles.

Service Name	ProductManagement	Service Id	1
Service Objective	<p>To allow a DCC Service User to manage the mode of operation, price or tariff at a specified meter id, such that the meter can update its configuration and confirm that the request has either completed or the reason for its failure.</p> <p>The Product Management service provides DCC Service Users with the ability to effect the terms of their contractual relationship with a consumer at a meter point by requesting that the device be set to operate a particular tariff, price, mode or debt configuration.</p>		
Business Context Statement	<p>The DCC Service User agrees to supply energy to a consumer at a defined cost and mode of payment (including any debt). Once agreement has been reached the DCC Service User initiates a Product Management service request to configure the meter according to the agreement with the consumer.</p> <p>This service may be initiated by a variety of events, such as:</p> <ul style="list-style-type: none"> • Change of Tenancy • Change of Supplier • New product offerings • Customer initiated • Supplier price changes 		
User Roles	<p>The following user roles have access to the list of service requests which make up the Product Management Service:</p> <ul style="list-style-type: none"> • Electricity Import Suppliers (EIS) • Gas Import Suppliers (GIS) 		

Table 1 Overview of Product Management Service

The mapping between the Product Management Services and the Devices they apply to is defined as follows:

Service Reference	Service Reference Variant	Name	Business Target ID
1.1	1.1.1	Update Import Tariff (Primary Element)	ESME GSME
1.1	1.1.2	Update Import Tariff (Secondary Element)	ESME (Twin Element)
1.2	1.2.1	Update Price (Primary Element)	ESME GSME
1.2	1.2.2	Update Price (Secondary Element)	ESME (Twin Element)
1.5	1.5	Update Meter Balance	ESME GSME
1.6	1.6	Update Payment Mode	ESME GSME
1.7	1.7	Reset Tariff Block Counter Matrix	ESME

Table 2 PMS - Service Requests / Devices

For each of the PMS Service Requests supported by the DCC User Gateway, this section details:

- the reference to the appropriate section of the XML Schema (see XML Schema – document 3 of this documentation set)
- the structure of each Service Request and Response with examples (if specific to the Service Request)
- if applicable, Service Request specific Validation and Response Codes

This section should be read in conjunction with the Main Document of this documentation set section 9 (which describes the general formatting for all Service Requests and Service Responses) and with the XSD (XML Schema – document 3 of this documentation set).

1.1 Update Import Tariff (1.1)

SMETS2 or later

This Service Request maps to two GBCS Use Cases and each Use Case requires its own Request ID. Therefore the 1.1 Service Request has been broken into two parts: 1.1.1 (Primary Element) and 1.1.2 (Secondary Element).

SMETS1

This Service Request maps to Service Reference Variant 1.1.1 (Primary Element).

1.1.1 Update Import Tariff (Primary Element) (1.1.1)

Service Request Name	UpdateImportTariff
Service Reference	1.1
Service Request Variant Name	UpdateImportTariff(PrimaryElement)
Service Reference Variant	1.1.1
Service Request Objective	To enable a DCC Service User to send a new tariff structure to a ESME/GSME for a specified meter id, such that the meter can update its configuration and confirm that the operation has either completed or the reason for its failure.
Business Context Statement	<p>The DCC Service User requires a new or updated tariff to be applied to a specified device. The assumption is that there are unlikely to be scenarios where a tariff structure would change without an associated change in prices so this service request includes both tariff structure and price data items (also included in 1.2 – see section 1.2). This service request would be initiated in the following scenarios:</p> <ul style="list-style-type: none">• new customer (CoT)• new supplier (CoS)• customer requests move to new tariff with same supplier• customer offer (tariff period) expired and Standard tariff now appropriate• customer changes mode (CR to PP/PP to CR) and new tariff required

User Role Access	<ul style="list-style-type: none">Electricity Import Supplier (EIS)Gas Import Supplier (GIS)
Security Classification	Critical and non-sensitive SMETS2 or later: <i>GBCS XREF: SME.C.C</i>

Service Request Narrative
(SMETS2 or later)

1. This Service Request is used for creating a new tariff on the Smart Meter where the initial condition of the tariff is unknown or for updating existing tariffs over time on a specified ESME/GSME
2. This Service Request also sets the initial price associated with the specified Tariff so Service Request 1.2.1 is not required to be sent in addition to this Service Request for the initial Tariff Setting. Service Request 1.2.1 is only applicable for any subsequent updates to the Tariff price. See section 1.2.1
3. For Electricity, when a Service User has defined either a Time Of Use tariff structure or a Block tariff structure, the DCC Data Systems shall populate any unused prices ("TOUPrice" or "BlockPrice" Data Item) in the Command with a value of zero GBP/EUROs per kWh up to the expected maximum of eighty prices that the Electricity Smart Meter requires within the Command, applicable to either a TOU rate or for each block as appropriate. This relates to DCC System processing when creating the GBCS Command as part of the Transform.
4. For Gas, when a Service User has defined either a Time Of Use tariff structure or a Block tariff structure, the DCC Data Systems shall populate any unused prices ("TOUPrice" or "BlockPrice" Data Item) in the Command with a value of zero 1000th pence/cent per kWh up to the expected maximum of four prices that the Gas Smart Meter requires within the Command, applicable to either a TOU rate or for each block as appropriate. This relates to DCC System processing when creating the GBCS Command as part of the Transform.
5. This Service Request updates the tariff and price on the Primary Element of an Electricity Smart Meter or on a Gas Smart Meter. A separate Service Request 1.1.2 is used to update the Secondary Element on an Electricity Smart Meter. See section 1.1.2
6. This Service Request updates the following data items as specified in SMETS,
 - a. *Standing Charge*
 - b. *Tariff Block Price Matrix*
 - c. *Tariff Block Price Matrix TOU*
 - d. *Tariff Switching Table*
 - e. *Tariff Threshold Matrix*
 - f. *Tariff Threshold Matrix Blocks*
 - g. *Tariff TOU Price Matrix*
7. The SeasonStartDate is active from midnight (00:00) UTC.
8. Guidance note: When setting a tariff on an ESME, the Import Supplier should define each DayProfile such that the first ProfileSchedule has a StartTime of midnight (00:00:00.00) to ensure that consumption is recorded on the expected Tariff

Register. If a DayProfile starts at a time other than midnight, the Service Request will be transformed successfully and may be processed successfully by an ESME. However, unexpected results may arise when later reading consumption registers as an ESME may not have processed the period between midnight and the StartTime of the first ProfileSchedule as expected.

9. Guidance note regarding block thresholds. A set of BlockThreshold values may contain up to 3 different threshold elements. Users are not obliged to populate all 3 possible elements, but there are some consequences of leaving them unpopulated.

a. ESME: Where a User does not provide a BlockThreshold value, the DCC will NOT populate the associated block threshold value in the GBCS command. However, if the block tariff is selected without a block threshold defined, or the block threshold does not align with the block price, the meter behaviour may not be as expected.

b. GSME: Where a User does not provide a BlockThreshold value the DCC will populate the associated GBCS Command with a value of 2⁴⁸-1(281474976710655) to ensure that all 3 BlockThreshold values are set in the associated Command. Please note some meters may reject multiple block thresholds of 2⁴⁸-1(281474976710655).

GBCS Cross Reference	Electricity	Gas
GBCS Message Code	0x0019	0x006B
GBCS Use Case	ECS01a	GCS01a
GBCS Use Case Name	Set Tariff and Price on ESME	Set Tariff and Price on GSME
SMETS1 Applicability	Yes	Yes

Service Request Narrative
(SMETS1)

1. The behaviour of DCC for this Service Request with regard to SMETS1 Devices is equivalent to the behaviour for SMETS2 or later Devices except:
2. Prices may be set for Block tariffs or Time of Use tariffs but not both.
3. Population of unused prices in the tariff, i.e. those not specified in the Service Request by the Service User, shall be to the relevant maximum number for SMETS1 Devices, rather than eighty prices as for SMETS2 Devices.
4. SMETS1 Smart Meters are not required to support Currency Units as a Configuration Data Item, therefore the S1SP shall discard any value in the CurrencyUnits fields when setting values on the Smart Meter. This discarding of values shall not result in an error in the SMETS1 Response.
5. For a SMETS1 GSME, processing shall include the SMETS1 required capture of information in to the Billing Data Log (with its SMETS1 meaning), and so may therefore not include capturing a value for the Total Consumption Register (with its SMETS1 meaning),
6. For SMETS1 ESME, processing shall include the SMETS1 required capture of information in to the Billing Data Log (with its SMETS1 meaning), and so may therefore not include capturing values for the Total Active Import Register (with its SMETS1 meaning) or the Tariff TOU Block Register Matrix.
7. Guidance regarding block thresholds differs from SMETS2.
 - a. For the Elster ESME only, the meter will reject a command if any block threshold is not set to 0 when configuring a TOU tariff. For these device models, where a TOU tariff is being used the S1SP will set any block threshold value corresponding to an unpopulated BlockThreshold element in the request to 0. Where a block tariff is being used the S1SP will set any block threshold value corresponding to an unpopulated BlockThreshold element to the maximum value.
 - b. For other meter device models, the DCC will not set unpopulated block threshold values.

Table 3 Update Import Tariff Service Request (Primary Element)

This section should be read in conjunction with the Main Document of this documentation set section 9 (which describes the general formatting for all Service Requests and Service Responses) and with the XSD (XML Schema – document 3 of this documentation set).

1.1.1.1 Service Request

1.1.1.1.1 Format

The Request Body XML element of the XSD (see XML Schema – document 3 of this documentation set) defines the structure of all the Service Requests. The UpdateImportTariff PrimaryElement XML element defines this Service Request and contains all the Data Items to set the tariff and price on the Device and, for Future Dated Requests, the Execution Date and Time.

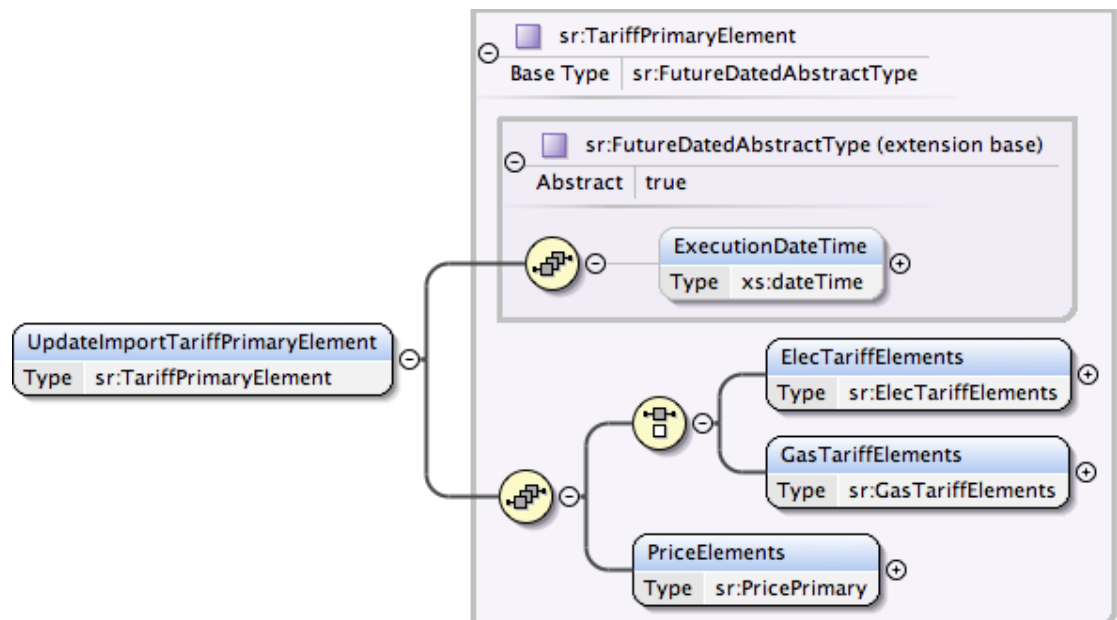


Figure 1 UpdateImportTariffPrimaryElement

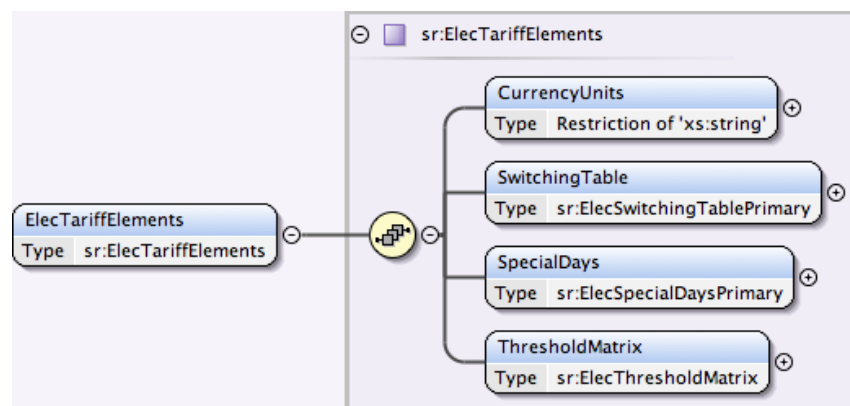


Figure 2 ElecTariffElements

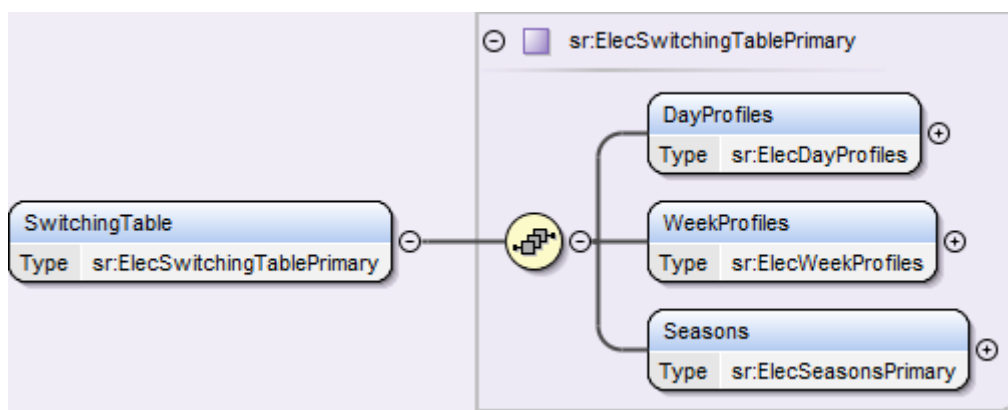


Figure 3 SwitchingTable for Electricity

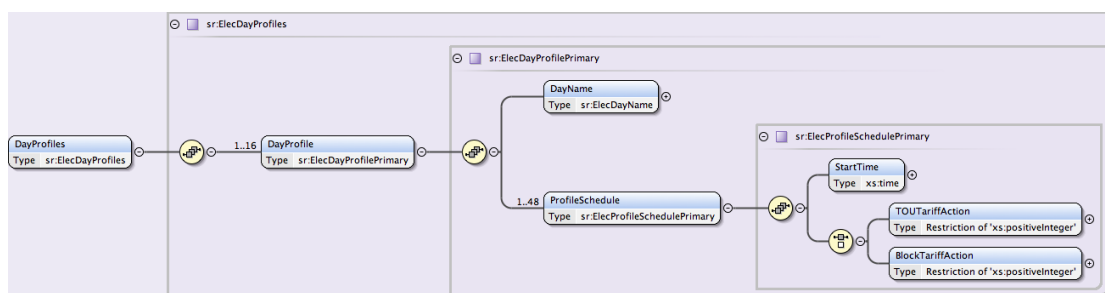


Figure 4 DayProfiles for Electricity

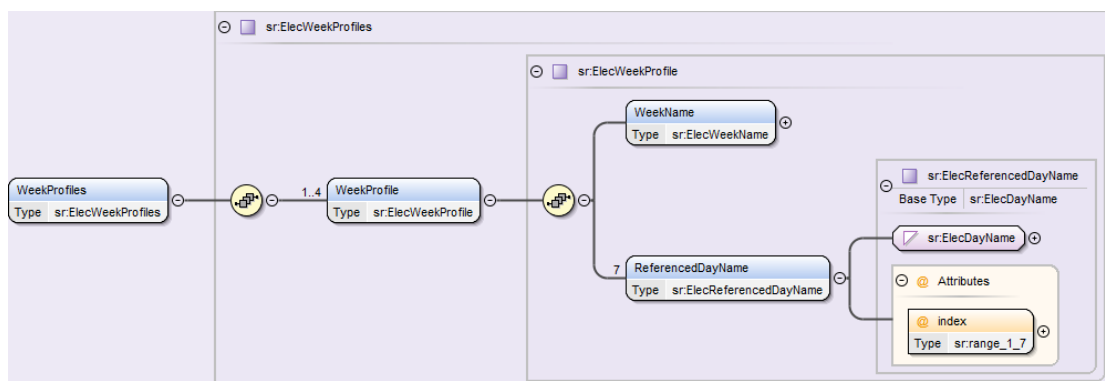


Figure 5 WeekProfiles for Electricity

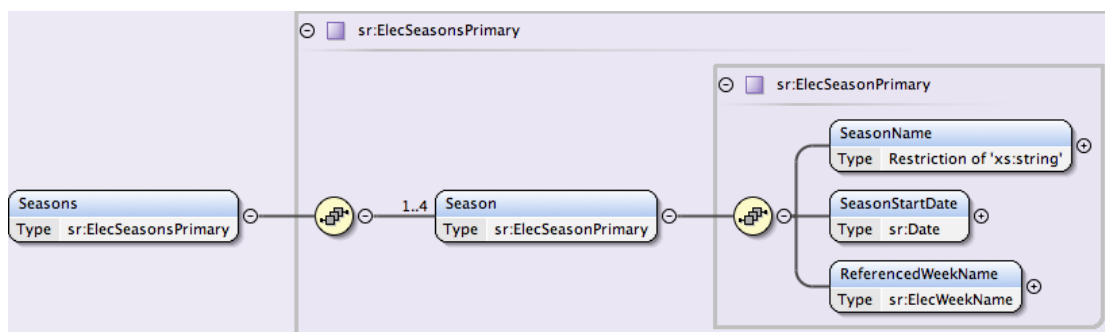


Figure 6 Seasons for Electricity

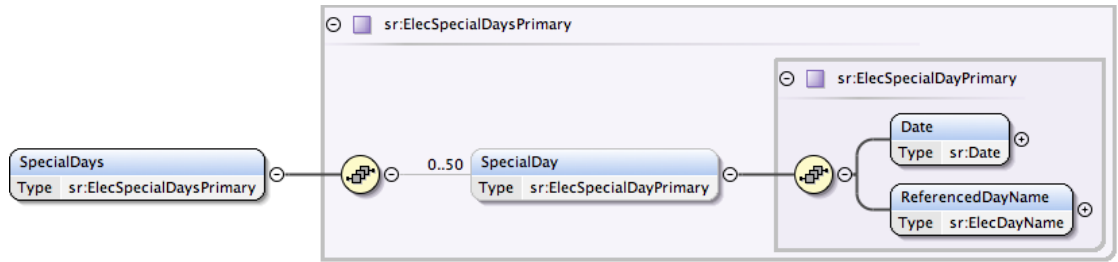


Figure 7 SpecialDays for Electricity

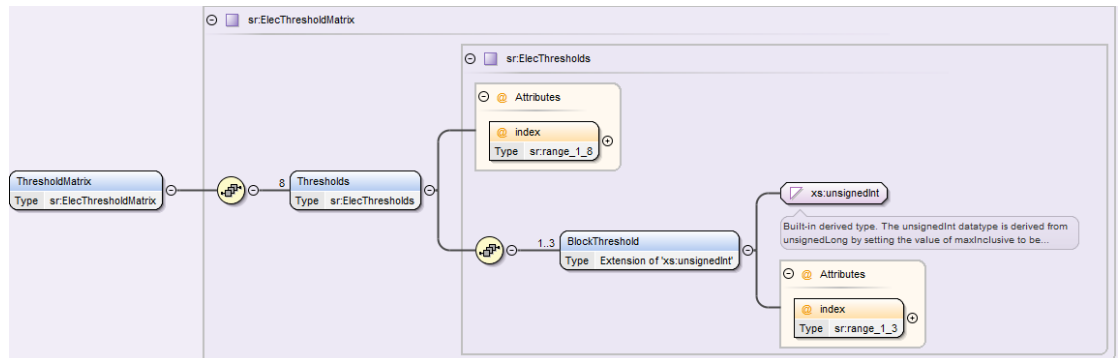


Figure 8 ThresholdMatrix for Electricity

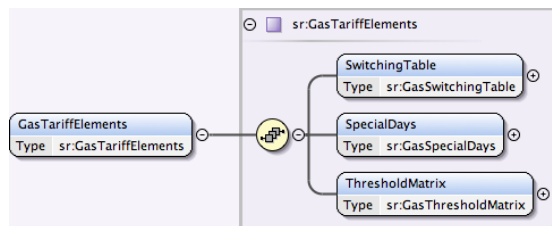


Figure 9 GasTariffElements

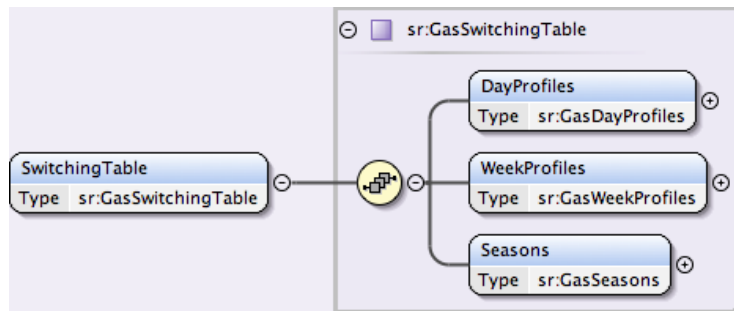


Figure 10 SwitchingTable for Gas

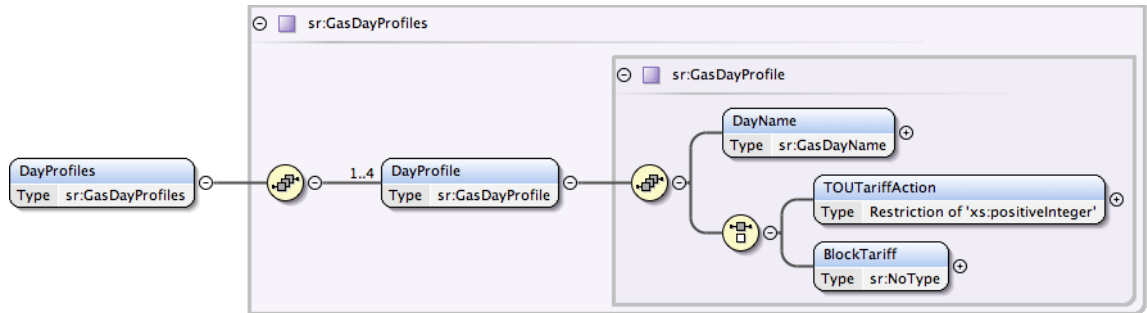


Figure 11 DayProfiles for Gas

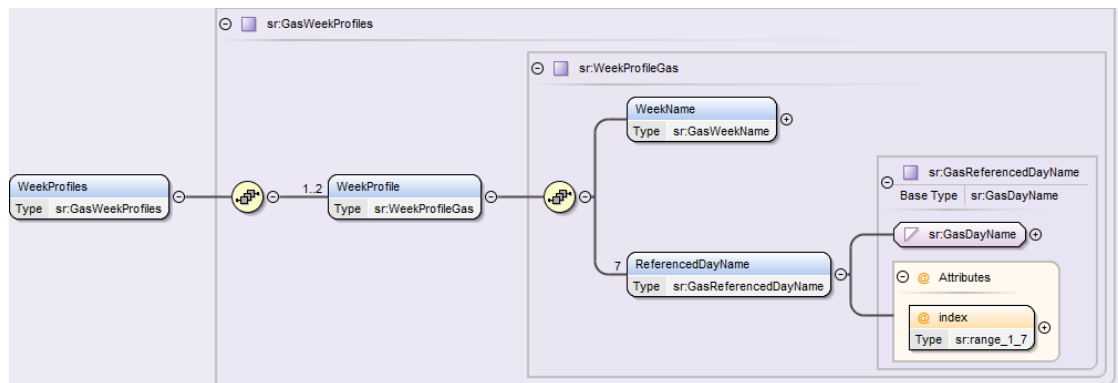


Figure 12 WeekProfiles for Gas

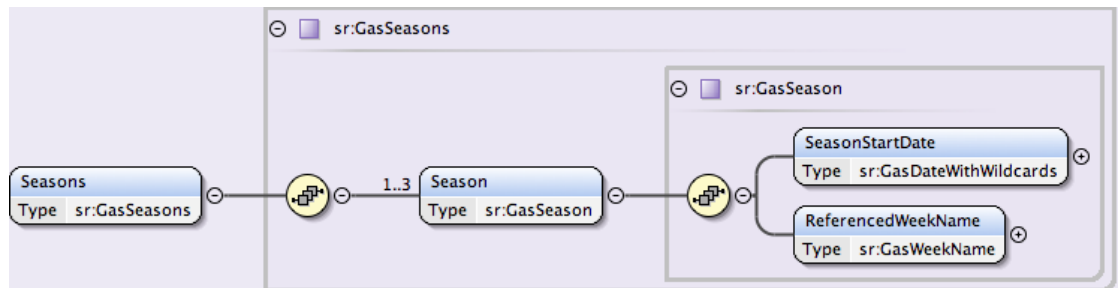


Figure 13 Seasons for Gas

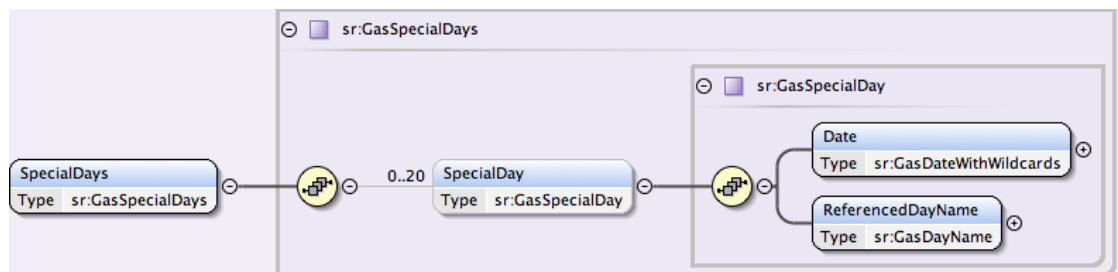


Figure 14 SpecialDays for Gas

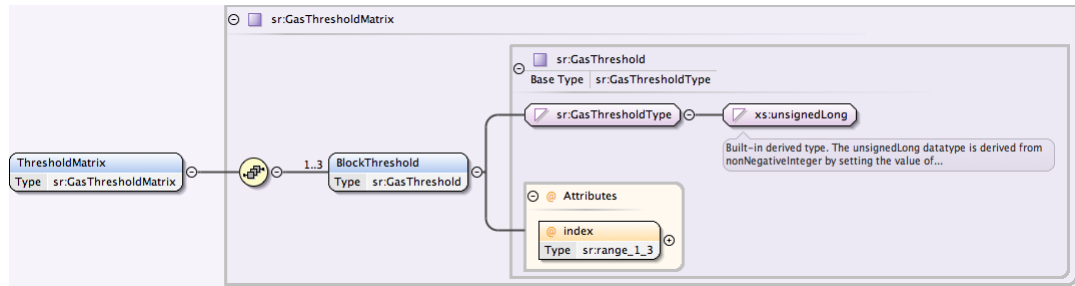


Figure 15 ThresholdMatrix for Gas

1.1.1.1.2 UpdateImportTariffPrimaryElement Definition

The data items contained in the Service Request are defined as:

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
ExecutionDateTime	The UTC date and time the DCC User requires the command to be executed on the Device ID <ul style="list-style-type: none"> Date-time in the future that is either <= current date + 30 days or the date = 31/12/3000 	xs:dateTime	No	None	UTC Date-Time	Non-Sensitive
ElecTariffElements	<ul style="list-style-type: none"> Electricity Smart Meter specific tariff elements 	sr:ElecTariffElements (see section 1.1.1.1.3)	Electricity Smart Meter: Yes Gas Smart Meter: N/A	None	N/A	Non-Sensitive
GasTariffElements	Gas Smart Meter specific tariff elements	sr:GasTariffElements (see section 1.1.1.1.16)	Electricity Smart Meter: N/A Gas Smart Meter: Yes	None	N/A	Non-Sensitive
PriceElements	All the Data Items required to update the price on the Device are defined in Service Request 1.2.1 Update Price (Primary Element)	sr:PricePrimary (see section 1.2.1.1.3)	Yes	None	N/A	Non-Sensitive

Table 4 Update Import Tariff (Primary Element) Service Request Data Items

1.1.1.1.3 ElectricityTariffElements Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
CurrencyUnits	The Currency Units currently used by a Smart Meter for display purposes, which shall be GB Pounds Valid set: <ul style="list-style-type: none"> GBP. GB Pounds ECB. European Central Bank Euros SMETS1: This element cannot be used by SMETS1 Devices but must be supplied since it is mandatory in the Service Request.	Restriction of xs:string (Enumeration)	Yes	None	N/A	Non-Sensitive
SwitchingTable	A calendar defining UTC times, days and dates for switching the Primary Element tariff The Switching Table shall support up to 200 switching rules across all Day Profiles	sr:ElecSwitchingTablePrimary (see section 1.1.1.1.4)	Yes	None	N/A	Non-Sensitive
SpecialDays	A calendar defining special dates for switching the Primary Element tariff	sr:ElecSpecialDaysPrimary (see section 1.1.1.1.12)	Yes ¹	None	N/A	Non-Sensitive
ThresholdMatrix	A 8 (threshold definitions) x 3 (block thresholds) matrix capable of holding thresholds for controlling Block Tariffs.	sr:ElecThresholdMatrix (see section 1.1.1.1.14)	Yes	None	N/A	Non-Sensitive

Table 5 Update Import Tariff (Primary Element) Service Request - ElectricityTariffElements Data Items

¹ If there are no Special Days, this XML element will be present, but empty, i.e. it will contain 0 SpecialDay elements

1.1.1.1.4 SwitchingTable Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
DayProfiles	Containing up to 16 DayProfile elements	sr:ElecDayProfiles (see section 1.1.1.1.5)	Yes	None	N/A	Non-Sensitive
WeekProfiles	Containing up to 4 WeekProfile elements	sr:ElecWeekProfiles (see section 1.1.1.1.8)	Yes	None	N/A	Non-Sensitive
Seasons	Containing up to 4 Season elements	sr:ElecSeasonsPrimary (see section 1.1.1.1.10)	Yes	None	N/A	Non-Sensitive

Table 6 Update Import Tariff (Primary Element) Service Request - SwitchingTable Data Items

1.1.1.1.5 DayProfiles Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
DayProfile	A profile definition for a single day	sr:ElecDayProfilePrimary (see section 1.1.1.1.6)	Yes	None	N/A	Non-Sensitive

Table 7 Update Import Tariff (Primary Element) Service Request - DayProfiles Data Items

1.1.1.1.6 DayProfile Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
DayName	An identifier for that day that has a number of ProfileSchedule elements associated with it. Note that this is referenced from the WeekProfile element The DayName value must begin at 1 and increment by 1 for each subsequent DayName.	sr:ElecDayName (Restriction of xs:positiveInteger (minInclusive = 1, maxInclusive = 16))	Yes	None	N/A	Non-Sensitive
ProfileSchedule	Array of Actions and Start Times when a Block or TOU action that is executed at that time. For TOU the action indicates the TOU register that consumption is recorded against. For Block the action indicates which one of the 8 threshold definitions is used. Note that it is not necessary to define which block consumption would be recorded against as the device will calculate this based on consumption. A profile schedule can have either a Block or a TOU action.	sr:ElecProfileSchedule Primary (see section 1.1.1.1.7)	Yes ¹	None	N/A	Non-Sensitive

Table 8 Update Import Tariff Service (Primary Element) Request - DayProfile Data Items

¹ Minimum 1 and maximum 48

1.1.1.1.7 ProfileSchedule Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
StartTime	The time at which the action is to execute	xs:time	Yes	None	N/A	Non-Sensitive
TOUTariffAction	Identifier (n) of the Action to be executed for a TOU tariff Valid set: Value between 1 and 48	Restriction of xs:positiveInteger (minInclusive = 1, maxInclusive = 48)	TOU Tariff to be applied: Yes Otherwise: N/A	None	N/A	Non-Sensitive
BlockTariffAction	Identifier (n) of the Action to be executed for a Block tariff Valid set: Value between 1 and 8	Restriction of xs:positiveInteger (minInclusive = 1, maxInclusive = 8)	Block Tariff to be applied: Yes Otherwise: N/A	None	N/A	Non-Sensitive

Table 9 Update Import Tariff (Primary Element) Service Request - ProfileSchedule Data Items

1.1.1.1.8 WeekProfiles Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
WeekProfile	A profile definition for a single week	sr:ElecWeekProfile (see section 1.1.1.1.9)	Yes	None	N/A	Non-Sensitive

Table 10 Update Import Tariff (Primary Element) Service Request - WeekProfiles Data Items

1.1.1.1.9 WeekProfile Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
WeekName	An identifier for the week. The WeekName value must begin at 1 and increment by 1 for each subsequent WeekName.	sr:ElecWeekName (Restriction of xs:positiveInteger (minInclusive = 1, maxInclusive = 4))	Yes	None	N/A	Non-Sensitive
ReferencedDayName	DayName as defined in 1.1.1.1.6	ElecReferencedDayName as defined in 1.1.1.1.6	Yes ¹	None	N/A	Non-Sensitive
Index (Attribute of ReferencedDayName)	Provides an ordering for the ReferencedDayName elements. Monday = 1 Sunday = 7	sr:range_1_7 (xs:positiveInteger from 1 to 7)	Yes	None	N/A	N/A

Table 11 Update Import Tariff (Primary Element) Service Request - WeekProfile Data Items

¹ Minimum 7 and maximum 7

1.1.1.1.10 Seasons Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
Season	A single season definition	sr:ElecSeasonPrimary (see section 1.1.1.1.11) minOccurs = 1 maxOccurs = 4	Yes	None	N/A	Non-Sensitive

Table 12 Update Import Tariff (Primary Element) Service Request - Seasons Data Items

1.1.1.1.11 Season Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SeasonName	An identifier for the season.	Restriction of xs:string (maxLength = 8)	Yes	None	N/A	Non-Sensitive

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SeasonStartDate	The date from which this season is defined to start	sr:Date (with wildcards) (See annex 17)	Yes	None	N/A	Non-Sensitive
ReferencedWeekName	Week name as defined in 1.1.1.1.9	ElecWeekName as defined in 1.1.1.1.9	Yes	None	N/A	Non-Sensitive

Table 13 Update Import Tariff (Primary Element) Service Request - Season Data Items

1.1.1.1.12 SpecialDays Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SpecialDay	A collection of between 0 and 50 Special Day elements	sr:ElecSpecialDayPrimary (see section 1.1.1.1.13)	No	None	N/A	Non-Sensitive

Table 14 Update Import Tariff (Primary Element) Service Request – SpecialDays Data Items

1.1.1.1.13 SpecialDay Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
Date	The date on which the special day applies	sr:Date (with wildcards) (see Annex Section 17)	Yes	None	N/A	Non-Sensitive
ReferencedDayName	ElecDayName as defined in 1.1.1.1.6	ElecDayName as defined in 1.1.1.1.6	Yes	None	N/A	Non-Sensitive

Table 15 Update Import Tariff (Primary Element) Service Request - SpecialDay Data Items

1.1.1.1.14 ThresholdMatrix Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
ThresholdMatrix	A collection of 8 threshold matrix definitions Note that the attribute index provides an ordering for these elements.	sr:ElecThresholdMatrix (see section 1.1.1.1.15)	Yes ¹	None	N/A	Non-Sensitive
Index (Attribute of Thresholds)	Provides an ordering for the Thresholds elements.	sr:range_1_8 (xs:positiveInteger from 1 to 8)	Yes	None	N/A	N/A

Table 16 Update Tariff (Primary Element) Service Request - ThresholdMatrix Data Items

¹ Minimum 8 and Maximum 8

1.1.1.1.15 Thresholds Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
BlockThreshold	Up to 3 threshold values defined within this collection, each value defines the threshold between blocks.	xs:unsignedInt	Yes ¹	None	Wh	Non-Sensitive
Index (Attribute of BlockThreshold)	Provides an ordering for the BlockThreshold elements.	sr:range_1_3 (xs:positiveInteger from 1 to 3)	Yes	None	N/A	N/A

Table 17 Update Tariff (Primary Element) Service Request - Thresholds Data Items

¹ Minimum 1 and Maximum 3

1.1.1.1.16 GasTariffElements Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SwitchingTable	A calendar defining UTC times, days and dates for switching the tariff	sr: GasSwitchingTable (see section 1.1.1.1.18)	Yes	None	N/A	Non-Sensitive
SpecialDays	A calendar defining special dates for switching the Primary Element tariff	sr:GasSpecialDays (see section 1.1.1.1.25)	Yes ¹	None	N/A	Non-Sensitive
ThresholdMatrix	Up to 3 threshold values defined within this collection, each value defines the threshold between blocks	sr:GasThresholdMatrix (see section 1.1.1.1.17)	Yes	None	N/A	Non-Sensitive

Table 18 Update Import Tariff (Primary Element) Service Request - GasTariffElements Data Items

¹ If there are no Special Days, this XML element will be present, but empty, i.e. it will contain 0 SpecialDay elements

1.1.1.1.17 BlockThreshold Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
BlockThreshold	Threshold between one block and the next. Up to 3 can be defined to match the corresponding prices.	sr:GasThresholdType minOccurs = 1 maxOccurs = 3 (xs:unsignedLong , maxInclusive = 281,474,976,710,655)	Yes	None	Wh	Non-Sensitive
Index (Attribute of BlockThreshold)	Provides an ordering for the BlockThreshold elements.	sr:range_1_3 (xs:positiveInteger from 1 to 3)	Yes	None	N/A	N/A

Table 19 Update Import Tariff (Primary Element) Service Request - BlockThreshold Data Items

1.1.1.1.18 GasSwitchingTable Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
DayProfiles	Array of up to 4 DayProfiles defining a DayName identifiers and a list of 4 actions and start times to switch tariff	sr:GasDayProfiles (see section 1.1.1.1.19)	Yes	None	N/A	Non-Sensitive
WeekProfiles	Array of up to 2 elements, each including a WeekName and the Day identifiers to be associated with a day of each day (Monday to Sunday)	sr:GasWeekProfiles (see section 1.1.1.1.21)	Yes	None	N/A	Non-Sensitive
Seasons	Array of 3 elements, each including a Season ID, a Season Start Date and the Week ID associated to that Season ID	sr:GasSeasons (see section 1.1.1.1.23)	Yes	None	N/A	Non-Sensitive

Table 20 Update Import Tariff (Primary Element) Service Request - GasSwitchingTable Data Items

1.1.1.1.19 DayProfiles Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
DayProfile	A profile definition for a single day	sr:GasDayProfile (see section 1.1.1.1.20) minOccurs = 1 maxOccurs = 4	Yes	None	N/A	Non-Sensitive

Table 21 Update Import Tariff (Primary Element) Service Request – DayProfiles Data Items

1.1.1.1.20 DayProfile Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
DayName	An identifier for that day that has a number of ProfileSchedule elements associated with it. Note that this is referenced from the WeekProfile element The DayName value must begin at 1 and increment by 1 for each subsequent DayName.	sr:GasDayName (Restriction of xs:positiveInteger (minInclusive = 1, maxInclusive = 4))	Yes	None	N/A	Non-Sensitive
TOUTariffAction	Identifier (n) of the entry in the Gas TOU Tariff Price Matrix [n] (n between 1 and 4) Valid set: Value between 1 and 4 Note that all TOU rates run from midnight, it is not possible to modify the start time.	Restriction of xs:positiveInteger (minInclusive = 1, maxInclusive = 4)	TOU Tariff to be applied: Yes Otherwise: N/A	None	N/A	Non-Sensitive
BlockTariff	Indicates that the block tariff is active on this day. Note that Gas devices do not support a mixture of TOU and Block tariffs. When defining a block tariff all week profiles need to point to a day profile that is set with a Profile Schedule of BlockTariff.	sr:NoType	Block Tariff to be applied: Yes Otherwise: N/A	None	N/A	Non-Sensitive

Table 22 Update Import Tariff Service (Primary Element) Request - DayProfile Data Items

1.1.1.1.21 WeekProfiles Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
WeekProfile	A profile definition for a single week	sr:WeekProfileGas (see section 1.1.1.1.22) minOccurs = 1 maxOccurs = 2	Yes	None	N/A	Non-Sensitive

Table 23 Update Import Tariff (Primary Element) Service Request – WeekProfiles Data Items

1.1.1.1.22 WeekProfile Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
WeekName	An identifier for the week. The WeekName value must begin at 1 and increment by 1 for each subsequent WeekName.	sr:GasWeekName (Restriction of xs:positiveInteger (minInclusive = 1, maxInclusive = 2))	Yes	None	N/A	Non-Sensitive
ReferencedDayName	DayName as defined in 1.1.1.1.20 Note that the attribute index provides an ordering for these elements.	DayName as defined in 1.1.1.1.20	Yes ¹	None	N/A	Non-Sensitive
Index (Attribute of ReferencedDayName)	Provides an ordering for the ReferencedDayName elements. Monday = 1 Sunday = 7	sr:range_1_7 (xs:positiveInteger from 1 to 7)	Yes	None	N/A	N/A

Table 24 Update Import Tariff (Primary Element) Service Request - WeekProfile Data Items

¹ Minimum 7 and maximum 7

1.1.1.1.23 Seasons Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
Season	A definition for a single season	sr:GasSeason (see section 1.1.1.1.24) minOccurs = 1 maxOccurs = 3	Yes	None	N/A	Non-Sensitive

Table 25 Update Import Tariff (Primary Element) Service Request – Seasons Data Items

1.1.1.1.24 Season Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SeasonStartDate	The date from which this season is defined to start	sr:GasDateWithWildcards (See Annex 17)	Yes	None	N/A	Non-Sensitive
ReferencedWeekName	WeekName as defined in 1.1.1.1.22	WeekName as defined in 1.1.1.1.22	Yes	None	N/A	Non-Sensitive

Table 26 Update Import Tariff (Primary Element) Service Request - Season Data Items

1.1.1.1.25 SpecialDays Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SpecialDay	A collection of between 0 and 20 Special Days	sr:GasSpecialDay (see section 1.1.1.1.26)	No	None	N/A	Non-Sensitive

Table 27 Update Import Tariff (Primary Element) Service Request – SpecialDays Data Items

1.1.1.1.26 SpecialDay Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
Date	The date on which the special day applies	sr:GasDateWithWildcards (See Annex 17)	Yes	None	N/A	Non-Sensitive
ReferencedDayName	DayName as defined in 1.1.1.1.6	sr:GasDayName as defined in 1.1.1.1.20	Yes	None	N/A	Non-Sensitive

Table 28 Update Import Tariff (Primary Element) Service Request - SpecialDay Data Items

1.1.1.1.27 Applicable Modes of Operation

The Modes of Operation applicable to this Service Request are (see Main Document of this documentation set section 2.3 for Modes of Operation definitions):

Service	Transform	On Demand	DCC Only	Future Dated	DSP Scheduled
SMETS2 or later	Yes	Yes	No	Device	No
SMETS1	No	Yes	No	DSP	No

Table 29 Update Import Tariff (Primary Element) Modes of Operation

1.1.1.1.28 Applicable Command Variant Values

The Command Variant values applicable to this Service Request are (see Main Document of this documentation set section 3 for Command Variant definitions):

Service	CV = 1	CV = 2	CV = 3	CV = 4	CV = 5	CV = 6	CV = 7	CV = 8
SMETS2 or later	No	No	No	Yes	Yes	Yes	Yes	No
SMETS1	No	No	No	Yes	No	No	No	No

Table 30 Update Import Tariff (Primary Element) Command Variant Values

1.1.1.1.29 Validation

This Service Request specific validation is as follows (see Main Document of this documentation set section 7 for generic access control checks and Annex section 17.2 for Execution Date Time) validation):

Validation Check	Process	Response Code
Does the number of switching rules exceed 200?	Switching Table shall support up to 200 switching rules across all Day Profiles, calculate the number defined in the Service Request and report an error if it exceeds 200.	E010101

Validation Check	Process	Response Code
For SMETS1 Service Requests, does the Service Request contain both Block tariff and Time of Use tariff prices?	SMETS1 Service Requests are not permitted to populate both Block tariff and Time of Use tariff prices, as indicated by the use of the HybridTariff XML element.	E010102

Table 31 Update Import Tariff (Primary Element) Service Request Validation

1.1.1.1.30 Sample Request

There are three versions applicable to this Service Request

- Transform Service Request
- Signed Pre-command
- SMETS1 Service Request. Same format as Transform Service Request

Sample requests are given in Annex Introduction Appendix 2. The specific information for this Service Request (Body) is as follows:

Please note only a subset of the TariffSwitchingTable has been included for illustration purposes. Due to its size, the sample has been split into 3 figures.

```
<UpdateImportTariffPrimaryElement>

  ← See Figure 17 Figure 17 for details of ElectricityTariffElements →

  ← See Figure 37 Figure 37 for details of PriceElements →

</UpdateImportTariffPrimaryElement>
```

Figure 16 Update Import Tariff (Primary Element) Transform Request (Body) Format

```
<ElecTariffElements>
  <CurrencyUnits>GBP</CurrencyUnits>
  <SwitchingTable>
    <DayProfiles>
      <DayProfile>
        <DayName>1</DayName>
        <ProfileSchedule>
          <StartTime>00:00:00.00Z</StartTime>
          <TOUTariffAction>1</TOUTariffAction>
        </ProfileSchedule>
      </DayProfile>
      <DayProfile>
        <DayName>2</DayName>
        <ProfileSchedule>
          <StartTime>00:00:00.00Z</StartTime>
          <TOUTariffAction>1</TOUTariffAction>
        </ProfileSchedule>
        <ProfileSchedule>
          <StartTime>12:00:00.00Z</StartTime>
          <TOUTariffAction>2</TOUTariffAction>
        </ProfileSchedule>
      </DayProfile>
    </DayProfiles>
  </SwitchingTable>
</ElecTariffElements>
```

```

        </ProfileSchedule>
    </DayProfile>
</DayProfiles>
<WeekProfiles>
    <WeekProfile>
        <WeekName>1</WeekName>
        <ReferencedDayName index="1">1</ReferencedDayName>
        <ReferencedDayName index="2">1</ReferencedDayName>
        <ReferencedDayName index="3">1</ReferencedDayName>
        <ReferencedDayName index="4">1</ReferencedDayName>
        <ReferencedDayName index="5">1</ReferencedDayName>
        <ReferencedDayName index="6">2</ReferencedDayName>
        <ReferencedDayName index="7">2</ReferencedDayName>
    </WeekProfile>
</WeekProfiles>
<Seasons>
    <Season>
        <SeasonName>ALL</SeasonName>
        <SeasonStartDate>
            <Year><NonSpecifiedYear></NonSpecifiedYear></Year>
            <Month><NonSpecifiedMonth></NonSpecifiedMonth></Month>
            <DayOfMonth><NonSpecifiedDayOfMonth></NonSpecifiedDayOfMonth></DayOfMonth>
            <DayOfWeek><NonSpecifiedDayOfWeek></NonSpecifiedDayOfWeek></DayOfWeek>
        </SeasonStartDate>
        <ReferencedWeekName>1</ReferencedWeekName>
    </Season>
</Seasons>
</SwitchingTable>
<SpecialDays>
    <SpecialDay>
        <Date>
            <Year><SpecifiedYear>2015</SpecifiedYear></Year>
            <Month><SpecifiedMonth>12</SpecifiedMonth></Month>
            <DayOfMonth><SpecifiedDayOfMonth>25</SpecifiedDayOfMonth></DayOfMonth>
            <DayOfWeek><NonSpecifiedDayOfWeek></NonSpecifiedDayOfWeek></DayOfWeek>
        </Date>
        <ReferencedDayName>2</ReferencedDayName>
    </SpecialDay>
</SpecialDays>
<ThresholdMatrix>
    <Thresholds index="1">
        <BlockThreshold index="1">0</BlockThreshold>
    </Thresholds>
    <Thresholds index="2">
        <BlockThreshold index="1">0</BlockThreshold>
    </Thresholds>
    <Thresholds index="3">
        <BlockThreshold index="1">0</BlockThreshold>
    </Thresholds>
    <Thresholds index="4">
        <BlockThreshold index="1">0</BlockThreshold>
    </Thresholds>
    <Thresholds index="5">
        <BlockThreshold index="1">0</BlockThreshold>
    </Thresholds>
    <Thresholds index="6">
        <BlockThreshold index="1">0</BlockThreshold>
    </Thresholds>
    <Thresholds index="7">
        <BlockThreshold index="1">0</BlockThreshold>
    </Thresholds>
    <Thresholds index="8">

```

```
<BlockThreshold index="1">0</BlockThreshold>
</Thresholds>
</ThresholdMatrix>
</ElecTariffElements>
```

Figure 17 Update Import Tariff (Primary Element) Transform Request Format (ElectricityTariffElements Detail)

1.1.1.2 Responses

The response messages for an "Update Import Tariff (Primary Element)" request follow the generic format for all "Device" response messages, the generic responses applicable to this request are;

- Pre-command
- Acknowledgement
- Service Response (from Device) - GBCSPayload
- Service Response (from Device) - FutureDatedDeviceAlertMessage
- Command for Local Delivery
- Parse Output / SMETS1 Response

Sample responses are given in Annex Introduction Appendix 1, response specific information details are given below.

1.1.1.2.1 Unsuccessful Response

The Response Codes specific to this Service Request are:

Response Code	Response Code Name	Response Code Type	Description
E010101	Too many switching rules defined	Error	Switching Table shall support up to 200 switching rules across all Day Profiles.

Table 32 Update Import Tariff (Primary Element) Service Request Response Codes

1.1.1.2.2 Device Responses and Future Dating

For SMETS2 or later Devices this Service Request's Command contains a fixed number of instructions ('n' = 21) and activation date-time instructions ('m' = 6) for Electricity and a variable number of instructions (7 <= 'n' <= 12) and activation date-time instructions (4 <= 'm' <= 5) for Gas. See Main Document of this documentation set section 9.3.6 for details of the Device Responses returned in the different scenarios. Apart from in the exception cases described there, e.g. cancellation, the relationship between Mode of Operation and Response message types is as follows:

1. On Demand.
 - a. Service Response (from Device) – GBCSPayload
 - i. One Device Response (Command execution outcome containing 'n' results).
2. Future Dated (Device).
 - a. Service Response (from Device) – GBCSPayload

- i. One Device Response (Command storage outcome containing 'n' results)
- b. Service Response (from Device) – FutureDatedDeviceAlertMessage
 - i. 'm' Device Alerts (Command instruction execution outcome). These Device Alerts are described in Annex section 15.4.4. The Device Alert payloads for this particular Service Request will be of the types described in Annex section 15.4.4.3.1 (Electricity) and 15.4.4.3.2 (Gas)

For SMETS1 Devices this Service Request is only available for Mode of Operation On Demand or Future Dated (DSP). In both cases the Response message type is a single SMETS1 Response.

1.1.1.2.3 Parse Output / SMETS1 Response Format

The response to this request returns only status without any substantial payload. The XML type is UpdateImportTariffPrimaryElementRsp.

Parse Responses: Please see Annex section 18.9 for a description of how status-only responses are represented in the MMC XML Schema.

SMETS1 Responses: Please see Annex section 19.7 for a description of how status-only responses are represented in the DUIS XML Schema.

1.1.1.2.3.1 Specific Header Data Items

Data Item	Electricity Response	Gas Response
GBCSHexadecimalMessageCode	0019	006B
<i>GBCS Use Case Number (for information only - not in header)</i>	<i>ECS01a</i>	<i>GCS01a</i>
<i>GBCS Use Case Name (for information only - not in header)</i>	<i>Set Tariff and Price on ESME</i>	<i>Set Tariff and Price on GSME</i>
SupplementaryRemotePartyID	Not Present	Not Present
SupplementaryRemotePartyCounter	Not Present	Not Present
SupplementaryOriginatorCounter	Not Present	Not Present
Timestamp	Present	Present

Table 33 - Update Import Tariff (Primary Element) Parse/ SMETS1 Response Header Data Items

1.1.2 Update Import Tariff (Secondary Element) (1.1.2)

Service Request Name	UpdateImportTariff
----------------------	--------------------

Service Reference	1.1
Service Request Variant Name	UpdateImportTariff(SecondaryElement)
Service Reference Variant	1.1.2
Service Request Objective	To enable a DCC Service User to create a new tariff for second element and update this Tariff on a specified Electricity Smart Meter where the initial condition of the tariff is unknown or for updating existing tariffs for second element.
Business Context Statement	<p>The DCC Service User requires a new or updated tariff to be applied to a specified device. The assumption is that there are unlikely to be scenarios where a tariff structure would change without an associated change in prices so this service request includes both tariff structure and price data items (also included in 1.2 – see section 1.2). This service request would be initiated in the following scenarios:</p> <ul style="list-style-type: none"> • new customer (CoT) • new supplier (CoS) • customer requests move to new tariff with same supplier • customer offer (tariff period) expired and Standard tariff now appropriate • customer changes mode (CR to PP/PP to CR) and new tariff required
User Role Access	<ul style="list-style-type: none"> • Electricity Import Supplier (EIS)
Security Classification	<p>Critical and non-sensitive</p> <p>GBCS XREF: SME.C.C</p>

Service Request Narrative (SMETS2 or later)	<ol style="list-style-type: none"> 1. This Service Request updates the tariff and price on the Secondary Element of a Twin Element Electricity Smart Meter 2. This Service Request updates the following data items as specific din SMETS, <ul style="list-style-type: none"> - <i>Tariff Switching Table</i> - <i>Secondary Tariff TOU Price Matrix</i> - A 1 x 4 matrix containing prices for Time-of-use Pricing Tariffs relating to Supply via the secondary measuring element of the Electricity Meter 3. The SeasonStartDate is active from midnight (00:00) UTC. 4. Guidance note: When setting a tariff on an ESME, the Import Supplier should define each DayProfile such that the first ProfileSchedule has a StartTime of midnight (00:00:00.00) to ensure that consumption is recorded on the expected Tariff Register. If a DayProfile starts at a time other than midnight, the Service Request will be transformed successfully and may be processed successfully by an ESME. However, unexpected results may arise when later reading consumption registers as an ESME may not have processed the period between midnight and the StartTime of the first ProfileSchedule as expected. 	
GBCS Cross Reference	Electricity	Gas
GBCS Message Code	0x00B7	N/A
GBCS Use Case	ECS01c	N/A
GBCS Use Case Name	Set Tariff and Price on ESME secondary	N/A
SMETS1 Applicability	No	N/A

Table 34 Update Import Tariff (Secondary Element) Service Request

This section should be read in conjunction with the Main Document of this documentation set section 9 (which describes the general formatting for all Service Requests and Service Responses) and with the XSD (XML Schema – document 3 of this documentation set).

1.1.2.1 Service Request

1.1.2.1.1 Format

The Request Body XML element of the XSD (see XML Schema – document 3 of this documentation set) defines the structure of all the Service Requests. The UpdateImportTariffSecondaryElement XML element defines this Service Request and contains all the Data Items to set the tariff and price on the Secondary Element of the Meter and, for Future Dated Requests, the Execution Date and Time.

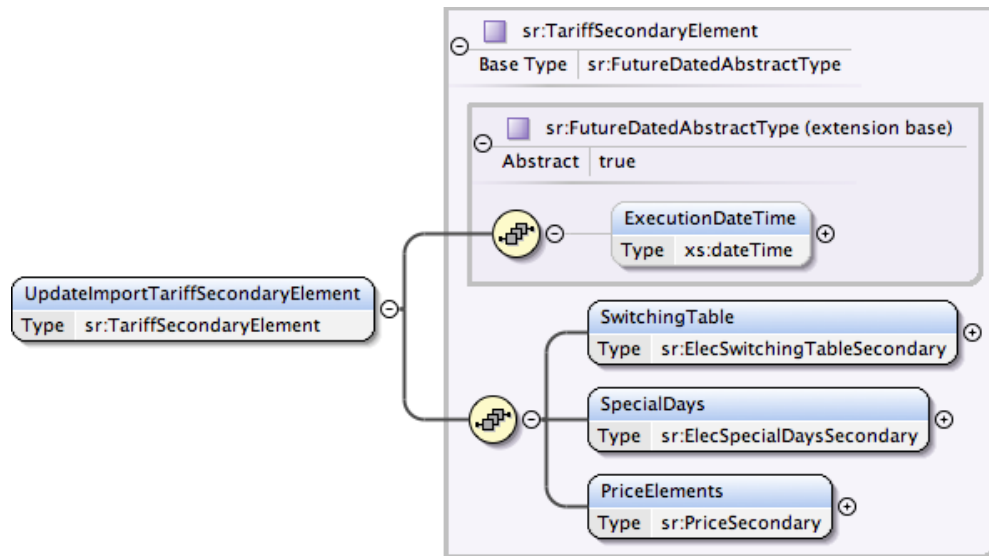


Figure 18 UpdateImportTariffSecondaryElement

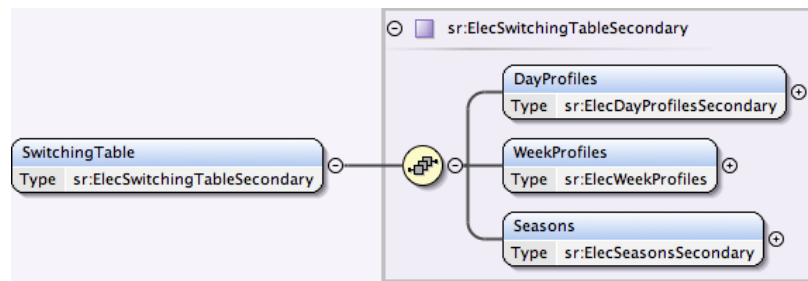


Figure 19 SwitchingTable

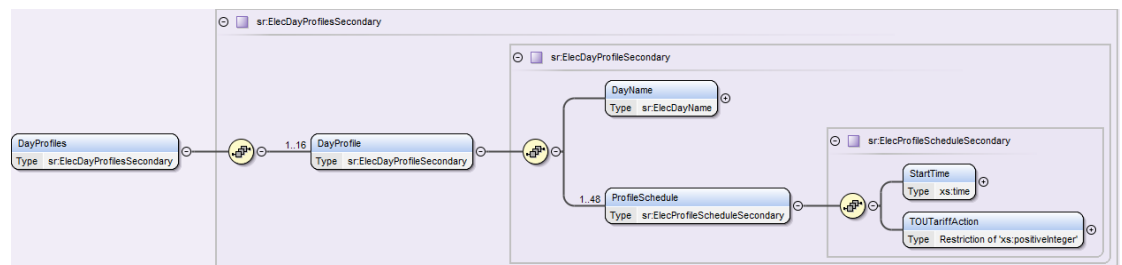


Figure 20 DayProfiles

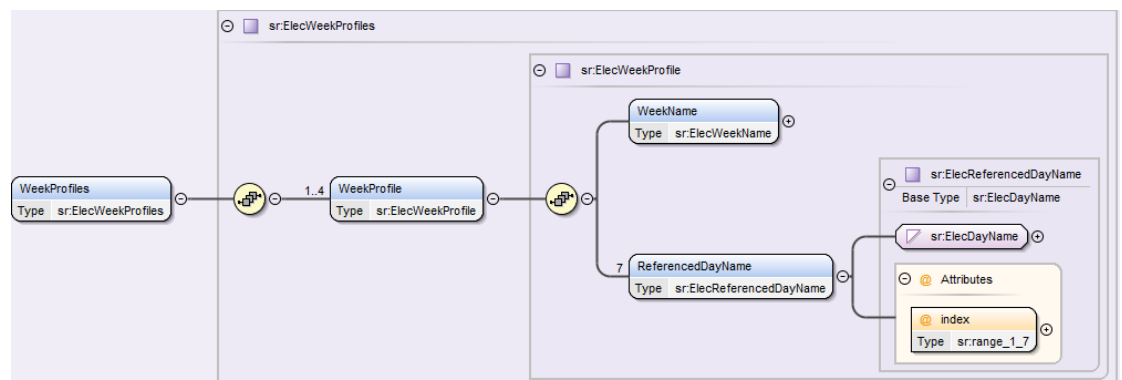


Figure 21 WeekProfiles

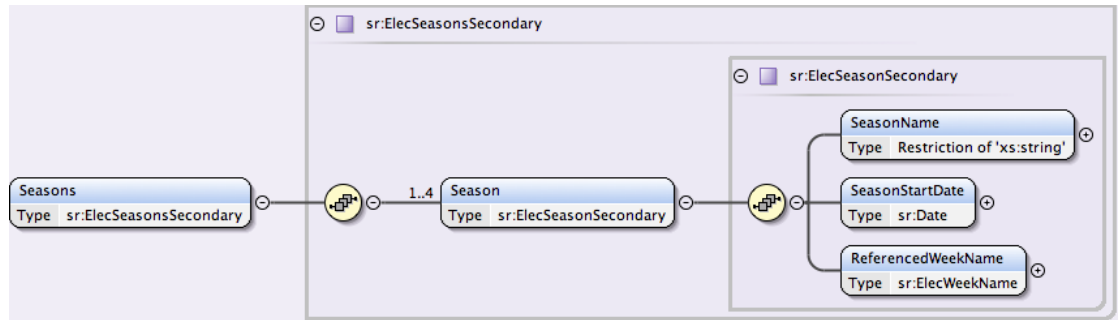


Figure 22 Seasons

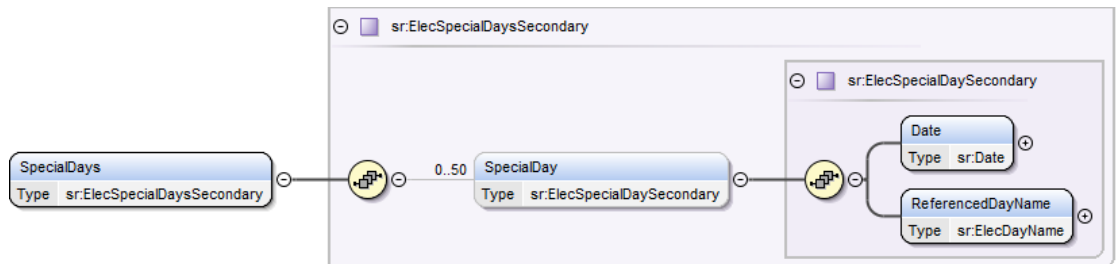


Figure 23 SpecialDays

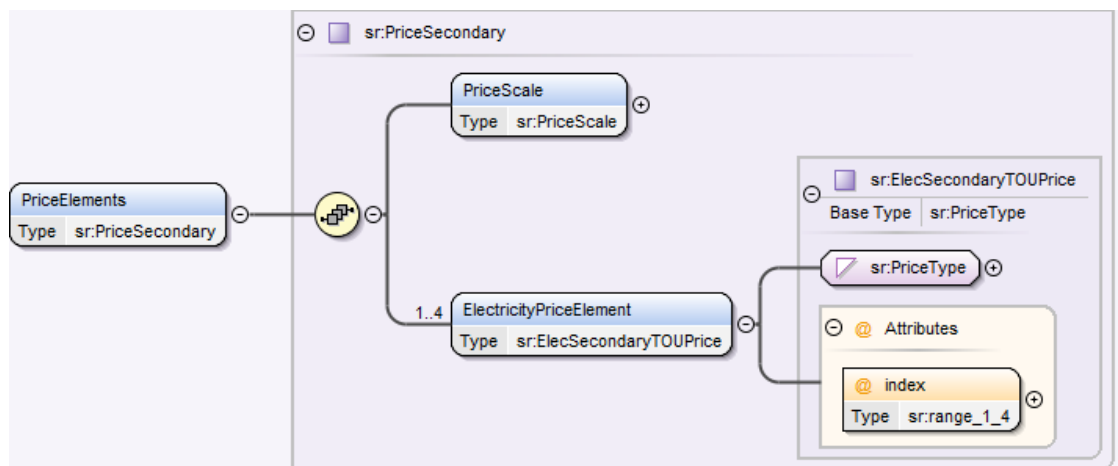


Figure 24 PriceElements

1.1.2.1.2 Specific Data Items Definition

The data items contained in the Service Request are defined as:

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
ExecutionDateTime	<p>The UTC date and time the DCC User requires the command to be executed on the Device ID</p> <ul style="list-style-type: none"> Date-time in the future that is either <= current date + 30 days or the date = 31/12/3000 	xs:dateTime	No	None	UTC Date-Time	Non-Sensitive

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SwitchingTable	A calendar defining UTC times, days and dates for switching the Secondary Element tariff	sr:ElecSwitchingTableSecondary (see section 1.1.2.1.3)	Yes	None	N/A	Non-Sensitive
SpecialDays	A calendar defining special dates for switching the Secondary Element tariff	sr:ElecSpecialDaysSecondary (see section 1.1.2.1.11)	Yes ¹	None	N/A	Non-Sensitive
PriceElements	All the Data Items required to update the price on the Device are defined in Service Request 1.2.2 Update Price (Secondary Element)	sr:PriceSecondary (see section 1.2.2.1.3)	Yes	None	N/A	Non-Sensitive

Table 35 Update Import Tariff (Secondary Element) Service Request Data Items

¹ If there are no Special Days, this XML element will be present, but empty, i.e. it will contain 0 SpecialDay elements

1.1.2.1.3 SwitchingTable Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
DayProfiles	Containing up to 16 DayProfile elements	sr:ElecDayProfilesSecondary (see section 1.1.2.1.4)	Yes	None	N/A	Non-Sensitive
WeekProfiles	Containing up to 4 WeekProfile elements	sr:ElecWeekProfiles (see section 1.1.2.1.7)	Yes	None	N/A	Non-Sensitive
Seasons	Containing up to 4 Season elements	sr:ElecSeasonsSecondary (see section 1.1.2.1.9)	Yes	None	N/A	Non-Sensitive

Table 36 Update Import Tariff (Secondary Element) Service Request - SwitchingTable

1.1.2.1.4 DayProfiles Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
DayProfile	A DayProfile definition containing a DayName and ProfileSchedule elements.	sr:ElecDayProfileSecondary (see section 1.1.2.1.5) minOccurs = 1 maxOccurs = 16	Yes	None	N/A	Non-Sensitive

Table 37 Update Import Tariff (Secondary Element) Service Request – DayProfiles Data Items

1.1.2.1.5 DayProfile Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
DayName	An identifier for that day that has a number of ProfileSchedule elements associated with it. Note that this is referenced from the WeekProfile element The DayName value must begin at 1 and increment by 1 for each subsequent DayName.	sr:ElecDayName (Restriction of xs:positiveInteger (minInclusive = 1, maxInclusive = 16))	Yes	None	N/A	Non-Sensitive

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
ProfileSchedule	Array of up to 48 Actions and Start Times when an action to trigger a tariff switch is to be run.	sr:ElecProfileSchedule Secondary (see section 1.1.2.1.6) minOccurs = 1 maxOccurs = 48	Yes	None	N/A	Non-Sensitive

Table 38 Update Import Tariff (Secondary Element) Service Request – DayProfile Data Items

1.1.2.1.6 ProfileSchedule Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
StartTime	The time at which the action is to execute	xs:time	Yes	None	N/A	Non-Sensitive
TOUTariffAction	Identifier (n) of the Script to be run to apply Secondary TOU Tariff Price Matrix [n] (n between 1 and 4) Valid set: Value between 1 and 4	Restriction of xs:nonNegativeInteger (minInclusive = 1, maxInclusive = 4)	Yes	None	N/A	Non-Sensitive

Table 39 Update Import Tariff (Secondary Element) Service Request – ProfileSchedule Data Items

1.1.2.1.7 WeekProfiles Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
WeekProfile	A collection of WeekName and ReferencedDayName elements.	sr:ElecWeekProfile (see section 1.1.2.1.8) minOccurs = 1 maxOccurs = 4	Yes	None	N/A	Non-Sensitive

Table 40 Update Import Tariff (Secondary Element) Service Request – WeekProfiles Data Items

1.1.2.1.8 WeekProfile Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
WeekName	An identifier for the week. The WeekName value must begin at 1 and increment by 1 for each subsequent WeekName.	sr:ElecWeekName (Restriction of xs:positiveInteger (minInclusive = 1, maxInclusive = 4))	Yes	None	N/A	Non-Sensitive
ReferencedDayName	DayName as defined in 1.1.2.1.5	DayName as defined in 1.1.2.1.5	Yes ¹	None	N/A	Non-Sensitive
Index (Attribute of ReferencedDayName)	Provides an ordering for the ReferencedDayName elements. Monday = 1 Sunday = 7	sr:range_1_7 (xs:positiveInteger from 1 to 7)	Yes	None	N/A	N/A

Table 41 Update Import Tariff (Secondary Element) Service Request – WeekProfile Data Items

¹ Minimum 7 and maximum 7

1.1.2.1.9 Seasons Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
Season	A single definition of a season.	sr:ElecSeasonsSecondary (see section 1.1.2.1.10) minOccurs = 1 maxOccurs = 4	Yes	None	N/A	Non-Sensitive

Table 42 Update Import Tariff (Secondary Element) Service Request – Seasons Data Items

1.1.2.1.10 Season Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SeasonName	An identifier for the season.	Restriction of xs:string (maxLength = 8)	Yes	None	N/A	Non-Sensitive
SeasonStartDate	The date from which this season is defined to start	sr:Date (with wildcards) (See Annex 17)	Yes	None	N/A	Non-Sensitive
ReferencedWeekName	Week name as defined in 1.1.2.1.8	Week name as defined in 1.1.2.1.8	Yes	None	N/A	Non-Sensitive

Table 43 Update Import Tariff (Secondary Element) Service Request – Season Data Items

1.1.2.1.11 SpecialDays Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SpecialDay	A collection of between 0 and 50 Special Days	sr:ElecSpecialDaySecondary (see section 1.1.2.1.12) minOccurs = 0 maxOccurs = 50	No	None	N/A	Non-Sensitive

Table 44 Update Import Tariff (Secondary Element) Service Request - SpecialDays Data Items

1.1.2.1.12 SpecialDay Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
Date	The date on which the special day applies	sr:Date (with wildcards) (see Annex 17)	Yes	None	N/A	Non-Sensitive
ReferencedDayName	DayName as defined in 1.1.2.1.5	DayName as defined in 1.1.2.1.5	Yes	None	N/A	Non-Sensitive

Table 45 Update Import Tariff (Secondary Element) Service Request - SpecialDay Data Items

1.1.2.1.13 Applicable Modes of Operation

The Modes of Operation applicable to this Service Request are (see Main Document of this documentation set section 2.3 for Modes of Operation definitions):

Transform	On Demand	DCC Only	Future Dated	DSP Scheduled
Yes	Yes	No	Device	No

Table 46 Update Import Tariff (Secondary Element) Modes of Operation

1.1.2.1.14 Applicable Command Variant Values

The Command Variant values applicable to this Service Request are (see Main Document of this documentation set section 3 for Command Variant definitions):

CV = 1	CV = 2	CV = 3	CV = 4	CV = 5	CV = 6	CV = 7	CV = 8
No	No	No	Yes	Yes	Yes	Yes	No

Table 47 Update Import Tariff (Secondary Element) Command Variant Values

1.1.2.1.15 Validation

This Service Request specific validation is as follows (see Main Document of this documentation set section 7 for generic access control checks and Annex section 17.2 for Execution Date Time) validation):

Validation Check	Process	Response Code
Does the number of switching rules exceed 200?	Switching Table shall support up to 200 switching rules across all Day Profiles, calculate the number defined in the Service Request and report an error if it exceeds 200.	E010101

Table 48 Update Import Tariff (Secondary Element) Service Request Validation

1.1.2.1.16 Sample Request

There are two versions applicable to this Service Request

- Transform Service Request
- Signed Pre-command

Sample requests are given in Annex Introduction Appendix 2. The specific information for this Service Request (Body) is as follows:

Due to its size, the sample has been split into multiple figures.

<p><UpdateImportTariffSecondaryElement></p> <p>← See Figure 26 for details of Tariff Switching Table →</p> <p>← See Figure 27 for details of Tariff Switching Table Special Days →</p> <p>← See Figure 28 for details of PriceElements →</p> <p></UpdateImportTariffSecondaryElement></p>

Figure 25 Update Import Tariff (Secondary Element) Transform Request (Body) Format

```

<SwitchingTable>
  <DayProfiles>
    <DayProfile>
      <DayName>1</DayName>
      <ProfileSchedule>
        <StartTime>00:00:00.00Z</StartTime>
        <TOUTariffAction>1</TOUTariffAction>
      </ProfileSchedule>
    </DayProfile>
    <DayProfile>
      <DayName>2</DayName>
      <ProfileSchedule>
        <StartTime>00:00:00.00Z</StartTime>
        <TOUTariffAction>1</TOUTariffAction>
      </ProfileSchedule>
      <ProfileSchedule>
        <StartTime>12:00:00.00Z</StartTime>
        <TOUTariffAction>2</TOUTariffAction>
      </ProfileSchedule>
    </DayProfile>
  </DayProfiles>
  <WeekProfiles>
    <WeekProfile>
      <WeekName>1</WeekName>
      <ReferencedDayName index="1">1</ReferencedDayName>
      <ReferencedDayName index="2">1</ReferencedDayName>
      <ReferencedDayName index="3">1</ReferencedDayName>
      <ReferencedDayName index="4">1</ReferencedDayName>
      <ReferencedDayName index="5">1</ReferencedDayName>
      <ReferencedDayName index="6">1</ReferencedDayName>
      <ReferencedDayName index="7">1</ReferencedDayName>
    </WeekProfile>
  </WeekProfiles>
  <Seasons>
    <Season>
      <SeasonName>ALL</SeasonName>
      <SeasonStartDate>
        <Year><NonSpecifiedYear></NonSpecifiedYear></Year>
        <Month><NonSpecifiedMonth></NonSpecifiedMonth></Month>
        <DayOfMonth><NonSpecifiedDayOfMonth></NonSpecifiedDayOfMonth></DayOfMonth>
        <DayOfWeek><NonSpecifiedDayOfWeek></NonSpecifiedDayOfWeek></DayOfWeek>
      </SeasonStartDate>
      <ReferencedWeekName>1</ReferencedWeekName>
    </Season>
  </Seasons>
</SwitchingTable>

```

Figure 26 Update Import Tariff (Secondary Element) Transform Request Format
(TariffSwitchingTable Detail)

```
<SpecialDays>
  <SpecialDay>
    <Date>
      <Year><SpecifiedYear>2015</SpecifiedYear></Year>
      <Month><SpecifiedMonth>12</SpecifiedMonth></Month>
      <DayOfMonth><SpecifiedDayOfMonth>25</SpecifiedDayOfMonth></DayOfMonth>
      <DayOfWeek><NonSpecifiedDayOfWeek></NonSpecifiedDayOfWeek></DayOfWeek>
    </Date>
    <ReferencedDayName>2</ReferencedDayName>
  </SpecialDay>
</SpecialDays>
```

Figure 27 Update Import Tariff (Secondary Element) Transform Request Format (TariffSwitchingTableSpecialDays Detail)

```
<PriceElements>
  <PriceScale>-5</PriceScale>
  <ElectricityPriceElement index="1">1000</ElectricityPriceElement>
  <ElectricityPriceElement index="2">3000</ElectricityPriceElement>
</PriceElements>
```

Figure 28 Update Import Tariff (Secondary Element) Transform Request Format (PriceElements Detail)

1.1.2.2 Responses

The response messages for an "Update Import Tariff(Secondary Element)" request follow the generic format for all "Device" response messages, the generic responses applicable to this request are;

- Pre-command
- Acknowledgement
- Service Response (from Device) - GBCSPayload
- Service Response (from Device) - FutureDatedDeviceAlertMessage
- Command for Local Delivery
- Parse Output

Sample responses are given in Annex Introduction Appendix 1, response specific information details are given below.

1.1.2.2.1 Unsuccessful Response

The Response Codes specific to this Service Request are:

Response Code	Response Code Name	Response Code Type	Description
E010101	Too many switching rules defined	Error	Switching Table shall support up to 200 switching rules across all Day Profiles.

Table 49 Update Import Tariff (Secondary Element) Service Request Response Codes

1.1.2.2.2 Device Responses and Future Dating

This Service Request's Command contains a fixed number of instructions ('n' = 8) and activation date-time instructions ('m' = 3). See Main Document of this documentation set

section 9.3.6 for details of the Device Responses returned in the different scenarios. Apart from in the exception cases described there, e.g. cancellation, the relationship between Mode of Operation and Response message types is as follows:

1. On Demand.
 - a. Service Response (from Device) – GBCSPayload
 - i. One Device Response (Command execution outcome containing 'n' results).
2. Future Dated (Device).
 - a. Service Response (from Device) – GBCSPayload
 - i. One Device Response (Command storage outcome containing 'n' results)
 - b. Service Response (from Device) – FutureDatedDeviceAlertMessage
 - i. 'm' Device Alerts (Command instruction execution outcome). These Device Alerts are described in Annex section 15.4.4. The Device Alert payloads for this particular Service Request will be of the types described in Annex section 15.4.4.3.1

1.1.2.2.3 Parse Output Format

The response to this request returns only status without any substantial payload. The XML type is UpdateImportTariffSecondaryElementRsp.

Please see Annex section 18.9 for a description of how status-only responses are represented in the MMC XML Schema.

See section 1.1.2.2.2 for description of the responses to future dated execution requests.

1.1.1.2.3.2 Specific Header Data Items

Data Item	Electricity Response
GBCSHexadecimalMessageCode	00B7
<i>GBCS Use Case Number (for information only - not in header)</i>	ECS01c
<i>GBCS Use Case Name (for information only - not in header)</i>	Set Tariff and Price on ESME secondary
SupplementaryRemotePartyID	Not Present
SupplementaryRemotePartyCounter	Not Present
SupplementaryOriginatorCounter	Not Present
Timestamp	Present

Table 50 - Update Import Tariff (Secondary Element) Parse Response Header Data Items

1.2 Update Price (1.2)

SMETS2 or later

This Service Request maps to two GBCS Use Cases and each Use Case requires its own Request ID. Therefore the 1.2 Service Request has been broken into two parts: 1.2.1 (Primary Element) and 1.2.2 (Secondary Element).

SMETS1

This Service Request maps to Service Reference Variant 1.2.1 (Primary Element).

1.2.1 Update Price (Primary Element) (1.2.1)

Service Request Name	UpdatePrice
Service Reference	1.2
Service Request Variant Name	UpdatePrice(PrimaryElement)
Service Reference Variant	1.2.1
Service Request Objective	To enable a DCC Service User to send a new currency unit price per time/unit of energy consumed to a meter such that the meter can update its configuration and confirm that the operation has either completed, or the reason for its failure.
Business Context Statement	The DCC Service User requires a new or updated pricing structure to be applied to a specified meter, e.g. following a supplier price change, without changing tariff structure. The price update must be effected within a reasonable period of time after the agreement or after the preceding event (e.g. CoS). This period may be the same day.
User Role Access	<ul style="list-style-type: none"> Electricity Import Supplier (EIS) Gas Import Supplier (GIS)
Security Classification	Critical and non-sensitive SMETS2 or later: <i>GBCS XREF: SME.C.C</i>
Service Request Narrative (SMETS2 or later)	<ol style="list-style-type: none"> This Service Request updates the price on the Primary Element of an Electricity Smart Meter or on a Gas Smart Meter. For Electricity, when a Service User has defined either a Time Of Use tariff structure or a Block tariff structure, the DCC Data Systems shall populate any unused prices ("TOUPrice" or "BlockPrice" Data Item) in the Command with a value of zero GBP/EUROs per kWh up to the expected maximum of eighty prices that the Electricity Smart Meter requires within the Command, applicable to either a TOU rate or for each block as appropriate. For Gas, when a Service User has defined either a Time Of Use tariff structure or a Block tariff structure, the DCC Data Systems shall populate any unused prices ("TOUPrice" or "BlockPrice" Data Item) in the Command with a value of zero 1000th pence/cent per kWh up to the expected maximum of four prices that the Gas Smart Meter requires within the

	Command, applicable to either a TOU rate or for each block as appropriate.	
GBCS Cross Reference	Electricity	Gas
GBCS Message Code	0x00A2	0x00A3
GBCS Use Case	ECS01b	GCS01b
GBCS Use Case Name	Set Price on ESME	Set Price on GSME
SMETS1 Applicability	Yes	Yes
Service Request Narrative (SMETS1)	<p>The behaviour of DCC for this Service Request with regard to SMETS1 Devices is equivalent to the behaviour for SMETS2 or later Devices except:</p> <ol style="list-style-type: none"> 1. Prices may be set for Block tariffs or Time of Use tariffs but not both. 2. Population of unused prices in the tariff, i.e. those not specified in the Service Request by the Service User, shall be to the relevant maximum number for SMETS1 Devices, rather than eighty prices as for SMETS2 Devices. 3. SMETS1 Smart Meters are not required to support Currency Units as a Configuration Data Item, therefore the S1SP shall discard any value in the CurrencyUnits fields when setting values on the Smart Meter. This discarding of values shall not result in an error in the SMETS1 Response. 4. For SMETS1 GSME, processing shall include the SMETS1 required capture of information in to the Billing Data Log (with its SMETS1 meaning), and so may therefore not include capturing a value for the Total Consumption Register (with its SMETS1 meaning), 5. For SMETS1 ESME, processing shall include the SMETS1 required capture of information in to the Billing Data Log (with its SMETS1 meaning), and so may therefore not include capturing values for the Total Active Import Register (with its SMETS1 meaning) or the Tariff TOU Block Register Matrix (with its SMETS2 meanings). 	

Table 51 Update Price (Primary Element) Service Request

This section should be read in conjunction with the Main Document of this documentation set section 9 (which describes the general formatting for all Service Requests and Service Responses) and with the XSD (XML Schema – document 3 of this documentation set).

1.2.1.1 Service Request

1.2.1.1.1 Format

The Request Body XML element of the XSD (see XML Schema – document 3 of this documentation set) defines the structure of all the Service Requests. Its UpdatePricePrimaryElement XML element defines this Service Request and contains all the Data Items to set the price on the Device and, for Future Dated Requests, the Execution Date and Time.

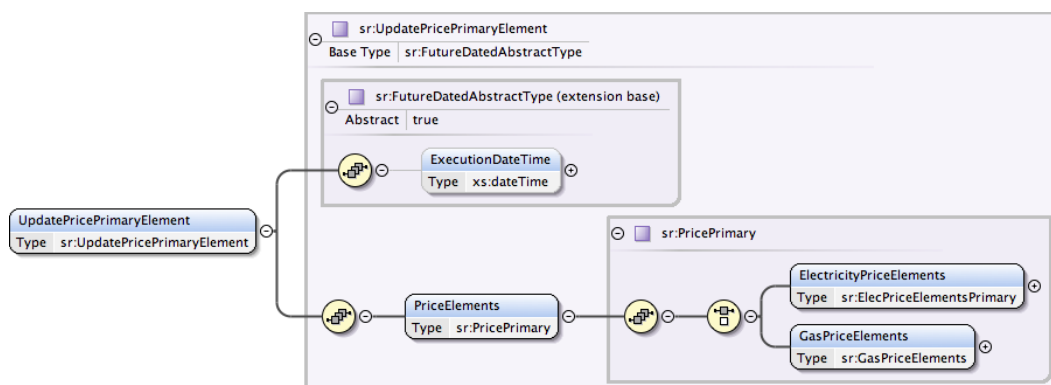


Figure 29 UpdatePricePrimaryElement

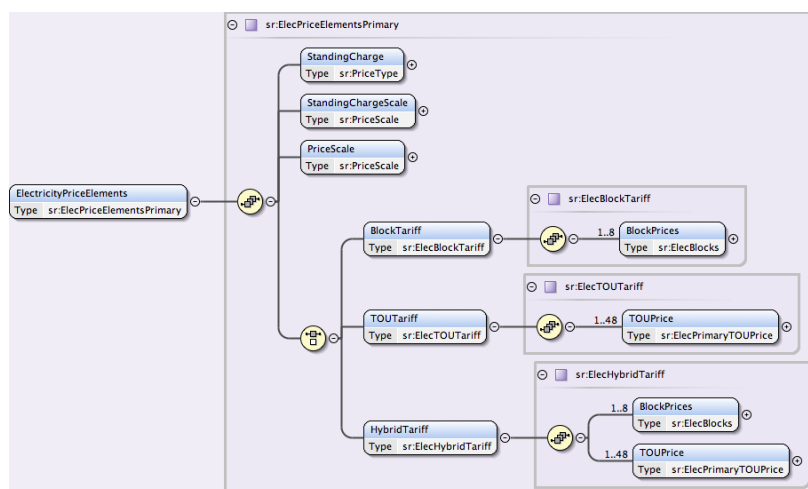


Figure 30 ElectricityPriceElements

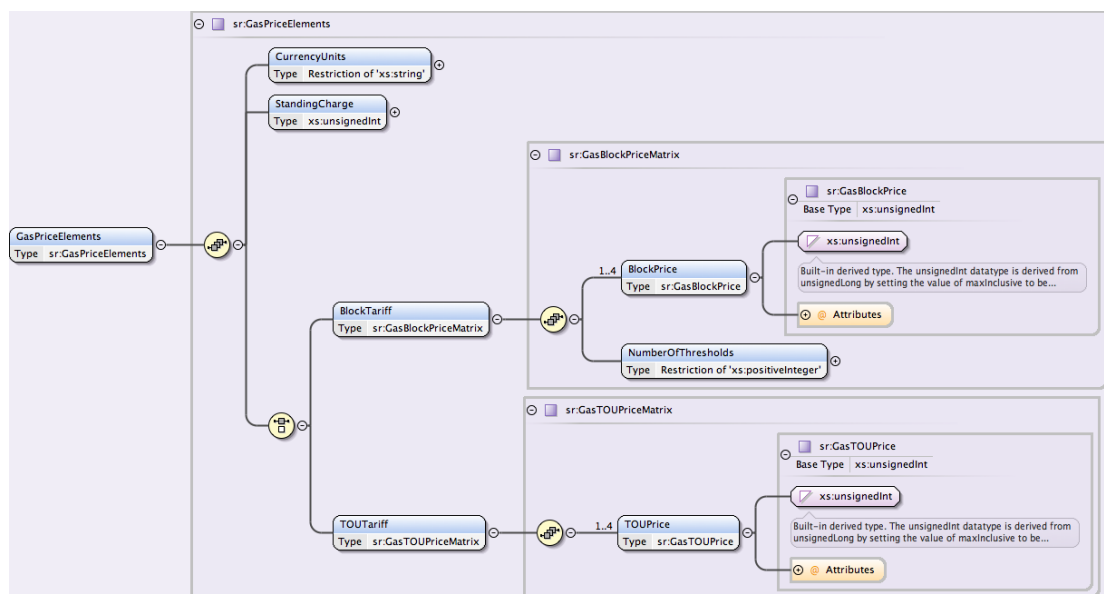


Figure 31 GasPriceElements

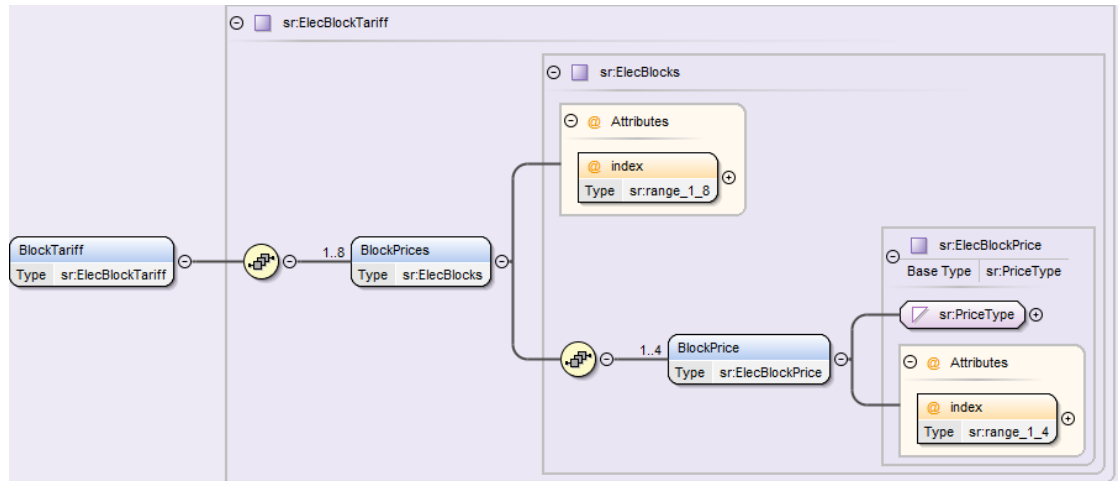


Figure 32 BlockTariff for Electricity

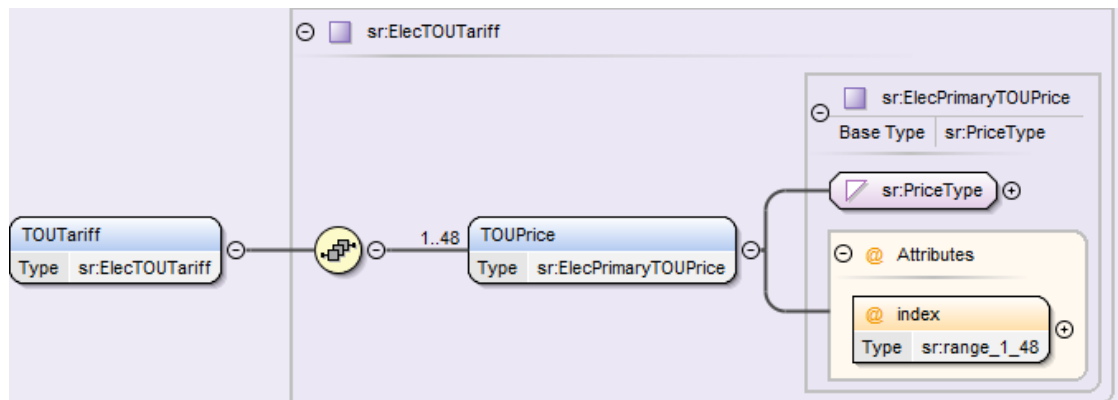


Figure 33 TOUTariff for Electricity

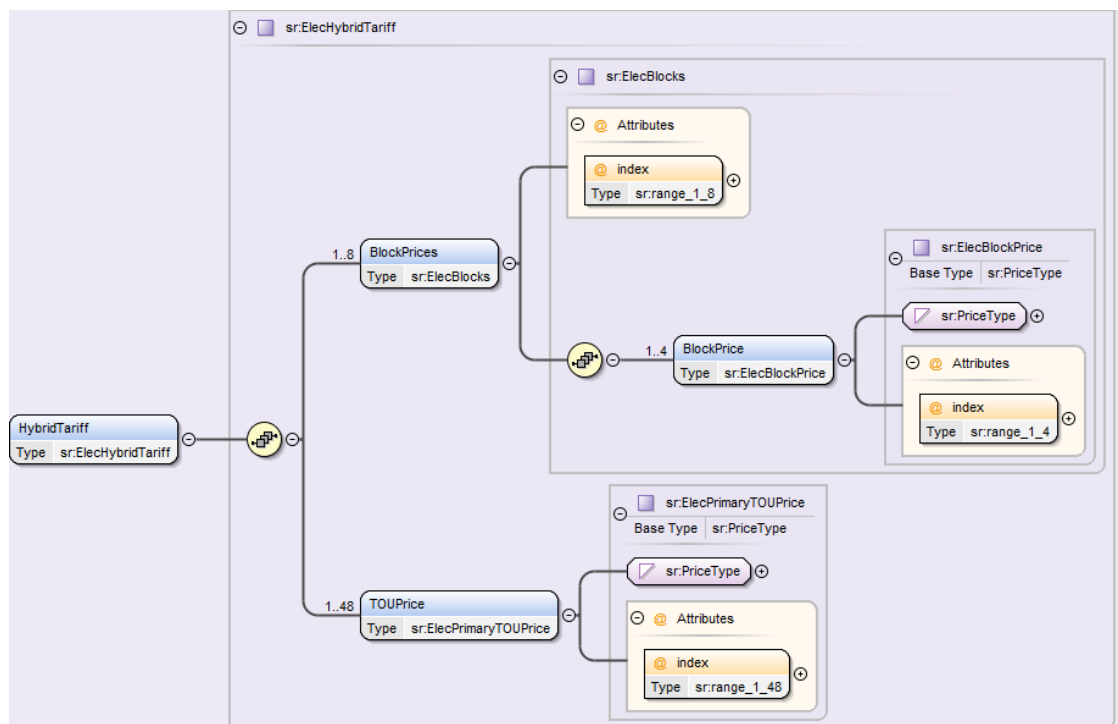


Figure 34 HybridTariff for Electricity

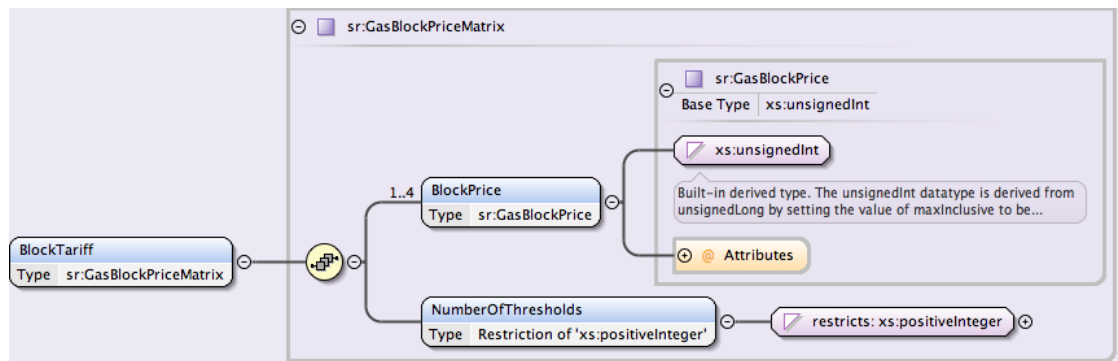


Figure 35 BlockTariff for Gas

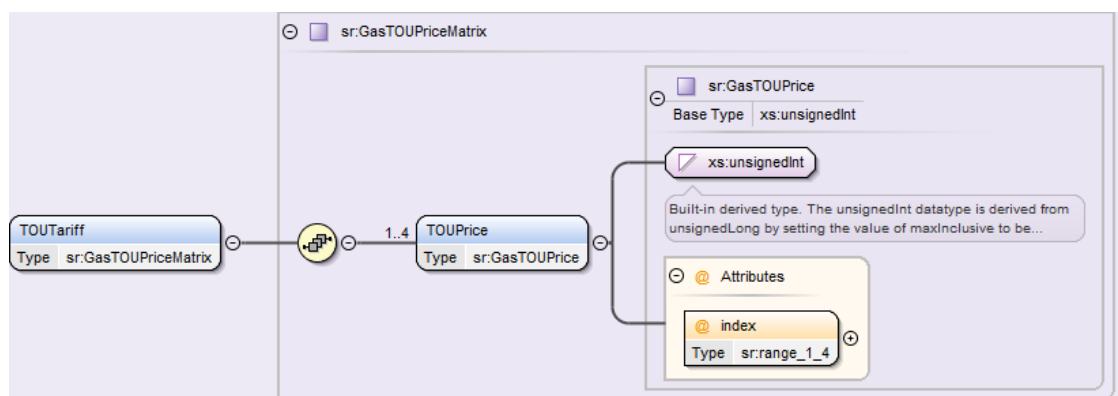


Figure 36 TOUTariff for Gas

1.2.1.1.2 Specific Data Items Definition

The data items contained in the Service Request are defined as:

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
ExecutionDateTime	The UTC date and time the DCC User requires the command to be executed on the Device ID <ul style="list-style-type: none"> Date-time in the future that is either <= current date + 30 days or the date = 31/12/3000 	xs:dateTime	No	None	UTC Date-Time	Non-Sensitive
PriceElements	All the Data Items required to update prices on the Primary Element of the Device	sr:PricePrimary (see section 1.2.1.1.3)	Yes	None	N/A	Non-Sensitive

Table 52 Update Price (Primary Element) Service Request Data Items

1.2.1.1.3 PriceElements Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
ElectricityPriceElements	Electricity Smart Meter specific price elements	sr:ElecPriceElementsPrimary (see section 1.2.1.1.4)	Electricity Smart Meter: Yes Gas Smart Meter: N/A	None	N/A	Non-Sensitive
GasPriceElements	Gas Smart Meter specific price elements	sr:GasPriceElements (see section 1.2.1.1.9)	Electricity Smart Meter: N/A Gas Smart Meter: Yes	None	N/A	Non-Sensitive

Table 53 Update Price (Primary Element) Service Request - PriceElements Data Items

1.2.1.1.4 ElectricityPriceElements Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
StandingCharge	A charge to be levied in Currency Units per unit time when operating in Credit Mode and Prepayment Mode Service Users are advised not to set this to a negative value as that would lead to undefined Device behaviour Note that the scale used for Electricity Meters is defined by StandingChargeScale value, Gas meters have a scale value of -5.	sr:PriceType (Restriction of xs:short)	Yes	None	Value when multiplied by the scale is GBP/EUROs This amount is collected daily	Non-Sensitive
StandingChargeScale	A multiplier applied to the StandingCharge value. Note this is the value of n in 10^n (10 to the power of n). For example a StandingCharge of 1 and a StandingChargeScale scale of -2 would result in a Standing Charge of £0.01	sr:PriceScale (Restriction of xs:integer minimum = -128, maximum=127)	Yes	None	N/A	Non-Sensitive
PriceScale	A multiplier applied to the prices defined in this structure. Note this is the value of n in 10^n (10 to the power of n). For example a price of 1 and a Price scale of -2 would result in a price of £0.01	sr:PriceScale (Restriction of xs:integer minimum = -128, maximum=127)	Yes	None	N/A	Non-Sensitive

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
BlockTariff	<p>Up to 8 block price definitions, with 4 prices per block. A block tariff must have 1 to 8 block definitions, each definition can have at most 4 prices.</p> <p>Where a User does not provide a price value the DCC shall populate the associated GBCS Command with a value of Zero to ensure that all 80 price values are set in the associated Command. Users are not obligated to populate all 80 price values.</p> <p>SMETS1: Where a User does not provide a price value the S1SP shall populate SMETS1 format commands with zero to ensure that all 32 block tariff price values are set.</p>	sr:ElecBlockTariff (see section 1.2.1.1.5)	Yes – if Block Tariff	None	N/A	Non-Sensitive
TOUTariff	<p>Up to 48 TOU prices. A TOU tariff must have 1 to 48 TOU rates defined.</p> <p>Where a User does not provide a price value the DCC shall populate the associated GBCS Command with a value of Zero to ensure that all 80 price values are set in the associated Command. Users are not obligated to populate all 80 price values.</p> <p>SMETS1: Where a User does not provide a price value the S1SP shall populate SMETS1 format commands with zero to ensure that all 48 time of use tariff price values are set.</p>	sr:ElecTOUTariff (see section 1.2.1.1.7)	Yes – if TOU Tariff	None	N/A	Non-Sensitive
HybridTariff	<p>A combination of Block and TOU prices.</p> <p>Where a User does not provide a price value the DCC shall populate the associated GBCS Command with a value of Zero to ensure that all 80 price values are set in the associated Command. Users are not obligated to populate all 80 price values.</p> <p>SMETS1: Not applicable</p>	sr:ElecHybridTariff (see section 1.2.1.1.8)	Yes – if combination of TOU and Block Tariffs	None	N/A	Non-Sensitive

Table 54 Update Price (Primary Element) Service Request - ElectricityPriceElements Data Items

1.2.1.1.5BlockTariff Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
BlockPrices	Price applicable to a TOU with Block Tariff	sr:ElecBlocks (see section 1.2.1.1.6)	Yes	None	N/A	Non-Sensitive
Index (Attribute of BlockPrices)	Provides an ordering for the BlockPrices elements.	sr:range_1_8 (xs:positiveInteger from 1 to 8)	Yes	None	N/A	N/A

Table 55 Update Price (Primary Element) Service Request - BlockTariff Data Items

1.2.1.1.6 BlockPrices Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
BlockPrice	Up to 4 prices for each block.	srElecBlockPrice (sr:PriceType ,Restriction of xs:short) minOccurs = 1 maxOccurs = 4	Yes	None	Value when multiplied by the scale is GBP/EUROs This amount per kWh	Non-Sensitive
Index (Attribute of BlockPrice)	Provides an ordering for the BlockPrice elements.	sr:range_1_4 (xs:positiveInteger from 1 to 4)	Yes	None	N/A	N/A

Table 56 Update Price (Primary Element) Service Request - BlockPrices Data Items

1.2.1.1.7 TOUTariff Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
TOUPrice	Up to 48 prices for each TOU rate.	sr:ElecPrimaryTOUPrice (sr:PriceType Restriction of xs:short) minOccurs = 1 maxOccurs = 48	Yes	None	Value when multiplied by the scale is GBP/EUROs This amount per kWh	Non-Sensitive
Index (Attribute of TOUPrice)	Provides an ordering for the TOUPrice elements.	sr:range_1_48 (xs:positiveInteger from 1 to 48)	Yes	None	N/A	N/A

Table 57 Update Price (Primary Element) Service Request - TOUTariff Data Items

1.2.1.1.8 HybridTariff Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
BlockPrices	Up to 4 prices for each block.	See 1.2.1.1.5	Yes	None	See 1.2.1.1.5	Non-Sensitive
TOUPrice	Up to 48 prices for each TOU rate.	See 1.2.1.1.7	Yes	None	See 1.2.1.1.7	Non-Sensitive

Table 58 Update Price (Primary Element) Service Request - TOUTariff Data Items

1.2.1.1.9 GasPriceElements Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
CurrencyUnits	The Currency Units currently used by a Smart Meter for display purposes, which shall be GB Pounds Valid set: <ul style="list-style-type: none"> GBP. GB Pounds ECB. European Central Bank Euros SMETS1: This element cannot be used by SMETS1 Devices but must be supplied since it is mandatory in the Service Request.	Restriction of xs:string (Enumeration)	Yes	None	N/A	Non-Sensitive
StandingCharge	A charge to be levied in Currency Units per unit time when operating in Credit Mode and Prepayment Mode The value is interpreted as in millipence or milli-cents.	xs:unsignedInt	Yes	None	This amount is collected daily	Non-Sensitive
BlockTariff	Gas Smart Meter: A 4 x 1 matrix containing Prices for Block Pricing, plus the thresholds for the blocks. Where a User does not provide a price value the DCC shall populate the associated GBCS Command with a value of zero to ensure that all 4 price values are set in the associated Command. Users are not obligated to populate all 4 price values.	sr:GasBlockPriceMatrix (see section 1.2.1.1.10)	Yes – if block tariff	None	N/A	Non-Sensitive
TOUTariff	Gas Smart Meter: A 1 x 4 matrix containing Prices for Time-of-use Pricing Where a User does not provide a price value the DCC shall populate the associated GBCS Command with a value of zero to ensure that all 4 price values are set in the associated Command. Users are not obligated to populate all 4 price values.	sr:GasTOUPriceMatrix (see section 1.2.1.1.11)	Yes – if TOU tariff	None	N/A	Non-Sensitive

Table 59 Update Price (Primary Element) Service Request - GasPriceElements Data Items

1.2.1.1.10 BlockTariff Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
BlockPrice	Up to 4 prices for each block.	sr:GasBlockPrice (xs:unsignedInt) minOccurs = 1 maxOccurs = 4	Yes	None	1000 th pence/cent per kWh	Non-Sensitive

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
Index (Attribute of BlockPrice)	Provides an ordering for the BlockPrice elements.	sr:range_1_4 (xs:positiveInteger from 1 to 4)	Yes	None	N/A	N/A
NumberOfThreshold	The number of thresholds in use on the GSME.	xs:positiveInteger minInclusive = 1 maxInclusive = 3	Yes	None	N/A	Non-Sensitive

Table 60 Update Price (Primary Element) Service Request - BlockTariff Data Items

1.2.1.1.11 TOUTariff Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
TOUPrice	Up to 4 Prices applicable to a TOU rate	sr:GasTOUPrice (xs:unsignedInt) minOccurs = 1 maxOccurs = 4	Yes	None	1000 th pence/ cent per kWh	Non-Sensitive
Index (Attribute of TOUPrice)	Provides an ordering for the TOUPrice elements.	sr:range_1_4 (xs:positiveInteger from 1 to 4)	Yes	None	N/A	N/A

Table 61 Update Price (Primary Element) Service Request - TOUTariff Data Items

1.2.1.1.12 Applicable Modes of Operation

The Modes of Operation applicable to this Service Request are (see Main Document of this documentation set section 2.3 for Modes of Operation definitions):

Service	Transform	On Demand	DCC Only	Future Dated	DSP Scheduled
SMETS2 or later	Yes	Yes	No	Device	No
SMETS1	No	Yes	No	DSP	No

Table 62 Update Price (Primary Element) Modes of Operation

1.2.1.1.13 Applicable Command Variant Values

The Command Variant values applicable to this Service Request are (see Main Document of this documentation set section 3 for Command Variant definitions):

Service	CV = 1	CV = 2	CV = 3	CV = 4	CV = 5	CV = 6	CV = 7	CV = 8
SMETS2 or later	No	No	No	Yes	Yes	Yes	Yes	No
SMETS1	No	No	No	Yes	No	No	No	No

Table 63 Update Price (Primary Element) Command Variant Values

1.2.1.1.14 Validation

This Service Request specific validation is as follows (see Main Document of this documentation set section 7 for generic access control checks and Annex section 17.2 for Execution Date Time) validation):

Validation Check	Process	Response Code
For SMETS1 Service Requests, does the Service Request contain both Block tariff and Time of Use tariff prices?	SMETS1 Service Requests are not permitted to populate both Block tariff and Time of Use tariff prices, as indicated by the use of the HybridTariff XML element.	E010201

Table 64 Update Price (Primary Element) Service Request Validation

1.2.1.1.15 Sample Request

There are three versions applicable to this Service Request

- Transform Service Request
- Signed Pre-command
- SMETS1 Service Request. Same format as Transform Service Request

Sample requests are given in Annex Introduction Appendix 2. The specific information for this Service Request (Body) is as follows (To include Electricity and Gas, the sample has been split into 3 figures):

```
<UpdatePricePrimaryElement>
  <ExecutionDateTime>2014-10-07T10:08:00.00Z</ExecutionDateTime>
  <PriceElements>
    < See Figure 38 for details of ElectricityPriceElements →
    < See Figure 39 for details of GasPriceElements →
  </PriceElements>
</UpdatePricePrimaryElement>
```

Figure 37 Update Price (Primary Element) Transform Request (Body) Format

```
<ElectricityPriceElements>
  <StandingCharge>5000</StandingCharge>
  <StandingChargeScale>-5</StandingChargeScale>
  <PriceScale>-5</PriceScale>
  <TOUTariff>
    <TOUPrice index="1">7000</TOUPrice>
    <TOUPrice index="2">8000</TOUPrice>
    <TOUPrice index="3">9000</TOUPrice>
  </TOUTariff>
</ElectricityPriceElements>
```

Figure 38 Update Price (Primary Element) Transform Request Format (ElectricityPriceElements Detail)

```
<GasPriceElements>
  <CurrencyUnits>GBP</CurrencyUnits>
  <StandingCharge>5000</StandingCharge>
  <BlockTariff>
    <BlockPrice index="1">100</BlockPrice>
    <BlockPrice index="2">200</BlockPrice>
    <BlockPrice index="3">250</BlockPrice>
    <NumberOfThresholds>2</NumberOfThresholds>
  </BlockTariff>
</GasPriceElements>
```

**Figure 39 Update Price (Primary Element) Transform Request Format
(GasPriceElements Detail)**

1.2.1.2 Responses

The response messages for an “Update Price (Primary Element)” request follow the generic format for all “Device” response messages, the generic responses applicable to this request are;

- Pre-command
- Acknowledgement
- Service Response (from Device) - GBCSPayload
- Service Response (from Device) - FutureDatedDeviceAlertMessage
- Command for Local Delivery
- Parse Output / SMETS1 Response

Sample responses are given in Annex Introduction Appendix 1, response specific information details are given below.

1.2.1.2.1 Device Responses and Future Dating

For SMETS2 or later Devices this Service Request's Command contains a fixed number of instructions ('n' = 4) and activation date-time instructions ('m' = 2) for Electricity and a fixed number of instructions ('n' = 2) and activation date-time instructions ('m' = 2) for Gas. See Main Document of this documentation set section 9.3.6 for details of the Device Responses returned in the different scenarios. Apart from in the exception cases described there, e.g. cancellation, the relationship between Mode of Operation and Response message types is as follows:

1. On Demand.
 - a. Service Response (from Device) – GBCSPayload
 - i. One Device Response (Command execution outcome containing 'n' results).
2. Future Dated (Device).
 - a. Service Response (from Device) – GBCSPayload
 - i. One Device Response (Command storage outcome containing 'n' results)
 - b. Service Response (from Device) – FutureDatedDeviceAlertMessage
 - i. 'm' Device Alerts (Command instruction execution outcome). These Device Alerts are described in Annex section 15.4.4. The Device Alert payloads for this particular Service Request will be of the types described in Annex section 15.4.4.3.1 (Electricity) and 15.4.4.3.2 (Gas)

For SMETS1 Devices this Service Request is only available for Mode of Operation On Demand or Future Dated (DSP). In both cases the Response message type is a single SMETS1 Response.

1.2.1.2.2 Parse Output / SMETS1 Response Format

The response to this request returns only status without any substantial payload. The XML type is UpdatePricePrimaryElementRsp.

Parse Responses: Please see Annex section 18.9 for a description of how status-only responses are represented in the MMC XML Schema.

SMETS1 Responses: Please see Annex section 19.7 for a description of how status-only responses are represented in the DUIS XML Schema.

See section 1.2.1.2.1 for description of the responses to future dated execution requests.

1.2.1.2.2.1 Specific Header Data Items

Data Item	Electricity Response	Gas Response
GBCSHexadecimalMessageCode	00A2	00A3
<i>GBCS Use Case Number (for information only - not in header)</i>	<i>ECS01b</i>	<i>GCS01b</i>
<i>GBCS Use Case Name (for information only - not in header)</i>	<i>Set Price on ESME</i>	<i>Set Price on GSME</i>
SupplementaryRemotePartyID	Not Present	Not Present
SupplementaryRemotePartyCounter	Not Present	Not Present
SupplementaryOriginatorCounter	Not Present	Not Present
Timestamp	Present	Present

Table 65 - Update Price (Primary Element) Parse/ SMETS1 Response Header Data Items

1.2.2 Update Price (Secondary Element) (1.2.2)

Service Request Name	UpdatePrice
Service Reference	1.2
Service Request Variant Name	UpdatePrice(SecondaryElement)
Service Reference Variant	1.2.2
Service Request Objective	To enable a DCC Service User to send a new currency unit price per time/unit of energy consumed to a meter such that the meter can update its configuration and confirm that the operation has either completed, or the reason for its failure.
Business Context Statement	The DCC Service User requires a new or updated pricing structure to be applied to a specified meter, e.g. following a supplier price change, without changing tariff structure. The price update must be effected within a reasonable period of time after the agreement or after the preceding event (e.g. CoS). This period may be the same day.
User Role Access	<ul style="list-style-type: none"> Electricity Import Supplier (EIS)
Security Classification	Critical and non-sensitive

	GBCS XREF: SME.C.C	
Service Request Narrative	1. This Service Request updates the price on the Secondary Element of an Electricity Smart Meter	
GBCS Cross Reference	Electricity	Gas
GBCS Message Code	0x00C7	N/A
GBCS Use Case	ECS01d	N/A
GBCS Use Case Name	Set Price on ESME secondary	N/A
SMETS1 Applicability	No	N/A

Table 66 Update Price (Secondary Element) Service Request

This section should be read in conjunction with the Main Document of this documentation set section 9 (which describes the general formatting for all Service Requests and Service Responses) and with the XSD (XML Schema – document 3 of this documentation set).

1.2.2.1 Service Request

1.2.2.1.1 Format

The Request Body XML element of the XSD (see XML Schema – document 3 of this documentation set) defines the structure of all the Service Requests. Its UpdatePriceSecondaryElement XML element defines this Service Request and contains all the Data Items to set the price on the Secondary Element of the Device and, for Future Dated Requests, the Execution Date and Time.

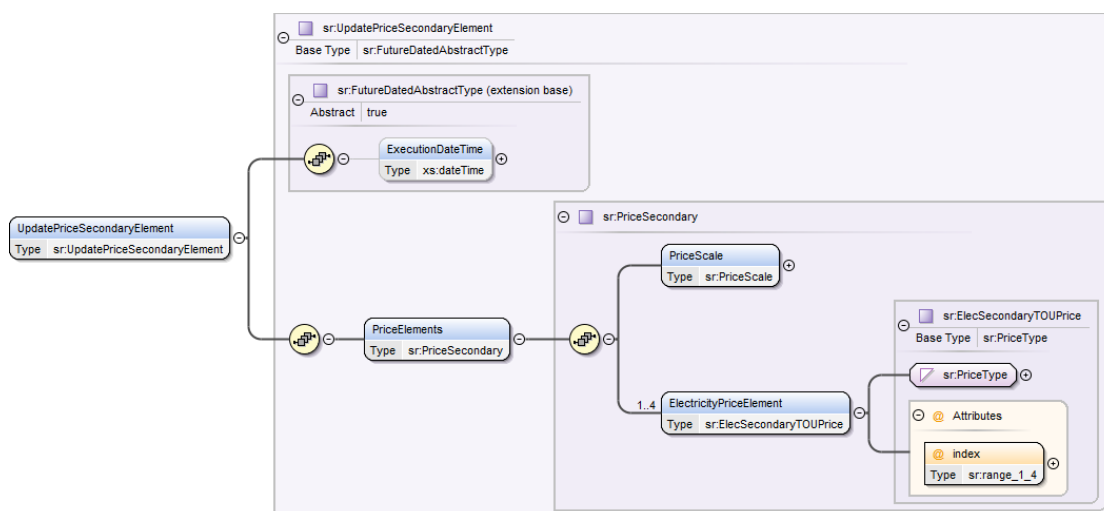


Figure 40 UpdatePriceSecondaryElement

1.2.2.1.2 Specific Data Items Definition

The data items contained in the Service Request are defined as:

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
ExecutionDateTime	The UTC date and time the DCC User requires the command to be executed on the Device ID <ul style="list-style-type: none"> Date-time in the future that is either \leq current date + 30 days or the date = 31/12/3000 	xs:dateTime	No	None	UTC Date-Time	Non-Sensitive
PriceElements	All the Data Items required to update prices on the Secondary Element of the Device	sr:PriceSecondary (see section 1.2.2.1.3)	Yes	None	N/A	Non-Sensitive

Table 67 Update Price (Secondary Element) Service Request Data Items

1.2.2.1.3 PriceElements Data Items Definition

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
PriceScale	A multiplier applied to the prices defined in this structure. Note this is the value of n in 10^n (10 to the power of n). For example a price of 1 and a Price scale of -2 would result in a price of £0.01	sr:PriceScale (Restriction of xs:integer minimum = -128, maximum=127)	Yes	None	N/A	Non-Sensitive
ElectricityPriceElements	Up to 4 prices for each TOU rate.	sr:ElecSecondaryTOUPrice sr:PriceType (Restriction of xs:short) minOccurs = 1 maxOccurs = 4	Yes	None	Value when multiplied by the scale is GBP/EUROs This amount per kWh	Non-Sensitive
Index (Attribute of ElectricityPriceElement)	Provides an ordering for the ElectricityPriceElement elements.	sr:range_1_4 (xs:positiveInteger from 1 to 4)	Yes	None	N/A	N/A

Table 68 Update Price (Secondary Element) Service Request - PriceElements Data Items

1.2.2.1.4 Applicable Modes of Operation

The Modes of Operation applicable to this Service Request are (see Main Document of this documentation set section 2.3 for Modes of Operation definitions):

Transform	On Demand	DCC Only	Future Dated	DSP Scheduled
Yes	Yes	No	Device	No

Table 69 Update Price (Secondary Element) Modes of Operation

1.2.2.1.5 Applicable Command Variant Values

The Command Variant values applicable to this Service Request are (see Main Document of this documentation set section 3 for Command Variant definitions):

CV = 1	CV = 2	CV = 3	CV = 4	CV = 5	CV = 6	CV = 7	CV = 8
No	No	No	Yes	Yes	Yes	Yes	No

Table 70 Update Price (Secondary Element) Command Variant Values

1.2.2.1.6 Validation

This Service Request has no specific validation. See Main Document of this documentation set section 7 for generic access control checks and Annex section 17.2 for Execution Date Time validation.

1.2.2.1.7 Sample Request

There are two versions applicable to this Service Request

- Transform Service Request
- Signed Pre-command

Sample requests are given in Annex Introduction Appendix 2. The specific information for this Service Request (Body) is as follows:

```
<UpdatePriceSecondaryElement>
  <ExecutionDateTime>2014-10-07T10:08:00.00Z</ExecutionDateTime>
  <PriceElements>
    <PriceScale>-5</PriceScale>
    <ElectricityPriceElement index="1">1000</ElectricityPriceElement>
    <ElectricityPriceElement index="2">2000</ElectricityPriceElement>
  </PriceElements>
</UpdatePriceSecondaryElement>
```

Figure 41 Update Price (Secondary Element) Transform Request (Body) Format

1.2.2.2 Responses

The response messages for an "Update Price (Secondary Element)" request follow the generic format for all "Device" response messages, the generic responses applicable to this request are;

- Pre-command
- Acknowledgement
- Service Response (from Device) - GBCSPayload
- Service Response (from Device) - FutureDatedDeviceAlertMessage
- Command for Local Delivery
- Parse Output

Sample responses are given in Annex Introduction Appendix 1, response specific information details are given below.

1.2.2.2.1 Device Responses and Future Dating

This Service Request's Command contains a fixed number of instructions ('n' = 2) and activation date-time instructions ('m' = 1). See Main Document of this documentation set section 9.3.6 for details of the Device Responses returned in the different scenarios. Apart from in the exception cases described there, e.g. cancellation, the relationship between Mode of Operation and Response message types is as follows:

1. On Demand.
 - a. Service Response (from Device) – GBCSPayload

- i. One Device Response (Command execution outcome containing 'n' results).
 - 2. Future Dated (Device).
 - a. Service Response (from Device) – GBCSPayload
 - i. One Device Response (Command storage outcome containing 'n' results)
 - b. Service Response (from Device) – FutureDatedDeviceAlertMessage
 - i. 'm' Device Alerts (Command instruction execution outcome). These Device Alerts are described in Annex section 15.4.4. The Device Alert payloads for this particular Service Request will be of the types described in Annex section 15.4.4.3.1

1.2.2.2.2 Parse Output Format

The response to this request returns only status without any substantial payload. The XML type is UpdatePriceSecondaryElementRsp.

Please see Annex section 18.9 for a description of how status-only responses are represented in the MMC XML Schema.

See section 1.2.2.2.1 for description of the responses to future dated execution requests.

1.2.2.2.2.1 Specific Header Data Items

Data Item	Electricity Response
GBCSHexadecimalMessageCode	00C7
<i>GBCS Use Case Number (for information only - not in header)</i>	<i>ECS01d</i>
<i>GBCS Use Case Name (for information only - not in header)</i>	<i>Set Price on ESME secondary</i>
SupplementaryRemotePartyID	Not Present
SupplementaryRemotePartyCounter	Not Present
SupplementaryOriginatorCounter	Not Present
Timestamp	Present

Table 71 - Update Price (Secondary Element) Parse Response Header Data Items

1.3 Section 1.3

This section has been intentionally left blank as there is no Service Reference 1.3.

1.4 Section 1.4

This section has been intentionally left blank as there is no Service Reference 1.4.

1.5 Update Meter Balance (1.5)

Service Request Name	UpdateMeterBalance
Service Reference	1.5
Service Request Variant Name	UpdateMeterBalance
Service Reference Variant	1.5
Service Request Objective	To enable a DCC Service User to send a command to a meter at a specified ESME/GSME to adjust the amount of money in currency units accounted for by the Smart Meter.
Business Context Statement	The DCC Service User requires an update to be made to the current balance on a specified device, e.g. to adjust the balance to take into account such things as CV calculations made in a Supplier's billing systems.
User Role Access	<ul style="list-style-type: none"> Electricity Import Supplier (EIS) Gas Import Supplier (GIS)
Security Classification	Critical and non-sensitive SMETS2 or later: <i>GBCS XREF: SME.C.C</i>
Service Request Narrative (SMETS2 or later)	<ol style="list-style-type: none"> If operating in <i>Prepayment Mode</i>, the <i>Meter Balance</i> represents ESME / GSME's determination of the amount of credit available to the Consumer (excluding any <i>Emergency Credit Balance</i>). If operating in <i>Credit Mode</i>, it represents ESME/ GSME's determination of the amount of money due from the Consumer since the Meter Balance was last reset. The adjustment of this meter balance in this Service Request is a positive / negative adjustment, rather than an absolute setting of this meter balance. As the DSP does not maintain a record of the meter accounting state (prepayment/credit) then it is necessary for the Service User to choose the appropriate data items. This Service Request supports the following Meter Balance updates: <ul style="list-style-type: none"> Electricity Smart Meter <ul style="list-style-type: none"> Adjustment of balance Reset. The Accumulated Debt Register and the Emergency Credit Balance are also reset Gas Smart Meter <ul style="list-style-type: none"> Adjustment of balance

	<ul style="list-style-type: none"> Reset The Accumulated Debt Register and the Emergency Credit Balance are also reset <p>6. Please Note – GBCS constraint. The prepayment mode meter balance is held in a separate ZigBee Cluster to the credit mode meter balance</p> <ul style="list-style-type: none"> GBCS Use Cases GCS40a and GCS40b must be used for interacting with the GSME when it is operating in prepayment mode GBCS Use Cases GCS40c and GCS40d must be used for interacting with the GSME when it is operating in credit mode <p>7. Resetting the Meter Balance with the parameter "ResetMeterBalance" would set the balance to £0.00 and there is a risk that supply would be disabled. If the following conditions are true, this would cause supply to be disabled:</p> <ul style="list-style-type: none"> The Meter is in Prepayment Mode; AND The Meter is NOT currently in a period of non-disablement; AND The Disablement Threshold is £0.00 or greater. 	
GBCS Cross Reference	Electricity	Gas
GBCS Message Code	Adjust Meter Balance – 0x001C Reset Meter Balance – 0x00B3	Prepayment Mode / Adjust Meter Balance – 0x0086 Prepayment Mode / Reset Meter Balance – 0x00B4 Credit Mode / Adjust Meter Balance – 0x00C0 Credit Mode / Reset Meter Balance – 0x00C2
GBCS Use Case	Adjust Meter Balance – ECS04a Reset Meter Balance – ECS04b	Prepayment Mode / Adjust Meter Balance – GCS40a Prepayment Mode / Reset Meter Balance – GCS40b Credit Mode / Adjust Meter Balance – GCS40c Credit Mode / Reset Meter Balance – GCS40d
GBCS Use Case Name	Adjust Meter Balance on the ESME Reset Meter Balance on the ESME	Adjust Prepayment Mode Meter Balance on the GSME Reset Prepayment Mode Meter Balance on the GSME Adjust Credit Mode Meter Balance on the GSME Reset Credit Mode Meter Balance on the GSME

SMETS1 Applicability	Yes	Yes
Service Request Narrative (SMETS1)	<p>The behaviour of DCC for this Service Request with regard to SMETS1 Devices is equivalent to the behaviour for SMETS2 or later Devices.</p> <p>Note that for continuity with the behaviour of SMETS2 or later Devices, SMETS1 Responses shall include message codes to correspond with the GBCS Use Cases identified in step 6 above.</p>	

Table 72 Update Meter Balance Service Request

This section should be read in conjunction with the Main Document of this documentation set section 9 (which describes the general formatting for all Service Requests and Service Responses) and with the XSD (XML Schema – document 3 of this documentation set).

1.5.1 Service Request

1.5.1.1 Format

The Request Body XML element of the XSD (see XML Schema – document 3 of this documentation set) defines the structure of all the Service Requests. Its UpdateMeterBalance XML element defines this Service Request and contains the Update type (Adjustment or Reset) and, for Adjustment, the Amount to be added to / subtracted from the Balance.

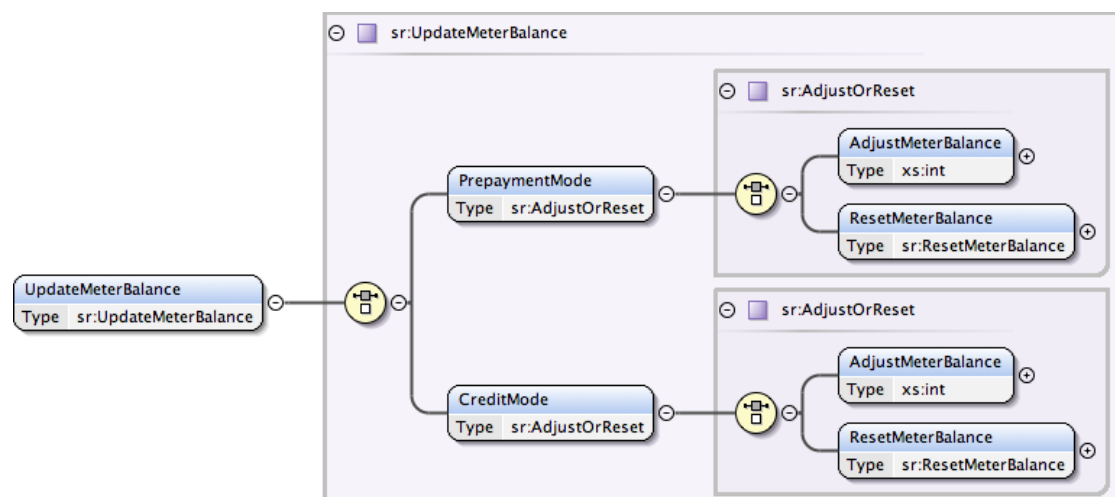


Figure 42 Update Meter Balance Service Request Structure

1.5.1.2 Specific Data Items Definition

Either PrepaymentMode or CreditMode must be defined in the request.

- When a Device is Operating in Prepayment Mode then the Prepayment Mode Data item must be included in the Service Request.
- When a Device is Operating in Credit Mode then the CreditMode Data item must be included in the Service Request.

The data items contained in the Service Request are defined as:

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
PrepaymentMode	The Smart Meter is operating in Prepayment mode	sr: AdjustOrReset (see section 1.5.1.3)	Yes (if in Prepayment mode)	None	N/A	Non-Sensitive

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
CreditMode	The Smart Meter is operating in Credit mode	sr:AdjustOrReset (see section 1.5.1.3)	Yes (if in Credit mode)	None	N/A	Non-Sensitive

Table 73 Update Meter Balance Service Request Data Items

1.5.1.3 AdjustOrReset Data Items Definition

Either AdjustMeterBalance or ResetMeterBalance must be defined in the request.

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
AdjustMeterBalance	The amount by which the Meter Balance is to be adjusted (which may be a positive or negative Integer).	xs:int	Yes if adjusting the balance	None	1000 th pence /cent	Non-Sensitive
ResetMeterBalance	Reset the Meter Balance to zero	sr:ResetMeterBalance This type has no definition	Yes if resetting the balance	None	N/A	Non-Sensitive

Table 74 Update Meter Balance Service Request - AdjustOrReset Items

1.5.1.4 Applicable Modes of Operation

The Modes of Operation applicable to this Service Request are (see Main Document of this documentation set section 2.3 for Modes of Operation definitions):

Service	Transform	On Demand	DCC Only	Future Dated	DSP Scheduled
SMETS2 or later	Yes	Yes	No	No	No
SMETS1	No	Yes	No	No	No

Table 75 Update Meter Balance Modes of Operation

1.5.1.5 Applicable Command Variant Values

The Command Variant values applicable to this Service Request are (see Main Document of this documentation set section 3 for Command Variant definitions):

Service	CV = 1	CV = 2	CV = 3	CV = 4	CV = 5	CV = 6	CV = 7	CV = 8
SMETS2 or later	No	No	No	Yes	Yes	Yes	Yes	No
SMETS1	No	No	No	Yes	No	No	No	No

Table 76 Update Meter Balance Command Variant Values

1.5.1.6 Validation

This Service Request has no specific validation. See Main Document of this documentation set section 7 for generic access control checks.

1.5.1.7 Sample Request

There are three versions applicable to this Service Request

- Transform Service Request
- Signed Pre-command

- SMETS1 Service Request. Same format as Transform Service Request

Sample requests are given in Annex Introduction Appendix 2. The specific information for this Service Request (Body) is as follows:

```
<UpdateMeterBalance>
  <PrepaymentMode>
    <AdjustMeterBalance>100000</AdjustMeterBalance>
  </PrepaymentMode>
</UpdateMeterBalance>
```

Figure 43 Update Meter Balance Transform Request (Body) Format

1.5.2 Responses

The response messages for an "Update Meter Balance" request follow the generic format for all "Device" response messages, the generic responses applicable to this request are;

- Pre-command
- Acknowledgement
- Service Response (from Device) – GBCSPayload
- Command for Local Delivery
- Parse Output / SMETS1 Response

Sample responses are given in Annex Introduction Appendix 1, response specific information details are given below.

1.5.2.1 Parse Output / SMETS1 Response Format

The response to this request returns only status without any substantial payload. The XML type is UpdateMeterBalanceRsp.

Parse Responses: Please see Annex section 18.9 for a description of how status-only responses are represented in the MMC XML Schema.

SMETS1 Responses: Please see Annex section 19.7 for a description of how status-only responses are represented in the DUIS XML Schema.

1.5.2.1.1 Specific Header Data Items

This Service Request 1.5 will be implemented by a meter command in one of 6 different GBCS use cases, depending on the input parameters sent by the DCC Service User, so there are 6 different GBCS uses cases which may be returned in the response.

Data Item	ResetMeterBalance for ESME (both PrepaymentMode & CreditMode)	ResetMeterBalance for ESME (both PrepaymentMode & CreditMode)
GBCSHexadecimalMessageCode	001C	00B3
GBCS Use Case Number (for information only - not in header)	ECS40a	ECS40b
GBCS Use Case Name (for information only - not in header)	Adjust Meter Balance on the ESME	Reset Meter Balance on the ESME

Data Item	ResetMeterBalance for ESME (both PrepaymentMode & CreditMode)	ResetMeterBalance for ESME (both PrepaymentMode & CreditMode)
SupplementaryRemotePartyID	Not Present	Not Present
SupplementaryRemotePartyCounter	Not Present	Not Present
SupplementaryOriginatorCounter	Not Present	Not Present
Timestamp	Not Present	Not Present

Table 77 - Update Meter Balance Parse/ SMETS1 Response Header Data Items Electricity

Data Item	PrepaymentMode & AdjustMeterBalance for GSME	PrepaymentMode & ResetMeterBalance for GSME	CreditMode & AdjustMeterBalance for GSME	CreditMode & ResetMeterBalance for GSME
GBCSHexadecimalMessageCode	0086	00B4	00C0	00C2
<i>GBCS Use Case Number (for information only - not in header)</i>	<i>GCS40a</i>	<i>GCS40b</i>	<i>GCS40c</i>	<i>GCS40d</i>
<i>GBCS Use Case Name (for information only - not in header)</i>	<i>Adjust Prepayment Mode Meter Balance on the GSME</i>	<i>Reset Prepayment Mode Meter Balance on the GSME</i>	<i>Adjust Credit Mode Meter Balance on the GSME</i>	<i>Reset Credit Mode Meter Balance on the GSME</i>
SupplementaryRemotePartyID	Not Present	Not Present	Not Present	Not Present
SupplementaryRemotePartyCounter	Not Present	Not Present	Not Present	Not Present
SupplementaryOriginatorCounter	Not Present	Not Present	Not Present	Not Present
Timestamp	Not Present	Not Present	Not Present	Not Present

Table 78 - Update Meter Balance Parse/ SMETS1 Response Header Data Items - Gas

1.6 Update Payment Mode (1.6)

Service Request Name	UpdatePaymentMode
Service Reference	1.6
Service Request Variant Name	UpdatePaymentMode
Service Reference Variant	1.6

Service Request Objective	To enable a DCC Service User to send a command to a ESME or GSME to set the payment mode to either Prepayment Mode or Credit Mode such that the meter can update its configuration.	
Business Context Statement	The customer has requested, either as a result of a change of tenancy, change of supplier or out of personal choice, a change of payment mode to either Prepayment Mode or Credit Mode. The supplier is responsible for resolving accounts, providing means to vend, ensuring that a payment mode is safe and practicable prior to undertaking the mode change.	
User Role Access	<ul style="list-style-type: none"> Electricity Import Supplier (EIS) Gas Import Supplier (GIS) 	
Security Classification	Critical and non-sensitive SMETS2 or later: <i>GBCS XREF: SME.C.C</i>	
Service Request Narrative (SMETS2 or later)	<p>On change of Payment Mode the device may create and store various snapshots on information and record in the Billing Data Log, as defined in SMETS.</p> <p>Update Payment Mode to Prepayment Mode</p> <p>This Service Request sets the following SMETS data items on the ESME/GSME;</p> <ul style="list-style-type: none"> Payment Mode Disablement Threshold Suspend Debt Disabled Suspend Debt Emergency <p>Update Payment Mode to Credit Mode</p> <p>This Service Request sets the following SMETS data items on the ESME/GSME;</p> <ul style="list-style-type: none"> Payment Mode 	
GBCS Cross Reference	Electricity	Gas
GBCS Message Code	Payment Mode Credit – 0x001A Payment Mode Prepayment - 0x001B	Payment Mode Credit – 0x006C Payment Mode Prepayment - 0x006D
GBCS Use Case	Payment Mode Credit – ECS02 Payment Mode Prepayment – ECS03	Payment Mode Credit – GCS02 Payment Mode Prepayment – GCS03
GBCS Use Case Name	Set ESME Payment Mode to Credit Set ESME Payment Mode to Prepayment	Set GSME Payment Mode to Credit Set GSME Payment Mode to Prepayment
SMETS1 Applicability	Yes	Yes

Service Request Narrative (SMETS1)

The behaviour of DCC for this Service Request with regard to SMETS1 Devices is equivalent to the behaviour for SMETS2 or later Devices except:

1. Processing by the relevant S1SP shall be according to the SMETS1 Supporting Requirements Document, and shall include the SMETS1 required capture of information in to the Billing Data Log (with its SMETS1 meaning), and so may therefore not include capturing values for the Total Consumption Register, Total Active Import Register or the Tariff TOU Block Register Matrix.
2. The meaning of the SuspendDebtDisabled and SuspendDebtEmergency values shall be as defined in the SMETS1 Supporting Requirements

Table 79 Update Price Service Request

This section should be read in conjunction with the Main Document of this documentation set section 9 (which describes the general formatting for all Service Requests and Service Responses) and with the XSD (XML Schema – document 3 of this documentation set).

1.6.1 Service Request

1.6.1.1 Format

The Request Body XML element of the XSD (see XML Schema – document 3 of this documentation set) defines the structure of all the Service Requests. Its UpdatePaymentMode XML element defines this Service Request and contains the Payment Mode and associated data to be set on the Device and, for Future Dated Requests, the Execution Date Time.

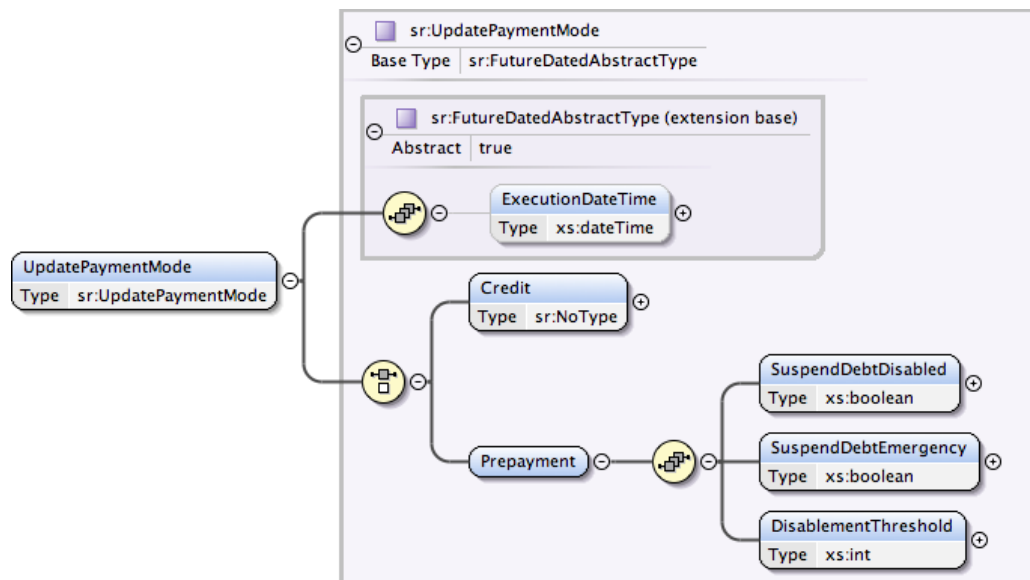


Figure 44 Update Payment Mode Service Request Structure

1.6.1.2 Specific Data Items Definition

Either Credit or Prepayment must be defined in the request.

- To set a Device into Credit mode then the Credit Data item must be included in the Service Request.

- To set a Device into Prepayment mode then the Prepayment Data item must be included in the Service Request.

The data items contained in the Service Request are defined as:

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
ExecutionDateTime	The UTC date and time the DCC User requires the command to be executed on the Device ID <ul style="list-style-type: none"> Date-time in the future that is either \leq current date + 30 days or the date = 31/12/3000 	xs:dateTime	No	None	UTC Date-Time	Non-Sensitive
Credit	Switch the device into Credit mode	sr:NoType (See Annex 17)	Yes for switching Device to Credit Mode	None	N/A	Non-Sensitive
Prepayment	Switch the device into Prepayment	See 1.6.1.3	Yes for switching Device to Prepayment Mode	None	N/A	Non-Sensitive

Table 80 Update Payment Mode Data Items

1.6.1.3 Prepayment Data Items Definition

The data items contained in the Service Request are defined as:

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SuspendDebtDisabled	A setting controlling whether debt should be collected when the Meter is operating in Prepayment Mode and Supply is Disabled. See SMETS for details. <ul style="list-style-type: none"> true: If the supply is disabled due to lack of credit, then the Meter shall not collect the Time Debts however the Standing Charge is still collected from the Meter Balance false: If the supply is disabled due to lack of credit, then the Meter shall collect the Time Debts and the Standing Charge from the Meter Balance SMETS1 only: the meaning of this value shall be as defined in the SMETS1 Supporting Requirements	xs:boolean	Yes	None	N/A	Non-Sensitive

Data Item	Description / Valid Set	Type	Mandatory	Default	Units	Sensitivity
SuspendDebtEmergency	<p>A setting controlling whether debt should be collected when the Meter is operating in Prepayment Mode and Emergency Credit has been activated. See SMETS for details.</p> <ul style="list-style-type: none"> true: If Emergency Credit is in use, then the Meter shall not collect the Standing Charge or Time Debts from the Emergency Credit Balance and will instead increment the Accumulated Debt Register false: If Emergency Credit is in use, then the Meter shall collect the Standing Charge and Time Debts from the Emergency Credit Balance <p>SMETS1 only: the meaning of this value shall be as defined in the SMETS1 Supporting Requirements</p>	xs:boolean	Yes	None	N/A	Non-Sensitive
DisablementThreshold	<p>The threshold in Currency Units for controlling when to Disable the Supply.</p> <p>Guidance note: Service Users are advised that if a disablement threshold is set to a value other than zero then devices may not behave consistently as expected.</p> <p>DCC notes that SMETS, GBCS and DUIS allows disablement thresholds to be set as negative, zero and positive values. The required behaviour in relation to the Disablement Threshold is the same regardless of whether its value is zero or not.</p> <p>To date, Suppliers have not yet identified a business scenario where they plan to use a value other than zero for Disablement Threshold. As a result, Service Users should note that Device manufacturers have not had an opportunity to test all permutations, and Manufacturers and Suppliers indicated there could be a range of unpredictable behaviour if a non-zero disablement threshold is set.</p>	xs:int	Yes	None	1000 th pence /cent	Non-Sensitive

Table 81 Update Payment Mode Service Request Data Items

1.6.1.4 Applicable Modes of Operation

The Modes of Operation applicable to this Service Request are (see Main Document of this documentation set section 2.3 for Modes of Operation definitions):

Service	Transform	On Demand	DCC Only	Future Dated	DSP Scheduled
SMETS2 or later	Yes	Yes	No	Device	No

Service	Transform	On Demand	DCC Only	Future Dated	DSP Scheduled
SMETS1	No	Yes	No	DSP	No

Table 82 Update Payment Mode Modes of Operation

1.6.1.5 Applicable Command Variant Values

The Command Variant values applicable to this Service Request are (see Main Document of this documentation set section 3 for Command Variant definitions):

Service	CV = 1	CV = 2	CV = 3	CV = 4	CV = 5	CV = 6	CV = 7	CV = 8
SMETS2 or later	No	No	No	Yes	Yes	Yes	Yes	No
SMETS1	No	No	No	Yes	No	No	No	No

Table 83 Update Payment Mode Command Variant Values

1.6.1.6 Validation

This Service Request has no specific validation. See Main Document of this documentation set section 7 for generic access control checks and Annex section 17.2 for Execution Date Time validation.

1.6.1.7 Sample Request

There are three versions applicable to this Service Request

- Transform Service Request
- Signed Pre-command
- SMETS1 Service Request. Same format as Transform Service Request

Sample requests are given in Annex Introduction Appendix 2. The specific information for this Service Request (Body) is as follows:

```
<UpdatePaymentMode>
  <Prepayment>
    <SuspendDebtDisabled>true</SuspendDebtDisabled>
    <SuspendDebtEmergency>true</SuspendDebtEmergency>
    <DisablementThreshold>10000</DisablementThreshold>
  </Prepayment>
</UpdatePaymentMode>
```

Figure 45 Update Payment Mode Transform Request (Body) Format

1.6.2 Responses

The response messages for an "Update Payment Mode" request follow the generic format for all "Device" response messages, the generic responses applicable to this request are;

- Pre-command
- Acknowledgement
- Service Response (from Device) - GBCSPayload
- Service Response (from Device) - FutureDatedDeviceAlertMessage
- Command for Local Delivery
- Parse Output / SMETS1 Response

Sample responses are given in Annex Introduction Appendix 1, response specific information details are given below.

1.6.2.1 Device Responses and Future Dating

For SMETS2 or later Devices this Service Request's Command contains a variable number of instructions ('n' = 3 for Credit and 'n' = 5 for Prepayment) and activation date-time instructions ('m' = 1 for Credit and 'n' = 2 for Prepayment) for Electricity and a fixed number of instructions ('n' = 1) and activation date-time instructions ('m' = 1) for Gas. See Main Document of this documentation set section 9.3.6 for details of the Device Responses returned in the different scenarios. Apart from in the exception cases described there, e.g. cancellation, the relationship between Mode of Operation and Response message types is as follows:

1. On Demand.
 - a. Service Response (from Device) – GBCSPayload
 - i. One Device Response (Command execution outcome containing 'n' results).
2. Future Dated (Device).
 - a. Service Response (from Device) – GBCSPayload
 - i. One Device Response (Command storage outcome containing 'n' results)
 - b. Service Response (from Device) – FutureDatedDeviceAlertMessage
 - i. 'm' Device Alerts (Command instruction execution outcome). These Device Alerts are described in Annex section 15.4.4. The Device Alert payloads for this particular Service Request will be of the types described in Annex section 15.4.4.3.1 (Electricity) and 15.4.4.3.2 (Gas)

For SMETS1 Devices this Service Request is only available for Mode of Operation On Demand or Future Dated (DSP). In both cases the Response message type is a single SMETS1 Response.

1.6.2.2 Parse Output / SMETS1 Response Format

The response to this request returns only status without any substantial payload. The XML type is UpdatePaymentModeRsp.

Parse Responses: Please see Annex section 18.9 for a description of how status-only responses are represented in the MMC XML Schema.

SMETS1 Responses: Please see Annex section 19.7 for a description of how status-only responses are represented in the DUIS XML Schema.

See section 1.6.2.1 for description of the responses to future dated execution requests.

1.6.2.2.1 Specific Header Data Items

This Service Request 1.6 will be implemented by a meter command in one of 4 different GBCS use cases, depending on the input parameters sent by the DCC Service User, so there are 4 different GBCS uses cases which may be returned in the response.

Input circumstances	GBCSHexadecimal MessageCode	GBCSUseCase Number	GBCSUseCaseName	Timestamp
PaymentMode Credit for ESME	0x001A	ECS02	Set ESME Payment Mode to Credit	Present
PaymentMode Prepayment for ESME	0x001B	ECS03	Set ESME Payment Mode to Prepayment	Present
PaymentMode Credit for GSME	0x006C	GCS02	Set GSME Payment Mode to Credit	Present
PaymentMode Prepayment for GSME	0x006D	GCS03	Set GSME Payment Mode to Prepayment	Present

Table 84 - Update Payment Mode Parse/ SMETS1 Response Header Data Items

1.7 Reset Tariff Block Counter Matrix (1.7)

Service Request Name	ResetTariffBlockCounterMatrix	
Service Reference	1.7	
Service Request Variant Name	ResetTariffBlockCounterMatrix	
Service Reference Variant	1.7	
Service Request Objective	To enable a DCC Service User to reset the Tariff Block Counter Matrix on an ESME.	
Business Context Statement	The DCC Service User wishes to reset the consumer's block consumption back to zero, such that their consumption will go back to being charged at the first block rate.	
User Role Access	<ul style="list-style-type: none"> Electricity Import Supplier (EIS) 	
Security Classification	Critical and non-sensitive <i>GBCS XREF: SME.C.C</i>	
Service Request Narrative	<ol style="list-style-type: none"> The Tariff Block Counter Matrix is defined by SMETS as "A 4 x 1 matrix for storing Block Counters for Block Pricing" This Matrix determines the switching between the Block Registers within each Time-of-use Band based on Consumption accumulated in the Tariff Block Counter Matrix The ESME automatically resets its tariff block counters at the end of the block period/billing period, therefore this Service Request should be avoided in favour of forcing an end of billing period, which will reset the block counter and provide a set of register reads at the time of reset 	
GBCS Cross Reference	Electricity	Gas

GBCS Message Code	0x001D	N/A
GBCS Use Case	ECS05	N/A
GBCS Use Case Name	Reset Tariff Block Counter Matrix	N/A
SMETS1 Applicability	No	N/A

Table 85 Reset Tariff Block Counter Matrix Service Request

This section should be read in conjunction with the Main Document of this documentation set section 9 (which describes the general formatting for all Service Requests and Service Responses) and with the XSD (XML Schema – document 3 of this documentation set).

1.7.1 Service Request

1.7.1.1 Format

The Request Body XML element of the XSD (see XML Schema – document 3 of this documentation set) defines the structure of all the Service Requests. Its ResetTariffBlockCounterMatrix XML element defines this Service Request and doesn't contain any data items.

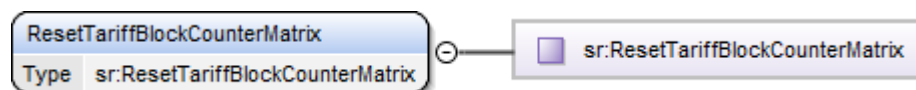


Figure 46 Reset Tariff Block Counter Matrix Service Request Structure

1.7.1.2 Applicable Modes of Operation

The Modes of Operation applicable to this Service Request are (see Main Document of this documentation set section 2.3 for Modes of Operation definitions):

Transform	On Demand	DCC Only	Future Dated	DSP Scheduled
Yes	Yes	No	No	No

Table 86 Reset Tariff Block Counter Matrix Modes of Operation

1.7.1.3 Applicable Command Variant Values

The Command Variant values applicable to this Service Request are (see Main Document of this documentation set section 3 for Command Variant definitions):

CV = 1	CV = 2	CV = 3	CV = 4	CV = 5	CV = 6	CV = 7	CV = 8
No	No	No	Yes	Yes	Yes	Yes	No

Table 87 Reset Tariff Block Counter Matrix Command Variant Values

1.7.1.4 Validation

This Service Request has no specific validation. See Main Document of this documentation set section 7 for generic access control checks.

1.7.1.5 Sample Request

There are two versions applicable to this Service Request

- Transform Service Request

- Signed Pre-command

Sample requests are given in Annex Introduction Appendix 2. The specific information for this Service Request (Body) is as follows:

```
<ResetTariffBlockCounterMatrix/>
```

Figure 47 Reset Tariff Block Counter Matrix Transform Request (Body) Format

1.7.2 Responses

The response messages for a “Reset Tariff Block Counter Matrix” request follow the generic format for all “Device” response messages, the generic responses applicable to this request are;

- Pre-command
- Acknowledgement
- Service Response (from Device) - GBCSPayload
- Command for Local Delivery
- Parse Output

Sample responses are given in Annex Introduction Appendix 1, response specific information details are given below.

1.7.2.1 Parse Output Format

The response to this request returns only status without any substantial payload. The XML type is ResetTariffBlockCounterMatrixRsp.

Please see Annex section 18.9 for a description of how status-only responses are represented in the MMC XML Schema.

1.7.2.1.1 Specific Header Data Items

Data Item	Electricity Response
GBCSHexadecimalMessageCode	001D
<i>GBCS Use Case Number (for information only - not in header)</i>	<i>ECS05</i>
<i>GBCS Use Case Name (for information only - not in header)</i>	<i>Reset Tariff Block Counter Matrix</i>
SupplementaryRemotePartyID	Not Present
SupplementaryRemotePartyCounter	Not Present
SupplementaryOriginatorCounter	Not Present
Timestamp	Not Present

Table 88 - Reset Tariff Block Counter Matrix Parse Response Header Data Items