



BUSINESS PROCESSES FOR THE DANISH ELECTRICITY MARKET

(EDI guide – BRS)

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The business processes are available in Danish and English. In the event of discrepancies between the Danish and English version, the Danish version of the business processes is legally binding.

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1. Changes

Changes are always changes in relation to the previously published version. For example, changes marked with version 3.7.1 are changes in relation to version 3.7.0.

Version	BRS no.	Section	Correction	Expected in service ¹
Changes announced 01.01.2018				
3.7.1		General information	Electrical heating start date and electrical heating tax start date are changed to electric heating tax date	
3.7.1	BRS-001	4.1.5	Clarification: BRS-001 can only be used after the actual termination date	
3.7.1	BRS-001	4.1.5	Modification when using a fictitious CPR/CVR number, cf. code H1	Q1 2018
3.7.1	BRS-002		Universal service obligation is removed from BRS	
3.7.1	BRS-002		Process rewritten and validation updated	
3.7.1	BRS-002	4.2.6	Customer name is updated on the date of receipt of metering point master data (RSM-021)	
3.7.1	BRS-002	4.2.6	Metering point is disconnected on the date of receipt of metering point master data (RSM-021)	
3.7.1	BRS-002	4.2.7	The electricity supplier is removed on the actual stop date	
3.7.1	BRS-002	4.2.7	Any electroheat cannot be removed on the actual stop date	
3.7.1	BRS-002	4.2.8	New paragraph added: Examples of the use of dates in connection with the master data message from the grid company	
3.7.1	BRS-002	4.2.13	Clarification: Calendar days are used	
3.7.1	BRS-002	4.2.13	Clarification: "In the event of non-submission of master data from the grid company, the process for end of supply is closed after 1 year" added	
3.7.1	BRS-002	4.2.14.7	New rejection code added: No access to meter	Q1/Q2 2018
3.7.1	BRS-002	4.2.5	Clarification: "and not an active move or change of supplier" added; validation: There is not a reported end of supply for the metering point and neither is there an expected active move or change of supplier	

¹ Empty fields mean that the change has already been implemented

Version	BRS no.	Section	Correction	Expected in service ¹
3.7.1	BRS-003	4.3.4	Change: "Please note that an incorrect move can only be reported for a move with an effective date not more than 180 calendar days before the reporting date." added	
3.7.1	BRS-003	4.3.4	Clarification: "Please note that an incorrect change of supplier can be implemented only in respect of the most recent change of electricity supplier and only for this one process. This means when an incorrect change of supplier is implemented for a metering point, another one cannot be commenced without another change of supplier." added	
3.7.1	BRS-003	4.3.5	Clarification: "Please note that, immediately after resumption, the previous electricity supplier is obliged to update customer data in conformity with the contents of the contract. This must be done via BRS-015: Submission of customer master data – electricity supplier." added	
3.7.1	BRS-003	4.3.8.6 4.3.8.8	Change: Date for resumption of supply is changed to the date of the original start of supply.	
3.7.1	BRS-004	4.4.10	Change: Time limit is changed to time limit for submission of master data	
3.7.1	BRS-006	4.6.5	Addition of existing validation in BRS: The electricity supplier has been or is assigned the metering point – Electricity supplier is assigned to D35 metering point	
3.7.1	BRS-006	4.6.5	Change of error code in the validation: If the metering point subtype is physical, a meter is registered for the metering point. Error code changed to D31: Registering of meter is not in conformity with the rules	
3.7.1	BRS-006	4.6.5	Change of error code in the validation: If the metering point type is virtual or calculated, a meter is not registered for the metering point. Error code changed to D31 Registering of meter is not in conformity with the rules	
3.7.1	BRS-006	4.6.5	Addition of existing validation in BRS: Metering point subtype is not changed – D32: Wrong	
3.7.1	BRS-006	4.6.5	New validation: Metering point type is D14 and metering point subtype is not calculated – D23 Time resolution is not correct	
3.7.1	BRS-006	4.6.5	Addition of existing validation in BRS: If the metering point has been registered as a consumption metering point in net settlement group 6, and one and only one nominal reading date has been registered – D47 Processing not allowed for metering point belonging to net settlement group 6	

Version	BRS no.	Section	Correction	Expected in service ¹
3.7.1	BRS-006	4.6.5	Addition of existing validation in BRS: If the settlement method has been filled in, the metering point is a consumption metering point – D15 Settlement method is incorrect	
3.7.1	BRS-004	4.6.8	Change: Time limit is changed to time limit for submission of master data	
3.7.1	BRS-007	4.7.5	New validation: The metering point does not have registered meter data with an end date later than the date for discontinuation. D27: Request is not legitimate	
3.7.1	BRS-008		Universal service obligation is removed from BRS	
3.7.1	BRS-008	4.8.7	Clarification: "... date of validity on the submission date or no more than five working days before the day of dispatch. But no earlier than on the date of creation". The following is added: But no earlier than on the date of creation.	
3.7.1	BRS-009	4.9.1	Clarification: "Please note: With a move-in for a metering point where a customer is registered with a fictitious CPR/CVR number, a new customer can use the same fictitious CPR/CVR number already registered for the metering point, as a fictitious CPR/CVR number is considered as a blank CPR/CVR number" added	
3.7.1	BRS-009	4.9.4	Change: "Please note: If the previous customer paid energy tax direct to the tax authorities, the electricity supplier has a duty to revert the taxes to normal taxation if the new customer does not have the same exception. DataHub will email the electricity supplier about the absence of assignment of tax." Sentence added	Q2 2018
3.7.1	BRS-009	4.9.4	Change: "Please note that if the supply to the metering point has ended and the previous customer had electroheat, DataHub will email the electricity supplier about this matter." Sentence added	Q2 2018
3.7.1	BRS-009	4.9.5	New validation: The completion of an end of supply for a metering point with a later effective date; D54 A move cannot be completed due to an end of supply	
3.7.1	BRS-010	general information	Universal service obligation is removed from BRS	
3.7.1	BRS-011	4.11.6.1	Change: "Please note that an incorrect move may only be reported for a move with an effective date not more than 180 calendar days before the reporting date." added	

Version	BRS no.	Section	Correction	Expected in service ¹
3.7.1	BRS-011	4.11.6.1	Clarification: "Please note that an incorrect move can only be carried out in respect of the most recent move and for this one process only. This means, once an incorrect move has been implemented in respect of a metering point, another one cannot be commenced without a new move-in." added	
3.7.1	BRS-011	4.11.7.1.6 and 8	Change: Date for resumption of supply is changed to the date of the original start of supply.	
3.7.1	BRS-014	4.14.9	Change: Time limit has been changed to -6 days, cf. the code.	
3.7.1	BRS-015	4.15.7	Clarification: The following is added: Except if Customer Name2 is also submitted as blank (deletion of customer). Deletion of CPR may also occur implicitly by forwarding an empty customer attribute and deletion of the CPR attribute. Sentence added	
3.7.1	BRS-015		Electroheat stop followed by start on the same day	
3.7.1	BRS-016	4.16.4	Clarification: "and proposal for estimated annual volume is valid from the day of submission" added	
3.7.1	BRS-018	4.18.6	Clarification: "DataHub ignores any included meter ID, but will when forwarding it to the grid company, insert the meter ID that is registered in DataHub in respect of the date on which the electricity supplier wants a change of meter reading." added	
3.7.1	BRS-021	4.21.7	Clarification: "Please note that the EDI message must only contain only the corrected time series." added	
3.7.1	BRS-021	4.21.10	Change: text "or as corrections" removed	
3.7.1	BRS-022	4.22.6	Change: all "12.00" timestamps removed are not in code D1	
3.7.1	BRS-023	4.23.6	Change: Introduction of system correction metering point	Q1 2018
3.7.1	BRS-023	4.23.10	Change: Sending of time series if aggregation lapses upon new refixation (0-series)	Q1 2018
3.7.1	BRS-025	4.25.1	Clarification: The process may be used for flex, hour and profile-settled metering points. – Sentence removed	
3.7.1	BRS-025	4.25.4	Clarification: Please note: this also applies to search for counter values. – sentence added	
3.7.1	BRS-025	4.25.7.4	Clarification: In the comment field for Metering point type, Consumption and Production are removed	
3.7.1	BRS-026	4.26.4	Change: DataHub administration will be able to toggle the use of reason code D09 off and on. The functionality will be toggled off as standard.	Q1 2018

Version	BRS no.	Section	Correction	Expected in service ¹
3.7.1	BRS-026	4.26.4	Change: Concurrently, a search is limited such that the start and end date must be in the same calendar month and, as a maximum, 1 calendar month can be searched (from the 1st day of a month to the 1st day of the next month). – Sentence added and first opening on request	
3.7.1	BRS-026	4.26.7.1	Change: Max 1 calendar month for D09 – added to Time period	
3.7.1	BRS-027	4.27.6	Change: Sending of time series if aggregation lapses upon new refixation (0-series)	Q1 2018
3.7.1	BRS-028	4.28.4	Change: Concurrently, a search is limited such that the start and end date must be in the same calendar month and, as a maximum, 1 calendar month can be searched (from the 1st day of a month to the 1st day of the next month). – Sentence added and first opening on request	Q2 2018
3.7.1	BRS-028	4.28.8.1	Change: Max 1 calendar month for D09 – added to Time period	
3.7.1	BRS-029	4.29.4	Change: Concurrently, a search is limited such that the start and end date must be in the same calendar month and, as a maximum, 1 calendar month can be searched (from the 1st day of a month to the 1st day of the next month). – Sentence added and first opening on request	Q2 2018
3.7.1	BRS-029	4.29.8.1	Change: Max 1 calendar month for D09 – added to Time period	
3.7.1	BRS-031	4.31.4	Clarification: Please note that when a VAT code is specified it may not subsequently be changed. – Sentence added	
3.7.1	BRS-032	4.32.4	Change: Please note that when a VAT code is specified it may not subsequently be changed. – Sentence added	
3.7.1	BRS-033	4.33.4	Change: Please note that when a VAT code is specified it may not subsequently be changed. – Sentence added	
3.7.1	BRS-037	4.37.1	Clarification: In Chapter 7 “Handling of assignments”, there is a further review of price linking	
3.7.1	BRS-037	4.37.8	Faults: If settlement master data relates to subscriptions or tariffs that are marked as mandatory re-invoicing, the electricity suppliers must include the subscription name or the tariff name and the new price on the invoice to the relevant customers – Fee removed from sentence, as fee cf. H3, section 3.2 must never be created for mandatory invoicing.	
3.7.1	BRS-037	4.37.10	Correction: Tax linking: Information about settlement master data must be submitted no more than 90 calendar days after the effective date. Corrected to no more than 21 calendar days after	

Version	BRS no.	Section	Correction	Expected in service ¹
3.7.1	BRS-038	4.38.1	Clarification: In Chapter 7 “Handling of assignments”, there is a further review of price linking	
3.7.1	BRS-038	4.38.5	Clarification: Date interval/date (A search may be made for a specific date or a period, but maximum 14 months (425 days) for the sake of the data volume) – after 14 months, (425 days) added	
3.7.1	BRS-039	4.39.1	Clarification: For business customers, following the completed reminder procedure, disconnection may be requested by the electricity supplier (implicit acceptance).	
3.7.1	BRS-039	4.39.5	New validation: Request for reconnection of the metering point is not possible, as there is no current change of supplier for the metering point. D39 Current termination of supply	
3.7.1	BRS-039	4.39.5	Clarification: The cut-off date is corrected to the submission date – The electricity supplier is the supplier to the metering point on the submission date	
3.7.1	BRS-043	4.43.4	Clarification: web form changed to e-mail	
3.7.1	BRS-043	4.43.5	Validation (existing): The new electricity supplier is the same as the current electricity supplier. E16 The electricity supplier is not correct	
3.7.1	BRS-043	4.43.12.1	Clarification: Today’s date or until the expected termination date, this date can also be used	
3.7.1	BRS-045	4.45.1	Change: Table 3-65 days to be changed to 5 – 65 days for other metering points	
3.7.1	BRS-045	4.45.1	Change: A reminder furthermore does not apply to hourly series for profile-settled metering point (RSM-0012/D06), but it is possible via the DataHub market portal to search for missing submissions and email them.	
3.7.1	BRS-047	4.47	Change: The process has been cancelled and the description removed	
3.7.1	BRS-048	4.48	Change: The process has been cancelled and the description removed	
3.7.1		5.1	Change: Plant capacity ...D05 changed to D04	

Version	BRS no.	Section	Correction	Expected in service ¹
3.7.1		5.1	Change: Expected annual consumption. In the Comment, text is added: "Cannot be changed in the master data; is an independent process. Expected annual value must be present for a profile-settled consumption metering point." Under Usage, text is added: Must be stated for profile-settled consumption metering point. Optional for other types of metering points.	
3.7.1		5.1	Change: Plant GSRN: added: "Mandatory for E17, if net settlement group <>0" and ...D05 changed to D04	
3.7.1		6.2.2	Clarification: Item 3. "The grid company is obliged to make the connection no more than 1 working day after receipt of a message about establishing electroheat."	
3.7.1		6.2.2	Clarification: Item 6. "For discontinuation of the D14 metering point, the ordinary discontinuation rules apply. The grid company is obliged to implement the change no more than 1 working day after receipt of a message about removal of electroheat."	
3.7.1		6.3.4	Clarification: New section regarding the practical handling of changes to electroheat	
3.7.1		8.2	Figure updated with D09	
3.7.1		9.4	ITX updated with individual new rules (published in the spreadsheet)	

2. Publication

This version of 'Business processes for the Danish electricity market' is effective from 1 October 2015, and covers implementation of the wholesale model and changes associated with the introduction of supply obligation.

This version comprises the following business processes:

Process	Name
BRS-001	Change of supplier
BRS-002	End of supply
BRS-003	Managing an incorrect change of supplier
BRS-004	Create metering point
BRS-005	Master data request
BRS-006	Submission of master data
BRS-007	Close down metering point
BRS-008	Connection of metering point with status <i>new</i>
BRS-009	Move-in
BRS-010	Move-out

BRS-011	Incorrect moves
BRS-012	Change of settlement method
BRS-013	Disconnection and reconnection of metering point
BRS-014	Meter management.
BRS-015	Submission of customer master data
BRS-016	Submission of EAC by balance supplier
BRS-017	Submission of EAC by grid company
BRS-018	Submission of meter reading by balance supplier
BRS-019	Submission of meter reading by grid company
BRS-020	Consumption statement for profile-settled metering point
BRS-021	Submission of metered data for metering point
BRS-022	Submission of load shares
BRS-023	Submission of calculated energy time series
BRS-024	Request for historical data
BRS-025	Request for metered data for a metering point
BRS-026	Request for calculated energy time series
BRS-027	Aggregation of wholesale services
BRS-028	Request for aggregated subscriptions or fees
BRS-029	Request for aggregated tariffs
BRS-030	Request for settlement basis
BRS-031	Update subscription price list
BRS-032	Update fee price list
BRS-033	Update tariff price list
BRS-034	Request price list
BRS-035	Discontinued
BRS-036	Update production obligation
BRS-037	Settlement master data for a metering point – subscription, fee and tariff links
BRS-038	Request for settlement master data for metering point
BRS-039	Request for service from grid company
BRS-040	Change to balance responsible party
BRS-041	Discontinued
BRS-042	Initiate cancel change of supplier by customer
BRS-043	Change of supplier at short notice
BRS-044	Mandatory change of supplier for metering point
BRS-045	Send missing data log
BRS-046	Submission of contact addresses from grid company
BRS-047	Submission of historic annual consumption to the balance supplier
BRS-048	Request for historical annual consumption

3. Introduction

3.1 Introduction

This specification must be used by all players in the Danish electricity market when exchanging messages with DataHub. The target group for the specification is all players and their IT suppliers.

The specification is based on the north European standard as specified by ebIX, but has been adapted to the Danish market model and an electricity market which includes a DataHub.

3.2 Basis of the specification

The basis for this document is the market regulations covering the Danish electricity market, particularly:

- Regulation H1: 'Change of balance supplier, move, etc.'
- Regulation H2: 'Load-profile settlement etc.'
- Regulation H3: 'Settlement of wholesale services and taxes'
- Regulation D1: 'Settlement metering'
- Regulation I: 'Master data'
- Regulation F1: 'EDI communication'
- Regulation C1: 'Terms of balance responsibility'

The document applies to all settlement metering points defined in Regulation I. However, there may be special circumstances applying to production metering points. These are stated under *Special provisions for production metering points* in each BRS.

For a description of the messages and their use, see *Appendix report 1 – EDI transactions for the Danish electricity market (EDI guide – RSM)*.

The key data fields in the messages, which form part of the various business processes, are described under *Data content* in each business process. 'Key data' refers to the data of significance to process handling in relation to DataHub.

4. Business processes

This section describes the business processes in the Danish electricity market. The business processes are described using use case diagrams, sequence diagrams and associated specification of the business procedures and rules.

Use case diagrams

Use case diagrams are employed in the business processes. Use case diagrams show relationships between relevant players and DataHub in each business process.

There are some drawing aspects readers need to be aware of in order to get the most out of use case diagrams. The initiating player is marked by a bold line in the diagram.

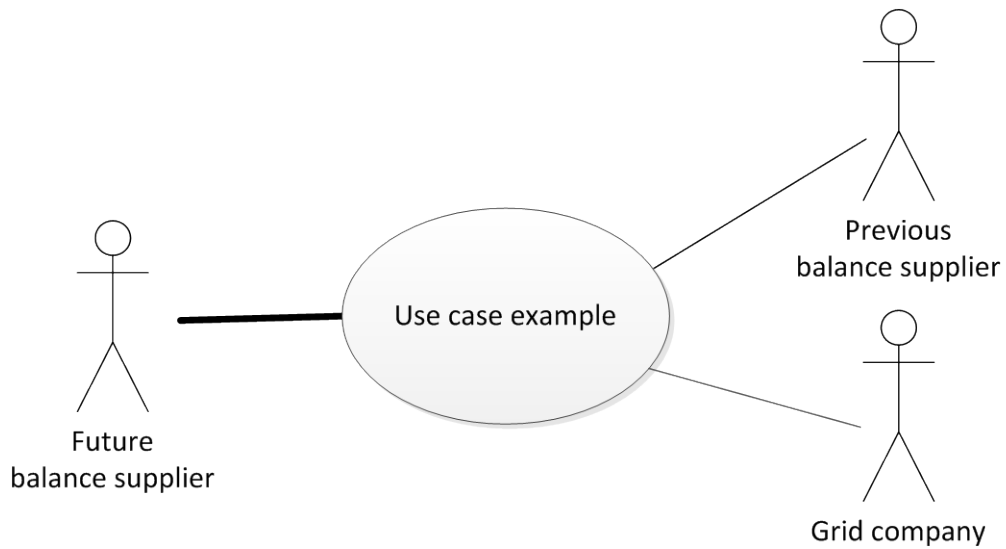


Figure 1 – Example use case diagram for a process

Sequence diagrams

The sequence diagrams present an overview of the exchange of messages in a given business process, see Figure 2 below. Sequence diagrams represent EDI transactions and associated EDI messages in the form of horizontal arrows between the players and DataHub.

EDI messages are identified using unique names, such as *RSM-001: Request start of supply*

A yellow bar indicates a manual procedure/activity not directly covered by the EDI transactions.

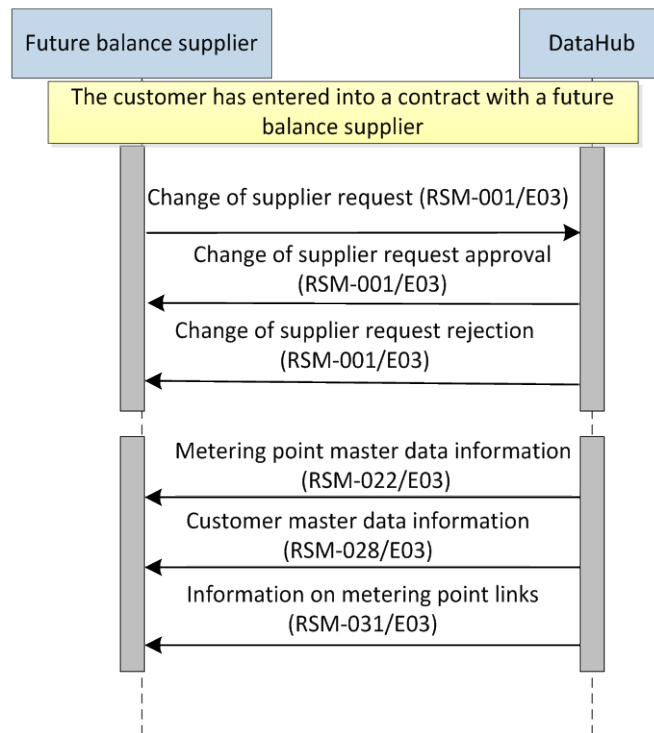


Figure 2 – Example sequence diagram for a process

Validation rules

A number of validation rules are defined for each business process to filter out incorrect messages. The validation rules are formulated positively. This means that messages which fulfill the validation condition will be accepted, while messages that do not will generate the error message shown in the validation table.

In the cases where no specific message type has been set for the error message, DataHub will send an *RSM-009: Acknowledgment (error report)*. This applies, for example, to faults in metered data (BRS-020 and BRS-021).

RSM-009 is not included in the sections on 'Identification of processes and transactions', or in the sequence diagrams, but will be used by DataHub if a BRS does not state a specific message type for reporting an error in a message received from the market.

Validation	Error message
Metering point identifiable	E10 Problem with metering point
Status of metering point is new, connected or disconnected	D16 Physical status is incorrect

Figure 3 – Example validation table

Time limits

Time limits are defined in this document either in working days, calendar days or years. *Working days are defined in Regulation D1.*

Most time limits in this document are stated as follows: 'Must be reported at least X working days before the effective date'. What this means is illustrated in the example shown below, where the deadline is three working days:

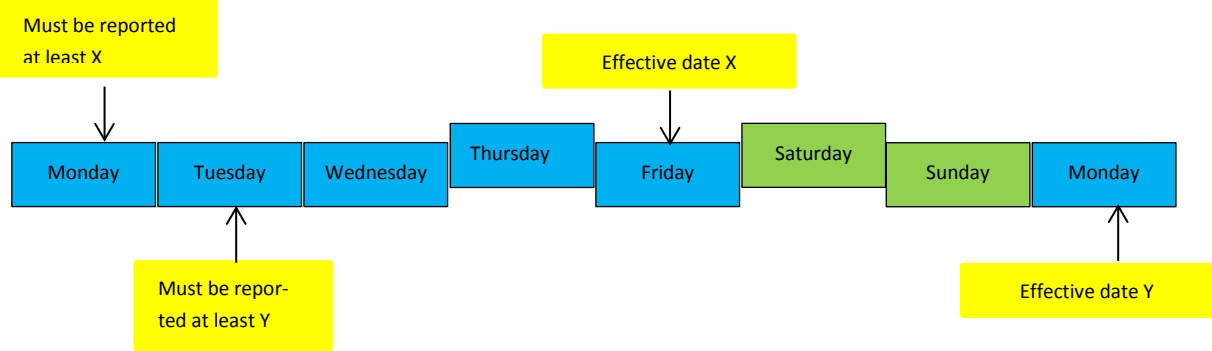


Figure 4 – How to interpret time limits

As the figure shows, 'at least X working days before the effective date' means there must be at least three whole working days between the reporting date and the effective date.

Each business process contains a table showing the time limits that apply to the business process, in line with the market regulations.

Sender	Recipient	Time limit
Future balance supplier	DataHub	<p>A change of supplier must be reported to DataHub at least 10 working days before the effective date, and as soon as possible after conclusion of the contract. Note that the ordinary rules for remote purchases, which stipulate a 14 calendar day cooling off period, must be incorporated into the supplier's own time limits.</p> <p>A change of supplier may be reported up to ten years ahead.</p> <p>If the applicable time limits for reporting a change of supplier are complied with, a change of supplier can be implemented on any day.</p>
DataHub	Balance supplier	<p>DataHub sends an approval/rejection within one hour of receiving a request for change of supplier.</p> <p>Immediately after sending approval, DataHub sends master data for the metering point.</p>

Figure 5 – Example of time limits

Data content

The messages (RSM) used in each business process are described. The list of data fields is not exhaustive. Reference is therefore always made to document, *EDI transactions for the Danish electricity market*, which contains all the relevant fields.

Name	Value	Comment
Business reason		Change of balance supplier
Metering point ID		
Supply start date		
Balance supplier ID		
Balance responsible party (BRP)		
CPR		Either a CPR or CVR number must be provided
CVR		

Figure 6 – Example data content (RSM-001)

4.1 BRS-001: Change of supplier

4.1.1 Overview

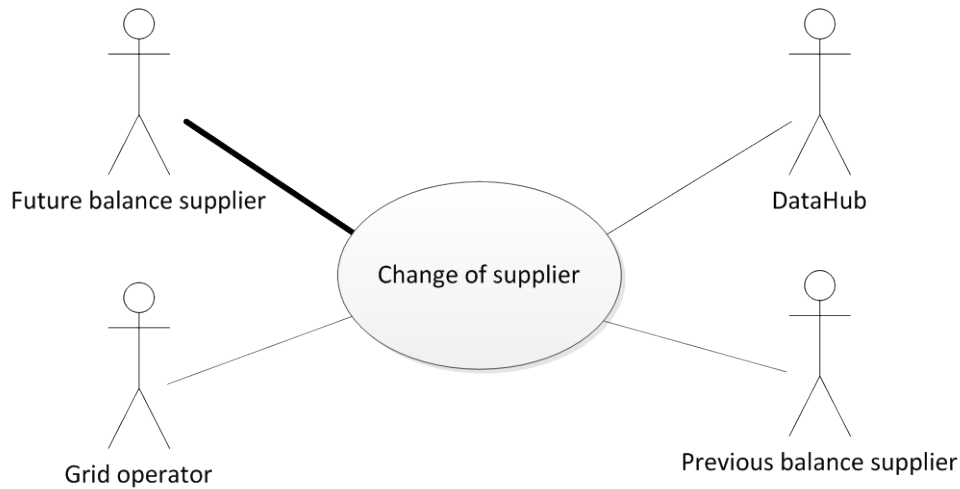


Figure 7 – Use case diagram for change of supplier

A change of supplier is a change of balance supplier for a given metering point.

It is always the balance supplier taking over the metering point (future balance supplier) who must notify DataHub of the change of supplier. The customer is not allowed to do it himself.

A change of supplier relates to a consumption or production metering point. A metering point is the smallest unit in the power system for which a change of supplier can be effected.

In the EDI communication, a metering point is defined by an 18-digit GSRN number.

The ordinary renewal of a contract with a current balance supplier is not normally considered a change of supplier. However, a balance supplier may choose to implement a change of supplier process for a change of product if the balance supplier finds this convenient for internal reasons. In these cases, the balance supplier will not receive a reading for a profile-settled metering point.

4.1.2 Overview of exchanges

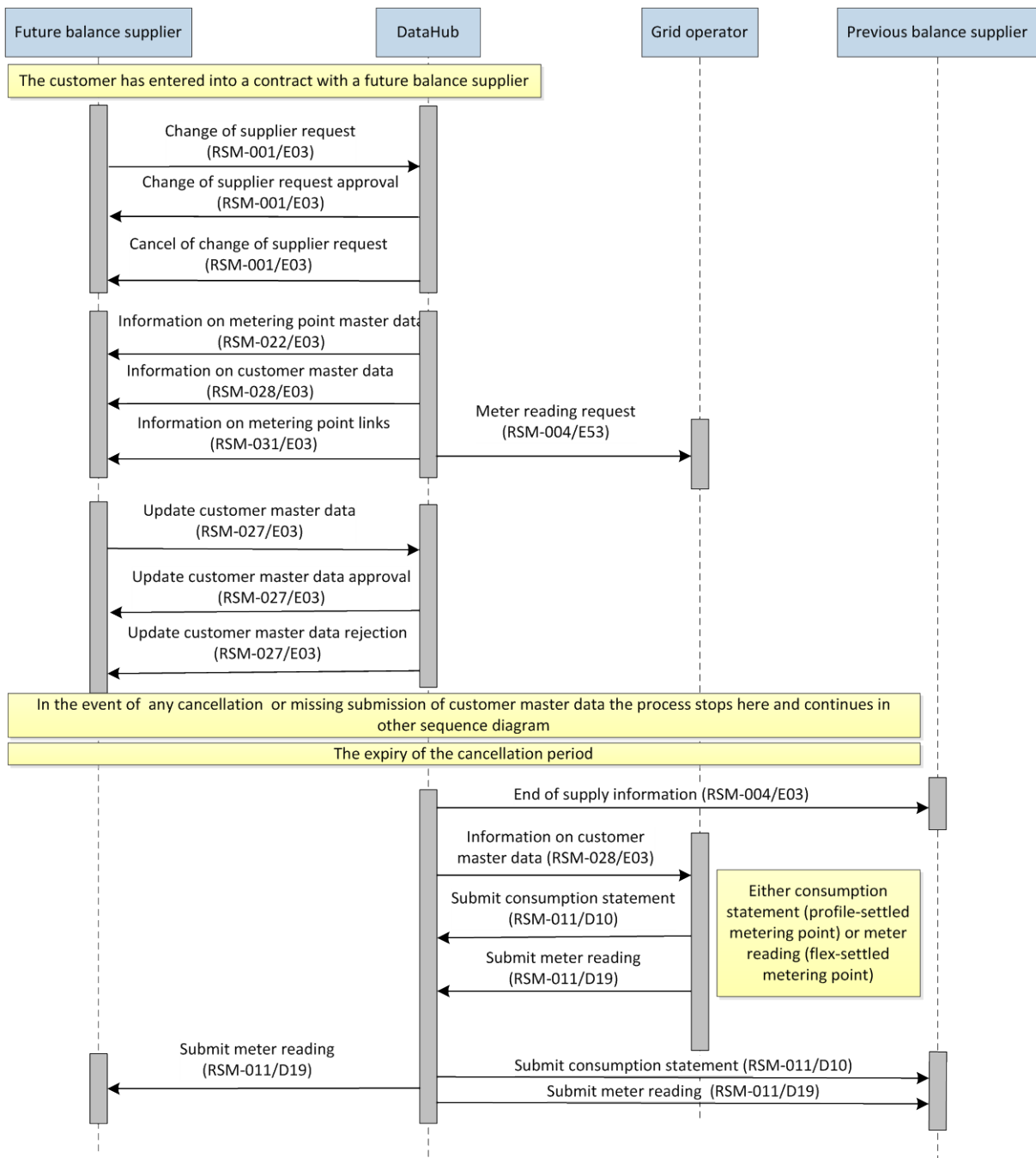


Figure 8 – Sequence diagram for a change of supplier – total process

4.1.3 Initial state

Before a change of supplier may be initiated, the customer and the new balance supplier must have entered into a contract for the supply of electricity to a metering point from a given date (effective date), see Regulation H1.

4.1.4 Process for change of supplier

Once the contract is concluded, the future balance supplier sends the *Request change of supplier* EDI message with business reason *Change of supplier* to DataHub.

The message must contain a CPR or CVR number. Specification of the content for CPR/CVR numbers in DataHub is available in Regulation I: *Master data*. The specific handling of CPR/CVR numbers in DataHub is described in BRS-015, *Submission of customer master data by balance supplier*.

In reply to the balance supplier's notification of a change of supplier, DataHub sends an EDI message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

The balance supplier should note that the change of supplier will be rejected if end of supply has been reported for the metering point and the time limit for reporting *BRS-043: Change of supplier at short notice* has been fulfilled.

If the change of supplier is approved, EDI messages containing relevant master data for the metering point are sent to the balance supplier. If other metering points have been coupled to the metering point, master data for these metering points will be included.

The balance supplier should note that the balance supplier's system must be able to receive master data for coupled metering points (child metering points) before master data for the parent metering point.

For the *Customer master data information* message, only the data not linked to the previous balance supplier will be sent. This means that no information will be sent regarding CPR numbers.

For *Metering point link information*, only the subscriptions, fees and tariffs registered as valid on the effective date or later will be sent.

The balance supplier is responsible for checking the change of supplier is effected for the correct metering point and customer, based on the customer name and metering point address. If this is not the case, the balance supplier must cancel the change of supplier before the cancellation deadline expires. The balance supplier does this by sending a *Cancel of change of supplier request* EDI message with function code *Cancellation*.

If the balance supplier cancels the change of supplier before the cancellation deadline expires, the business process will be discontinued.

When the future balance supplier has confirmed that the change of supplier has been correctly effected, the balance supplier must check the information the balance supplier is responsible for under Regulation I and submit an *Update customer master data* message with business reason *Change of supplier* to DataHub before the cancellation time limit expires.

The *customer master data* submitted for the metering point must always include information on customer name(s) and associated CPR/CVR number(s). If there are two customers for the metering point, there must be CPR numbers for both.

Where CVR numbers are used, two CVR numbers must always be registered: a customer CVR, used to manage move and change of supplier events, and a data access CVR, used to manage access to metered data for third parties. The two CVR numbers may be identical if the same CVR is used for both functions. Note that only the first customer name may be entered when using CVR numbers. No name is linked to the data access CVR.

The submitted master data will be validated in line with the rules in *BRS-015: Submission of customer master data by balance supplier*.

However, note that electrical heating status cannot be changed in this business process. If an attempt is made to change this, the message will be rejected with the error: *Change to electrical heating status not permitted*.

Any other future balance suppliers for the metering point will receive *Customer master data information* with business reason *Update customer master data*, in line with BRS-015.

The future balance supplier should note that it is the customer master data the future balance supplier originally submitted in connection with the change of supplier or move-in notification which will apply from the effective date.

This applies even if the future balance supplier has received later updates to customer master data.

It will therefore be the future balance supplier's responsibility to update the customer master data on the effective date, if the balance supplier wishes to use this customer master data received later.

If DataHub has not received the master data message containing the above information from the future balance supplier before expiry of the cancellation period, DataHub will cancel the change of supplier. DataHub will send an *Incorrect process information* message to the future balance supplier in this case.

In cases where a *Reading request* has been sent to the grid company, DataHub will send a *Reading cancellation information* message after this process.

If the metering point has a connection status of *new* and a balance supplier is registered for the metering point, the process is effected as a change of supplier for a connected metering point. However, a consumption or meter reading will not be made for the metering point.

If the metering point has a connection status of *new* and the customer is specified as (*unknown*), the change of supplier request will be rejected. In this situation the balance supplier must use *BRS-009: Move-in*.

However, the supply of electricity will only commence once DataHub and then the balance supplier has received a master data message with connection status *connected* and an effective date for start of supply.

If the balance supplier makes a product change, this may be effected by sending a *Request change of supplier* EDI message with business reason *Change of supplier*. There will be no meter reading in connection with such a product change.

4.1.5 Validation rules for Request change of supplier

For validations for submitted customer master data, see *BRS-015 Submission of customer master data*.

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The metering point is registered as a consumption or production metering point	D18 Metering point type is incorrect

The metering point is registered as a production metering point and is not subject to a purchase obligation	E22 Metering point blocked for change of supplier
Status of metering point is new, connected or disconnected	D16 Physical status is incorrect
The metering point has a balance supplier assigned	E22 Metering point blocked for change of supplier
The metering point customer is not registered as (<i>unknown</i>)	E22 Metering point blocked for change of supplier
The balance supplier is a legitimate player	E16 Balance supplier is not correct
The balance responsible party is a legitimate player	E18 Balance responsible party is not correct
There has been no change of supplier on the day	E22 Metering point blocked for change of supplier
The message has been received before the official deadline	E17 Date is not within set time limit
CPR/CVR corresponds to registered information*	D17 CPR/CVR is not correct
No move has been reported for the metering point on or before the effective date	D07 Move in progress
End of supply has not been reported for the metering point with an effective date prior to the first possible date for change of supplier	D39 End of supply in progress

* CPR/CVR numbers are validated using the following rules:

CPR:

- If at least one of the customers registered for the metering point has a blank CPR number in DataHub, the change of supplier is accepted.
- If there are no customers with a 'blank' or fiktive CPR number for the metering point, the change of supplier is only accepted if there is a match with one of the CPR numbers registered for the metering point.

CVR (customer CVR):

- If the customer CVR field in DataHub is blank or fiktive, the change of supplier is accepted.
- If the customer CVR field in DataHub is not blank or fiktive, the change of supplier is accepted if there is a match with the customer CVR registered for the metering point.

Note that a change from CPR to CVR and vice versa must be effected as a move.

4.1.6 Notifying the grid company

If the metering point is profile-settled, DataHub sends a *Meter reading request* EDI message to the grid company, specifying the effective date and metering point ID.

Before sending the message, DataHub checks whether a meter reading request has already been sent for the day, and whether the balance supplier is the existing balance supplier on the date of change. If one of the above is the case, no EDI message is sent to the grid company.

Following expiry of the cancellation period, DataHub sends customer master data to the grid company with business reason *Change of supplier*.

4.1.7 End of supply information

For metering points for which confirmation of the change of supplier has been sent and where the future balance supplier has sent updated customer master data to DataHub, DataHub informs the previous balance supplier of end of supply immediately upon expiry of the cancellation period, by sending an *End of supply information* EDI message specifying the end date.

Note that the previous balance supplier cannot reject the end of supply. This applies even if the customer is bound by a contract, in line with Regulation H1.

4.1.8 Effective date

For metering points for which confirmation of the change of supplier has been sent, DataHub will activate the change from the effective date.

The future balance supplier starts supply on the effective date.

The previous balance supplier stops supply on the effective date.

4.1.9 Submit consumption statement/meter reading

The future balance supplier can submit meter readings and estimated annual consumption to DataHub in accordance with *BRS-018: Submission of meter reading by balance supplier* and *BRS-016: Submission of EAC by balance supplier*. However, this cannot be done before the effective date for start of supply.

For profile-settled metering points, the grid company will make a reading on the effective date in accordance with its rules. If the grid company has received meter readings from a balance supplier, the grid company may choose to use these values as a basis for its reading.

For profile-settled metering points, the grid company sends an EDI message to DataHub with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, the grid company sends an EDI message to DataHub with business reason *Meter reading*. The message contains the meter reading on the effective date.

There can be several meter reading requests on the same day from different processes. In such cases, the grid company only needs to make and send one meter reading.

For profile-settled metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Meter reading*. The message contains the meter reading on the effective date.

The previous balance supplier then sends the final settlement to the customer.

For profile-settled and flex-settled physical metering points, DataHub sends an EDI message to the future balance supplier with business reason *Meter reading*. The message contains the meter reading on the effective date.

For profile-settled metering points, the consumption statement will often result in a new value for the estimated annual consumption. If this is the case, the grid company submits the updated annual consumption using business process *BRS-017: Submission of EAC by grid company*.

Note that if the consumer is assigned to net settlement group 6, any surplus production for the D04 metering point must be submitted when changing supplier.

4.1.10 Cancellation of change of supplier

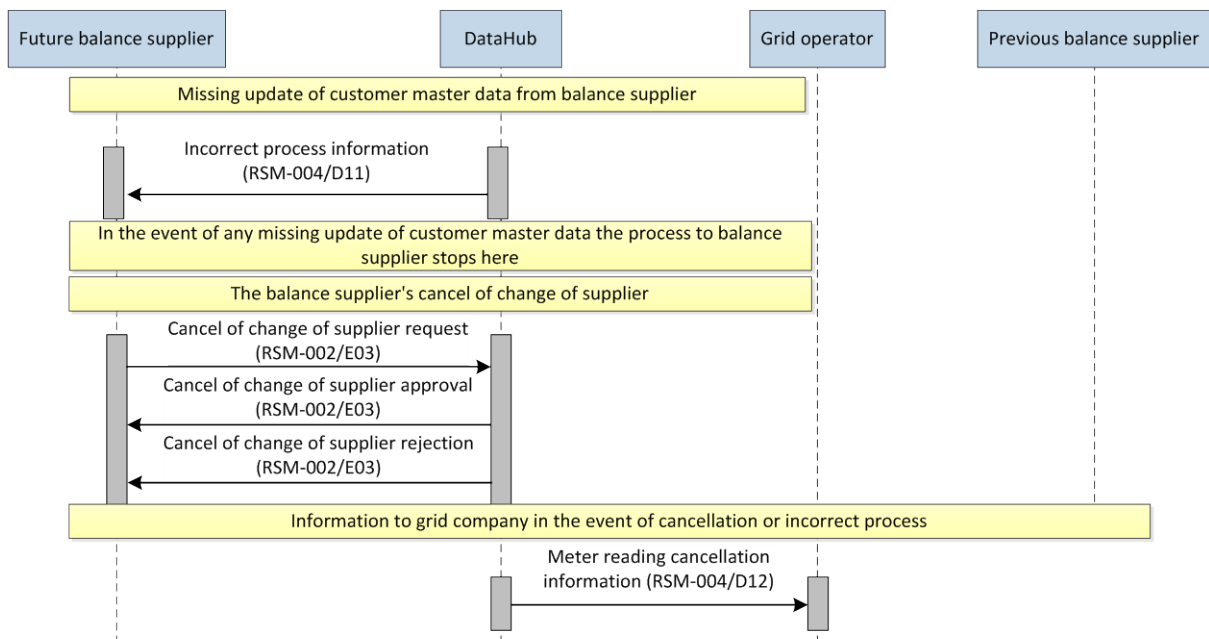


Figure 9 – Sequence diagram for Cancellation of change of supplier

As noted in section 4.1.4, DataHub will cancel the change of supplier if the balance supplier does not submit updated customer master data within the time limit. DataHub will send an *Incorrect process information EDI* message to the future balance supplier in this case.

If the balance supplier wants to cancel the change of supplier, they send a *Cancel of change of supplier request* EDI message with business reason *Change of supplier* and function code *Cancellation* to DataHub. The balance supplier should do this, for example, if they discover upon receipt of the change of supplier confirmation that the request is incorrect, or if the customer cancels the agreement.

DataHub validates the message in accordance with the validation rules for cancellation shown below. In reply to the balance supplier's cancellation message, DataHub sends an EDI message with a reply status (approved/rejected). If DataHub rejects the cancellation, it must state the reason why.

If DataHub has sent a *Meter reading request* EDI message to the grid company in connection with the change of supplier, and if the cancellation is approved or the process is incorrect, DataHub will send a *Meter reading cancellation information* message to the grid company so that the grid company can cancel the pending meter reading.

The process will then be terminated.

If the cancellation deadline has passed and the conditions specified in Regulation H1 have been met, a cancellation of change of supplier must be effected as described in business process *BRS-003: Incorrect change of supplier*.

4.1.11 Validation rules for cancellation

Validation	Error message
Metering point identifiable	E10 Problem with metering point
Metering point matches the one in the original message	D05 Metering point does not match the metering point from the original document
The balance supplier is the same as the one that made the request	E16 Balance supplier is not correct
The message has been received before the official deadline	E17 Date is not within time limit
Function code is cancellation	D19 Function code is not valid
The reference is to the original request from the balance supplier	D06 Reference to transaction ID does not match ID from original document

4.1.12 Special provisions for production metering points

DataHub will reject change of supplier for production metering points covered by a production obligation. The customer must contact Energinet and surrender their production obligation right in line with the applicable rules, after which Energinet will remove the block preventing a change of supplier from being effected for the metering point.

4.1.13 Time limits for change of supplier

Sender	Recipient	Time limit
Future balance supplier	DataHub	<p>A change of supplier must be reported to DataHub at least 10 working days before the effective date, and as soon as possible after conclusion of the contract. Note that the ordinary rules for remote purchases, which stipulate a 14 calendar day cooling off period, must be incorporated into the supplier's own time limits.</p> <p>A change of supplier may be reported up to ten years ahead.</p> <p>If the applicable time limits for reporting a change of supplier are complied with, a change of supplier can be implemented on any day.</p>
DataHub	Future Balance supplier	<p>DataHub sends an approval/rejection within one hour of receiving a request for change of supplier.</p> <p>Immediately after sending approval, DataHub sends master data for the metering point.</p>
DataHub	Grid company	DataHub sends the grid company a <i>Meter reading request</i> nine working days before the effective date.
Future balance supplier	DataHub	A change of supplier cancellation of must be sent to DataHub at least three working days before the effective date for the change of supplier.
Future balance supplier	DataHub	New balance supplier must submit <i>customer master data</i> before expiry of the cancellation period.
DataHub	Future balance supplier	Within one hour following expiry of the cancellation period, DataHub sends an <i>Incorrect process information</i> message to the future balance supplier if customer master data have not been received
DataHub	Previous balance supplier	Within one hour following expiry of the cancellation period, DataHub sends an end-of-supply message to the previous balance supplier.
DataHub	Grid company	Within one hour following expiry of the cancellation period, DataHub sends customer master data to the grid company.
Grid company	DataHub	The grid company sends a consumption statement for a profile-settled metering point and a meter reading, if available, for a profile or flex-settled metering point, as soon as possible and within 35 calendar days after the effective date, in line with Regulation D1.

DataHub	Previous balance supplier	DataHub forwards the consumption statement and/or meter reading for the measuring point within one hour of receipt.
DataHub	Future balance supplier	DataHub forwards the meter reading for the measuring point, if available, within one hour of receipt.

4.1.14 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.1.14.1 Change of supplier request (RSM-001/E03)

RSM message		Request start of supply
Name	Value	Comment
Business reason	E03	Change of balance supplier
Metering point ID		
Supply start date		
Balance supplier ID		
Balance responsible party ID		
CPR		Either a CPR or CVR number must be provided
CVR		Customer CVR

4.1.14.2 Change of supplier request approval (RSM-001/E03)

RSM message		Start of supply approval
Name	Value	Comment
Business reason	E03	Change of balance supplier
Metering point ID		
Reference		Reference to Start of supply request

4.1.14.3 Change of supplier request rejection (RSM-001/E03)

RSM message		Start of supply rejection
Name	Value	Comment
Business reason	E03	Change of balance supplier
Metering point ID		
Reference		Reference to Start of supply request
Rejection reason		

4.1.14.4 Information on metering point master data (RSM-022/E03)

RSM message		Metering point master data notification
Name	Value	Comment
Business reason	E03	Change of balance supplier
Metering point ID		
Validity date		Supply start date

RSM message	Metering point master data notification	
Balance supplier		GLN for balance supplier
Start of supply		Supply start date
Balance responsible party ID		GLN
Other master data is sent to the balance supplier in line with Chapter 5: master data		

Master data for any child metering points will also be sent to the balance supplier.

4.1.14.5 Information on metering point links (RSM-031/E03)

Only sent to the balance supplier if there are links for the metering point.

RSM message	Master data settlement notification	
Name	Value	Comment
Business reason	E03	Change of balance supplier
Validity date		Date for metering point link
Function code		Registered value for link (Create/Change/Stop)
Metering point ID		
Market player		GLN for grid company
Charge type		Subscription/fee/tariff
Charge type ID		Market player's ID for charge type
Number		

Master data for any child metering points will also be sent to the balance supplier if there are links for the metering point.

4.1.14.6 Information on customer master data (RSM-028/E03/E34)

RSM message	Customer master data notification	
Name	Value	Comment
Business reason	E03	Change of balance supplier
	E34	Update customer master data (future balance suppliers)
Metering point ID		
Validity date		Supply start date
Electrical heating		Yes/No
Electrical heating tax date		Calculation start date
Web access code*		
Consumer category		
Customer name and if any, second customer name		
Customer CVR		
Data access CVR*		
Balance supplier status		Active/Inactive
Address(es)		Reading card/voting card/disconnect card/ "address 4". See chapter5: Master data
Other master data is sent to the balance supplier and grid company in line with Chapter 5: master data		

The grid company does not receive data marked with*

4.1.14.7 Update customer master data (RSM-027/E03)

RSM message	Update customer master data request

Name	Value	Comment
Business reason	E03	Change of balance supplier
Metering point ID		
Validity date		Supply start date
Electrical heating		Electrical heating status cannot be changed in this process
Electrical heating tax date		Electrical heating tax date cannot be changed in this process
Consumer category		
Customer name and if any, second customer name		
CPR		CPR must be specified for each registered customer
Customer CVR		
Data access CVR		
Address(es)		Reading card/voting card/disconnect card/ "address 4". See chapter 5
The balance supplier may send other master data in line with Chapter 5: Master data		

4.1.14.8 Update customer master data approval (RSM-027/E03)

RSM message	Update customer master data approval	
Name	Value	Comment
Business reason	E03	Change of balance supplier
Metering point ID		
Reference		Reference to <i>Update balance supplier master data request</i>

4.1.14.9 Update customer master data rejection (RSM-027/E03)

RSM message	Update customer master data rejection	
Name	Value	Comment
Business reason	E03	Change of balance supplier
Metering point ID		
Reference		Reference to <i>Update balance supplier master data request</i>
Rejection reason		

4.1.14.10 Cancel of change of supplier request (RSM-002/E03)

RSM message	Cancel start of supply request	
Name	Value	Comment
Business reason	E03	Change of balance supplier
Function code		Cancellation
Metering point ID		
Reference		Reference to Start of supply request

4.1.14.11 Cancel of change of supplier approval (RSM-002/E03)

RSM message	Cancel start of supply approval	

Name	Value	Comment
Business reason	E03	Change of balance supplier
Metering point ID		
Reference		Reference to <i>Cancel start of supply request</i>

4.1.14.12 Cancel of change of supplier rejection (RSM-002/E03)

RSM message		Cancel start of supply rejection
Name	Value	Comment
Business reason	E03	Change of balance supplier
Metering point ID		
Reference		Reference to <i>Cancel start of supply request</i>
Rejection reason		

4.1.14.13 End of supply information (RSM-004/E03)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	E03	Change of balance supplier (to balance supplier)
Metering point ID		
Effective date		

4.1.14.14 Meter reading request (RSM-004/E53)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	E53	Meter reading request
Metering point ID		
Effective date		

4.1.14.15 Cancel meter reading information (RSM-004/D12)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D12	Cancel meter reading request
Metering point ID		
Effective date		

4.1.14.16 Incorrect process information (RSM-004/D11)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D11	Incorrect process
Metering point ID		
Effective date		

4.1.14.17 Submit consumption statement (RSM-011/D10)

RSM message		Meter reading notification

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Period		From last reading date to effective date
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point

Statements for any child metering points will also be sent to the balance supplier.

4.1.14.18 Submit meter reading (RSM-011/D19)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D19	Meter reading
Metering point ID		
Reading date		Change of supplier date
Meter reading		Must be submitted for a physical metering point

Meter readings for any child metering points will also be sent to the balance supplier.

4.1.15 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-001
BRS name	Change of supplier
EDI transactions:	
RSM ID	RSM-001
RSM name	Start of supply
RSM ID	RSM-002
RSM name	Cancel start of supply
RSM ID	RSM-004
RSM name	Change of balance supplier notification
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-031
RSM name	Submit settlement master data
RSM ID	RSM-027
RSM name	Update customer master data
RSM ID	RSM-028
RSM name	Submit customer master data

A list of parameters that can be configured by the ENDK support team to influence the behaviour of the market function.

4.2 BRS-002: End of supply

4.2.1 Overview

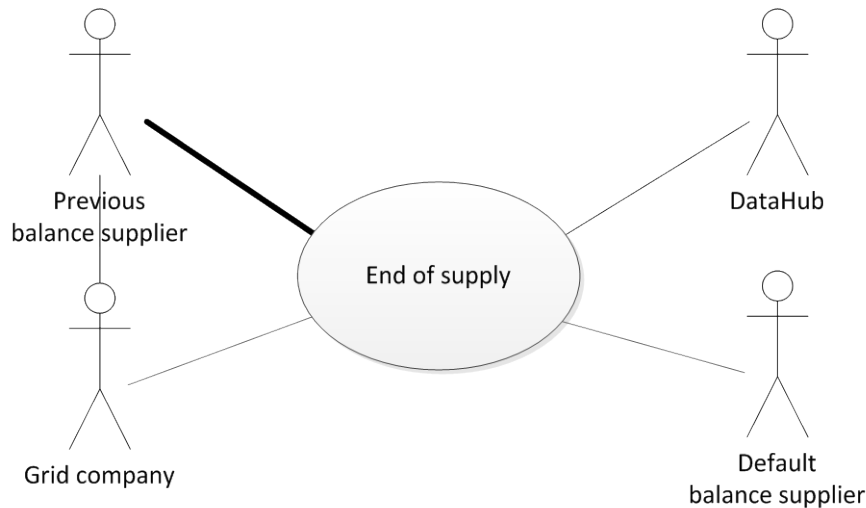


Figure 10 – Use case diagram for end of supply

A balance supplier continues to be responsible for a metering point until another balance supplier takes over the metering point, the metering point is closed down or the balance supplier reports end of supply to DataHub in line with this process and with the required notice.

The end-of-supply process is only relevant if the current contract with the customer terminates and the current balance supplier has not received an end-of-supply notification before the actual effective day due to a move or change of supplier. The balance supplier can also cancel the process until a message stating the actual termination day has been received.

If a cancel or stop message is received from another business process before the business process has been effected, ie before the actual effective date, the end-of-supply process is cancelled.

The end of supply process is only fully complete once the grid company, as part of the process, has disconnected the metering point.

The process therefore has a desired effective date and an actual effective date, where the latter is the date from which responsibility for the metering point ceases.

In addition, the date on which the metering point is disconnected and the grid company submits metering point master data about this (change of physical status) is called the submission date for metering point master data.

As the grid company will not always be able to disconnect the metering point on the desired effective date, the actual effective date may be later, but never earlier, than the desired effective date.

If the grid company does not receive master data for disconnection of the metering point, the process will automatically be cancelled after the specified period and players involved will be notified with the message *Information about breach of process*.

4.2.2 Overview of exchanges common to all grid areas

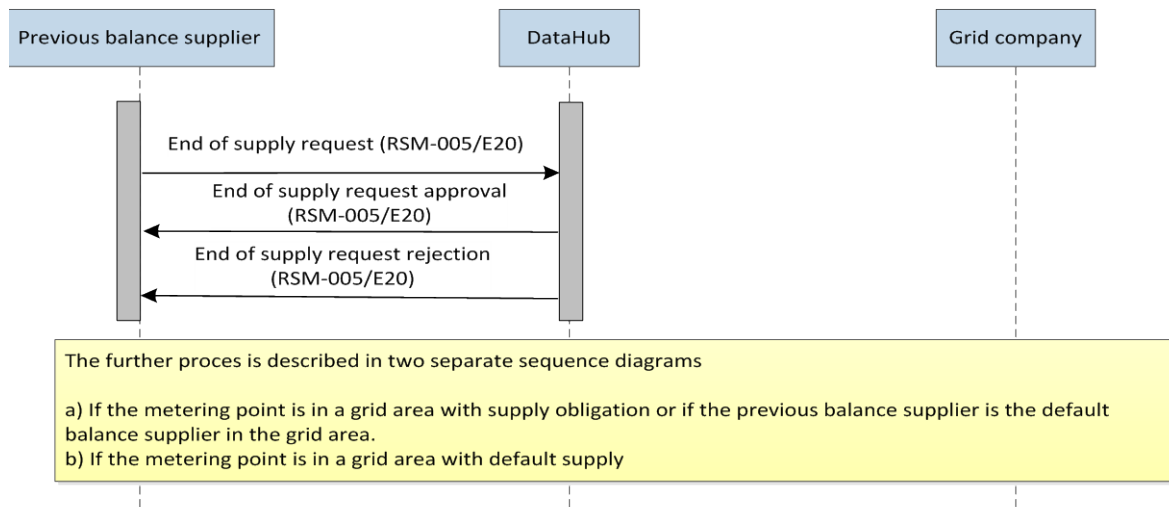


Figure 11 – Sequence diagram for end of supply

4.2.3 Initial state

The balance supplier knows that the contract with the customer is expiring and has notified the customer in line with the provisions of Regulation H1.

4.2.4 Process for end of supply

The balance supplier sends an end of supply message for the metering point with a requested effective termination date (typically the day after the customer contract expires) using the *End of supply request* EDI message.

In response to the balance supplier’s request, DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

4.2.5 Validation rules for End of supply request

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The balance supplier is a legitimate player for the metering point	E16 Balance supplier is not correct
The message has been received before the official deadline	E17 Date is not within correct time frame
The metering point is registered as a consumption or production metering point	D18 Metering point type is incorrect

No end of supply, active expected move or change of supplier has been reported for the metering point (after the cancellation period expires)	E22 Metering point blocked for change of supplier
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4.2.6 End of supply in grid areas with a supply obligation

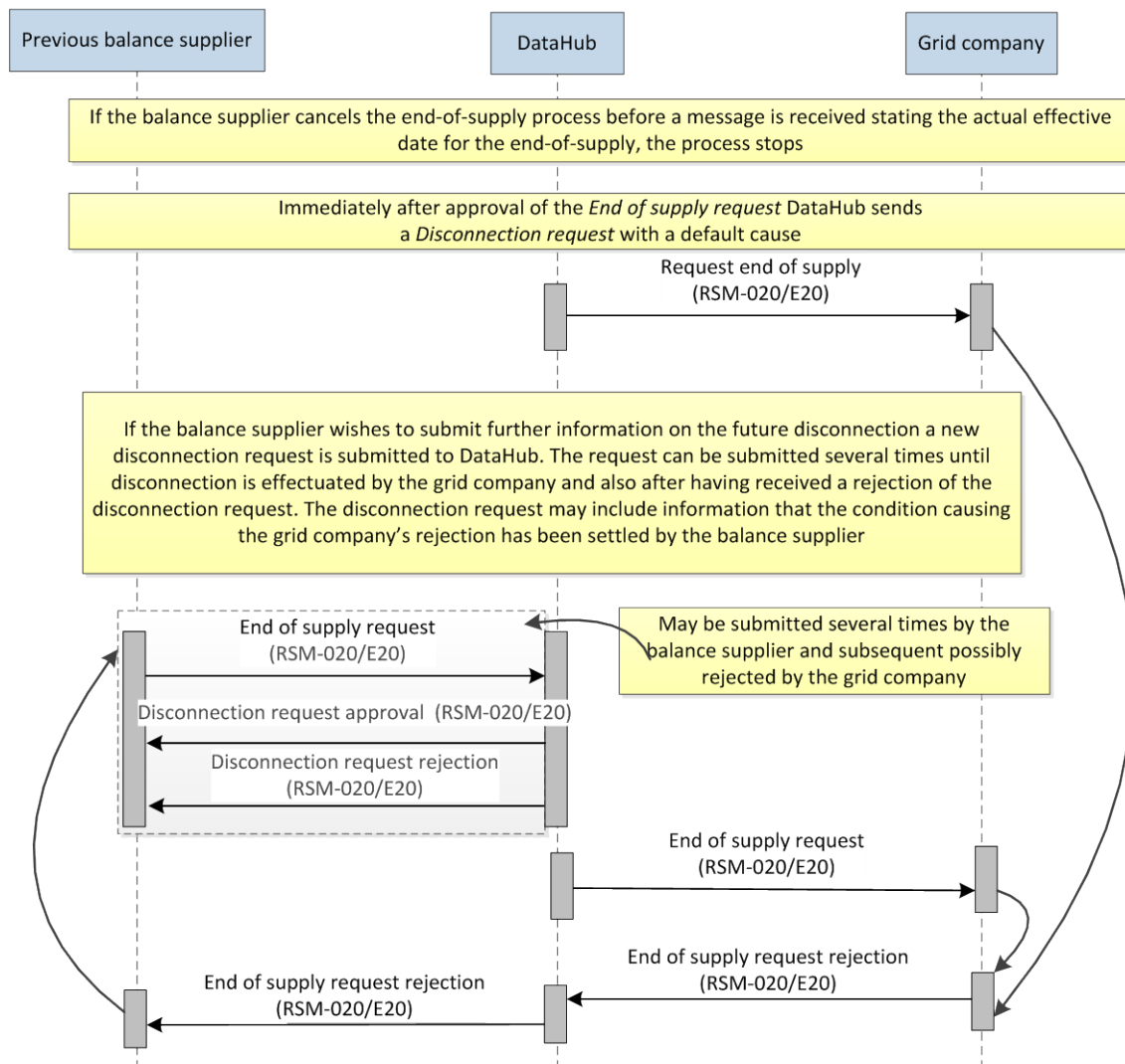


Figure 12 – Sequence diagram for end of supply (part 1)

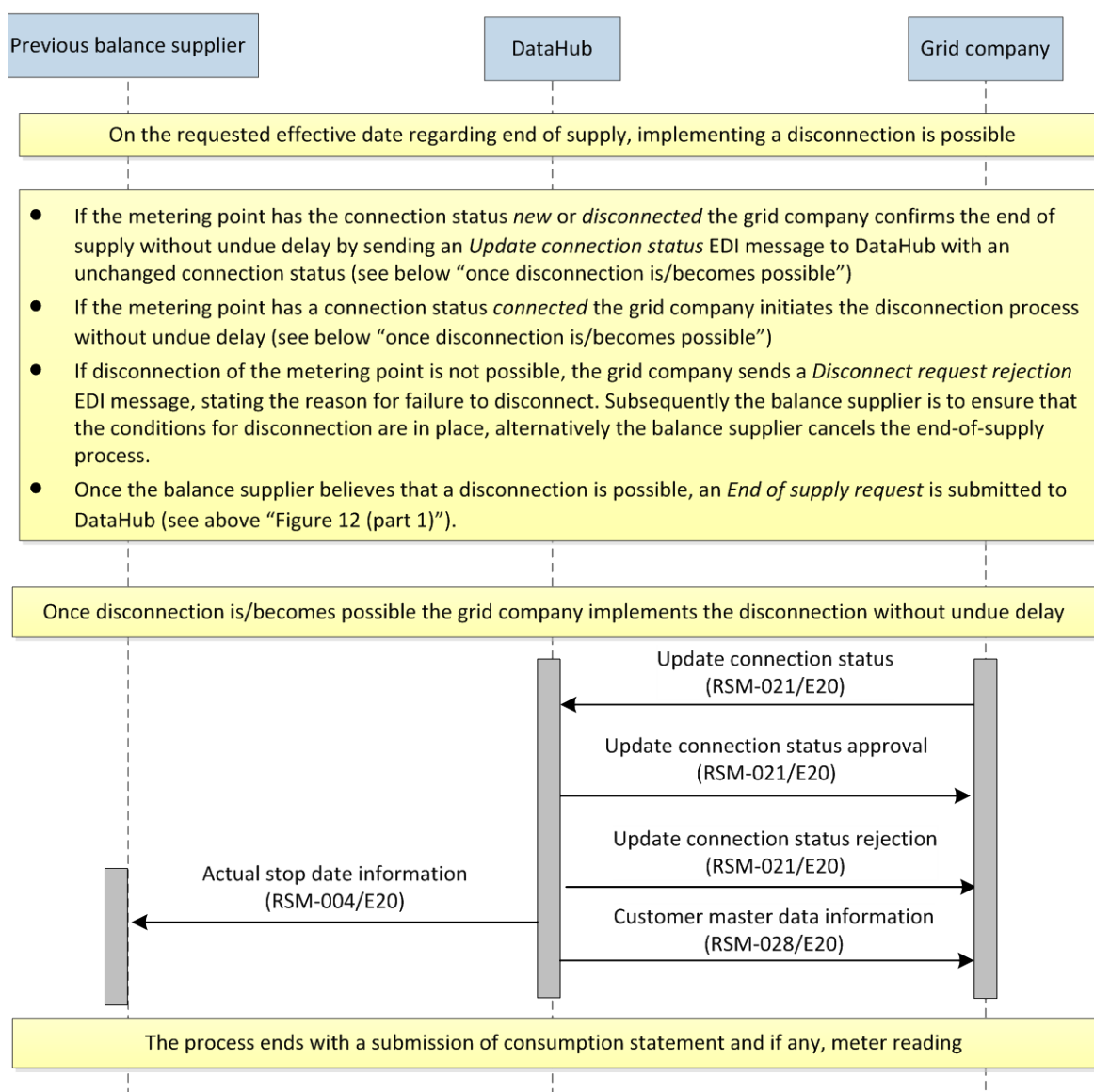


Figure 13 – Sequence diagram for end of supply (part 2)

If the balance supplier is aware that disconnection is not immediately possible for the grid company without assistance from the balance supplier, the balance supplier can submit a disconnect request to DataHub using the *Disconnect request* EDI message, with business reason *end of supply*, and a service request which indicates what action the balance supplier has already taken to make disconnection possible.

Such request is possible to send to DataHub from the time when the balance supplier has received the *End of supply request approval* EDI message from DataHub, until disconnection has taken place.

In response to the request for disconnection, DataHub sends an EDI message approving or rejecting receipt of the request.

If rejected, DataHub must specify one of the reasons listed below under the validation rules in section 4.2.9. Please note that this approval from DataHub is only approval of receipt of the message and that it is formally valid.

Immediately after approval of the end of supply request has been sent to the balance supplier, DataHub sends a *Disconnect request* EDI message to the grid company with service request *disconnect due to end of supply* and the end of supply date as the requested effective date.

The balance supplier may submit as many disconnect requests the balance supplier sees as necessary. DataHub forwards these requests to the grid company within the specified time limit. If the grid company is unable to approve the request, the grid company sends a rejection message, specifying the Rejection reason.

Note that the requested effective day is the earliest date upon which the grid company may disconnect the metering point or confirm end of supply (see below) in line with this process.

The grid company checks the connection status of the metering point on the effective day, and the process continues depending on this status.

If the metering point has a connection status of *new* or *disconnected* on the effective day, the grid company must send an end of supply approval without undue delay by sending the *Update connection status* EDI message with an unchanged connection status.

If the connection status is *connected*, the grid company initiates the disconnection process for the metering point without undue delay.

If the grid company is unable to disconnect the metering point, the grid company sends a *Disconnect request rejection* EDI message to DataHub, stating the reason for failure to disconnect.

DataHub registers the rejection and sends the *Disconnect request rejection* EDI message containing the reason for the rejection to the balance supplier.

When the conditions for disconnection are in place, the balance supplier sends a new *Disconnect request* to DataHub containing the relevant service request.

In response to the request for disconnection, DataHub sends an EDI message approving or rejecting receipt of the request.

If rejected, DataHub must specify one of the reasons listed below under the validation rules in section 4.2.9.

If the request is rejected again by the grid company, the process can be repeated several times by the balance supplier until disconnection becomes possible.

4.2.7 Netvirksomhedens afbrydelse og videre forløb

When disconnection of the metering point is or becomes possible, the grid company disconnects the metering point and sends an EDI message *Change connection status* to DataHub with connection status *Disconnected* and the date of validity, which concurrently becomes the actual effective date.

As described above, a connection status of *Disconnected* is also used if the metering point already has this status on the effective date.

In response to the grid company's notification, DataHub sends a message with a reply status (approved/rejected). If rejected, DataHub must specify one of the reasons listed below under the validation rules (section 4.2.9).

The grid company may only submit the EDI message *Change connection status* to the DataHub after the metering point has been disconnected (without current).

On the date of submission of metering point master data, the metering point will be assigned a *disconnected* or *newly established* status in the DataHub and customer information will be removed.

The actual effective date for end of supply is the date on which the electricity supplier and any electroheat are removed from the metering point in DataHub. The date is either today's date or tomorrow's date.

The DataHub subsequently sends the EDI message *Information about the actual stop date* to the previous electricity supplier with the actual effective date for end of supply.

At the same time, this means that, after *Information about the actual stop date* has been sent, the termination of supply can no longer be cancelled by the electricity supplier, and that change of supplier at short notice can no longer be used.

Furthermore, it means that the electricity supplier may not use any business processes for the metering point other than BRS-009: *Move-in*, with a move-in date no earlier than the submission date for metering point master data from the grid company.

DataHub sends a *Customer master data information* EDI message to the grid company, containing the actual effective date for end of supply. This is to ensure that the grid company is aware that there is no longer a balance supplier or customer(s) assigned to the metering point, and that any electrical heating is removed (the electrical heating tax date is updated).

Settlement master data is updated in line with BRS-037: *Settlement master data for a metering point – subscription, fee and tariff links*.

The grid company must then retrieve the meter reading and calculate consumption.

If future changes of supplier- or move-out-requests have been submitted for the metering point, an *End of supply information* message is also sent to the future balance supplier(s) with business reason *end of supply*.

4.2.8 Examples of the use of dates in connection with the master data message from the grid company

The two possible scenarios for handling disconnection of current and handling in DataHub are:

Situation A:

All the dates are the same day, i.e. the actual effective date = date of validity in the metering point master data.

Situation B:

The date of validity and the actual effective date are the day after submission of metering point master data.

The two scenarios are described in more detail below.

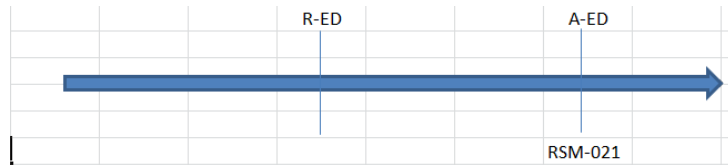
Abbreviations used:

R-ED: Requested effective date

A-ED: Actual effective date

RSM-021: Date of submission of metering point master data

Situation A:



The actual effective date (A-ED) and the date of submission of metering point master data (RSM-021) are the same date.

The date of validity is “today” in the master data message (RSM-021).

Data processing upon receipt of the master data message (RSM-021):

Customer name(s) are set to *(unknown)*

Connection status is set to *off (E23)*, except if the status is *newly established*

Electricity supplier information is removed

Any electroheat is removed from the metering point and the electric heating tax date is set to the actual effective date.

The following messages will be sent within one hour after receipt of metering point master data (RSM-021):

Information about the actual stop date (RSM-004/E20) to the electricity supplier with the actual effective date as the date of validity.

Information about customer master data (RSM-028/E20) to the grid company with the actual effective date as the date of validity.

In addition, settlement master data is sent in accordance with BRS-037: Settlement master data for a metering point: Assignment of subscriptions, fees and tariffs.

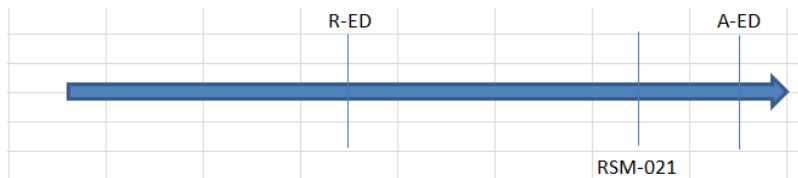
The following applies to electricity supplier after receipt of *Information about the actual stop date*:

- Cancellation of termination of supply cannot be carried out.
- Change of supplier at short notice (BRS-043) cannot be carried out.
- Request for service from the grid company (BRS-039) cannot be carried out.
- Submission of customer master data (BRS-015) cannot be carried out.
- A *move-in (BRS-009)* can be carried out

For the grid company, the following applies:

- Responsibility for consumption and payment will be transferred to the grid company
- Only a *move-in (BRS-009)* can assign an electricity supplier for the metering point.

Situation B:



The actual effective date (A-ED) and the date of submission of metering point master data (RSM-021) are different days. The date of validity in the master data message (RSM-021) is the actual effective date.

Data processing upon receipt of the master data message (RSM-021):

Customer name(s) are set to *(unknown)*

Connection status is set to *off (E23)* unless the status is *newly established*

Data processing on the actual effective date:

Electricity supplier information is removed

Any electroheat is removed from the metering point and the electric heating tax date is set to the actual effective date.

The following messages will be sent within one hour after receipt of metering point master data (RSM-021):

Information about the actual stop date (RSM-004/E20) to the electricity supplier with the actual effective date as the date of validity.

Information about customer master data (RSM-028/E20) to the grid company with the actual effective date as the date of validity.

In addition, settlement master data is sent in accordance with BRS-037: Settlement master data for a metering point: Assignment of subscriptions, fees and tariffs.

The following applies to the electricity supplier after receipt of *Information about the actual stop date*:

- Cancellation of termination of supply cannot be carried out.
- Change of supplier at short notice (BRS-043) cannot be carried out.
- Request for service from the grid company (BRS-039) cannot be carried out.
- Submission of customer master data (BRS-015) cannot be carried out.
- A *move-in* (BRS-009) can be carried out

For the grid company, the following applies:

- Responsibility for consumption and payment passes to the grid company on the actual effective date.
- Only a *move-in* (BRS-009) can assign an electricity supplier for the metering point

4.2.9 Validation rules for disconnection messages

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The metering point is registered as a consumption or production metering point	D18 Metering point type is incorrect

The metering point is not registered as closed down	D16 Physical status is incorrect
The message has been received before the official deadline	E17 Date is not within correct time frame
If the metering point has a status of <i>new</i> in DataHub, the connection status must be <i>new</i>	D16 Physical status is incorrect

4.2.10 Cancel end of supply

Insert sequence diagram

Figure 14 – Sequence diagram for Cancel end of supply

The current balance supplier has the option to cancel end of supply, for example if the customer makes a payment after end of supply has been reported to DataHub.

The balance supplier does this by sending a *Cancel end of supply* EDI message with business reason *end of supply* and function code *Cancel* to DataHub.

DataHub validates the message in accordance with the validation rules for cancellation shown below. In reply to the balance supplier's cancellation message, DataHub sends an EDI message with a reply status (approved/rejected).

In grid areas with a default supply, the process then stops.

In grid areas with a supply obligation, once the cancellation has been approved, DataHub sends a *Cancel disconnection request information* message to the grid company, so that the grid company halts Disconnection of the metering point.

If the metering point has already been physically disconnected when the cancellation message is received, the grid company must reconnect it as quickly as possible.

Once it has been reconnected, a *Disconnection and reconnection of metering point* message according to BRS-013 is sent to DataHub. If the metering point is not reconnected on the grid company's own initiative, the balance supplier can request this by initiating BRS-039, *Request for service*.

As already stated, the process will be considered as breached if the grid company does not send the EDI message *Change connection status* to the DataHub within the time period, and the players involved will be informed accordingly with the message *Information about breach of process*.

4.2.11 Validation rules for cancellation

Validation	Error message
Metering point identifiable	E10 Problem with metering point

Metering point matches the one in the original message	D05 Metering point does not match the metering point from the original document
The balance supplier is the same as the one that made the request	E16 Balance supplier is not correct
The message has been received before the official deadline	E17 Date is not within correct time frame
The reference is unequal to the original request from the balance supplier	D06 Reference to transaction ID does not match ID from original document

4.2.12 Send consumption statement

Indsæt sekvensdiagram

Figure 15 – Sequence diagram for submission of consumption statement

For a profile-settled metering point, the grid company obtains a meter reading and calculates consumption for the actual effective date in line with the grid company's rules.

If the grid company has received a meter reading from the now former balance supplier, the grid company may choose to use this value as a basis for its reading.

For profile-settled metering points, the grid company sends an EDI message to DataHub with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective day as well.

For flex-settled physical metering points, the grid company sends an EDI message to DataHub with business reason *Meter reading*. The message contains the meter reading on the effective date.

There can be several meter reading requests on the same day from different processes. In such cases, the grid company only needs to submit one meter reading.

4.2.13 Time limits for end of supply

Sender	Recipient	Time limit
Current balance supplier	DataHub	The balance supplier must send an end-of-supply EDI message to DataHub at least three working days before the requested effective date. The request cannot be submitted earlier than 60 calendar days prior to the requested effective date.
Current balance supplier	DataHub	The earliest time the service request can be submitted this immediately after approval of end of supply

DataHub	Current balance supplier	DataHub must send an approval/rejection for this within one hour of receiving of the request.
DataHub	Grid company	DataHub sends a <i>Disconnection request</i> message to the grid company within hour of approving the <i>end of supply request</i> .
Current balance supplier	DataHub	The balance supplier can cancel end of supply up until the time DataHub approves the grid company's notification that disconnection has been effected.
DataHub	Grid company	Within one hour of approving cancellation of end of supply, reported later than three working days prior to the effective date for end of supply, DataHub sends a <i>Cancel disconnection information</i> message to the grid company.
Grid company	DataHub	The master data message must be submitted on the day the disconnection is physically implemented. Please note that the validity date in the message may be the submission date or the day after the date when disconnection is physically implemented.
DataHub	Current balance supplier	DataHub sends an EDI message regarding the actual effective date to the current balance supplier within one hour of approving the disconnection.
DataHub	Grid company	DataHub sends a customer master data EDI message to the grid company within one hour of approving the disconnection.
Grid company	DataHub	The grid company sends a consumption statement for a profile-settled metering point and a meter reading, if available, for a profile or flex-settled metering point, as soon as possible and within 35 calendar days after the effective date, in grid areas with a default supply, in line with Regulation D1.
DataHub	Previous balance supplier	DataHub forwards the consumption statement and/or meter reading for the metering point within one hour of receipt.
DataHub	Grid company Balance supplier	In the event of non-submission of master data from the grid company, the process for end of supply will close down after 1 year

4.2.14 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.2.14.1 Request end of supply (RSM-005/E20)

RSM message	Request end of supply	
Name	Value	Comment

RSM message	Request end of supply	
Business reason	E20	End of supply
Metering point ID		
Supply end date		

4.2.14.2 End of supply request approval (RSM-005/E20)

RSM message	Confirm end of supply	
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Reference		Reference to <i>Request end of supply</i>

4.2.14.3 End of supply request rejection (RSM-005/E20)

RSM message	Reject end of supply	
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Reference		Reference to <i>Request end of supply</i>
Rejection reason		

4.2.14.4 Disconnection request (RSM-020/E20)

RSM message	Request for service	
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Service request		Disconnection due to end of supply (used by DataHub if no request has been sent by the balance supplier) The municipality is involved in the disconnection The police are involved in the disconnection The court is involved in the disconnection Disconnection agreed with the customer Other reason
Requested implementation date		The date must be the effective date for end of supply or later
Market player		The balance supplier's GLN number – entered by DataHub

4.2.14.5 Confirm receipt of disconnection proposal (RSM-020/E20)

RSM message	Approve service	
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Reference		Reference to <i>Request for service (RSM-020)</i>

4.2.14.6 Reject receipt of disconnection proposal (RSM-020/E20)

RSM message		Reject service
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Reference		Reference to <i>Request for service</i> (RSM-020)
Rejection reason		

4.2.14.7 Reject disconnection request (RSM-020/E20)

RSM message		Reject service
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Reference		Grid company: Reference to <i>Request for service</i> . (RSM-020) Balance supplier: Reference to <i>End of supply request</i> (RSM-005)
Rejection reason		The municipality must be involved in the disconnection The police must be involved in the disconnection The court must be involved in the disconnection Other Rejection reason No acces to meter

4.2.14.8 Actual stop date information (RSM-004/E20)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Effective date		Date for end of supply

4.2.14.9 Update connection status (RSM-021/E20)

RSM message		Update metering point master data request
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Validity date		
Connection status		Disconnected/New
Other master data is submitted by the grid company in line with Chapter 5: Master data		

4.2.14.10 Update connection status approval (RSM-021/E20)

RSM message		Update metering point master data approval
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		

RSM message	Update metering point master data approval	
Reference		Reference to <i>Update metering point master data request</i>

4.2.14.11 Update connection status rejection (RSM-021/E20)

RSM message	Update metering point master data rejection	
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>
Rejection reason		

4.2.14.12 Meter reading request (RSM-004/E53)

Name	Value	Comment
Business reason	E53	Meter reading request
Metering point ID		
Effective date		

4.2.14.13 Customer master data information (RSM-028/E20) (for grid company)

RSM message	Customer master data notification	
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Validity date		Date for end of supply
Electrical heating	No	Electrical heating removed (if any)
Electrical heating tax date		Date for deactivation of electrical heating. The date will be the actual stop date (only with supply obligation grid areas).
Customer name 1	(unknown)	Set to (unknown)
Customer name 2		Leave blank
Balance supplier status	Inactive	Set to no balance supplier
Other master data is sent to the default balance supplier in line with Chapter 5: Master data		

4.2.14.14 Request end of supply cancellation (RSM-008/E20)

RSM message	Request end of supply cancellation	
Name	Value	Comment
Business reason	E20	End of supply
Function code		Cancellation
Metering point ID		
Reference		Reference to <i>Request end of supply</i> (original message)

4.2.14.15 End of supply cancellation approval (RSM-008/E20)

RSM message	End of supply cancellation approval	

Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Reference		Reference to <i>Request end of supply cancellation</i>

4.2.14.16 End of supply cancellation rejection (RSM-008/E20)

RSM message		End of supply cancellation rejection
Name	Value	Comment
Business reason	E20	End of supply
Metering point ID		
Reference		Reference to <i>Request end of supply cancellation</i>
Rejection reason		

4.2.14.17 Disconnection request cancellation information (RSM-004/D44)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D44	End of supply cancellation
Metering point ID		
Effective date		

4.2.14.18 Submit consumption statement (RSM-011/D10)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Period		From last reading date to effective date
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point

Statements for coupled child metering points, if any, will also be sent to the balance supplier.

4.2.14.19 Submit meter reading (RSM-011/D19)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D19	Meter reading
Metering point ID		
Reading date		Change of supplier date
Meter reading		Must be submitted for a physical metering point

Meter readings for coupled child metering points, if any, will also be sent to the balance supplier.

4.2.15 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-002
BRS name	End of supply
EDI transactions:	
RSM ID	RSM-004
RSM name	Change of balance supplier notification
RSM ID	RSM-005
RSM name	End of supply from balance supplier
RSM ID	RSM-008
RSM name	End of supply cancellation
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading
RSM ID	RSM-020
RSM name	Service query
RSM ID	RSM-021
RSM name	Update metering point master data
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-028
RSM name	Submit customer master data
RSM ID	RSM-031
RSM name	Submit settlement master data

4.3 BRS-003: Managing an incorrect change of supplier

4.3.1 Overview

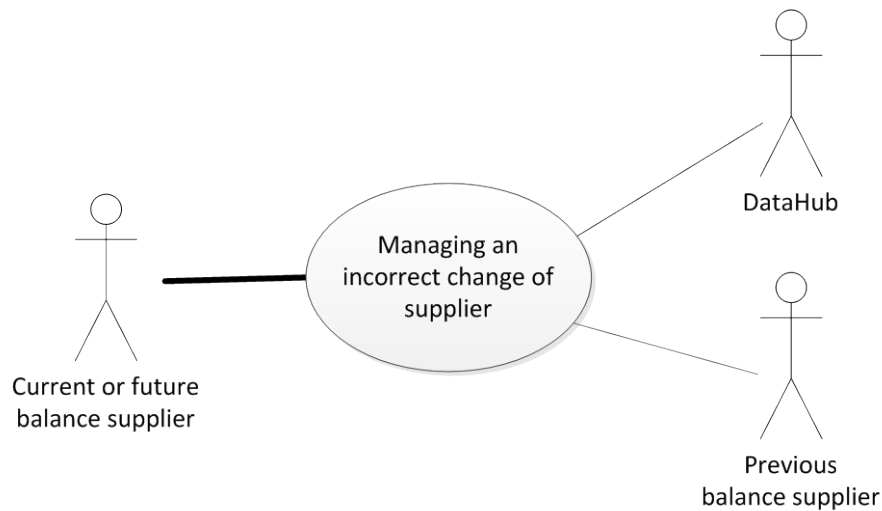


Figure 156 – Use case diagram for managing an incorrect change of supplier

The current balance supplier starts the process after having been informed that an incorrect change of supplier has occurred, in line with Regulation H1.

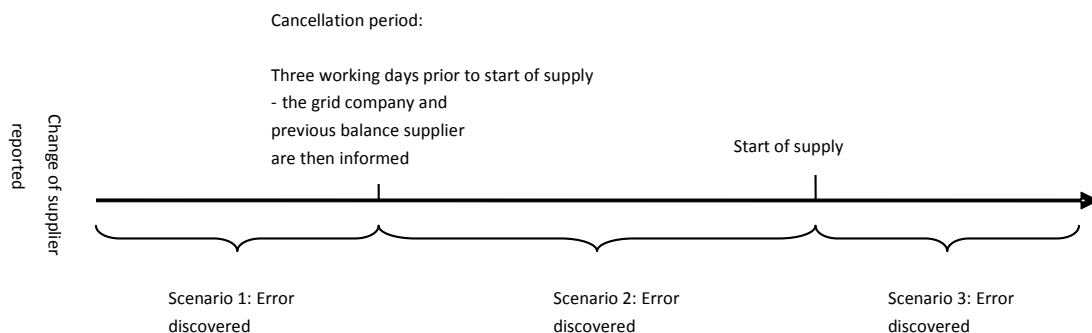


Figure 16 – Scenarios for discovering errors in connection with change of supplier

The process is partly manual and partly based on the exchange of EDI messages. Once the process has been initiated, it cannot be cancelled.

Scenario 1 is handled in *BRS-001: Change of supplier*, so that this process only covers scenarios 2 and 3.

The process results in, the customer either returns to the previous balance supplier, if the conditions for an incorrect change of supplier are fulfilled, or remains with the existing balance supplier if the agreement has expired in the meantime.

4.3.2 Overview of exchanges

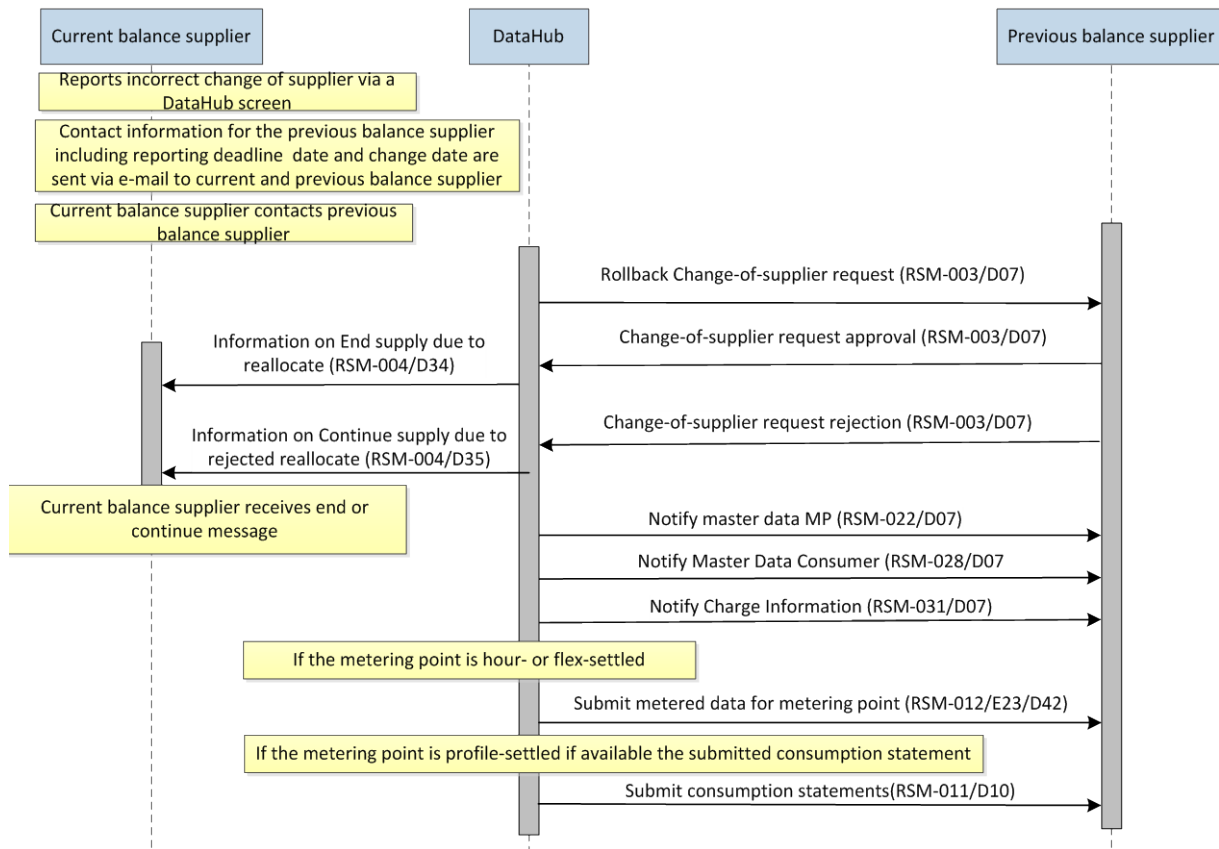


Figure 17 – Sequence diagram for managing an incorrect change of supplier

4.3.3 Initial state

The customer has drawn attention to the fact that an incorrect change of supplier has taken place with the 'new' balance supplier.

4.3.4 Process for incorrect change of supplier

The current balance supplier reports the incorrect change of supplier via a DataHub screen.

The information received, including the date of notification, is recorded in DataHub.

Please note: an incorrect change of supplier may only be reported in respect of a change of supplier with an effective date no more than 180 calendar days prior to the date of reporting.

Please note that an incorrect change of supplier can only be implemented in respect of the most recent change of supplier and only for this one process. Accordingly, when an incorrect change of supplier is implemented in respect of a metering point, another one cannot be commenced without another change of supplier.

DataHub then sends a text message containing contact information for the current and previous balance supplier, including the telephone number for both parties. The text message also contains information about the incorrect change of supplier, including the response deadline date.

DataHub also sends a *Request resumption of supply* EDI message to the previous balance supplier containing the start date. The previous balance supplier must send an approval/rejection to DataHub before the deadline expires.

The previous balance supplier cannot refuse to accept the customer back unless the agreement with the customer has been terminated by the supplier (see regulation H1).

The way the process proceeds depends on the response from the previous balance supplier.

4.3.5 The previous balance supplier resumes supply

The previous balance supplier sends an approve resumption of supply.

DataHub then sends master data messages for the metering point.

Note that before sending customer master data, any CPR number is removed from the metering point.

Please note that, immediately after resumption, the previous electricity supplier is obliged to update customer data in conformity with the contents of the contract. This must be done via *BRS-015: Submission of customer master data – electricity supplier*.

For settlement master data, all links established on the metering point from the original stop date to the current date are sent to the previous balance supplier, who is responsible for making the necessary changes to the taxes and Energinet's tariffs from the effective date.

If the previous balance supplier does not respond before the deadline, the metering point will automatically be transferred to the previous balance supplier, in line with Regulation H1. In this case, DataHub sends master data messages upon expiry of the time limit.

The aggrieved customer is entitled to settle their payment as if the error had not occurred, in line with Regulation H1.

DataHub sends a *Stop due to resumption information* EDI message containing the start date for the incorrect change of supplier to the current balance supplier.

For a profile-settled metering point, the consumption statements submitted to DataHub since the previous balance supplier stopped the supply are sent.

If the metering point uses flex or hourly settlement, DataHub sends metered data for the entire period to the previous balance supplier if they take over the metering point.

DataHub will retroactively correct the name of the balance supplier for the metering point so that the periodised consumption is attributed to the correct balance supplier.

The parties involved then determine the financial consequences in accordance with the guidelines in Regulation H1.

4.3.6 Current balance supplier not willing to resume supply

If the previous balance supplier has rejected resumption of supply before the deadline, a *Continuation of supply information* EDI message containing the start date for the incorrect change of supplier is sent to the current balance supplier.

4.3.7 Time limits for incorrect change of supplier

Sender	Recipient	Time limit
Previous balance supplier	DataHub	The previous balance supplier must send an EDI message approving or rejecting the re-allocate request to DataHub within three working days.
DataHub	Previous balance supplier	DataHub must send master data immediately after approval or expiry of the above deadline.
DataHub	Current/future balance supplier	DataHub must send a <i>Stop due to resumption information</i> message to the balance supplier already assigned the metering point within one hour of approval or immediately after expiry of the deadline.
DataHub	Current/future balance supplier	DataHub must send a <i>Continuation of supply information</i> message to the balance supplier already assigned the metering point within one hour after approval.
DataHub	Previous balance supplier	Immediately after implementation of the change, DataHub must send a profile, flex or hourly settled consumption EDI message from the incorrect effective date to the balance supplier that is taking over the metering point.

4.3.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.3.8.1 Resumption of supply request (RSM-003/D07)

RSM message		Re-allocation of balance supplier request
Name	Value	Comment
Business reason	D07	Resume supply
Metering point ID		
Supply start date		

4.3.8.2 Resumption of supply request approval (RSM-003/D07)

RSM message		Re-allocation of balance supplier approval
Name	Value	Comment
Business reason	D07	Resume supply
Metering point ID		
Reference		Reference to <i>Re-allocation of balance supplier request</i>

4.3.8.3 Resumption of supply request rejection (RSM-003/D07)

RSM message		Re-allocation of balance supplier rejection
Name	Value	Comment
Business reason	D07	Resume supply
Metering point ID		
Reference		Reference to <i>Re-allocation of balance supplier request</i>
Rejection reason	D29	No contract

4.3.8.4 Stop due to resumption information (RSM-004/D34)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D34	Stop due to resumption information
Metering point ID		
Effective date		

4.3.8.5 Continuation of supply information (RSM-004/D35)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D35	Continuation of supply information
Metering point ID		
Effective date		

4.3.8.6 Metering point master data information (RSM-022/D07)

RSM message		Metering point master data notification
Name	Value	Comment
Business reason	D07	Resume supply
Metering point ID		
Validity date		Start date for resumption
Balance supplier		
Start of supply		Date for original start of supply
Balance responsible party ID		GLN
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

Master data for any child metering points will also be sent to the balance supplier.

4.3.8.7 Information on metering point links (RSM-031/D07)

Only sent to the balance supplier if there are links for the metering point.

RSM message		Master data settlement notification
Name	Value	Comment
Business reason	D07	Resume supply
Validity date		Date for metering point link
Function code		Registered value for link (<i>Create/Change/Stop</i>)

RSM message	Master data settlement notification	
Metering point ID		
Market player		GLN
Charge type		Subscription/fee/tariff
Charge type ID		Market player's ID for charge type
Quantity		

Master data for any child metering points will also be sent to the balance supplier if there are links for the metering point.

4.3.8.8 Customer master data information (RSM-028/D07)

RSM message	Customer master data notification	
Name	Value	Comment
Business reason	D07	Resume supply
Metering point ID		
Validity date		Date for original start of supply
CPR		Not sent to the previous balance supplier
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

4.3.8.9 Submit consumption statement (RSM-011/D10)

RSM message	Meter reading notification	
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Period		
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point

Statements for any child metering points will also be sent to the balance supplier.

4.3.8.10 Submit metered data for metering point (RSM-012/E23/D42)

RSM message	Metering point metered data notification	
Name	Value	Comment
Business reason	E23	Periodic consumption statement
	D42	Periodic flex statement
Metering point ID		
Time period for quantity		
Product		Active energy
Type of metering point		Consumption
		Production
Settlement method		For consumption: Hourly/Flex/Profile
Resolution		Hour/Quarter-hour/Month
Quantity	kWh	Up to 3 decimal places

RSM message	Metering point metered data notification	
Quantity status		Estimated Measured Missing Correction (only from DataHub)

Metered data for any child metering points will also be sent to the balance supplier.

4.3.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-003
BRS name	Managing an incorrect change of supplier
EDI transactions:	
RSM ID	RSM-003
RSM name	Resume supply to metering point
RSM ID	RSM-004
RSM name	Change of balance supplier notification
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-031
RSM name	Submit settlement master data
RSM ID	RSM-028
RSM name	Submit customer master data
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading
RSM ID	RSM-012
RSM name	Submit metered data for metering point

4.4 BRS-004: Create metering point

4.4.1 Overview

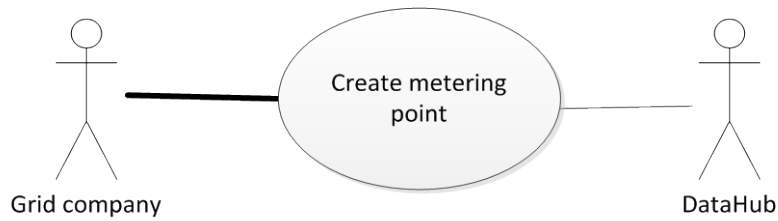


Figure 19 – Use case diagram for Create metering point

This process must be used to create a metering point as described in Regulation H1.

The grid company creates the metering point, but the supply of electricity only commences once the metering point is connected.

If the grid company ascertains that the metering point will never be connected, the grid company may close down the metering point via the *BRS-007: Close down metering point* business process.

4.4.2 Overview of exchanges

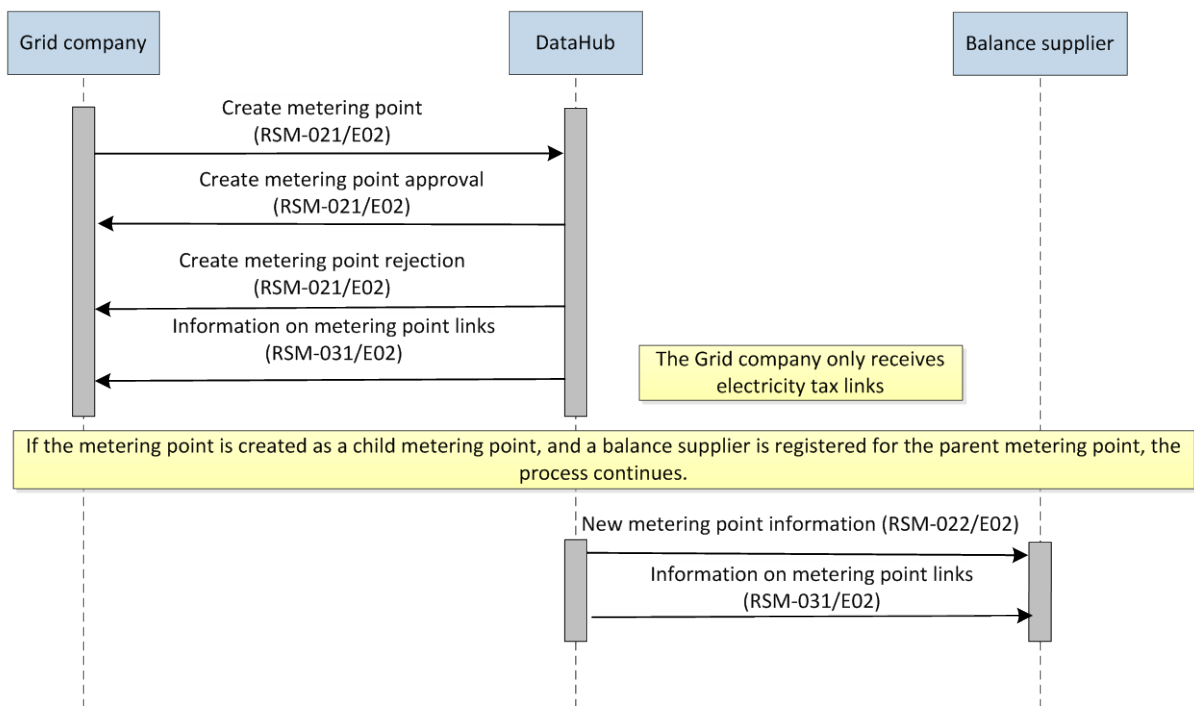


Figure 18 – Sequence diagram for establishing a metering point

4.4.3 Initial state

The grid company creates a metering point in their system.

4.4.4 Process for creating a metering point

The grid company creates a metering point in their system and sends a create metering point request to DataHub with business reason *New metering point*. The metering point connection status is specified as *new*.

Once received by DataHub, the master data message is validated and DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

DataHub creates the metering point once approved. For a D14 metering point, DataHub changes the connection status from *new* to *connected* on the creation date.

DataHub then registers then the various links from the TSO that are relevant to the metering point type.

DataHub then immediately sends the metering point links which are registered as 'tax' to the grid company using the *Metering point links information* message with business reason *new measuring point*.

If the grid company wishes to register expected annual consumption in connection with creation of a new metering point, the information must be sent to DataHub as described in business process *BRS-017: Submission of EAC by grid company* with the same validity date as the creation of the new metering point

Note: If the grid company creates a metering point with the wrong type, this can be corrected as long as the metering point has a connection status of *new* and no balance supplier has been assigned. However, this does not apply to or from a metering point of type D14. The metering point type is changed by updating the master data, in line with *BRS-006*.

The process for creating a new metering point with connection status *new* stops here. Connection status is changed to *connected* via business process *BRS-008: Connection of metering point with status new*.

In grid areas without default supply, *BRS-008 Connection of metering point with status new* can first be implemented once the metering point has been moved in via *BRS-009 Move-in*.

4.4.5 Validation rules

Validation	Error message
Metering point is not identifiable. (Does not already exist in DataHub)	E10 Problem with metering point
The metering point's connection status is new	D16 Physical status is incorrect
The message has been received before the official deadline	E17 Date is not within set time limit
The parent metering point is a consumption or production metering point	D18 Metering point type is incorrect
The child metering point is not a consumption or production metering point	D18 Metering point type is incorrect

If the metering point sub type is physical, a meter is registered for the metering point	D31 The meter is not registered in accordance with the rules
If the metering point sub type is virtual or calculated, a meter is not registered for the metering point	D31 The meter is not registered in accordance with the rules
A child metering point has the same grid area as the parent metering point	D46 Grid area is not correct
The parent metering point's connection status is not closed down	D16 Physical status is incorrect
When connecting a D14 metering point, the validity date is the same as the electrical heating start date	E50 Invalid period

4.4.6 Process for the submission of master data from DataHub

If the metering point is created as a child metering point, and a balance supplier is registered for the parent metering point, a *New metering point information* message must be sent to them with business reason *new metering point*, as well as all links assigned to the metering point using an *Information on metering point links* message, with business reason *new metering point*.

DataHub sends all master data to the current and any future balance suppliers for the metering point.

The date the change takes effect (validity date) will be the validity date submitted by the grid company.

Note that this means that a future balance supplier must be able to receive master data messages before supply commences.

4.4.7 Description of metering point types

Every metering point in DataHub is identified by metering point type. A distinction is made between four types of metering points.

Group 1 covers the metering points that are part of the electricity market, ie it is possible to effect a change of supplier or move for these metering points.

Group 2 covers the exchange metering points that are not part of the electricity market, ie it is not possible to effect a change of supplier or move for these metering points.

Groups 3 and 4 are also called other metering points. Other metering points are not directly part of the electricity market, but if coupled to a group 1 metering point, group 3 metering points will be processed together with this metering point with respect to balance supplier, customer and settlement.

Group 1, 2, and 3 points are relevant to settlement and must therefore be assigned a sub type (see section 4.4.7) as well as a metering point type.

Metering points *relevant to settlement* must fulfill one of the following conditions:

- The metering point is included in either balance or wholesale settlement
- The metering point is required for correct invoicing in line with the Danish invoicing legislation.

- The metering point is necessary to be able to transfer mandatory information from the grid company to the balance supplier.

Group 1: Included in balance settlement and may be included in wholesale settlement

Type of metering point	Use	Abbreviated name
E17	Consumption metering point	
E18	Production metering point	

Group 2: Included in balance settlement.

Type of metering point	Use	Abbreviated name
E20	Exchange metering point	

Group 3: **Not** included in balance settlement but may be included in wholesale settlement

Type of metering point	Use	Abbreviated name
D01	<i>RE production (share)</i>	RE
D04	Surplus production group 6	
D05	Net production	M1
D06	Supply to grid	M2
D07	Consumed from grid	M3
D08	Settlement/information	
D09	Auto generation	EP
D10	Net from grid	NFN
D11	Net to grid	NTN
D12	Total consumption	BF
D13	Grid loss correction	NT
D14	Electrical heating	
D15-D20	Reserved for future use	

Group 4: Not included in either balance settlement or wholesale settlement

Type of metering point	Use	Abbreviated name
D02	Special metering points not relevant to settlement	Analysis metering point
D99	Used by Energinet and players for various calculations	Internal calculations

4.4.8 Description of metering point sub type

Each metering point relevant to settlement is assigned a sub type of *physical*, *virtual* or *calculated*. The metering point sub type indicates how consumption on the metering point has been obtained. Consumption can either be based on a single meter, calculated based on several meters, or estimated.

Physical metering points

A metering point is physical if the energy quantity for the metering point is measured by the grid company on a single physical meter. The grid company submits energy quantities and meter readings from a physical metering point to DataHub in accordance with the requirements in the regulations.

For large customers with several physical meters, each of these is generally defined as a metering point.

However, several meters may be aggregated into one (virtual) metering point (see below).

Each physical metering point has one and only one meter assigned to it in DataHub.

The meter is identified by a meter ID chosen by the grid company.

Virtual metering points

A virtual metering point is one where the energy quantity is calculated by the grid company as a function of two or more physical meters, or estimated on some other basis (such as metering points without meters). For a virtual metering point, the grid company submits energy quantities to DataHub in accordance with the requirements in the regulations. Meter readings are not submitted and virtual metering points do not have a meter assigned.

The metering points of large customers, as specified in DataHub's and the grid company's systems, are very often virtual metering points comprising several physical meters. The same applies to production facilities.

Grid losses must always be represented by a virtual metering point.

Calculated metering points

A calculated metering point is one where the energy quantity is calculated in DataHub using the calculation engine which is part of DataHub.

The calculated metering points necessary for correct settlement are constructed based on physical and virtual metering points, using the calculation engine. For net-settled producers this applies, for example, to the consumption metering point (E17), the production metering point (E18) and own production (D09), which are often calculated metering points.

It is not possible to submit energy quantities or meter readings for calculated metering points, which do not have a meter linked.

4.4.9 Linking taxes and Energinet tariffs

Note that when creating new metering points, DataHub links relevant taxes and Energinet tariffs to the metering point.

This settlement master data is forwarded to the metering point's balance supplier, when one is linked to the metering point. It is then the balance supplier's responsibility to maintain this tax and PSO master data, in accordance with the tax conditions for the specific metering point.

4.4.10 Time limits for establishing new metering points

Sender	Recipient	Time limit
Grid company	DataHub	The grid company sends master data with the physical status <i>new</i> to the DataHub without undue delay and on or before the next working day after the grid company sent the designation of the connection point to the owner or electrician. The D14 metering point must be created without undue delay and on or before the next working day after the grid company has received information about electroheat from the DataHub. Establishment can take place with a <i>date of validity</i> (being the date of establishment) up to 31 calendar days prior if the D14 metering point is created as a child metering point.
DataHub	Balance supplier	DataHub must send any master data messages to the balance supplier assigned to the parent metering point within one hour of approval
DataHub	Grid company	DataHub must send any links marked as taxes to the grid company within one hour after registering in DataHub

4.4.11 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.4.11.1 Create metering point (RSM-021/E02)

RSM message	Update metering point master data request	
Name	Value	Comment
Business reason	E02	New metering point
Metering point ID		
Parent metering point ID		
Validity date		Creation date
Metering point address		See chapter 5: Master data
Connection status		New
Settlement method		Hourly/Flex/Profile
Meter reading frequency		OTHER/Hour/Quarter-hour/Month

RSM message		Update metering point master data request
Name	Value	Comment
Nominal reading date		Up to 12 dates. Only for profile-settled metering points
Reading method		Remote/Manual. Only for profile-settled metering points
Hourly time series		Yes/No. Only for profile-settled metering points
Metering point sub type		Physical/Virtual/Calculated
Type of metering point		Consumption/Production/Other
Disconnection type		Remote disconnection/Manual disconnection. Only for consumption and production metering points
Connection type		Direct connection/Installation connection. Only for consumption and production metering points, where net settlement is different from group 0
Net settlement group		
Grid area		
Maximum power kW		
Maximum current Amps		
MP capacity		1 kW – mandatory for consumption and production metering points, where net settlement is different from group 0. Permitted for D01 and D05 to D12 metering points.
Product		GLN code
Energy unit		Unit metering point is measured in
Ignore mandatory limit		Only for profile-settled metering points
Plant GSRN		Mandatory for production metering points and D01 metering points. Permitted for D05-D12 metering points
FromGrid		Only for exchange metering points
ToGrid		Only for exchange metering points
Location description		May be used to specify the physical location
Wash instructions		Washable/Not washable. Only for consumption and production metering points
Meter ID		Only for metering points of sub type physical
Meter number of digits		Only for metering points of sub type physical
Meter conversion factor		Only for metering points of sub type physical
Meter unit type		Only for metering points of sub type physical Typical kWh
Meter type		Only for metering points of sub type physical. Accumulating/Balancing
Other master data is submitted by the grid company in line with Chapter 5: Master data		

4.4.11.2 Create metering point approval (RSM-021/E02)

RSM message		Update metering point master data approval
Name	Value	Comment
Business reason	E02	New metering point
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>

4.4.11.3 Create metering point rejection (RSM-021/E02)

RSM message		Update metering point master data rejection
Name	Value	Comment
Business reason	E02	New metering point
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>
Rejection reason		

4.4.11.4 New metering point information (RSM-022/E02)

RSM message		Metering point master data notification
Name	Value	Comment
Business reason	E02	New metering point
Metering point ID		
Validity date		Creation date
Balance supplier		GLN for balance supplier
Start of supply		Supply start date
Balance responsible party ID		GLN
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

4.4.11.5 Information on metering point links (RSM-031/E02)

Only sent to the balance supplier and grid company if there are links for the metering point.

RSM message		Master data settlement notification
Name	Value	Comment
Business reason	E02	New metering point
Validity date		Date for metering point link is equal to creation date
Function code		<i>Create</i>
Metering point ID		
Market player		GLN for grid company
Charge type		Subscription/fee/tariff
Charge type ID		Market player's ID for charge type
Number		

4.4.12 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-004
BRS name	Create metering point
EDI transactions:	
RSM ID	RSM-021
RSM name	Update metering point master data
RSM ID	RSM-022

RSM name	Submit metering point master data
RSM ID	RSM-031
RSM name	Submit settlement master data

4.5 BRS-005: Master data request

4.5.1 Overview

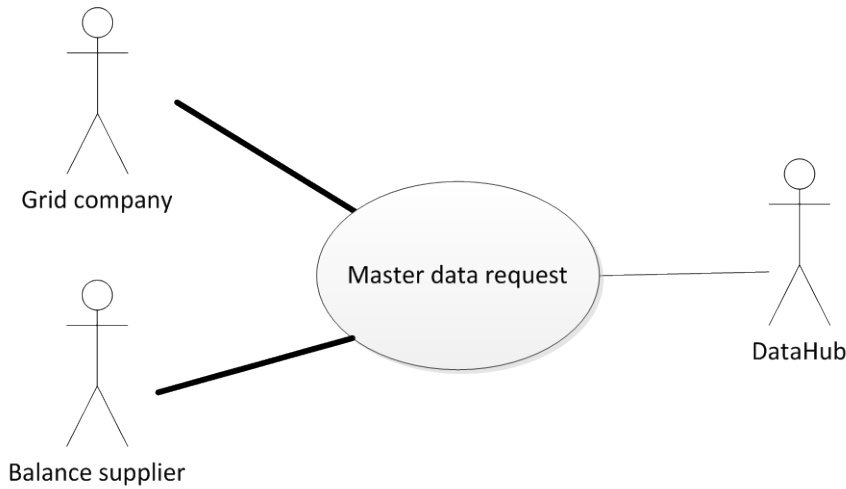


Figure 191 – Use case diagram for Master data request

A master data request can be used by a balance supplier or grid company to obtain information about a metering point.

Requests for settlement master data must use *BRS-038: Request for settlement master data for metering point*.

The balance supplier can use this process during the quotation phase to find the metering point address, customer name(s), estimated annual consumption etc., from the change of supplier approval, or to obtain all master data for a metering point once supply has commenced.

4.5.2 Overview of exchanges

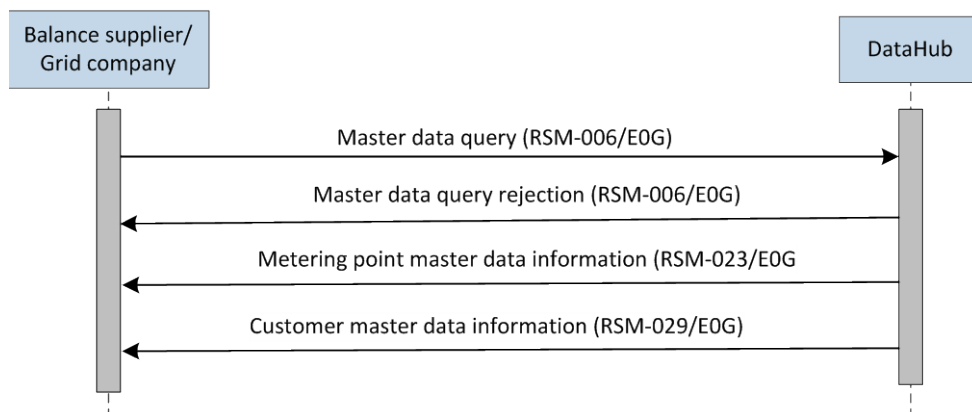


Figure 20 – Sequence diagram for Master data request

4.5.3 Initial state

The balance supplier or grid company wants information about a metering point.

4.5.4 Process for master data request

A balance supplier or grid company sends an EDI message to DataHub requesting master data for a metering point.

Note that a balance supplier may only request information on consumption and production metering points, and other metering points registered as child metering points. A grid company may query their own metering points.

In reply to the balance supplier's master data request, DataHub sends an EDI message containing relevant master data for the metering point, or a rejection.

If rejected, DataHub must indicate a reason, in line with the validation rules below.

4.5.5 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The grid company is a legitimate player for the metering point	E01 Grid company is not correct
The balance supplier is a legitimate player	E16 Balance supplier is not correct

DataHub checks whether the request comes from a grid company, a potential new balance supplier for the metering point (quotation phase), or a future or current balance supplier for the metering point, and then sends master data messages containing the relevant information for the player. A list of the attributes forwarded to the various players can be found in section 5.1 *master data*.

The master data sent is what applies on the request date.

4.5.6 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

Note that the various players only receive the master data they are entitled to receive.

4.5.6.1 Master data query (RSM-006/E0G)

RSM message	Master data query	
Name	Value	Comment
Business reason	E0G	Master data for verification
Metering point ID		

4.5.6.2 Master data query rejection (RSM-006/E0G)

RSM message	Master data query rejection	
Name	Value	Comment
Business reason	E0G	Master data for verification

RSM message	Master data query rejection	
Metering point ID		
Reference		Reference to <i>Master data query</i>
Rejection reason		

4.5.6.3 Metering point master data information (RSM-023/E0G)

RSM message	Metering point master data query response	
Name	Value	Comment
Business reason	E0G	Master data for verification
Metering point ID		
Validity date		Current date
Reference		Reference to Master data query
Child metering point ID		List of child metering points for the metering point and their metering point type.
Other master data is sent in line with Chapter 5: Master data		

4.5.6.4 Customer master data information (RSM-029/E0G)

RSM message	Customer master data query response	
Name	Value	Comment
Business reason	E0G	Master data for verification
Metering point ID		
Validity date		Current date
Reference		Reference to Master data query
Other master data is sent in line with Chapter 5: Master data		

4.5.7 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-005
BRS name	Master data request
EDI transactions:	
RSM ID	RSM-006
RSM name	Master data query
RSM ID	RSM-023
RSM name	Metering point master data query (response)
RSM ID	RSM-029
RSM name	Customer master data query (response)

4.6 BRS-006 Submission of master data – grid company

4.6.1 Overview

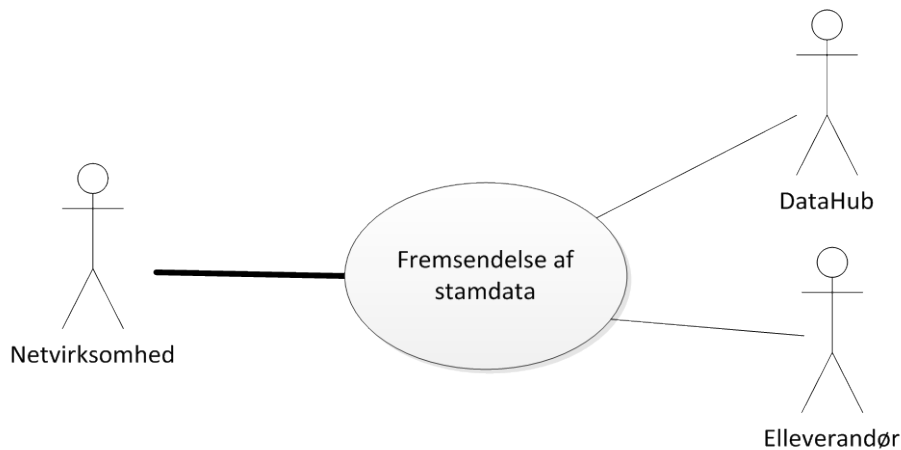


Figure 213 – Use case diagram for Submission of master data

If the master data registered in DataHub which the grid company has responsibility for is changed, the grid company must immediately send the changed master data to DataHub, which forwards the information to the balance suppliers that are legitimate recipients.

In terms of changes to meter information, this process only be used to correct errors. For other cases which are not due to errors, *BRS-014: Meter management* is used.

This information will be sent to the current and any future balance suppliers registered for the metering point. The changed master data is submitted in accordance with this business procedure.

The grid company is not allowed to send master data without a reason.

The sending of master data is part of many structured business processes, and this process is not to be used in these instances. Business processes which involve master data include *BRS-012: Change of settlement method*.

This process only covers the grid company updates to master data for a metering point with business reason *Update metering point master data*.

The process may cover several simultaneous updates.

4.6.2 Overview of exchanges

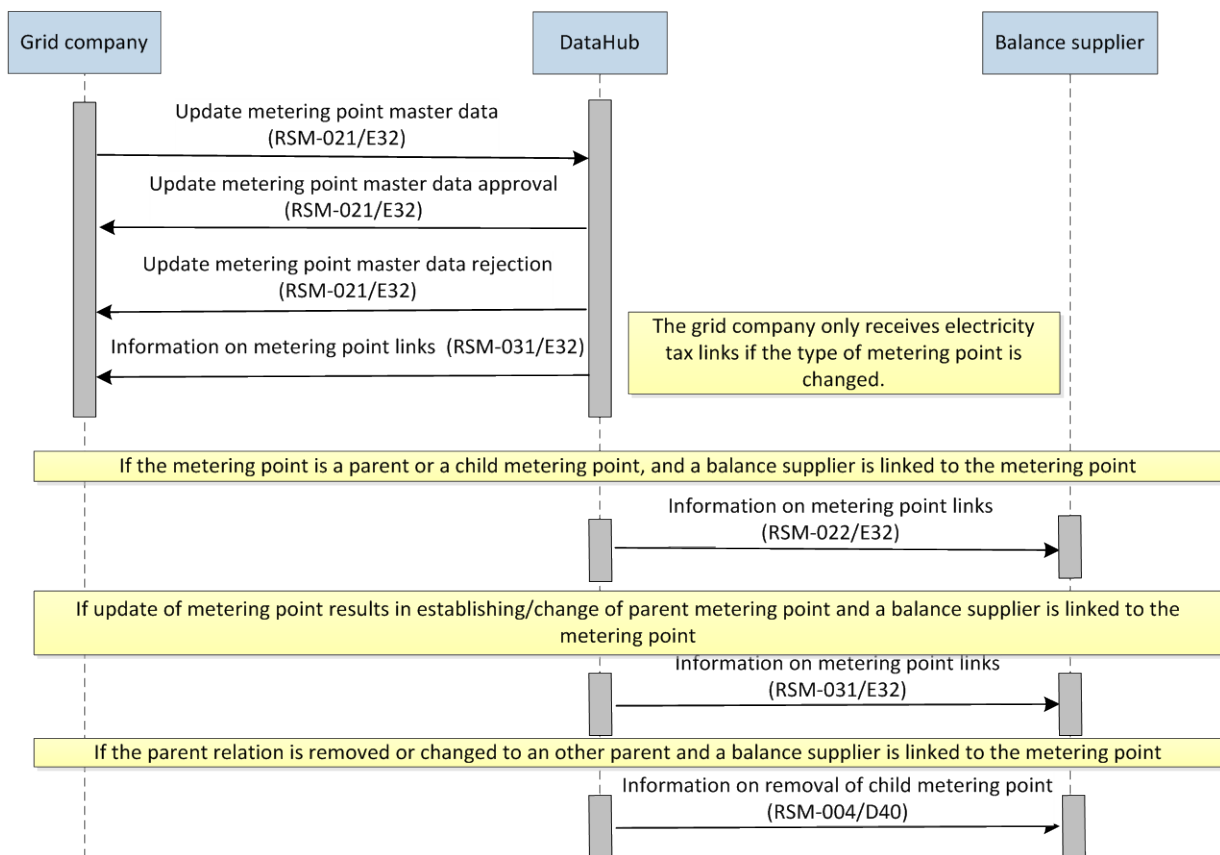


Figure 22 – Sequence diagram for Submission of master data

4.6.3 Initial state

A grid company has discovered that one or more of the properties for a metering point have been changed, and these changes are not covered by the other business processes.

4.6.4 Process for the submission of master data from the grid company

The grid company sends an EDI message for the metering point to DataHub, with business reason *Update metering point master data*.

The master data message includes all changes for the metering point on the validity date.

In response to the grid company’s request, DataHub sends a message with a reply status (approved/rejected).

If approved, DataHub updates the metering point with the new information.

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

Note that if the grid company wishes to update expected annual consumption, the information must be sent to DataHub as described in business process *BRS-017: Submit estimated annual consumption – grid company*.

Note: The metering point type may be changed for a consumption or production metering point, if the connection status is *new* and there is no balance supplier registered for the metering point. The metering point

type may be changed for an exchange metering point or *other* metering point which is not coupled to a parent metering point, if the connection status is *new*.

If the metering point type is changed, the attributes relevant to the new metering point type are submitted and the new message is processed in line with the rules in *BRS-004: Create metering point*. All previously submitted information for the metering point, including settlement master data, will be removed by DataHub.

Note that when changing the metering point type, the grid company will not receive a message cancelling links already created for the metering point, but all previously created links for the metering point will be deleted on DataHub and replaced with links corresponding to *BRS-004: Create metering point* having being used on the metering point with the new metering point type.

The grid company must therefore ensure that all settlement master data links, including tariffs registered as taxes, are matched to the new metering point type in their own IT system. The grid company must also be sure to submit the settlement master data required for the new measuring point type, in line with *BRS-037: Settlement master data for a metering point – subscription, fee and tariff links*.

Note that updates to the settlement form must be made as described in *BRS-012: Change of settlement method*.

Note that in these cases DataHub will change the validity date for master data registrations to the metering point's creation date.

If the metering point type is changed, taxes and Energinet's tariffs must be updated.

The grid company only receives tariffs which are registered as taxes.

4.6.5 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The grid company is a legitimate player	E01 Grid company is not correct
The metering point is not registered as closed down	D16 Physical status is incorrect
The parent metering point is a consumption or production metering point	D18 Metering point type is incorrect
The child metering point is not a consumption or production metering point	D18 Metering point type is incorrect
The electricity supplier has been or is assigned to the metering point	D35 The metering point has an assigned electricity supplier
If the metering point sub type is physical, a meter is registered for the metering point	D31 Registering of meter is not in conformity with the rules
If the metering point sub type is <i>virtual</i> or <i>calculated</i> , a meter is not registered for the metering point	D31 Registering of meter is not in conformity with the rules
Metering point subtype is not changed	D32 Incorrect metering point subtype

A child metering point has the same grid area as the parent metering point	D46 Grid area is not correct
The message has been received before the official deadline	E17 Date is not within set time limit
The parent metering point's connection status is not closed down	D16 Physical status is incorrect
When connecting a D14 metering point to a parent metering point, the validity date is the same as the Electrical heating tax date	E50 Invalid period
When removing a D14 metering point as a child metering point, the validity date is the same as or later than the electrical heating tax date for current customer master data.	E50 Invalid period
Changing the metering point type does not involve metering point type D14	D27 Request is not valid

4.6.6 Process for the submission of master data from DataHub

DataHub forwards all the metering point's master data to the current and any future balance suppliers for the metering point.

After receipt of the new master data, the recipient balance supplier(s) correct the sent master data in their own systems.

If the balance supplier discovers during a check of master data that the information does not tally with the information provided by the customer, the balance supplier may either contact the grid company directly or draw attention to the problem by filling in a web form.

The date the change takes effect (validity date) will be the validity date submitted by the grid company.

Note that this means that a future balance supplier must be able to receive master data messages before supply commences.

In cases where the *Parent metering point ID* field is updated, the following will take place depending on the change:

- The metering point ID will be added, ie a parent relationship will be created, and if a balance supplier is linked to the parent metering point, the *Information on metering point links* message will be sent to the balance supplier for the parent metering point, with business reason *Update metering point master data*.
- The metering point ID will be deleted, ie the parent relationship will be removed and if a balance supplier is linked to the parent metering point, the *Removal of child metering point information* message will be sent to the balance supplier for the previous parent metering point, containing the child metering point ID and the date of the change.
- The metering point ID will be changed, ie the parent relationship will be moved to another metering point and if a balance supplier is linked to the parent metering point, the *Removal of child metering point information* message will be sent to the balance supplier for the previous parent metering point, containing the child metering point ID and the date of the change. The *Information on metering point*

links message will also be sent to the balance supplier for the new parent metering point, with business reason *Update metering point master data*.

4.6.7 Special aspects of the individual changes

For a detailed description of master data for a metering point, please see Regulation I for master data – requirements and definitions.

However, note that the following applies for the master data below:

Metering point location address

Indicates the address for the installation of the meter where the metering point applies. The grid company determines this address based on its internal rules. In certain cases (such as a corner house), it may differ from the address considered by the customer to be the metering point address. The address must be stated separately as road name and house number. The house number need not be stated for special locations that do not have an official address.

It is possible to state a coded address in addition to the address written as normal text. If the grid company uses this, the coded address must be stated.

Scheduled reading date

The date when a profile-settled metering point is expected to be read. The date must be stated as MMDD (month and day). For a virtual metering point, the reading date is the date on which the consumption statement is based. If there are several reading dates in a year, the field is repeated for each reading date

Hourly time series

Indicates whether to send time series with hourly values for a profile-settled metering point (Yes/No). When the reading method is changed from remote to manual, DataHub deletes the contents of this field.

Metering point sub type

A metering point may be either physical, virtual or calculated, in line with the specification in *BRS-004: Create metering point*. A metering point sub type can only be changed to and from *physical* using business process *BRS-014: Meter management*.

Reading method

Indicates whether a metering point (profile-settled) is remote or manually read.

Maximum power kW

Indicates the actual maximum limit for power drawn (in kW).

Maximum current Amps

Indicates the actual maximum limit for current drawn (in amps)

Net settlement group

Indicates the net settlement group for the metering point. When the net settlement group is changed to group 0, DataHub deletes the contents of the *Connection type* and *MP capacity* fields.

Disconnection type

Indicates whether a metering point can be remotely disconnected.

Connection type

Indicates whether a net-settled metering point has a director or installation connection.

MP capacity

Indicates MP's power in kW

Wash instructions

Indicates whether a metering point can be or has been checked against a public register

Meter number of digits

Number of digits on meter.

Meter conversion factor

Conversion factor for the meter. Used when calculating consumption, which is defined as: *measured consumption * meter conversion factor*.

Meter unit type

Unit, as specified in code list, which measures energy consumption (normally kWh).

Meter type

Indicates whether the meter accumulates or balances (is reset after reading).

4.6.8 Time limits for submission of master data

Sender	Recipient	Time limit
Grid company	DataHub	Messages to update master data under this business process must have a validity date equal to the submission date or the previous working day. Changes to a parent relationship for a D14 metering point must take place without undue delay and on or before the next working day after the grid company received information about electroheat from the DataHub. The change must be made on or before 31 calendar days after the effective date for the change in respect of electroheat.
DataHub	Balance suppliers	DataHub must forward data within one hour of receiving changes.
DataHub	Balance supplier	DataHub must send any master data messages to the balance supplier assigned to the parent metering point within one hour of approval

4.6.9 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These ‘key data’ refers to the data of significance to process handling in relation to DataHub.

4.6.9.1 Update metering point master data (RSM-021/E32)

RSM message		Update metering point master data request
Name	Value	Comment
Business reason	E32	Update metering point master data
Metering point ID		
Parent metering point ID		
Validity date		Date from which changed master data applies
Metering point address		See chapter 5: Master data
Meter reading frequency		OTHER/Month/Hour-hour/Quarter
Hourly time series		Yes/No
Nominal reading date		Up to 12 dates
Reading method		Remote/Manual. Only for profile-settled metering points
Type of metering point		Consumption/Production/Exchange/Other. May be changed if the status is new and there is no balance supplier for the metering point.
Disconnection type		Remote disconnection/Manual disconnection. Only for consumption and production metering points
Connection type		Direct connection/Installation connection. Only for consumption and production metering points, where net settlement is different from group 0
Metering point sub type		Physical/Virtual/Calculated The metering point sub type cannot be changed to and from a physical metering point
Settlement method		Hourly/Flex/Profile
Net settlement group		
Maximum power kW		
Maximum current Amps		
MP capacity		1 kW – mandatory for consumption and production metering points, where net settlement is different from group 0. Permitted for D01 and D05 to D12 metering points.
Plant GSRN		
FromGrid		Only for exchange metering points
ToGrid		Only for exchange metering points
Product		GLN code
Energy unit		Unit metering point is measured in
IgnoreMandatoryLimit		Yes/No. Only for profile-settled metering points. Set to yes if estimated annual consumption may exceed the mandatory limit
Location description		May be used to describe the meter's physical location.
Wash instructions		Washable/Not washable. Only for consumption and production metering points

RSM message		Update metering point master data request
Name	Value	Comment
Meter ID		
Meter number of digits		
Meter conversion factor		
Meter unit type		Typical kWh
Meter type		Accumulated/Balanced
Other master data is submitted by the grid company in line with Chapter 5: Master data		

4.6.9.2 Update metering point master data approval (RSM-021/E32)

RSM message		Update metering point master data approval
Name	Value	Comment
Business reason	E32	Update metering point master data
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>

4.6.9.3 Update metering point master data approval (RSM-021/E32)

RSM message		Update metering point master data rejection
Name	Value	Comment
Business reason	E32	Update metering point master data
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>
Rejection reason		

4.6.9.4 Update metering point master data information (RSM-022/E32)

RSM message		Metering point master data notification
Name	Value	Comment
Business reason	E32	Update metering point master data
Metering point ID		
Validity date		Date from which changed master data applies. The start of supply date is specified for the future balance supplier
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

4.6.9.5 Information on metering point links (RSM-031/E32)

Only sent to the balance supplier and grid company if there are links for the metering point.

RSM message		Master data settlement notification
Name	Value	Comment
Business reason	E32	Update metering point master data
Validity date		Date for metering point link
Function code		Registered value for link (<i>Create/Change/Stop</i>)
Metering point ID		

RSM message	Master data settlement notification	
Market player		GLN for grid company
Charge type		Subscription/fee/tariff
Charge type ID		Market player's ID for charge type
Number		

4.6.9.6 Information on removal of child metering point (RSM-004/D40)

RSM message	Change of balance supplier notification	
Name	Value	Comment
Business reason	D40	Parent relationship removed from metering point
Metering point ID		Metering point ID for child metering point
Effective date		Validity date for master data

4.6.10 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-006
BRS name	Submission of master data
EDI transactions:	
RSM ID	RSM-004
RSM name	Change of balance supplier notification
RSM ID	RSM-021
RSM name	Update metering point master data
RSM ID	RSM-022
RSM name	Metering point master data notification
RSM ID	RSM-031
RSM name	Submit settlement master data

4.7 BRS-007: Close down metering point

4.7.1 Overview

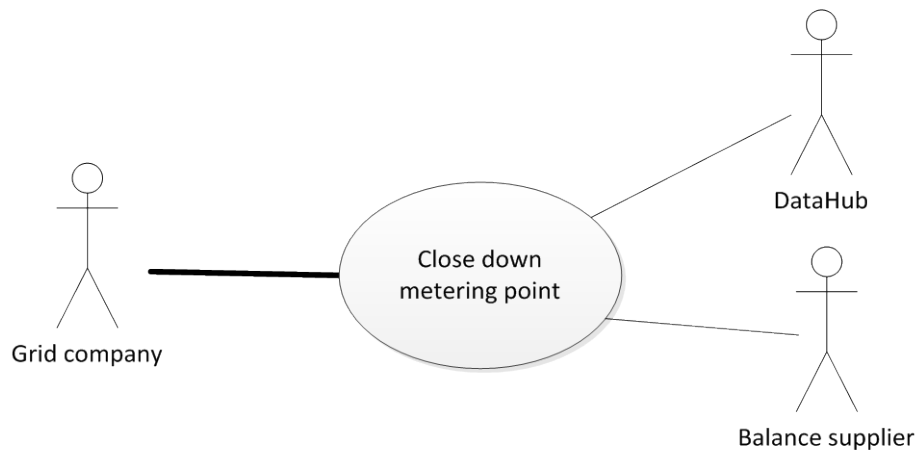


Figure 235 – Use case diagram for Close down metering point

If the conditions specified in Regulation H1 are fulfilled, this business process may be used when the existing customer wishes to close down a metering point and inform the grid company.

Implementing this process results in the metering point being closed down. Note that the ID of a metering point which has been closed down cannot be reused or reactivate.

4.7.2 Overview of exchanges

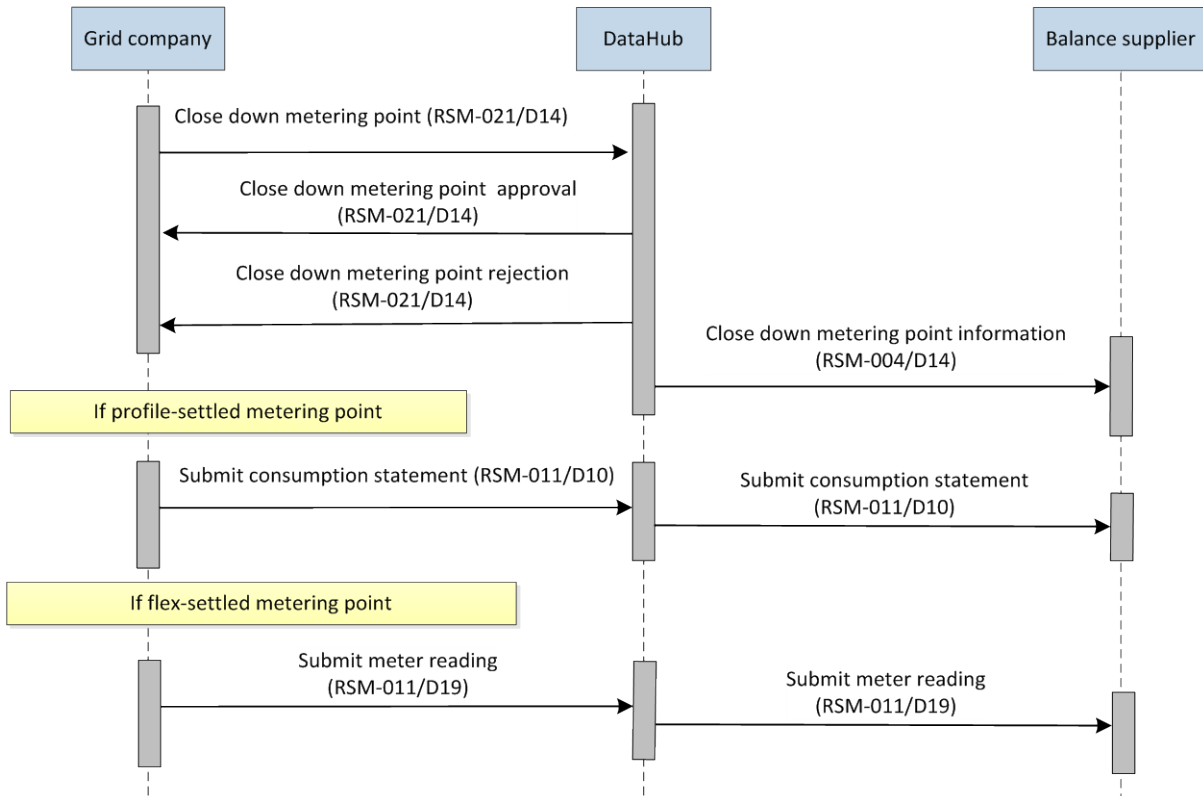


Figure 24 – Sequence diagram for Closing down a metering point

4.7.3 Initial state

The grid company wishes to close down a metering point on a given date.

4.7.4 Close down process

The grid company registers the close-down with an effective date and connection status *closed down*, and the grid company disconnects the metering point from the grid.

The grid company sends a *Close down metering point* message to DataHub.

In response to the grid company’s request, DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub registers the message with a date for the close-down and connection status *Closed down*. Customer information, supplier information and the parent metering point relationship (if any) are removed from the metering point.

If a metering point to be closed down has linked metering points, these must have their parent metering point relationship removed by updating the master data, in line with *BRS-006: Submission of master data – grid company*, before the metering point can be closed down.

4.7.5 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The grid company is responsible for the metering point	E01 Grid company is not correct
The metering point is not registered as closed down	D16 Physical status is incorrect
The message has been received before the official deadline	E17 Date is not within set time limit
The metering point does not have registered meter data with a later end date than the discontinuation date	D27 Request is not legitimate
Metering point is not included in a calculation formula	D33 Metering point is part of a calculation structure
The metering point does not have a metering point relationship	D34 The metering point has child metering points

4.7.6 End of supply information

DataHub sends an *Information on closing down metering point* EDI message to the balance supplier regarding end of supply.

If future change of supplier/move transactions have been registered for the metering point, an *Information on closing down metering point* message will also be sent to the future balance supplier(s), with a stop date equal to the start of supply date for the given balance supplier.

The previous balance supplier registers the halt in their system, and stops supply on the effective date.

Any future balance suppliers delete the information about start of supply from their respective systems.

4.7.7 Send consumption statement

For profile-settled metering points, the grid company reads the meter on the effective date for the close-down in accordance with the grid company's rules.

For profile-settled metering points, the grid company sends an EDI message to DataHub with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, the grid company sends an EDI message to DataHub with business reason *Meter reading*. The message contains the meter reading on the effective date.

There can be several meter reading requests on the same day from different processes. In such cases, the grid company only needs to make and send one meter reading.

For profile-settled metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Meter reading*. The message contains the meter reading on the effective date.

The previous balance supplier then sends the final settlement to the customer.

4.7.8 Time limits for close down

Sender	Recipient	Time limit
Grid company	DataHub	A close down request may not be submitted to DataHub earlier than 30 calendar days before the effective date or later than one working day after the effective date.
DataHub	Balance supplier	An end-of-supply message must be sent to the previous balance supplier (and any future balance suppliers) immediately after approval and within one working day after the effective date.
Grid company	DataHub	A consumption statement for a profile-settled metering point or a <i>Submit meter reading</i> message will be sent to DataHub as soon as possible, and within 35 calendar days after the effective date.
DataHub	Balance supplier	DataHub forwards a consumption statement for a profile-settled metering point within one hour after receipt.

4.7.9 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.7.9.1 Close down metering point (RSM-021/D14)

RSM message		Update metering point master data request
Name	Value	Comment
Business reason	D14	Close down metering point
Metering point ID		
Validity date		Close down date
Connection status		Closed down
Other master data is submitted by the grid company in line with Chapter 5: Master data		

4.7.9.2 Close down metering point approval (RSM-021/D14)

RSM message		Update metering point master data approval
Name	Value	Comment
Business reason	D14	Close down metering point
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>

4.7.9.3 Close down metering point rejection (RSM-021/D14)

RSM message		Update metering point master data rejection
Name	Value	Comment
Business reason	D14	Close down metering point
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>
Rejection reason		

4.7.9.4 Close down metering point information (RSM-004/D14)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D14	Close down metering point
Metering point ID		
Effective date		The future balance supplier is sent the start of supply date for the close down date

4.7.9.5 Submit consumption statement (RSM-011/D10)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Period		From last reading date to effective date
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point

4.7.9.6 Submit meter reading (RSM-011/D19)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D19	Meter reading
Metering point ID		
Reading date		Change of supplier date

RSM message	Meter reading notification	
Meter reading		Must be submitted for a physical metering point

4.7.10 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-007
BRS name	Close down metering point
EDI transactions:	
RSM ID	RSM-004
RSM name	Change of balance supplier notification
RSM ID	RSM-021
RSM name	Update metering point master data
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading

4.8 BRS-008: Connection of metering point with status *new*

4.8.1 Overview

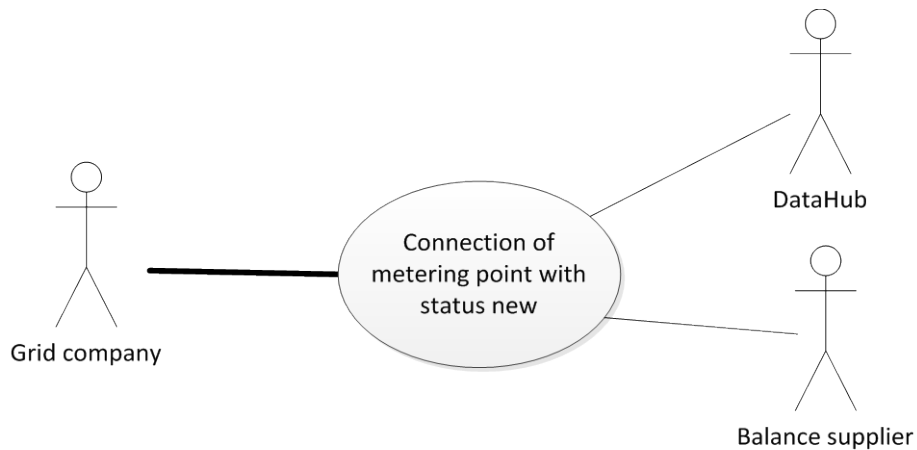


Figure 27 – Use case diagram for Connection of metering point with status new

This process is used when the grid company wants to change the connection status for a metering point from new to connected.

Submission of metered data commences from the day the metering point is connected. For profile-settled metering points, the start date for the first statement must correspond to the connection date.

4.8.2 Overview of exchanges

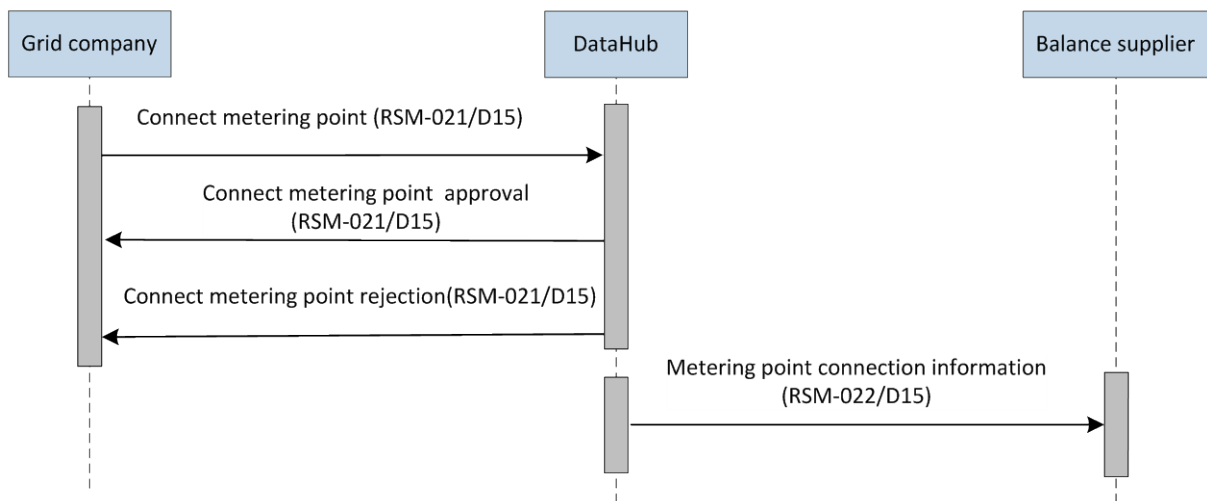


Figure 25 – Sequence diagram for Connection of metering point with status new

4.8.3 Initial state

The grid company connects a metering point and updates their system.

4.8.4 Process for metering point connection

The grid company sends an *Update customer master data request* EDI message to DataHub with connection status *Connected* and business reason *Connect metering point*.

Upon receipt, DataHub validates the master data message in accordance with the validation rules. In response to the grid company's request, DataHub sends a message with a reply status (approved/rejected).

Exchange and other metering points may be connected immediately after they have been created. For other metering points, a balance supplier must be assigned before they can be connected.

DataHub updates the metering point with the new status.

DataHub forwards the master data message to the current and any future balance suppliers.

The grid company must ensure when forwarding meter values that these have the same start date as the connection date.

4.8.5 Submit meter reading

When changing connection status to *connected*, the grid company should note it has an obligation to submit a meter reading for the metering point using business process BRS-019: *Submission of meter reading by grid company*, if this has not already happened in connection with another business process.

4.8.6 Validation rules

Validation	Error messages
Metering point identifiable	E10 Problem with metering point
The requested connection status change is from new to connected	D16 Physical status is incorrect
If the metering point is registered as a consumption metering point in a grid area with supply obligation, a balance supplier is registered	D36 Metering point cannot be connected
If the metering point is registered as a production metering point, a balance supplier is registered	D36 Metering point cannot be connected
The message has been received before the official deadline	E17 Date is not within set time limit

4.8.7 Time limits for connecting a metering point

Sender	Recipient	Time limit
Grid company	DataHub	Messages to update master data under this business process must have a validity date equal to the submission date or no more than five working days before the submission date. But no earlier than on the date of establishment.
DataHub	Balance supplier	DataHub must forward data within one hour of receiving changes.

4.8.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These ‘key data’ refers to the data of significance to process handling in relation to DataHub.

4.8.8.1 Connect metering point (RSM-021/D15)

RSM message		Update metering point master data request	
Name	Value	Comment	
Business reason	D15	Connect metering point	
Metering point ID			
Validity date		Date from which changed master data applies	
Connection status		Connected	
Other master data can be submitted by the grid company in line with Chapter 5: Master data			

4.8.8.2 Metering point connection approval (RSM-021/D15)

RSM message		Update metering point master data approval	
Name	Value	Comment	
Business reason	D15	Connect metering point	
Metering point ID			
Reference		Reference to <i>Update metering point master data request</i>	

4.8.8.3 Metering point connection rejection (RSM-021/D15)

RSM message		Update metering point master data rejection	
Name	Value	Comment	
Business reason	D15	Connect metering point	
Metering point ID			
Reference		Reference to <i>Update metering point master data request</i>	
Rejection reason			

4.8.8.4 Metering point connection information (RSM-022/D15)

RSM message		Metering point master data notification	
Name	Value	Comment	
Business reason	D15	Connect metering point	
Metering point ID			
Validity date		Date from which the changed master data applies, in line with deadlines	
Connection status		Connected	
Other master data is sent to the balance supplier in line with Chapter 5: Master data			

4.8.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-008
BRS name	Connection of metering point with status <i>new</i>
EDI transactions:	
RSM ID	RSM-021
RSM name	Update metering point master data
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-031
RSM name	Submit settlement master data
RSM ID	RSM-028
RSM name	Submit customer master data

4.9 BRS-009: Move-in

4.9.1 Overview

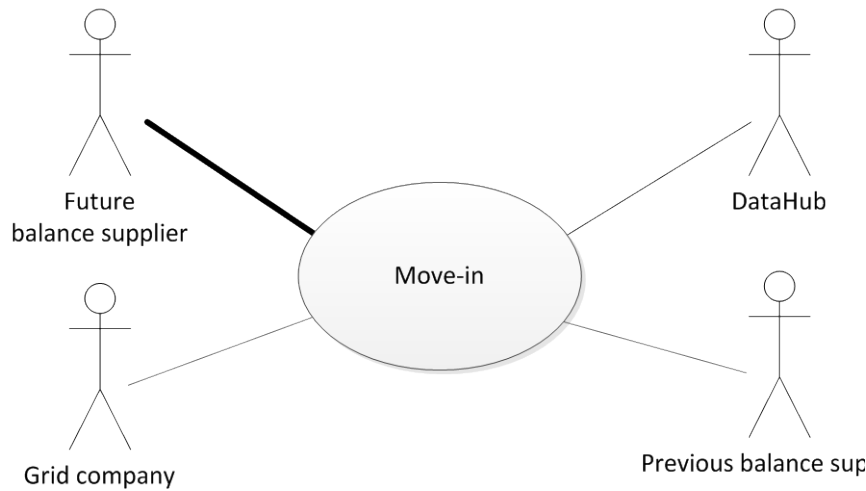


Figure 29 – Use case diagram for Move-in

This business process is used when the balance supplier has to move-in a new customer for a metering point.

Three different business reasons may be used in the process:

- *Customer move-in,*
- *Move-in due to other reason,*
- *Secondary move-in.*

Business reason *Customer move-in* is used for a normal move-in for a metering point. Such move-in transactions are processed on a 'first come, first served' basis. This means that other move-ins with the same effective date cannot subsequently be reported.

For a move-in with business reason *Customer move-in*, the CPR/CVR must be different from the CPR/CVR registered in DataHub.

Business reason *Move-in due to other reason* is used in situations where divorce, death or bankruptcy requires a change to the customer agreement with the balance supplier, and where a final reading is also required. *Move-in due to other reason* is also processed on a 'first come, first served' basis.

For a move-in with business reason *Move-in due to other reason*, the CPR/CVR must be the same as a CPR/CVR registered in DataHub.

Business reason *Secondary move-in* is used for move-ins that are different from moves with other business reason codes. In contrast to the two types of move-in mentioned above, the final secondary move-in received on the same date will take precedence over secondary move-ins submitted earlier.

For a move-in with business reason *Secondary move-in*, the CPR/CVR must be different from the CPR/CVR registered in DataHub.

Move-ins with business reason *Customer move-in* or *Move-in due to other reason* will always have priority over move-ins with business reason *Secondary move-in*

Please note: With a move-in for a metering point where a customer is registered with a fictitious CPR/CVR number, a new customer can use the same fictitious CPR/CVR number already registered for the metering point, as a fictitious CPR/CVR number is considered as a blank CPR/CVR number.

If a change of supplier has to be effected without a change of customer, *BRS-001: Change of supplier* must be used.

4.9.2 Overview of exchanges

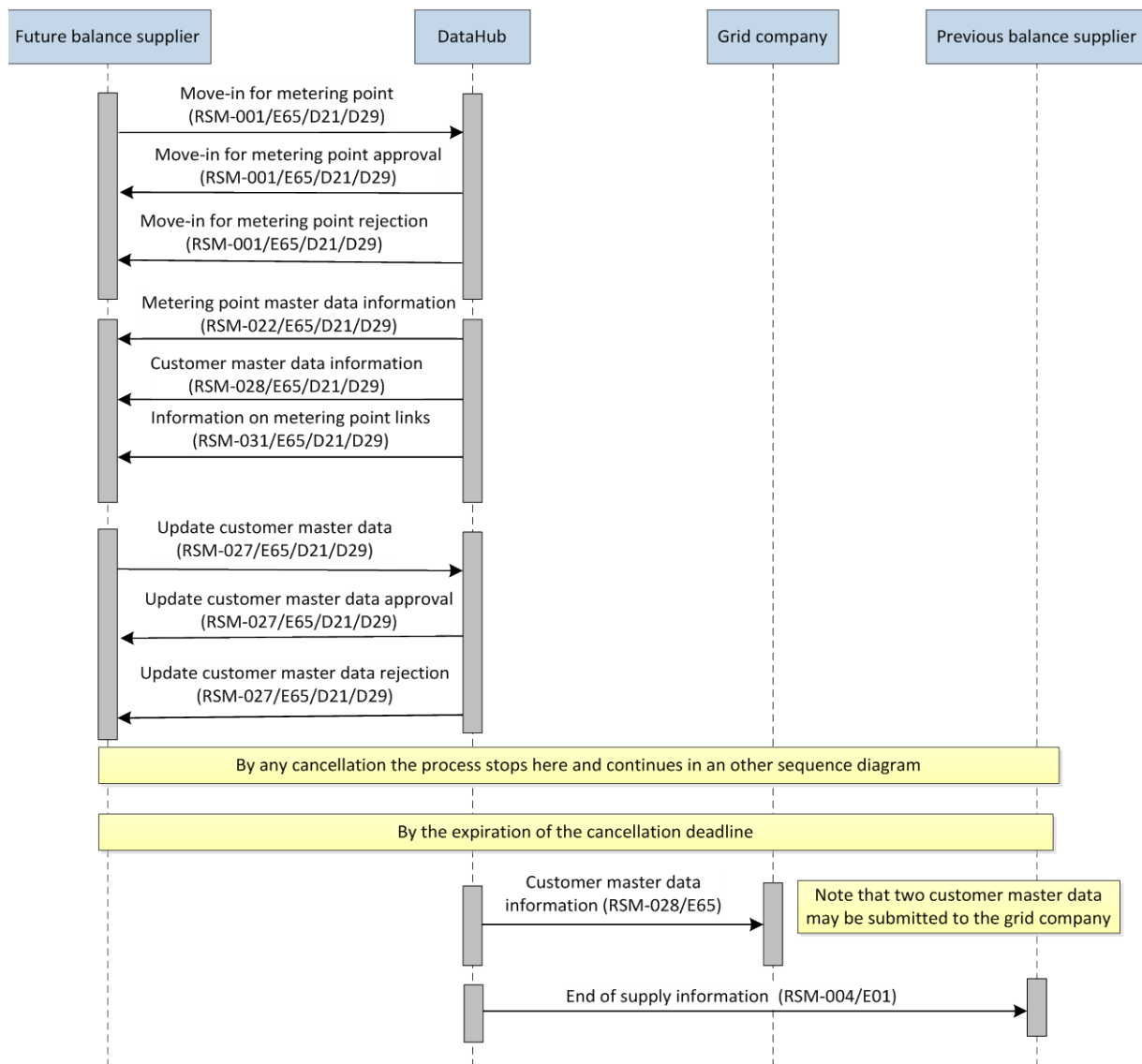


Figure 26 – Sequence diagram for move-in – main process

4.9.3 Initial state

A customer has made an agreement with a balance supplier for the supply of electricity to a metering point which the customer intends to move in to on a given effective date.

4.9.4 Process for move-in

The customer notifies the balance supplier of a metering point ID and move-in date. If the customer does not know the metering point ID, the balance supplier must look up the number in DataHub. The customer also provides their name and CPR/CVR number.

CPR/CVR numbers must be specified in line with the guidelines in *Regulation I: Master data* and BRS-015: *Submission of customer master data by balance supplier*.

The balance supplier sends a *move-in on metering point* EDI message using one of the permitted business reasons.

In response to the request, DataHub sends an EDI message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

After the move-in has been approved, the balance supplier receives all master data for the metering point, including *customer master data*, but not including contact addresses.

It is the responsibility of the new balance supplier to update customer master data. If two customers are required on the metering point, both should be submitted in *update customer master data* with associated CPR numbers.

Note that electrical heating status cannot be changed in this business process. If an attempt is made to change this, the message will be rejected with the error: *Change to electrical heating status not permitted*.

The submitted master data will be validated in line with the rules in *BRS-015: Submission of customer master data by balance supplier*.

The balance supplier must return the updated master data to DataHub before the deadline.

If DataHub does not receive the necessary master data information from the balance supplier before the deadline, a reminder will be sent to the balance supplier via email.

Any other future balance suppliers for the metering point will also receive *Customer master data information* with business reason *Update customer master data*, in line with BRS-015.

The future balance supplier should note that it is the customer master data the future balance supplier originally submitted in connection with the move-in notification which will apply from the effective date.

This applies even if the future balance supplier has received later updates to customer master data. It will therefore be the future balance supplier's responsibility to update the customer master data on the effective date, if the balance supplier wishes to use this customer master data received later.

If the metering point has been given connection status *new*, the process stops here by the new balance supplier taking over the metering point from the effective date. The balance supplier should note that the supply of electricity cannot commence until the balance supplier has received a master data message with connection status *connected* and a validity date for start of supply.

Please note: if the previous customer paid energy tax to the tax authorities, the electricity supplier has a duty to revert the taxes to normal taxation if the new customer does not have the same exception.

The DataHub will email the electricity supplier about the absence of assignment of tax.

Please note that if the supply to the metering point has ended and the previous customer had electroheat, DataHub will email the electricity supplier about this matter.

The new balance supplier starts the supply on the effective date.

4.9.5 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The metering point is not registered as closed down	D16 Physical status is incorrect
The balance supplier is a legitimate player	E16 Balance supplier is not correct
The balance responsible party is a legitimate player	E18 Balance responsible party is not correct
The message has been received before the official deadline	E17 Date is not within set time limit
CPR/CVR does not correspond to registered information if the business reason is <i>Customer move-in</i>	D17 CPR/CVR is not correct
CPR/CVR does not correspond to registered information if the business reason is <i>Secondary move-in</i>	D17 CPR/CVR is not correct
CPR/CVR corresponds to registered information if the business reason is <i>Move-in due to other reason</i>	D17 CPR/CVR is not correct
A customer move has not been reported for the metering point on the effective date	D07 Move in progress
The metering point is registered as a consumption or production metering point	D18 Metering point type is incorrect
Customer name is included	D03 Customer information is not correct
An end of supply for the metering point is completed with a later effective date	D54 A move cannot be completed due to an end of supply

4.9.6 Notifying the grid company

When the cancellation deadline expires, the grid company receives a *move-in information* EDI message containing the move-in date.

Once the balance supplier has updated the customer master data, this is forwarded to the grid company.

In the exceptional case that the balance supplier has not submitted customer master data as specified, DataHub will forward the customer master data registered for the metering point 60 calendar days after the effective date. The business process is then closed.

Customer master data must be submitted with the business reason *Customer move-in*.

If the metering point has status *new* and a balance supplier has been registered, the grid company can initiate the connection procedure. The grid company should note that the balance supplier is not responsible prior to the move-in date.

4.9.7 End of supply information

DataHub sends an *End of supply information* EDI message with business reason *Move* to the previous balance supplier. If the previous balance supplier is the same as the new balance supplier for the metering point, the balance supplier must relate the end of supply to the previous customer.

If a future change of supplier has been registered for the metering point, an *End of supply information* message is also sent to the future balance supplier(s) with business reason *Move*.

The current balance supplier starts the supply at the effective date.

Any future balance suppliers delete the information about start of supply from their respective systems.

4.9.8 Send consumption statement

The subsequent part processes are not to be carried out if the party moving out has reported a move-out to the grid company and a consumption statement has been prepared in accordance with move-out business process BRS-010: *Move-out*. A *meter reading message* must always be sent to the future balance supplier.

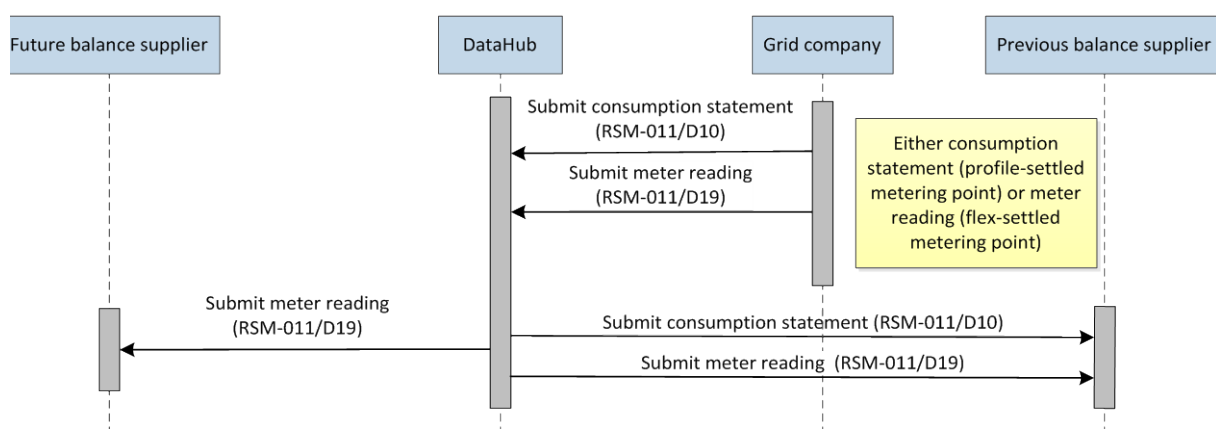


Figure 27 – Sequence diagram for Move-in (meter reading/statement)

The future balance supplier may submit a meter reading on the effective move-in date and an updated expected annual consumption to DataHub once supply has commenced, in line with *BRS-018 Submission of meter reading by balance supplier* and *BRS-016 Submission of EAC by balance supplier*. DataHub forwards this information to the grid company.

For profile-settled metering points, the grid company will make a reading on the effective date in accordance with its rules. The grid company may make use of the meter reading submitted by the balance supplier in this connection.

For profile-settled metering points, the grid company sends an EDI message to DataHub with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, the grid company sends an EDI message to DataHub with business reason *Meter reading*. The message contains the meter reading on the effective date.

There can be several meter reading requests on the same day from different processes. In such cases, the grid company only needs to make and send one meter reading.

For profile-settled metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Meter reading*. The message contains the meter reading on the effective date.

For profile-settled metering points, the consumption statement will often result in a new value for the estimated annual consumption. If this is the case, the grid company submits the updated annual consumption using business process *BRS-017: Submit estimated annual consumption – grid company*.

For profile-settled and flex-settled physical metering points, DataHub sends an EDI message to the future balance supplier with business reason *Meter reading*. The message contains the meter reading on the effective date.

The balance supplier should note that for hourly/flex-settled metering points, time series will not automatically be forwarded to the balance supplier in the event of a retroactive change. The balance supplier should use *BRS-025: Request for metered data for a metering point* instead to obtain the desired metered data.

The previous balance supplier then sends the final settlement to the customer.

4.9.9 Move-in cancellation

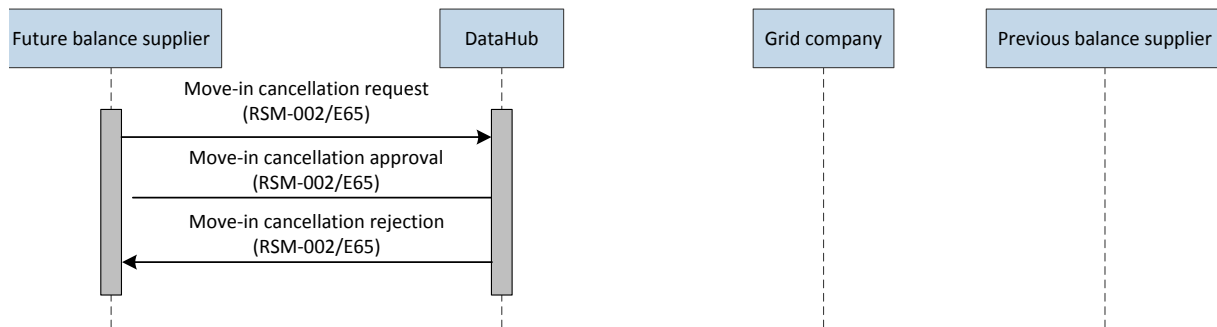


Figure 28 – Sequence diagram for move-in – cancellation

If the balance supplier realizes upon receipt of the confirmation that the move is incorrect, or the customer cancels the agreement, the move must be cancelled.

The balance supplier does this by sending a *Cancel move-in request* EDI message with business reason *Customer move-in* and function code *Cancellation* to DataHub.

Regardless of the type of move-in requested to be cancelled (business reason: *Customer move-in*, *Secondary move-in* or *Move-in due to other reason*) the business reason for cancellation must be *Customer move-in*.

DataHub validates the message in accordance with the validation rules *for cancellation* shown below. In reply to the balance supplier's cancellation message, DataHub sends an EDI message with a reply status (approved/rejected). If DataHub rejects the cancellation, it must state the reason why.

If the cancellation deadline has passed and the conditions specified in Regulation H1 have been met, the process must be effected as described in business process *BRS-011: Incorrect move*.

4.9.10 Validation rules for cancellation

Validation	Error message
Metering point identifiable	E10 Problem with metering point
Metering point matches the one in the original message	D05 Metering point does not match the metering point from the original document
The balance supplier is a legitimate player	E16 Balance supplier is not correct
The message has been received before the official deadline	E17 Date is not within time limit

The reference is to the original request from the balance supplier	D06 Reference to transaction ID does not match ID from original document
--	---

4.9.11 Special provisions for production metering points

DataHub will reject move-ins for production metering points covered by a production obligation. The customer must contact Energinet and surrender their production obligation right in line with the applicable rules, after which Energinet will remove the block preventing a move-in being effected for the metering point.

4.9.12 Time limits for move-in – reported to balance supplier

Sender	Recipient	Time limit
Future balance supplier	DataHub	The move-in must be reported by the balance supplier within 5 working days after the effective date for hourly-settled metering points and within 15 working days after the effective date for profile and flex-settled metering points, and not more than 60 calendar days prior to the effective date.
DataHub	Future balance supplier	DataHub sends an approval/rejection within one hour after receipt of a <i>Notify start of supply</i> message.
DataHub	Future balance supplier	DataHub forwards master data messages to the balance supplier within one hour after receiving move-in approval.
DataHub	Grid company	DataHub sends <i>move-in information</i> to the grid company within one hour after expiry of the cancellation period.
Future balance supplier	DataHub	The balance supplier may cancel the move-in up to three working days before the effective date.
Future balance supplier	DataHub	<i>Update customer master data</i> requests can be submitted until the cancellation period expires. Where a move-in has an effective date after the cancellation deadline, <i>Update customer master data</i> must be sent within five working days of move-in approval
DataHub	Grid company	DataHub sends customer master data to the grid company within one hour after expiry of the cancellation period, if master data is received from the balance supplier. Customer master data will otherwise be forwarded within one hour of receipt in DataHub. If customer master data has not been received from the balance supplier within 60 calendar days after the effective date, the customer master data registered in DataHub will be forwarded to the grid company.

DataHub	Previous balance supplier	DataHub sends a stop information message to the old balance supplier within one hour after expiry of the cancellation period. Retroactive move-ins must be reported on the notification day (and hence within 5 working days after the effective date for hourly-settled metering points and within 15 working days after the effective date for profile and flex-settled metering points).
Grid company	DataHub	The grid company sends a consumption statement for a profile-settled metering point and a meter reading, if available, for a profile or flex-settled metering point, as soon as possible and within 35 calendar days after the effective date, in line with Regulation D1.
DataHub	Previous balance supplier	DataHub forwards the consumption statement and/or meter reading for the measuring point within one hour of receipt.
DataHub	Future balance supplier	DataHub forwards the meter reading for the measuring point, if available, within one hour of receipt.

4.9.13 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.9.13.1 Move-in for metering point (RSM-001/E65/D21/D29)

RSM message		Request start of supply
Name	Value	Comment
Business reason	E65	Customer move-in
	D21	Move-in due to other reason
	D29	Secondary move-in
Metering point ID		
Supply start date		
Balance supplier ID		
Balance responsible party ID		
Customer name		Name of party moving in
CPR		Either a CPR or CVR number must be provided
CVR		Customer CVR

4.9.13.2 Move-in for metering point approval (RSM-001/E65/D21/D29)

RSM message		Start of supply approval
Name	Value	Comment
Business reason	E65	Customer move-in
	D21	Move-in due to other reason
	D29	Secondary move-in

RSM message	Start of supply approval	
Metering point ID		
Reference		Reference to Start of supply request

4.9.13.3 Move-in for metering point rejection (RSM-001/E65/D21/D29)

RSM message	Start of supply rejection	
Name	Value	Comment
Business reason	E65	Customer move-in
	D21	Move-in due to other reason
	D29	Secondary move-in
Metering point ID		
Reference		Reference to Start of supply request
Rejection reason		

4.9.13.4 Metering point master data information (RSM-022/E65/D21/D29)

RSM message	Metering point master data notification	
Name	Value	Comment
Business reason	E65	Customer move-in
	D21	Move-in due to other reason
	D29	Secondary move-in
Metering point ID		
Validity date		Supply start date
Supply start date		
Balance supplier ID		
Balance responsible party ID		
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

Master data for any child metering points will also be sent to the balance supplier.

4.9.13.5 Information on metering point links (RSM-031/E65/D21/D29)

Only sent to the balance supplier if there are links for the metering point.

RSM message	Master data settlement notification	
Name	Value	Comment
Business reason	E65	Customer move-in
	D21	Move-in due to other reason
	D29	Secondary move-in
Validity date		Date for metering point link
Function code		Registered value for link (Create/Change/Stop)
Metering point ID		
Market player		GLN for grid company
Charge type		Subscription/fee/tariff
Charge type ID		Market player's ID for charge type
Number		

Master data for any child metering points will also be sent to the balance supplier if there are links for the metering point.

4.9.13.6 Metering point master data information (RSM-028/E65/D21/D29/D34)

RSM message		Customer master data notification
Name	Value	Comment
Business reason	E65	Customer move-in
	D21	Move-in due to other reason
	D29	Secondary move-in
	E34	Update customer master data
Metering point ID		
Validity date		Supply start date
Electrical heating		Yes/No
Electrical heating tax date		Calculation start date
Web access code		<i>New web access code</i>
Consumer category		
Customer name and if any, second customer name		
CPR		Up to 2 CPR numbers Not sent from DataHub
Customer CVR		
Data access CVR		
Address(es)		Contact information is not sent to the balance supplier
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

4.9.13.7 Update customer master data (RSM-027/E65/D21/D29)

RSM message		Update customer master data request
Name	Value	Comment
Business reason	E65	Customer move-in
	D21	Move-in due to other reason
	D29	Secondary move-in
Metering point ID		
Validity date		Supply start date
Electrical heating		Electrical heating status cannot be changed in this process
Electrical heating tax date		Electrical heating tax date cannot be changed in this process
Customer name and if any, second customer name		
CPR		Up to 2 CPR numbers Both must be entered if two customers
Customer CVR		
Data access CVR		
Address(es)		Reading card/voting card/disconnect card/ "address 4". See chapter 5: Master data
Other master data may be submitted by the balance supplier in line with Chapter 5: Master data		

4.9.13.8 Update customer master data approval (RSM-027/E65/D21/D29)

RSM message		Update customer master data approval
Name	Value	Comment

RSM message		Update customer master data approval
Business reason	E65 D21 D29	Customer move-in Move-in due to other reason Secondary move-in
Metering point ID		
Reference		Reference to <i>Update balance supplier master data request</i>

4.9.13.9 Update customer master data rejection (RSM-027/E65/D21/D29)

RSM message		Update customer master data rejection
Name	Value	Comment
Business reason	E65 D21 D29	Move-in Move-in due to other reason Secondary move-in
Metering point ID		
Reference		Reference to <i>Update balance supplier master data request</i>
Rejection reason		

4.9.13.10 Move-in cancellation request (RSM-002/E65)

RSM message		Cancel start of supply request
Name	Value	Comment
Business reason	E65	Customer move-in
Function code		Cancellation
Metering point ID		
Reference		Reference to Start of supply request

4.9.13.11 Move-in cancellation approval (RSM-002/E65)

RSM message		Cancel start of supply approval
Name	Value	Comment
Business reason	E65	Customer move-in
Metering point ID		
Reference		Reference to <i>Cancel start of supply request</i>

4.9.13.12 Move-in cancellation rejection (RSM-002/E65)

RSM message		Cancel start of supply rejection
Name	Value	Comment
Business reason	E65	Customer move-in
Metering point ID		
Reference		Reference to <i>Cancel start of supply request</i>
Rejection reason		

4.9.13.13 End of supply information (RSM-004/E01)

RSM message		Change of balance supplier notification
Name	Value	Comment

RSM message	Change of balance supplier notification	
Business reason	E01	Move
Metering point ID		
Effective date		

4.9.13.14 Move information (RSM-004/E65)

RSM message	Change of balance supplier notification	
Name	Value	Comment
Business reason	E65	Customer move-in
Metering point ID		
Effective date		

4.9.13.15 Customer master data information (RSM-028/E65)

To grid company

RSM message	Customer master data notification	
Name	Value	Comment
Business reason	E65	Customer move-in
Metering point ID		
Validity date		Supply start date
Electrical heating		Yes/No
Electrical heating tax date		Calculation start date
Consumer category		
Customer name and if any, second customer name		
Customer CVR		
Balance supplier status	Active	
Address(es)		Reading card/voting card/disconnect card/ "address 4". See chapter 5: Master data
Other master data may be submitted by the balance supplier in line with Chapter 5: Master data		

4.9.13.16 Submit consumption statement (RSM-011/D10)

RSM message	Meter reading notification	
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Period		From last reading date to effective date
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point

Statements for any child metering points will also be sent to the balance supplier.

4.9.13.17 Submit meter reading (RSM-011/D19)

RSM message	Meter reading notification	
Name	Value	Comment

RSM message	Meter reading notification	
Business reason	D19	Meter reading
Metering point ID		
Reading date		Change of supplier date
Meter reading		Must be submitted for a physical metering point

Meter readings for any child metering points will also be sent to the balance supplier.

4.9.14 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-009
BRS name	Move-in
EDI transactions:	
RSM ID	RSM-001
RSM name	Start of supply
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-031
RSM name	Submit settlement master data
RSM ID	RSM-028
RSM name	Submit customer master data

4.10 BRS-010: Move-out

4.10.1 Overview

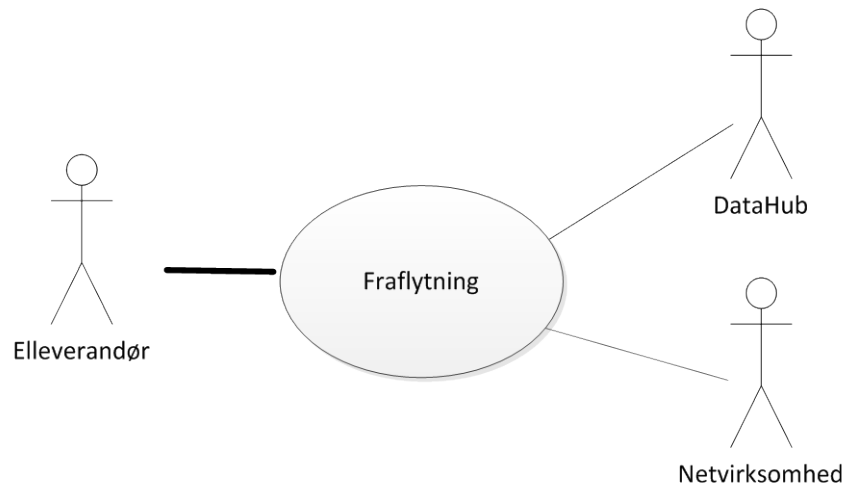


Figure 33 – Use case diagram for Move-out

A customer has contacted their balance supplier about a move-out.

Note: If a customer goes bankrupt, the general deadlines for move-out still apply.

Overview of exchanges

Indsæt sekvensdiagram

Figure 294 – Sequence diagram for move-out

4.10.2 Initial state

The customer contacts the balance supplier regarding a planned move-out on a given date.

4.10.3 Process for move-out

The balance supplier sends a *move-out metering point* EDI message to DataHub.

In response to the balance supplier's move-out request, DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

When the cancellation period expires, DataHub is updated with the received information on move date. *CPR/CVR information* and web access code are also removed and *customer name* is set to (*unknown*).

4.10.4 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
The balance supplier is a legitimate player for the metering point	E16 Balance supplier is not correct

Metering point identifiable	E10 Problem with metering point
The message has been received before the official deadline	E17 Date is not within set time limit
A move has not been requested for the metering point	D07 Move in progress
The metering point is registered as a consumption or production metering point	D18 Metering point type is incorrect
Status of metering point is new, connected or disconnected	D16 Physical status is incorrect

4.10.5 Notifying the grid company

When the cancellation deadline expires, DataHub sends a *Customer master data information* EDI message to the grid company.

4.10.6 End of supply information

If a future change of supplier has been registered for the metering point, an *End of supply* message is also sent to the customer's future balance supplier(s) with business reason *Move*.

In other grid areas, only the customer relationship terminates on the effective date.

Any future balance suppliers delete the information about start of supply from their respective systems.

4.10.7 Send consumption statement

The previous balance supplier may submit a meter reading to DataHub in line with *BRS-018 Submission of meter reading by balance supplier*.

As regards profile-settled metering points, the grid company reads the meter on the effective date of the move-out and calculates the consumption until the effective date.

If the grid company has received meter readings from the balance supplier, the grid company may choose to use these values as a basis for its reading.

For profile-settled metering points, the grid company sends an EDI message to DataHub with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, the grid company sends an EDI message to DataHub with business reason *Meter reading*. The message contains the meter reading on the effective date.

There can be several meter reading requests on the same day from different processes. In such cases, the grid company only needs to make and send one meter reading.

For profile-settled metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Meter reading*. The message contains the meter reading on the effective date.

The previous balance supplier then sends the final settlement to the customer.

4.10.8 Cancel move-out

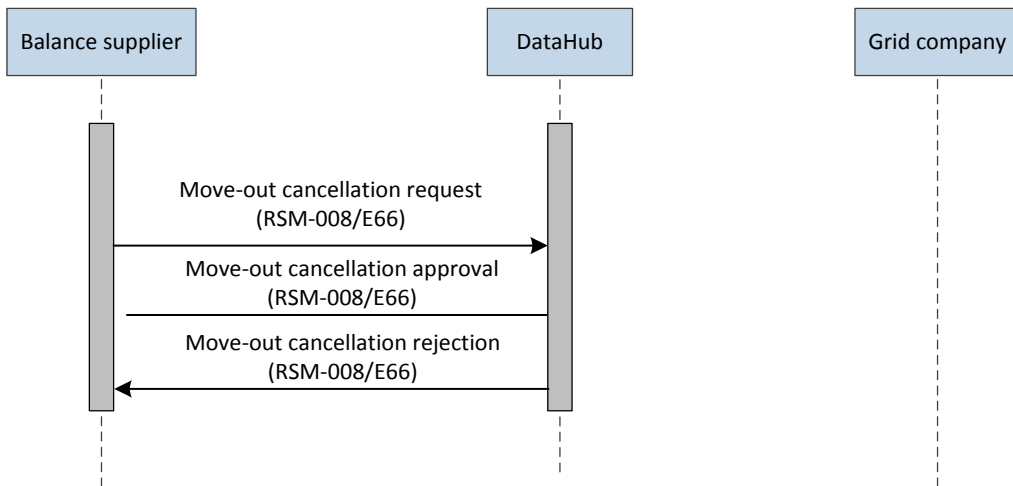


Figure 305 – Sequence diagram for Move-out – cancellation

If the balance supplier realizes upon receipt of the confirmation that the move is incorrect, or the customer cancels the agreement, the move must be cancelled.

The balance supplier does this by sending a *Cancel move-out request* EDI message with business reason Customer move-out and function code *Cancellation* to DataHub.

DataHub validates the message in accordance with the validation rules *for cancellation* shown below. In reply to the balance supplier's cancellation message, DataHub sends an EDI message with a reply status (approved/rejected). If DataHub rejects the cancellation, it must state the reason why.

4.10.9 Validation rules for cancellation

Validation	Error message
Metering point identifiable	E10 Problem with metering point
Metering point matches the one in the original message	D05 Metering point does not match the metering point from the original document
The balance supplier is a legitimate player	E16 Balance supplier is not correct
The message has been received before the official deadline	E17 Date is not within time limit

The reference is to the original request from the balance supplier	D06 Reference to transaction ID does not match ID from original document
--	---

4.10.10 Time limits for move-out reported to balance supplier

Sender	Recipient	Time limit
Balance supplier	DataHub	A move-out must be reported by the balance supplier at least three working days before the effective date.
Balance supplier	DataHub	A move-out is reported by the balance supplier no earlier than 60 calendar days before the effective date.
DataHub	Balance supplier	DataHub sends an approval or a rejection to the balance supplier within one hour.
DataHub	Grid company	DataHub sends information about the move-out to the grid company within one hour after the cancellation period expires.
Balance supplier	DataHub	A move-out cancellation must be submitted by the balance supplier at least three working days before the effective date.
DataHub	Balance supplier	DataHub sends a cancellation approval or rejection to the balance supplier within one hour.
DataHub	Balance supplier	DataHub sends a <i>Move cancellation information</i> message within one hour after sending approval to the balance supplier.
DataHub	Future balance supplier	An end of supply message is sent to any future balance suppliers immediately after the cancellation period expires
Grid company	DataHub	The grid company sends a consumption statement for a profile-settled metering point and a meter reading, if available, for a profile or flex-settled metering point, as soon as possible and within 35 calendar days after the effective date, in line with Regulation D1.
DataHub	Balance supplier	DataHub forwards the consumption statement and/or meter reading for the measuring point within one hour of receipt.

4.10.11 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

Detailed functionality provided by the market function for a specific system action.

Data required and handled by the market function when executing a specific system action.

4.10.11.1 Move-out metering point (RSM-005/E66)

RSM message	Request end of supply	
Name	Value	Comment
Business reason	E66	Move-out
Metering point ID		
Supply end date		

4.10.11.2 Metering point move-out approval (RSM-005/E66)

RSM message	Confirm end of supply	
Name	Value	Comment
Business reason	E66	Move-out
Metering point ID		
Reference		Reference to <i>Request end of supply</i>

4.10.11.3 Metering point move-out rejection (RSM-005/E66)

RSM message	Reject end of supply	
Name	Value	Comment
Business reason	E66	Move-out
Metering point ID		
Reference		Reference to <i>Request end of supply</i>
Rejection reason		

4.10.11.4 Move-out cancellation request (RSM-008/E66)

RSM message	Request end of supply cancellation	
Name	Value	Comment
Business reason	E66	Move-out
Function code		Cancellation
Metering point ID		
Reference		Reference to <i>Request end of supply</i> (original message)

4.10.11.5 Move-out cancellation approval (RSM-008/E66)

RSM message	End of supply cancellation approval	
Name	Value	Comment
Business reason	E66	Move-out
Metering point ID		
Reference		Reference to <i>Request end of supply cancellation</i>

4.10.11.6 Move-out cancellation rejection (RSM-008/E66)

RSM message	End of supply cancellation rejection	
Name	Value	Comment
Business reason	E66	Move-out
Metering point ID		

RSM message	End of supply cancellation rejection	
Reference		Reference to <i>Request end of supply cancellation</i>
Rejection reason		

4.10.11.7 Customer master data information (RSM-028/E66) (for grid company)

RSM message	Customer master data notification	
Name	Value	Comment
Business reason	E66	Move-out
Metering point ID		
Validity date		Date for end of supply
Customer name 1	(unknown)	
Customer name 2	blank	
Other master data is submitted to the grid company in line with Chapter 5: Master data		

4.10.11.8 Move information (RSM-004/E01)

RSM message	Change of balance supplier notification	
Name	Value	Comment
Business reason	E01	Move
Metering point ID		
Effective date		

Detailed functionality provided by the market function for a specific system action.

Data required and handled by the market function when executing a specific system action.

4.10.11.9 Submit consumption statement (RSM-011/D10)

RSM message	Meter reading notification	
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Period		From last reading date to effective date
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point

Statements for any child metering points will also be sent to the balance supplier.

4.10.11.10 Submit meter reading (RSM-011/D19)

RSM message	Meter reading notification	
Name	Value	Comment
Business reason	D19	Meter reading
Metering point ID		

RSM message	Meter reading notification	
Reading date		Equal to effective date
Meter reading		Must be submitted for a physical metering point

Meter readings for any child metering points will also be sent to the balance supplier.

4.10.12 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-010
BRS name	Move-out
EDI transactions:	
RSM ID	RSM-005
RSM name	End of supply from balance supplier
RSM ID	RSM-004
RSM name	Change of balance supplier notification
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-031
RSM name	Submit settlement master data
RSM ID	RSM-028
RSM name	Submit customer master data
RSM ID	RSM-008
RSM name	End of supply cancellation

4.11 BRS-011: Incorrect move

4.11.1 Overview

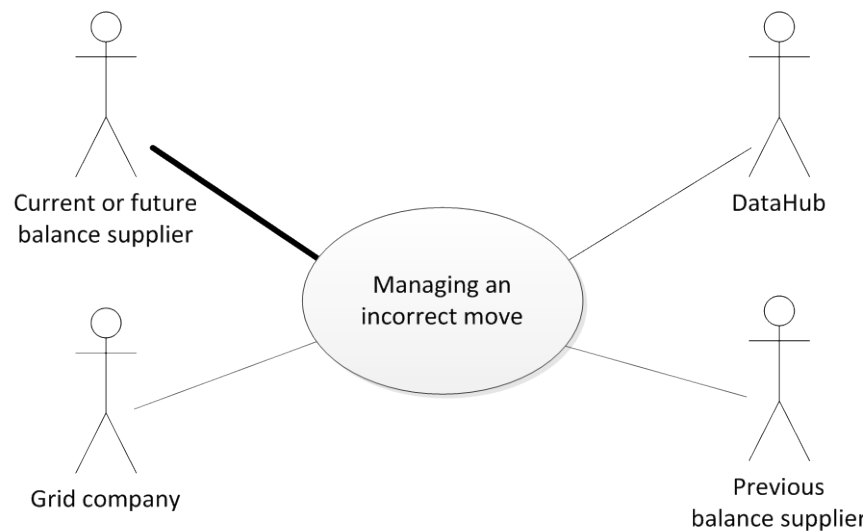


Figure 31 – Use case diagram for incorrect move

A reported move-in or move-out for a consumption or production metering point which turns out to be incorrect (see Regulation H1), is handled using this process.

If the balance supplier has only reported incorrect customer master data, this can be corrected using BRS-015: *Submission of customer master data by balance supplier*.

This process can only be used when the move cancellation deadline has expired. Note also that only the balance supplier that reported the move (following referred to as the incorrect balance supplier) can report an incorrect move.

Once the process has been initiated, it cannot be cancelled.

4.11.2 Initial state

The balance supplier that reported a move for a metering point becomes aware after the cancellation period has expired that the move is incorrect, in line with the conditions for an incorrect move in Regulation H1.

4.11.3 Process for incorrect move

The balance supplier reports an incorrect move via the market portal (GUI).

When the balance supplier activates the process for incorrect move (via the market portal), DataHub checks if the incorrect move is a *simple incorrect move*, which can be handled by the balance supplier in DataHub or if the incorrect move is a complex incorrect move which requires assistance from DataHub Support.

If the incorrect move is *simple* and in this way can be handled by the balance supplier, it is still an option for the balance supplier to choose manual handling of the process, if this is estimated as necessary by the balance supplier.

As noted above, incorrect moves are handled differently depending on their complexity.

- 1) A *simple incorrect move* is characterized in:
 - a. That no processes have been cancelled, stopped, implemented or submitted since the cancellation period expired (such as change of supplier, end of supply, etc.), such that recovery can be carried out purely between the two balance suppliers (the incorrect and previous).
 - b. That **no** purely technical factors prevent an automatic recovery of the error without involvement of DataHub Support.

A *simple incorrect move* can be handled by the incorrect balance supplier directly in DataHub without DataHub Support's involvement (see section 4.11.5 below).

However, the balance supplier can choose to involve DataHub Support in the solution of the problem via the market portal, if the circumstances call for it. In that case the balance supplier must state the reason, in line with Regulation H1.

- 2) A *complex incorrect move* is characterized in:
 - a. That special circumstances apply, for example if events have occurred since expiry of the cancellation period which impact on other players in the market than the incorrect and previous balance suppliers.
 - b. That technical reasons require the involvement of DataHub Support.

A *complex incorrect move* cannot be handled by the incorrect balance supplier via DataHub and requires action to be taken directly by DataHub Support. DataHub Support will solve the problems via HTX (see section 4.11.4). The players involved will automatically be notified directly by DataHub Support regarding the chosen solution, including to what extent the problem solving has activated EDI Messages to the players involved.

4.11.4 Complex incorrect move

If the incorrect move is complex, DataHub sends an e-mail to DataHub Support and the incorrect balance supplier, as confirmation for the submission in the market portal, reproducing the information entered in the market portal and noting that the process will be handled manually by DataHub Support via HTX.

Normally, DataHub Support can recreate the metering point to its state immediately before the incorrect move. This includes restoring any future change of supplier for the metering point which was cancelled in connection with the move. Future changes of supplier are only restored by agreement with the affected balance suppliers (for example via web form, telephone or email). DataHub Support will also contact the grid company if they are affected by the change.

Note that it will not always be possible for DataHub to send EDI messages to the affected players (balance suppliers and grid company) due to the complexity of the solution chosen for the problem. In such cases, the players must following directly request master data in line with *BRS-005 Request for master data*.

4.11.4.1 Time limits for complex incorrect moves

Sender	Recipient	Time limit
Energinet	DataHub	Energinet processes the incorrect move query as soon as possible after notification to the market portal has occurred.

4.11.5 Simple incorrect move

If the incorrect move is simple, after it has been reported in the market portal the received information, including the notification date, is registered in DataHub.

The process restores the metering point to its state immediately before the incorrect move

4.11.6 Simple incorrect move: Overview of exchanges

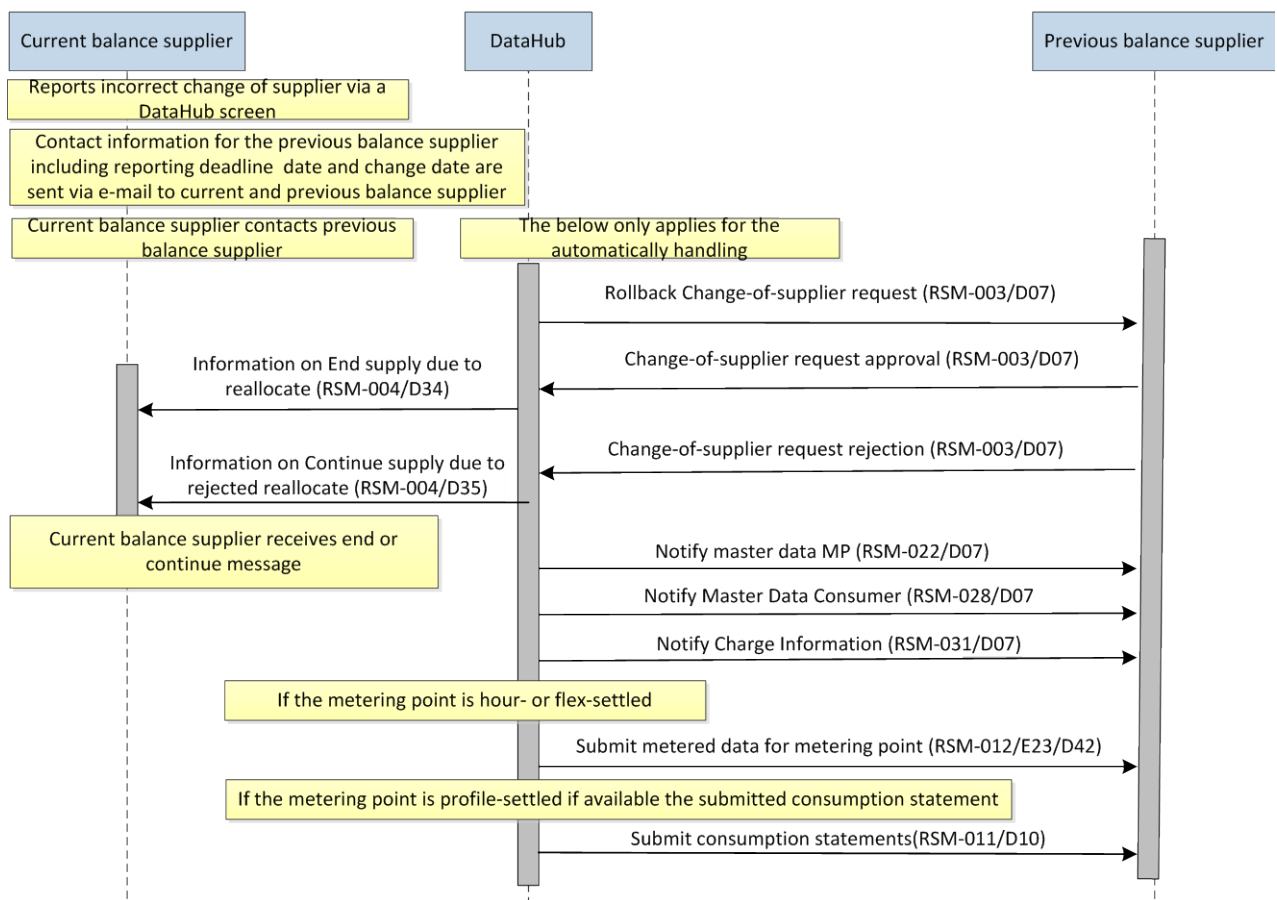


Figure 32 – Sequence diagram for managing a simple incorrect move

4.11.7 Simple incorrect move: Procedure

Following submission in the market portal, DataHub sends a web form reproducing the information entered in the market portal, with contact information for the existing and previous balance suppliers, including telephone numbers for both involved balance suppliers. The email also contains information about the incorrect move, including the response deadline date.

Please note that an incorrect move may only be reported in respect of a relocation with an effective date not more than 180 calendar days before the reporting date.

Please note that an incorrect move can only be carried out in respect of the most recent move and for this one process only. This means that when an incorrect move-in/move-out is implemented for a metering point, another cannot commence without a new move-in.

DataHub sends a *Request resumption of supply* EDI message to the previous balance supplier containing the start date. The previous balance supplier must send an approval/rejection to DataHub before the deadline expires.

The previous balance supplier must approve or reject the resumption before the deadline. If no response is received before the deadline, this is taken as approval.

The way the process proceeds depends on the response from the previous balance supplier.

The previous balance supplier resumes supply

The previous balance supplier sends an approve resumption of supply.

DataHub then sends master data messages for the metering point from prior to the move.

Note that before sending customer master data, any CPR number is removed from the metering point.

DataHub sends a *Stop due to resumption information* EDI message containing the start date for the incorrect move to the existing balance supplier.

DataHub sends a *Submission of customer master data* message with business reason *Incorrect move* with updated customer master data and the start date for the incorrect move to the grid company.

If the metering point is profile-settled, a consumption statement (if received) is sent. Subsequent adjustments are made via the balance statement.

If the metering point uses hourly settlement, DataHub sends metered data for the entire period to the previous balance supplier if they take over the metering point.

Current balance supplier not willing to resume supply

If the previous balance supplier has rejected resumption of supply before the deadline, a *Continuation of supply information* EDI message containing the start date for the incorrect move is sent to the current balance supplier.

4.11.7.1 Time limits for simple incorrect move

Sender	Recipient	Time limit
DataHub	Previous balance supplier	<p>When an incorrect move is reported, DataHub identifies whether the process is simple or complex.</p> <p>If the process is simple, DataHub immediately sends a request for resumption of supply to the previous balance supplier.</p> <p>If the process is complex, web forms are sent to the balance suppliers involved and Energinet, and the process is then handled manually.</p>

Previous Balance supplier	DataHub	The previous balance supplier must send an EDI message approving or rejecting the resumption request to DataHub within three working days.
DataHub	Previous balance supplier	DataHub must send master data immediately after approval or expiry of the above deadline.
DataHub	Grid company	DataHub must send master data immediately after approval or expiry of the above deadline.
DataHub	Current/future balance supplier	DataHub must send a <i>Stop due to resumption information</i> message to the balance supplier already assigned the metering point within one hour of approval or immediately after expiry of the deadline.
DataHub	Previous balance supplier	Immediately after implementation of the change, DataHub must send an EDI hourly settled consumption message from the incorrect effective date to the balance supplier that is taking over the metering point.

4.11.8 Simple incorrect move: Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. In this context 'important data' are the data which are significant in terms of handling the process for the business.

4.11.8.1.1 Resumption of supply request (RSM-003/D33)

RSM message		Re-allocation of balance supplier request
Name	Value	Comment
Business reason	D33	Incorrect move
Metering point ID		
Supply start date		

4.11.8.1.2 Resumption of supply request approval (RSM-003/D33)

RSM message		Re-allocation of balance supplier approval
Name	Value	Comment
Business reason	D33	Incorrect move
Metering point ID		
Reference		Reference to <i>Re-allocation of balance supplier request</i>

4.11.8.1.3 Resumption of supply request rejection (RSM-003/D33)

RSM message		Re-allocation of balance supplier rejection
Name	Value	Comment
Business reason	D33	Incorrect move
Metering point ID		
Reference		Reference to <i>Re-allocation of balance supplier request</i>

RSM message	Re-allocation of balance supplier rejection	
Rejection reason	D29	No contract

4.11.8.1.4 Stop due to resumption information (RSM-004/D34)

RSM message	Change of balance supplier notification	
Name	Value	Comment
Business reason	D34	Stop due to resumption information
Metering point ID		
Effective date		

4.11.8.1.5 Continuation of supply information (RSM-004/D35)

RSM message	Change of balance supplier notification	
Name	Value	Comment
Business reason	D35	Continuation of supply information
Metering point ID		
Effective date		

4.11.8.1.6 Metering point master data information (RSM-022/D33)

RSM message	Metering point master data notification	
Name	Value	Comment
Business reason	D33	Incorrect move
Metering point ID		
Validity date		Start date for resumption
Balance supplier		GLN for balance supplier
Start of supply		Date for original start of supply
Balance responsible party ID		GLN
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

Any child metering points will also be sent to the balance supplier.

4.11.8.1.7 Information on metering point links (RSM-031/D33)

Only sent to the balance supplier if there are links for the metering point.

RSM message	Master data settlement notification	
Name	Value	Comment
Business reason	D33	Incorrect move
Validity date		Date for metering point link
Function code		Registered value for link (Create/Change/Stop)
Metering point ID		
Market player		GLN for grid company
Charge type		Subscription/fee/tariff
Charge type ID		Market player's ID for charge type
Number		

Any child metering points will also be sent to the balance supplier if there are links for the metering point.

4.11.8.1.8 Customer master data information (RSM-028/D33)

RSM message		Customer master data notification
Name	Value	Comment
Business reason	D33	Incorrect move
Metering point ID		
Validity date		Start date for original start of supply
CPR		Not sent to the previous balance supplier and grid company
Other master data is sent to the balance supplier and grid company in line with Chapter 5: Master data		

4.11.8.1.9 Submit consumption statement (RSM-011/D10)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Period		
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point

Statements for any child metering points will also be sent to the balance supplier.

4.11.8.1.10 Submit metered data for metering point (RSM-012/E23/D42)

RSM message		Metering point metered data notification
Name	Value	Comment
Business reason	E23 D42	Periodic consumption statement Periodic flex statement
Metering point ID		
Time period for quantity		
Product		Active energy
Type of metering point		Consumption Production
Settlement method		For consumption: Hourly/Flex/Profile
Resolution		Hour/Quarter-hour/Month
Quantity		kWh with up to 3 decimal places
Quantity status		Estimated Measured Missing Correction (only from DataHub)

Metered data for any child metering points will also be sent to the balance supplier.

4.11.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-011
BRS name	Management of incorrect move
EDI transactions:	
RSM ID	RSM-003
RSM name	Resume supply to metering point
RSM ID	RSM-004
RSM name	Change of balance supplier notification
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-031
RSM name	Submit settlement master data
RSM ID	RSM-028
RSM name	Submit customer master data
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading
RSM ID	RSM-012
RSM name	Submit metered data for metering point

4.12 BRS-012: Change of settlement method

4.12.1 Overview

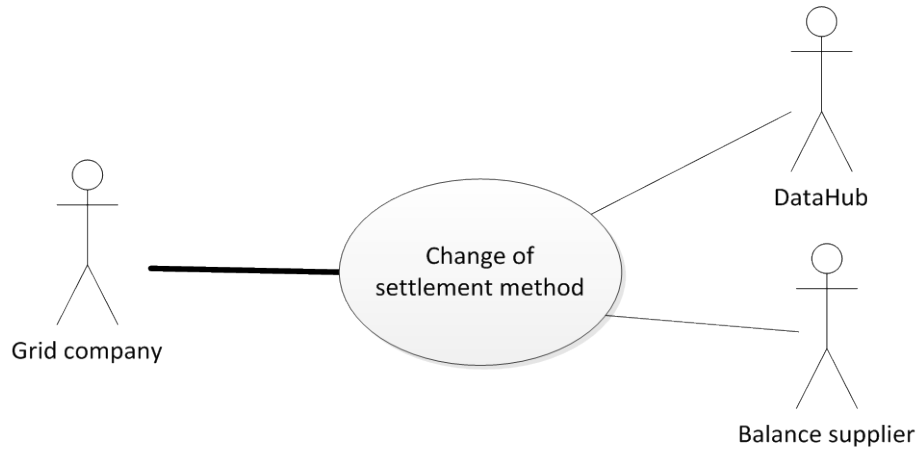


Figure 38 – Use case diagram for Change of settlement method

This process handles changes between profile, flex and hourly settlement for a metering point.

The following types of *change of settlement method* are possible:

1. From profile-settled to flex-settled
2. From profile-settled to hourly settled
3. From flex-settled to hourly settled
4. From hourly settled to flex-settled
5. From the flex or hourly settled to profile-settled (only until deadline)

The rules for changing settlement method are explained in Regulation H1.

4.12.2 Overview of exchanges

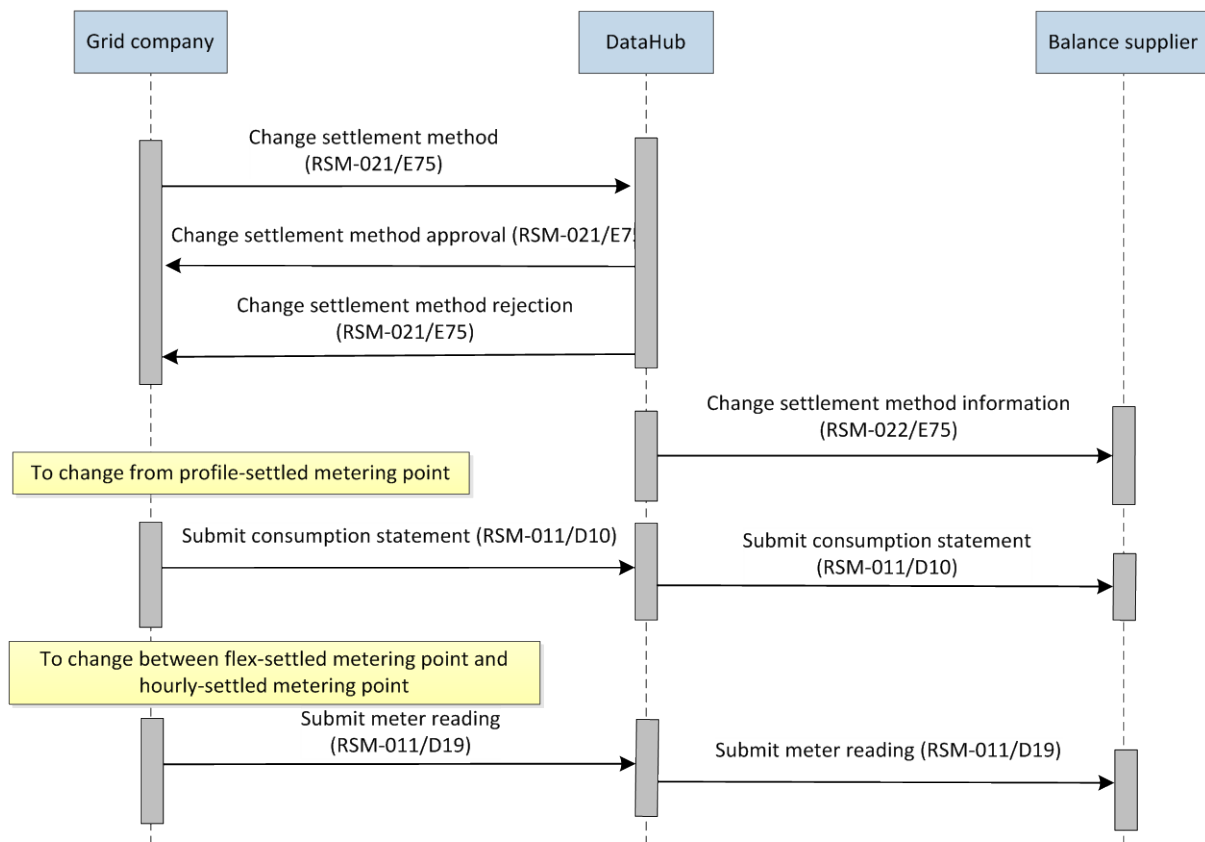


Figure 33 – Sequence diagram for Change of settlement method

4.12.3 Initial state for change of settlement method

The grid company wants to change the settlement method for a metering point.

4.12.4 Process for change of settlement method

The grid company sends an EDI message with master data to DataHub, stating the new settlement method, business reason *Change settlement method* and a validity date, which must be the date of change for the settlement method.

In response to the grid company's request, DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the error messages listed below under the validation rules.

If approved, DataHub updates the metering point with the new information.

DataHub forwards the EDI message to the balance supplier supplying electricity on the validity date and to any future balance suppliers for the metering point.

When the settlement method is changed, DataHub automatically takes the change into account when calculating load shares for the following month.

When the settlement method is changed to flex or hourly settlement, the balance supplier must prepare for consumption data to be received as time series in future.

Note: If the grid company has incorrectly reported a change of settlement method from *profile-settlement* to *flex* or *hourly settlement*, the grid company can 'cancel' this change by reporting a new change of settlement method with the same effective date and with the settlement method set to *profile settlement* (the original settlement method) up until the deadline.

4.12.5 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The metering point is registered as a consumption metering point	D18 Metering point type is incorrect
Requested change is to a different settlement method	D15 Settlement method is incorrect
The metering point is not registered as closed down	D16 Physical status is incorrect
The message has been received before the official deadline	E17 Date is not within set time limit
If a change of settlement method from profile to flex-settled has not already been requested on the effective date, the requested change is a change from profile to flex-settlement, or a change between profile and flex-settlement	D15 Settlement method is incorrect
If a change of settlement method from profile to flex or hourly settled has already been requested on the effective date, the requested change is a change from flex or hourly settlement to profile-settlement (a request to cancel the change already requested)	D15 Settlement method is incorrect
Metering point is not registered with net settlement group 6	D47 Processing not allowed for metering points belonging to net settlement group 6
The effective date for a change of settlement method is not earlier than the effective date for a change of supplier, move or end of supply transaction the grid company has been notified of by DataHub	D07 Move in progress

4.12.6 Send consumption statement

If the settlement method is changed from profile-settlement to hourly or flex-settlement, a meter reading must be performed on the effective date in accordance with the grid company's rules, unless the connection status is *new*.

The grid company sends a consumption statement to DataHub on the effective date with business reason *Profile-settled consumption*. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

There can be several meter reading requests on the same day from different processes. In these cases, the grid company must only send one consumption statement to DataHub.

DataHub forwards the consumption statement including any meter reading to the balance supplier.

If the settlement method has been changed from profile settlement to flex or hourly settlement, the consumption statements will be sent after the change has been effected in accordance with business process BRS-021: *Submission of metered data for a metering point*.

When changing between flex-settlement and hourly settlement for a metering point with sub type *physical*, the grid company sends an EDI message to DataHub with business reason *Meter reading*. The message contains the meter reading on the effective date.

DataHub forwards the meter reading to the balance supplier with business reason *Meter reading*.

If the grid company changes the estimated annual consumption in connection with a change of settlement method, this information must be sent to DataHub as described in business process BRS-017: *Submission of EAC by grid company*, with the same validity date as the change of settlement method.

On the validity date, DataHub sends a message with the expected annual consumption to the current and any future balance suppliers for the metering point.

Note: If a change in settlement method from *flex or hourly settlement* to *profile settlement* is submitted (cancellation of a previously submitted change of settlement method from *profile* to *flex-settlement*), any consumption statement and meter reading from the original change is not sent.

4.12.7 Time limits for change of settlement method

Sender	Recipient	Time limit
Grid company	DataHub	As far as possible, the change in settlement method message must be sent to DataHub in time to allow for the change to be reflected in the computation of load shares for the following month. The message may be sent up to 150 calendar days before and no later than 1 working day after the change. However, a change from a profile-settled metering point to flex or hourly settlement must be submitted at least one calendar month before the effective date, which must be the first of a month.
Grid company	DataHub	The grid company can send a message changing settlement method from flex or hourly settlement to profile-settlement up to 3 working days before the effective date (only cancellation)

DataHub	Grid company	DataHub sends an approval or rejection to the grid company within one hour.
Grid company	DataHub	If the settlement method is changed to hourly settlement, metered data cannot be sent by the grid company to DataHub more than one working day after the validity date.
DataHub	Balance supplier	DataHub sends a master data message to the balance supplier within one hour after receipt.
Grid company	DataHub	The grid company sends a consumption statement for a profile-settled metering point and a meter reading, if available, for a profile or flex-settled metering point, as soon as possible and within 35 calendar days after the effective date, in line with Regulation D1.
DataHub	Balance supplier	DataHub forwards the consumption statement and/or meter reading for the measuring point within one hour of receipt.

4.12.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.12.8.1 Change settlement method (RSM-021/E75)

RSM message		Update metering point master data request
Name	Value	Comment
Business reason	E75	Change settlement method
Metering point ID		
Validity date		Date from which changed master data applies
Settlement method		Hourly/Flex/Profile
Meter reading frequency		Hourly/Other
Type of metering point	E17	Consumption
Reading method		Remote/Manual. Only for profile-settled metering points

4.12.8.2 Change settlement method approval (RSM-021/E75)

RSM message		Update metering point master data approval
Name	Value	Comment
Business reason	E75	Change settlement method
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>

4.12.8.3 Change settlement method rejection (RSM-021/E75)

RSM message		Update metering point master data rejection
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RSM message		Update metering point master data rejection
Name	Value	Comment
Business reason	E75	Change settlement method
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>
Rejection reason		

4.12.8.4 Change settlement method information (RSM-021/E75)

RSM message		Metering point master data notification
Name	Value	Comment
Business reason	E75	Change settlement method
Metering point ID		
Validity date		Date from which changed master data applies
Settlement method		Hourly/Flex/Profile
Meter reading frequency		Hourly/OTHER
Hourly time series		Yes/No. Only profile-settled remote-read
Nominal reading date		Up to 12 dates. Only profile-settled
Reading method		
Type of metering point		Consumption
Metering point sub type		Physical/Virtual/Calculated
Reading method		Remote/Manual. Only for profile-settled metering points
Maximum power kW		
Maximum current Amps		
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

Detailed functionality provided by the market function for a specific system action.

Data required and handled by the market function when executing a specific system action.

4.12.8.5 Submit consumption statement (RSM-011/D10)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Period		From last reading date to effective date
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point.

4.12.8.6 Submit meter reading (RSM-011/D19)

RSM message		Meter reading notification
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RSM message		Meter reading notification
Name	Value	Comment
Business reason	D19	Meter reading
Metering point ID		
Reading date		Equal to effective date
Meter reading		Must be submitted for a physical metering point

4.12.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-012
BRS name	Change of settlement method
EDI transactions:	
RSM ID	RSM-021
RSM name	Update metering point master data
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading

4.13 BRS-013: Disconnection and reconnection of metering point

4.13.1 Overview

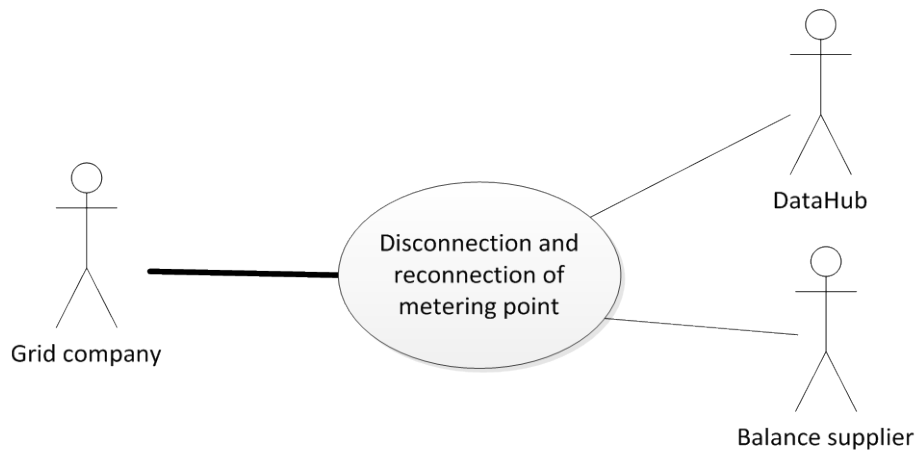


Figure 340 – Use case diagram for Disconnecting and reconnecting a metering point

This process is applied when the grid company disconnects and reconnects a metering point. Note that all types of metering points can be disconnected.

The grid company must disconnect the metering point if the need arises for a technical disconnection of the customer with an expected duration of more than one calendar day. If the disconnection is expected to have a shorter duration, the process for disconnection should not be initiated. Reconnection can be submitted for the same day as a disconnection, within the time limits, if the disconnection is shorter than expected.

If a balance supplier, by agreement with the customer, wants to disconnect or reconnect a metering point, the balance supplier should contact the grid company using *BRS-039: Request for service from grid company*.

The grid company must then disconnect the metering point in accordance with the rules in Regulation H1.

Disconnection associated with end of supply is generally not handled via this process, but as part of *BRS-002: End of supply*.

4.13.2 Overview of exchanges

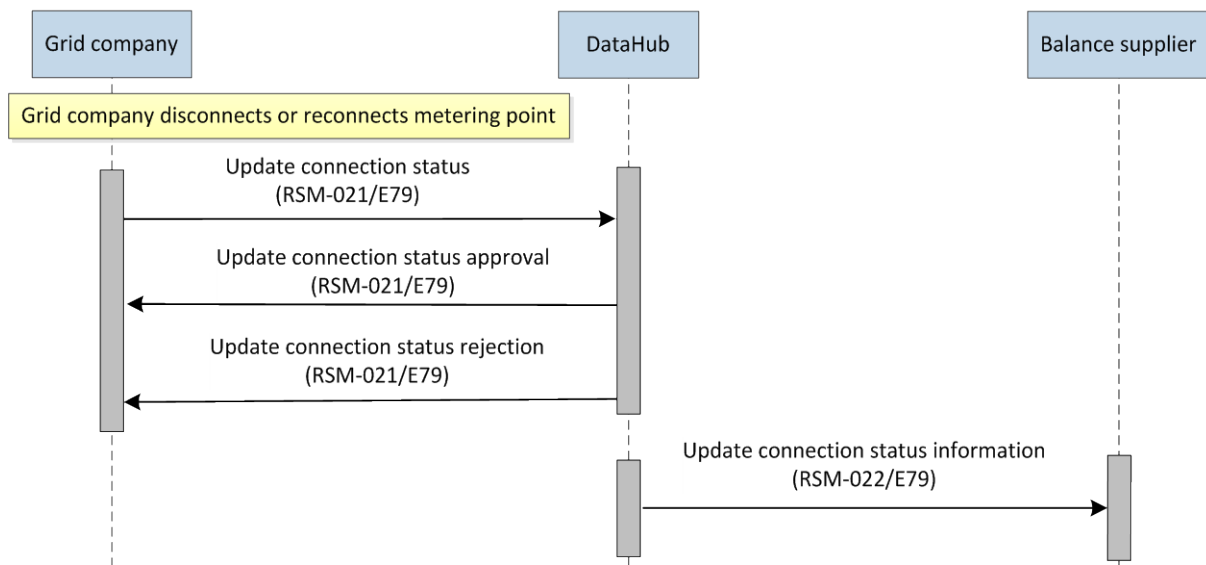


Figure 35 – Sequence diagram for Disconnecting and reconnecting a metering point

4.13.3 Initial state

The process is initiated when a grid company wants to disconnect a metering point.

4.13.4 Process for disconnecting a metering point

The grid company sends an EDI message with master data to DataHub with business reason *Change connection status* and connection status *Disconnected*.

The effective date for disconnection is the calendar day following the day on which physical disconnection takes place.

In response to the grid company's request, DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

DataHub forwards the master data message to the current and any future balance suppliers.

4.13.5 Process for metering point reconnection

The grid company reconnects the metering point to the grid and sends an EDI message with master data to DataHub with business status *Change connection status* and connection status *Connected*.

The effective date for reconnection is the calendar day on which physical reconnection takes place.

Same validations will be performed as for disconnection of the metering point.

DataHub forwards the master data message to the current and any future balance suppliers.

4.13.6 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The requested connection status change is from connected to disconnected or vice-versa	D16 Physical status is incorrect
The message has been received before the official deadline	E17 Date is not within set time limit
When reconnecting a metering point registered as a consumption or production metering point, there is a registered balance supplier	D36 Metering point cannot be connected

4.13.7 Time limits for disconnection/reconnection of a metering point

Sender	Recipient	Time limit
Grid company	DataHub	The disconnection message may only be sent to DataHub after physical disconnection has taken place. The disconnection can be reported on the day it is implemented, or on the effective date for the disconnection if this is a working day, or otherwise on or before the first working day after the effective date. Note that the effective date for the disconnection must always be the day after the day the disconnection is physically implemented (see definition 4.13.4).
Grid company	DataHub	The reconnection message may only be sent to DataHub after physical reconnection has taken place. Reconnection can be reported to DataHub on the day of physical reconnection, or on the first working day after the effective date (see 4.13.5 for definition).
DataHub	Grid company	DataHub sends an approval or rejection to the grid company within one hour.
DataHub	Balance supplier	DataHub sends a master data message within one hour after receipt.

4.13.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.13.8.1 Update connection status (RSM-021/E79)

RSM message	Update metering point master data request

Name	Value	Comment
Business reason	E79	Change connection status
Metering point ID		
Validity date		Date from which changed master data applies
Connection status		Disconnected/connected

4.13.8.2 Update connection status approval (RSM-021/E79)

RSM message		Update metering point master data approval
Name	Value	Comment
Business reason	E79	Change connection status
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>

4.13.8.3 Update connection status rejection (RSM-021/E79)

RSM message		Update metering point master data rejection
Name	Value	Comment
Business reason	E79	Change connection status
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>
Rejection reason		

4.13.8.4 Update connection status information (RSM-021/E79)

RSM message		Metering point master data notification
Name	Value	Comment
Business reason	E79	Change connection status
Metering point ID		
Validity date		Date from which changed master data applies
Connection status		Disconnected/connected
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

4.13.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-013
BRS name	Disconnection and reconnection of metering point
EDI transactions:	
RSM ID	RSM-021
RSM name	Update metering point master data
RSM ID	RSM-022
RSM name	Submit metering point master data

4.14 BRS-014: Meter management.

4.14.1 Overview

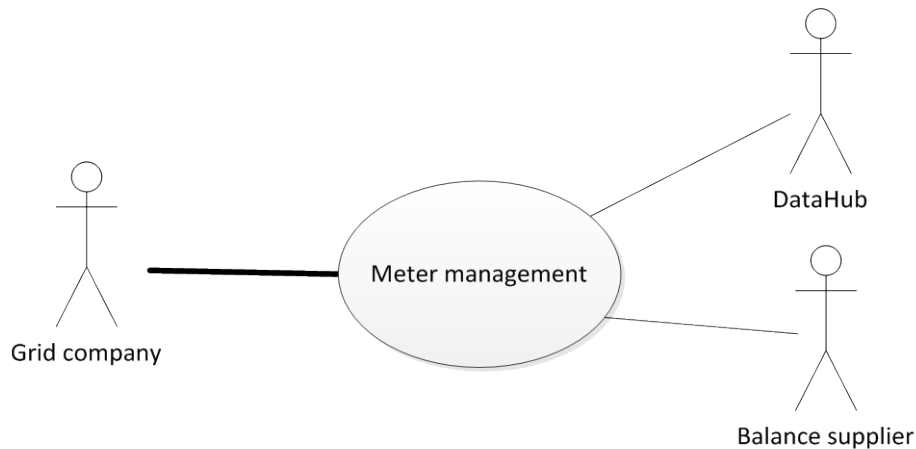


Figure 362 – Use case diagram for meter management

This business process is used to configure, remove and change meters for physical metering points.

Incorrect meter master data is corrected via *BRS-006: Submission of master data by grid company*.

Note that when using BRS-014 there may be a need to update other master data for the metering point:

- Settlement method (hourly/flex/profile-settled). Processed in BRS-012: Change of settlement method
- Reading method (remote-read, manually read). Processed in *BRS-006: Submission of master data – grid company*
- Meter reading frequency (OTHER/Hour/Quarter-hour). Processed in *BRS-006: Submission of master data – grid company*
- Subscription, fee and tariff links. Processed by BRS-037: Settlement master data for a metering point – subscription, fee and tariff links.

If the meter management process is completed several times during the same day, DataHub will only register the last message submitted for the metering point (previous submissions will be cancelled, but the balance supplier will receive all *metering point master data information* EDI messages).

4.14.2 Overview of exchanges

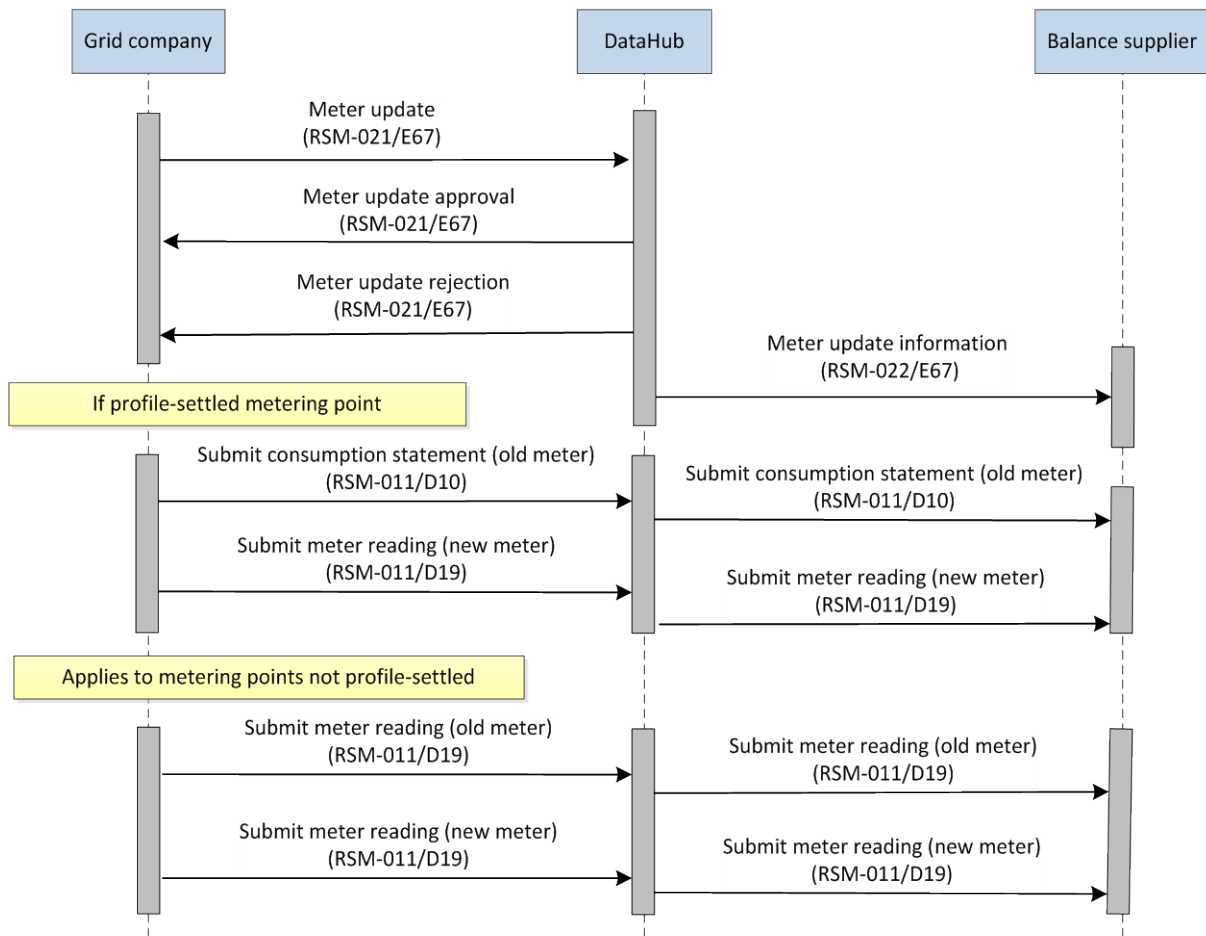


Figure 37 – Sequence diagram for change of meter

4.14.3 Initial state

The grid company wants to configure, remove or change the meter for a metering point and verify the technical information for the new meter.

4.14.4 Meter configuration

The grid company sends an *Update meter* EDI message with function code *New* to DataHub.

The request must contain all relevant master data for the new meter, and the metering point subtype must be *physical*.

In response to the grid company's request, DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

The grid company must then send:

- the start meter reading for the new meter
- If the metering point is profile-settled and the change is from sub type *virtual*, a consumption statement must be submitted if the metering point had been previously connected at a date earlier than the change date.

4.14.5 Meter removal

The grid company sends an *Update meter* EDI message with function code *Stop* to DataHub.

The request must contain metering point sub type *virtual* or *calculated*, as there is no longer a meter for the metering point.

In response to the grid company's request, DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information. DataHub removes all meter information from the metering point. The grid company must remove unnecessary information from the metering point in their own system.

The grid company must then send:

- A consumption statement for a profile-settled metering point and a meter reading for the old meter

4.14.6 Change of meter

If a meter is being changed, the grid company sends an *Update meter* EDI message with function code *Change* to DataHub.

The request must contain all relevant master data for the new meter, and the metering point subtype must be *physical*.

In response to the grid company's request, DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

The grid company must then send:

- A consumption statement for a profile-settled metering point and a meter reading for the old meter
- the start meter reading for the new meter

Note the following exception for metering points covered by net settlement group 6. These must only contain a meter reading and be sent with the *Submit meter reading* EDI message.

4.14.7 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The metering point sub type is <i>physical</i> for function codes <i>New</i> and <i>Change</i> or <i>virtual</i> for function code <i>Stop</i>	D37 Metering point sub type is not correct
The grid company is a legitimate player	E01 Grid company is not correct
The metering point is not registered as closed down	D16 Physical status is incorrect
The message has been received before the official deadline	E17 Date is not within set time limit
Function code is <i>New/Change/Stop</i>	D19 Function code is not valid
If the function code is <i>New</i> , the metering point must not already have a meter	D19 Function code is not valid
If the function code is <i>Change</i> or <i>Stop</i> , the metering point must have a meter	D19 Function code is not valid

4.14.8 The balance supplier receives information about the meter update

DataHub sends the update meter EDI message to the current and any future balance supplier(s).

After receipt of the new master data, the recipient balance supplier(s) correct the sent master data in their own systems.

If the balance supplier discovers during a check of master data that the information does not tally with the information the balance supplier has, they may either contact the grid company directly or draw attention to the problem by filling in a web form.

The date the change takes effect (validity date) will be the validity date submitted by the grid company.

Note that this means that a future balance supplier must be able to receive master data messages before supply commences.

DataHub sends all messages related to the meter update, including consumption statement and meter reading, to the legitimate recipients. It cannot be guaranteed that DataHub sends the messages in a particular order. Systems in the market must therefore be able to handle receiving messages for the same incident in any order.

A meter update may coincide with other business processes such as *BRS-001: Change of supplier*, *BRS-002: End of supply* and *BRS-009: Move-in*. As a result of these processes, all information may not have to be sent to all balance suppliers.

4.14.9 Time limits for meter change

Sender	Recipient	Time limit
Grid company	DataHub	Message about changed master data after this business process must have its effective date on the date of dispatch or no more than 6 working days before the date of dispatch.
DataHub	Balance supplier	DataHub must forward data within one hour of receiving it
Grid company	DataHub	The grid company sends a consumption statement for a profile-settled metering point and a meter reading, if available, for a profile or flex-settled metering point, as soon as possible and within 35 calendar days after the effective date, in line with Regulation D1.
DataHub	Balance supplier	DataHub forwards the consumption statement and/or meter reading for the measuring point within one hour of receipt.

4.14.10 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.14.10.1 Meter update (RSM-021/E67)

RSM message		Update metering point master data request
Name	Value	Comment
Business reason	E67	Change of meter
Function code		Create/Change/Stop
Metering point ID		
Meter ID		New ID if function code is New or Change
Validity date		Date for meter change, creation or stop
Metering point sub type		Must be <i>physical</i> for Create/Change and <i>virtual or calculated</i> for Stop
Meter number of digits		
Meter conversion factor		
Meter unit type		Typical kWh
Meter type		Accumulated/Balanced
Other master data can be submitted by the grid company in line with Chapter 5: Master data		

4.14.10.2 Meter update approval (RSM-021/E67)

RSM message		Update metering point master data approval
Name	Value	Comment
Business reason	E67	Change of meter
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>

4.14.10.3 Meter update rejection (RSM-021/E67)

RSM message		Update metering point master data rejection
Name	Value	Comment
Business reason	E67	Change of meter
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>
Rejection reason		

4.14.10.4 Meter update information (RSM-022/E67)

RSM message		Metering point master data notification
Name	Value	Comment
Business reason	E67	Change of meter
Function code		Create/Change/Stop
Metering point ID		
Meter ID		New ID if function code is New or Change
Validity date		Date for meter change, creation or stop
Metering point sub type		Is <i>physical</i> for Create/Change and <i>virtual</i> or <i>calculated</i> for Stop
Meter number of digits		
Meter conversion factor		
Meter unit type		Typical kWh
Meter type		Accumulated/Balanced
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

4.14.10.5 Submit consumption statement (RSM-011/D10)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Period		From last reading date to effective date
Meter ID		Old meter
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point

4.14.10.6 Submit meter reading (RSM-011/D19)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D19	Meter reading
Metering point ID		
Meter ID		Old meter/new meter
Reading date		Date for meter change
Meter reading		Must be submitted for a physical metering point

4.14.11 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-014
BRS name	Meter management.
EDI transactions:	
RSM ID	RSM-021
RSM name	Update metering point master data
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-011
RSM name	Meter reading notification

4.15 BRS-015: Submission of customer master data by balance supplier

4.15.1 Overview

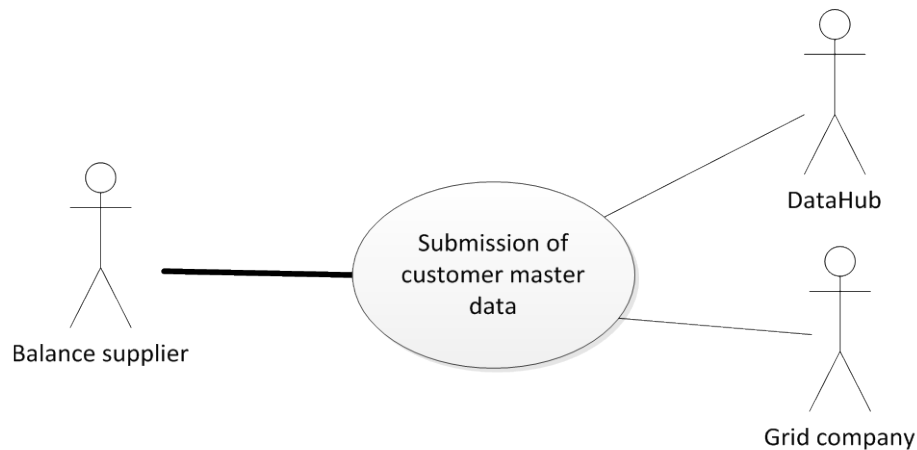


Figure 384 – Use case diagram for Submission of customer master data

If the customer master data registered in DataHub which the balance supplier has responsibility for is changed, the balance supplier must immediately send the changed customer master data to DataHub, which forwards the information to the grid company and any future balance suppliers.

The changed customer master data is submitted in accordance with this business procedure.

Submission of customer master data is part of many structured business processes, and this process is not to be used in these instances. Business processes which involve customer master data include:

- *BRS-001: Change of supplier*
- *BRS-009: Move-in*

This process only covers updates to customer master data for a metering point from the balance supplier with business reason *Update customer master data*. The process may cover several simultaneous updates.

4.15.2 Overview of exchanges

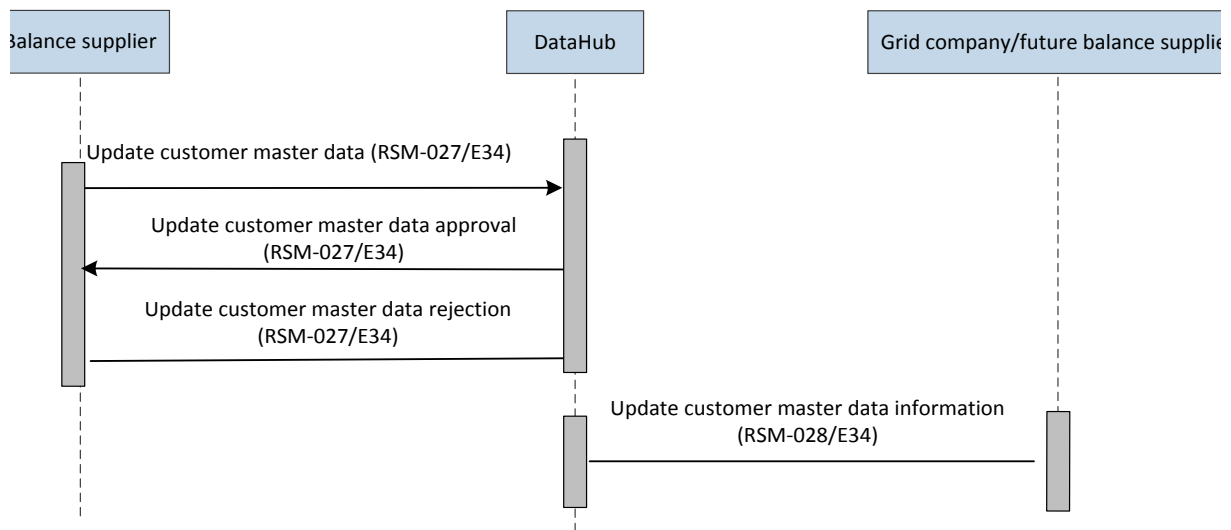


Figure 394 – Sequence diagram for Submission of master data by balance supplier

4.15.3 Initial state

The balance supplier has discovered that one or more of the metering point properties have been changed. These changes do not form part of the other business processes.

4.15.4 Process for the submission of master data from the balance supplier

The balance supplier sends an EDI message for the metering point to DataHub with business reason *Update customer master data*.

Note that a balance supplier may not use this business process prior to the effective date for take-over of a metering point (for example, in connection with a change of supplier).

The message contains all data for the metering point the balance supplier is responsible for and all the changes that have been made for the metering point as at the validity date.

In response to the balance supplier's request, DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

4.15.5 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The metering point is registered as a consumption or production metering point	D18 Metering point type is incorrect

The balance supplier is registered as the balance supplier for the metering point	E16 Balance supplier is not correct
The metering point is not registered as closed down	D16 Physical status is incorrect
The validity date is on or after the start of supply date for the balance supplier	E17 Date is not within set time limit
The message has been received before the official deadline	E17 Date is not within set time limit
CVR/CPR number is technically valid	D17 CPR/CVR is not correct
Customer name is not (<i>unknown</i>)	D03 Customer information is not correct
No pending customer update has been registered for the metering point with an earlier effective date	D40 Invalid process
The reporting of special taxes by the balance supplier is permitted for the metering point	E22 Metering point blocked for change of supplier
Electrical heating tax date is within the supply period	E50 Invalid period

4.15.6 Process for the submission of master data from DataHub

DataHub forwards customer master data to the grid company and any future balance suppliers for the metering point.

A future balance supplier and grid company should be aware that master data will be forwarded to them whenever it changes. This happens regardless of whether the change relates to information which they do not receive with the master data update.

After receipt of the new master data, the grid company or future balance supplier corrects their system if there are any changes to the registered data.

If the grid company or future balance supplier discover during a check of master data that the information does not tally with the information they hold, they can draw attention to the problem by filling in a web form and sending this to the existing balance supplier.

4.15.7 Special aspects of the individual master data changes

For a detailed description of master data for a metering point, please see Regulation I for master data – requirements and definitions.

It should, however, be noted that for the master data below, the following applies:

Electrical heating

Permitted values for electrical heating: Yes/No.

Indicates whether the customer is entitled to an electricity tax reduction due to electric heating. This information must be used with the 'Electrical heating tax date' field.

Electrical heating tax date

The date from which a reduction in the electricity tax is given, or this reduction ceases.

The start date must not be earlier than the start date for using electrical heating in the BBR register.

The end date must not be later than the end date for electrical heating in the BBR register.

The Electrical heating tax date must be specified for both the start and end of electrical heating.

Electrical heating may be added with an Electrical heating tax date up to 21 calendar days prior to the master data message's validity date.

Electrical heating may be ended with an Electrical heating tax date up to 21 calendar days prior to the master data message's validity date.

Web access code

A web access code is allocated automatically from DataHub for all settlement metering points. The balance supplier is responsible for forwarding the web access code to the customer.

The balance supplier cannot change the web access code by submitting master data, but only via a separate process in DataHub.

Consumer category

Indicates which electricity-consumption category applies to the metering point.

The balance supplier must at all times indicate the consumer category if the balance supplier is made aware of the category/a change of category.

Customer name

Must be stated. The metering point customer can be a physical (private) person or a legal (company or other entity with a CVR number) person. If the customer is a physical person, up to two customers can be registered for the metering point. It is only possible to register one customer for a metering point if the customer is a legal person.

If customer is listed as (*unknown*), the name can only be changed as a consequence of a move-in for the metering point.

CPR number

A CPR number is used for private customers (up to two per metering point) and is either the customer's Danish CPR number, or for private customers who do not have a Danish CPR number, their date of birth followed by four zeros, 'ddmmyy0000 '. If the date of birth is unknown, 1111110000 is used.

It is a requirement that the CPR number be reported in connection with future change of supplier and move-in transactions, as the CPR number is used to validate these transactions.

DataHub never sends CPR information via EDI, but only stores the information for checking purposes. The current balance supplier will be able to see the CPR number via the DataHub GUI.

If the balance supplier does not have the customer's CPR number and this is not registered in DataHub, the CPR attribute **must not be sent** in the EDI customer master data message (RSM-027), as a blank CPR number in the message will be rejected. An exception exists, however, if the Customer Name2 is also submitted as blank (deletion of customer). Deletion of CPR may also occur implicitly by forwarding an empty customer attribute and deletion of the CPR attribute.

Note that replacement of a CPR number with CVR number is handled as a move.

CVR number

A CVR number is used if the customer is a business owner. The CVR number is either the customer's Danish CVR number, or for business owners/associations that do not have a Danish CVR number, the code '11111111'.

It is a requirement for business owners that the CVR number be reported in connection with future change of supplier and move-in transactions, as the CVR number is used to validate these transactions.

In addition to the customer CVR, the data access CVR must also be provided. The data access CVR number is used to manage access to metered data for third parties. The data access CVR may be the same as the customer CVR if the customer manages data access directly.

CVR information is communicated in the same way as other customer information.

Given that CVR numbers were not required initially in DataHub, a number of customers will have a blank CVR number in DataHub. Note that replacement of a CVR number with CPR number is handled as a move.

Contact addresses

Zero, one or more contact addresses may be specified. These are stated with a type:

- 'self-reading card'
- 'disconnect card'
- 'voting card'
- 'address 4'

An address code may be specified in addition to an address text. If the player uses a code, the coded address must be stated as this makes it possible to automatically handle the address listed in the balance supplier's system.

If one or more of the addresses are the same as the metering point address, this can be indicated in the message.

For a more detailed description of the address structure, see the Chapter 5.

4.15.8 Time limits for submission of master data

Sender	Recipient	Time limit
Balance suppliers	DataHub	Messages to update master data under this business process must have a validity date equal to the submission date or the previous working day
DataHub	Grid company	DataHub must forward data within one hour of receiving changes

4.15.9 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.15.9.1 Update customer master data (RSM-027/E34)

RSM message	Update customer master data request

Name	Value	Comment
Business reason	E34	Update customer master data
Metering point ID		
Validity date		Date master data enters into force. The start of supply date is specified for the future balance supplier
Electrical heating		Yes/No
Electrical heating tax date		Date for start/end of electrical heating. The date must be within the balance supplier's supply period
Consumer category		
Customer name and if any, second customer name		
CPR		Up to 2 CPR numbers
Customer CVR		
Data access CVR		
Address(es)		Reading card/voting card/disconnect card/ "address 4". See chapter 5: Master data
Other master data is submitted by the balance supplier in line with Chapter 5: Master data		

4.15.9.2 Update customer master data approval (RSM-027/E34)

RSM message	Update customer master data approval	
Name	Value	Comment
Business reason	E34	Update customer master data
Metering point ID		
Reference		Reference to <i>Update customer master data request</i>

4.15.9.3 Update customer master data rejection (RSM-027/E34)

RSM message	Update customer master data rejection	
Name	Value	Comment
Business reason	E34	Update customer master data
Metering point ID		
Reference		Reference to <i>Update customer master data request</i>
Rejection reason		

4.15.9.4 Update customer master data information (RSM-028/E34)

RSM message	Update customer master data request	
Name	Value	Comment
Business reason	E34	Update customer master data
Metering point ID		
Validity date		Date master data enters into force
Electrical heating		Yes/No
Electrical heating tax date		Date for start/end of electrical heating. The date must be within the balance supplier's supply period
Consumer category		
Customer name and if any, second customer name		
CPR		Not sent from DataHub

RSM message	Update customer master data request	
Customer CVR		
Data access CVR		Not sent from DataHub
Address(es)		Reading card/voting card/disconnect card/ "address 4". See chapter 5: Master data
Other master data is submitted by the balance supplier in line with Chapter 5: Master data		

4.15.10 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-015
BRS name	<i>Submission of customer master data by balance supplier</i>
EDI transactions:	
RSM ID	RSM-027
RSM name	Update customer master data
RSM ID	RSM-028
RSM name	Submit customer master data

4.16 BRS-016: Submission of Estimated annual consumption - EAC by balance supplier

4.16.1 Overview

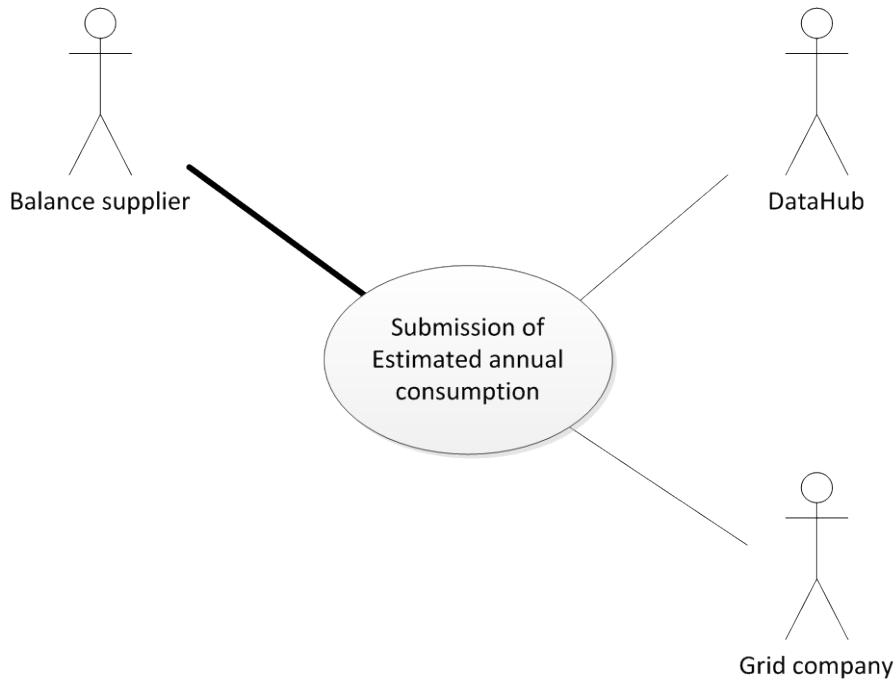


Figure 406 – Use case diagram for Submission of EAC by balance supplier

If a balance supplier wants a change to annual consumption for the metering point, this process is used. Given that the grid company determines whether or not the submitted annual consumption is to be used, proposals for annual consumption are not recorded in DataHub.

4.16.2 Overview of exchanges

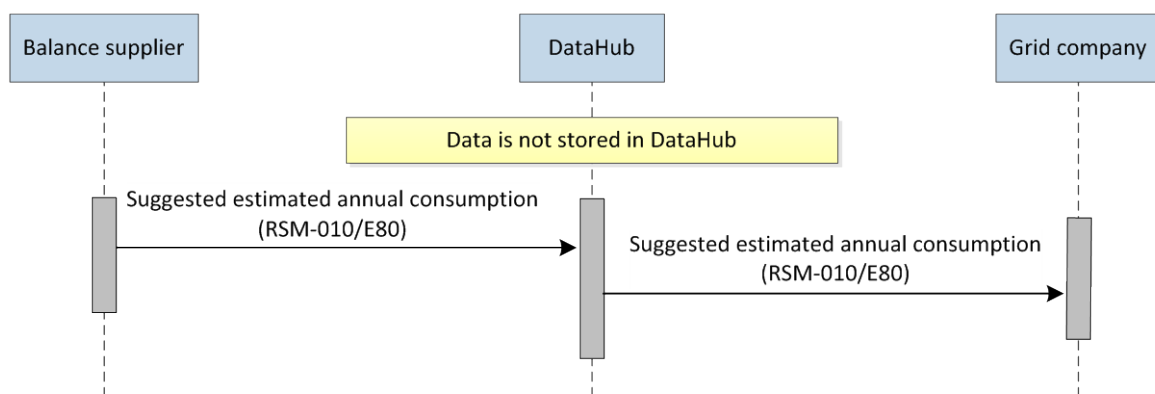


Figure 41 – Sequence diagram for Submission of EAC by balance supplier

4.16.3 Initial state

An existing or future balance supplier has received an estimated annual consumption.

4.16.4 Process for submission of EAC by balance supplier

Only the balance supplier that currently supplies electricity to the metering point may send this EDI message. This means a future electricity supplier cannot submit an estimated annual volume before the date of start of supply, and any proposed estimated annual volume is valid from the date of submission.

The balance supplier sends an EDI message with business reason *Estimated annual consumption* containing a suggested estimated annual consumption to DataHub.

DataHub receives the message and it is validated in DataHub in accordance with the validation rules below.

The estimated annual consumption submitted by the balance supplier is not saved in DataHub.

4.16.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The balance supplier is the supplier for the metering point on the submission date	E16 Balance supplier is not correct
The metering point is not registered as closed down	D16 Physical status is incorrect
The estimated annual consumption has a valid format	E86 Incorrect value
Estimated annual consumption is positive or 0	E98 Reading has incorrect sign

4.16.6 The grid company receives information on estimated annual consumption

DataHub sends the message to the grid company.

The grid company decides whether it wants to use the submitted expected annual consumption.

If the grid company wants to use the estimated annual consumption, it is submitted to DataHub using business process *BRS-017: Submission of EAC by grid company*.

Detailed functionality provided by the market function for a specific system action.

4.16.7 Time limits for submission of EAC

Sender	Recipient	Time limit
Balance supplier	DataHub	Estimated annual consumption may be submitted by the balance supplier at any point in time.
DataHub	Grid company	DataHub must forward data regarding estimated annual consumption within one hour after receipt of the data

4.16.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These ‘key data’ refers to the data of significance to process handling in relation to DataHub.

4.16.8.1 Suggested estimated annual consumption (RSM-010/E80)

RSM message		Notification of consumption information
Name	Value	Comment
Business reason	E80	Estimated annual consumption
Metering point ID		
Validity date		For future balance suppliers, this date will be on or after the effective date for the given change of supplier
Quantity		Estimated annual consumption

4.16.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-016
BRS name	Submission of EAC by balance supplier
EDI transactions:	
RSM ID	RSM-010
RSM name	Forward various consumption statements

4.17 BRS-017: Submission of EAC by grid company

4.17.1 Overview

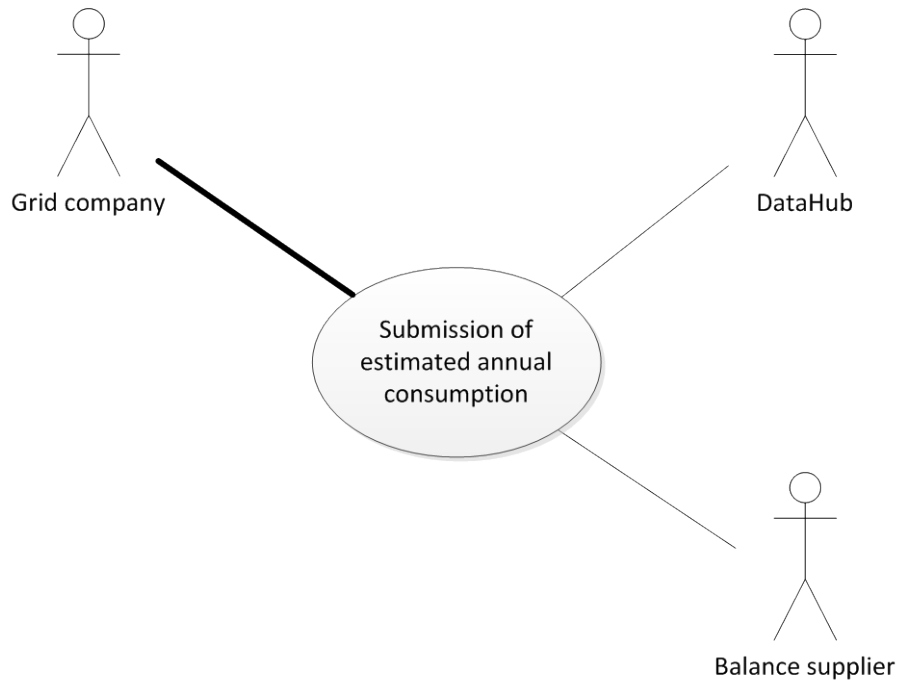


Figure 48 – Use case diagram for Submission of EAC by grid company

A grid company may submit estimated annual consumption to DataHub in connection with a periodic reading, or if an estimated annual consumption is received from a balance supplier, etc.

4.17.2 Overview of exchanges

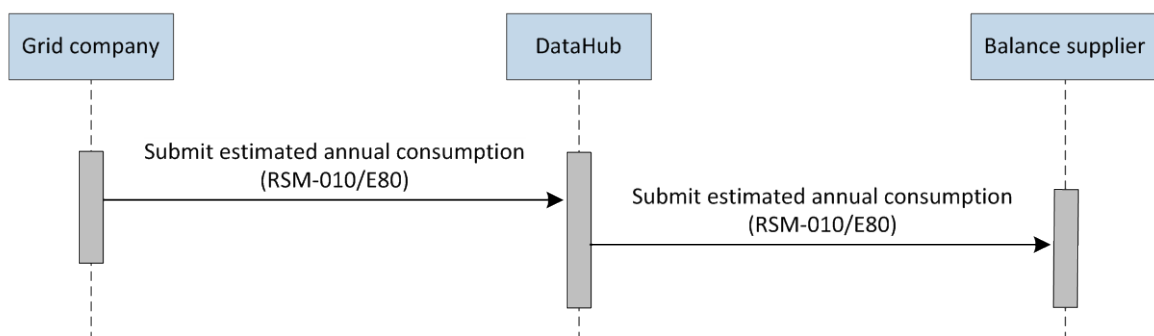


Figure 42 – Sequence diagram for Submission of EAC by grid company

4.17.3 Initial state

A grid company detects a change in consumption and wishes to change the estimated annual consumption.

4.17.4 Process for submission of EAC by grid company

The grid company sends an EDI message to DataHub with business reason *Estimated annual consumption* containing the new estimated annual consumption.

It is not possible to correct estimated annual consumption retroactively.

Detailed functionality provided by the market function for a specific system action.

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

4.17.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The metering point is not registered as closed down	D16 Physical status is incorrect
Estimated annual consumption is positive or 0	E98 Reading has incorrect sign
The grid company is a legitimate player	E01 Grid company is not correct
The message has been received before the official deadline	E17 Date is not within set time limit
The metering point is not registered as an exchange metering point (E20), internal metering point (D99) or grid loss correction (D13)	D18 Metering point type is incorrect
The estimated annual consumption has a valid format	E86 Incorrect value

4.17.6 Process for submission of EAC from DataHub

DataHub sends the estimated annual consumption to the balance supplier and any future balance suppliers.

Detailed functionality provided by the market function for a specific system action.

4.17.7 Time limits for submission of EAC by grid company

Sender	Recipient	Time limit
Grid company	DataHub	Messages to update master data under this business process must have a validity date equal to the submission date or the previous working day
DataHub	Balance supplier	DataHub must forward estimated annual consumption within one hour after receipt of the data

4.17.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.17.8.1 Submit estimated annual consumption (RSM-010/E80)

RSM message		Notification of consumption information
Name	Value	Comment
Business reason	E80	Estimated annual consumption
Metering point ID		
Validity date		
Quantity		Estimated annual consumption

4.17.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-017
BRS name	Submission of EAC by grid company
EDI transactions:	
RSM ID	RSM-010
RSM name	Forward various consumption statements

4.18 BRS-018: Submission of meter reading by balance supplier

4.18.1 Overview

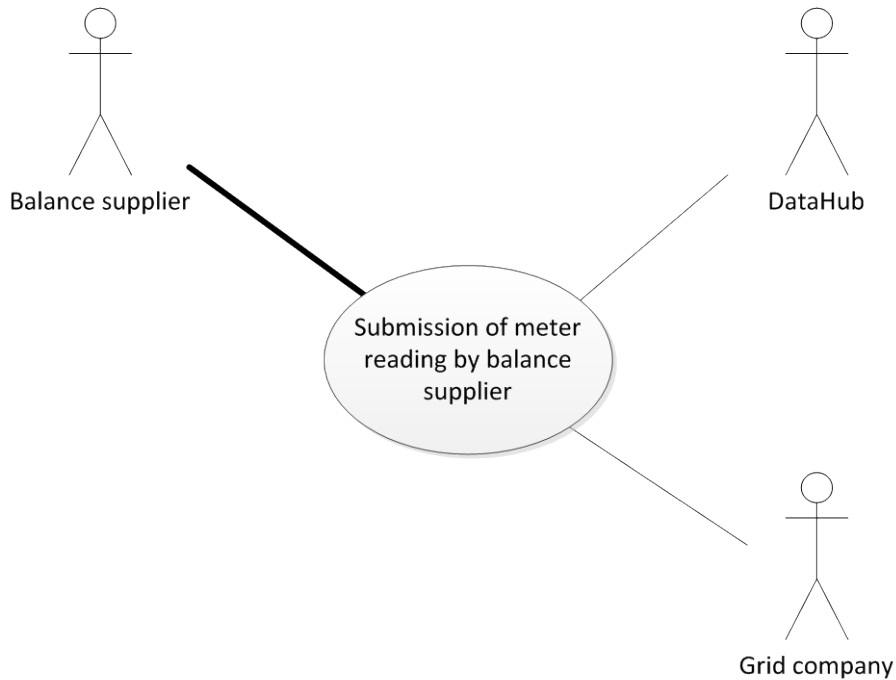


Figure 430 – Use case diagram for Submission of meter reading by balance supplier

If a balance supplier receives a meter reading from a customer, the balance supplier may choose to inform the grid company. This is done using this process. The grid company determines whether or not the submitted meter reading is to be used. The meter reading is therefore not recorded in DataHub.

Only the balance supplier that currently supplies the metering point may send this EDI message. This means that in connection with moves and changes of supplier it will normally be the 'future' balance supplier that submits the message, as the meter cannot be read before the effective date for the move/change of supplier.

4.18.2 Overview of exchanges

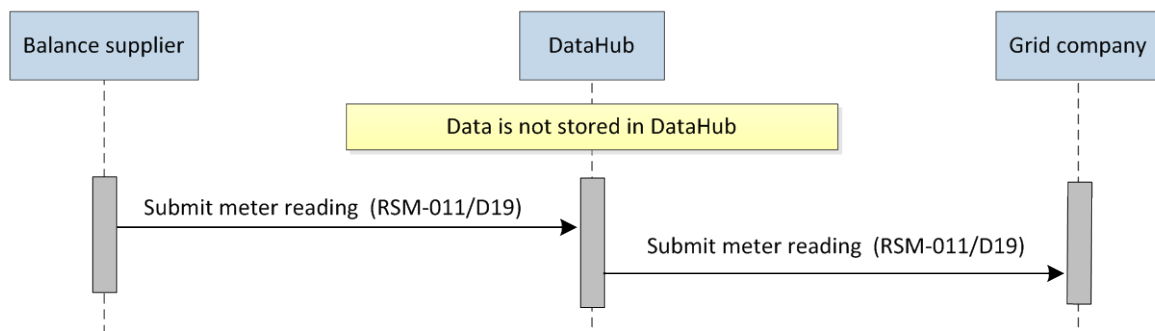


Figure 44 – Sequence diagram for Submission of meter reading by balance supplier

4.18.3 Initial state

A balance supplier receives a meter reading from the customer.

4.18.4 Process for submission of meter reading by the balance supplier

The balance supplier sends an EDI message with business reason *Meter reading* containing the customer's meter reading to DataHub.

DataHub receives the message and it is validated in DataHub in accordance with the validation rules below.

The submitted meter reading will not be saved in DataHub.

4.18.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The balance supplier is the supplier for the metering point on the submission date	E16 Balance supplier is not correct
The metering point physical status is <i>connected</i> or <i>disconnected</i>	D16 Physical status is incorrect
The metering point is a physical metering point	D37 Metering point sub type is not correct
The meter reading value has a valid format	E86 Incorrect value

4.18.6 Process for submission of meter reading by DataHub

The grid company receives an EDI message with a meter reading from DataHub.

Note that a balance supplier may submit meter readings for all types of metering points. The DataHub ignores any included meter ID, but, when forwarding to the grid company, will insert the meter ID, which is registered in the DataHub for the day on which the supplier wants a change of meter reading.

It is up to the grid company to decide whether to use them. If the meter reading is to be used, it is forwarded to DataHub in line with BRS-019: Submission of meter reading by grid company, or BRS-020: Consumption statement for profile-settled metering point.

Detailed functionality provided by the market function for a specific system action.

4.18.7 Time limits for submission of meter readings

Sender	Recipient	Time limit
Balance supplier	DataHub	Meter readings may be submitted by the balance supplier at any point in time
DataHub	Grid company	DataHub must forward a meter reading within one hour of receiving data

4.18.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.18.8.1 Submit customer's meter reading (RSM-011/D19)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D19	Meter reading
Metering point ID		
Reading date		
Meter reading		

4.18.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-018
BRS name	Submission of meter reading by balance supplier
EDI transactions:	
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading

4.19 BRS-019: Submission of meter reading by grid company

4.19.1 Overview

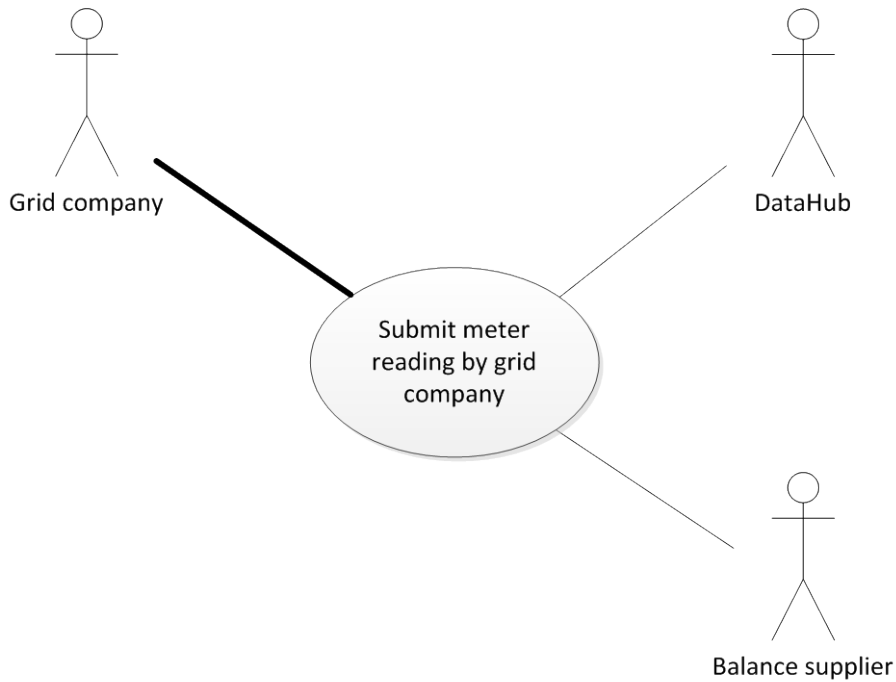


Figure 452 – Use case diagram for Submission of meter reading by grid company

This process is used by the grid company to submit meter readings for physical metering points.

Note that all meter readings related to setting up, changing or removing meters are submitted via BRS-014 *Meter management*.

For profile-settled metering points, the grid company sends meter readings for physical metering points together with a consumption statement via *BRS-020: Consumption statement for profile-settled metering point*.

When connecting a physical profile-settled metering point, this process is used for submitting the initial meter reading.

4.19.2 Overview of exchanges

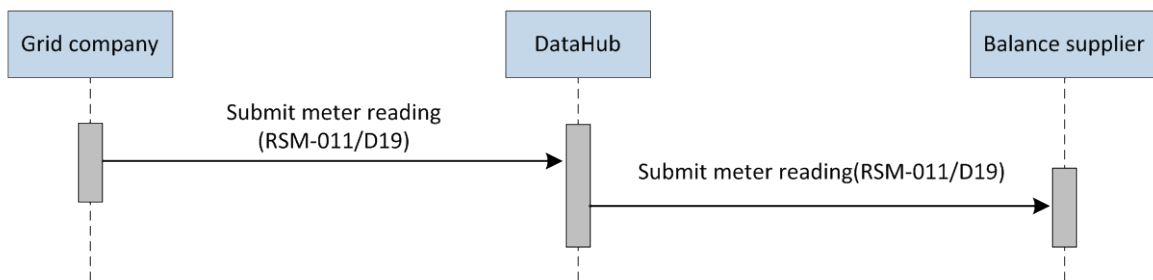


Figure 46 – Sequence diagram for Submission of meter reading by grid company

4.19.3 Initial state

A grid company wants to report a meter reading for a physical metering point that the grid company has obtained itself or has received from a balance supplier.

4.19.4 Process for submission of meter reading by grid company

The grid company sends an EDI message with business reason *Meter reading* containing the new meter reading to DataHub.

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

If a meter reading already exists on the reading date, the existing meter reading will be overwritten (viewed as a correction)

4.19.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The grid company is a legitimate player	E01 Grid company is not correct
The metering point physical status is <i>connected</i> or <i>disconnected</i>	D16 Physical status is incorrect
The metering point is a physical metering point	D37 Metering point sub type is not correct
The meter reading value has a valid format	E86 Incorrect value

4.19.6 The balance supplier receives information about the meter reading

DataHub sends an EDI message to the balance supplier with the meter reading.

The balance supplier may then use the meter reading as information for the customer. Detailed functionality provided by the market function for a specific system action.

4.19.7 Time limits for submission of meter reading by grid company

Sender	Recipient	Time limit
Grid company	DataHub	Meter readings may be submitted by the grid company at any point in time
DataHub	Balance supplier	DataHub must forward a meter reading within one hour of receiving data

4.19.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.19.8.1 Submit meter reading (RSM-011/D19)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D19	Meter reading
Metering point ID		
Reading date		
Meter reading		Must be submitted for a physical metering point

4.19.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-019
BRS name	Submission of meter reading by grid company
EDI transactions:	
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading

4.20 BRS-020: Consumption statement for profile-settled metering point

4.20.1 Overview

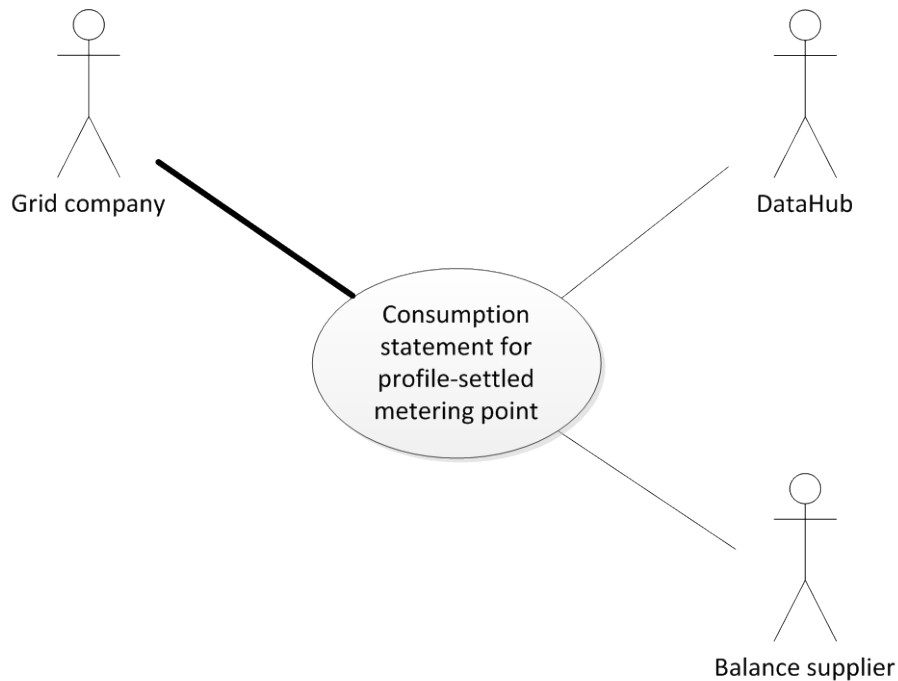


Figure 474 – Use case diagram for Consumption statement for profile-settled metering point

A consumption statement for a profile-settled metering point consists of the consumption for a given period and the meter reading on the last day of the period (reading date). If the metering point has no meter (virtual or calculated metering point), the meter reading will not be included in the consumption statement.

The grid company is responsible for submitting consumption statements for all profile-settled metering points at least once a year. This is done in accordance with this business process. In addition, the business process is involved in several of the other business processes, such as moves and changes of supplier.

This business process deals with the following types of consumption statements:

- Consumption statement – normal meter reading time
- Consumption statement – abnormal meter reading time

The balance supplier must be informed of the consumption and meter reading in order to invoice the customer.

4.20.2 Overview of exchanges

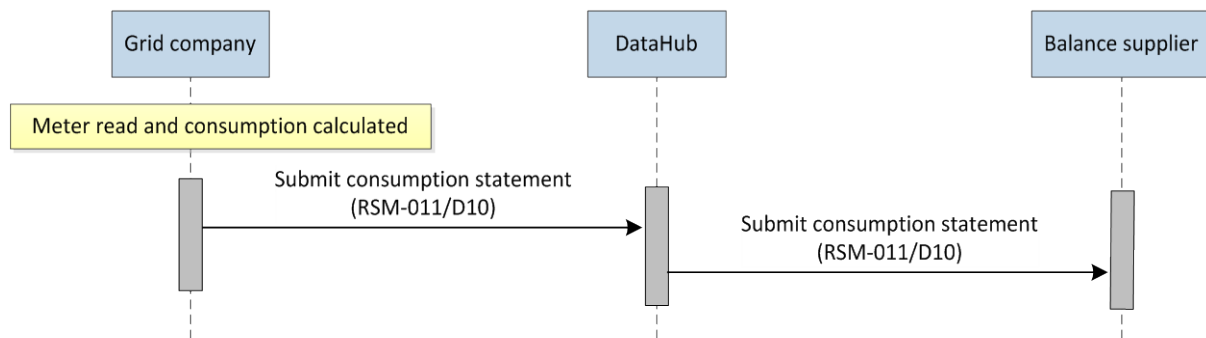


Figure 48 – Sequence diagram for Consumption statement for profile-settled metering point

4.20.3 Initial state

The grid company has registered the meter reading or received it from the balance supplier, has calculated the consumption for a profile-settled metering point and has quality-checked it in accordance with the company's procedures.

4.20.4 Process for consumption statement for profile-settled metering point

The grid company sends an EDI message to DataHub as an original message with business reason *profile-settled consumption*.

Consumption statements must be sent in an unbroken sequence, such that the previous end time is equal to the next start time.

There can be several meter reading requests on the same day from different processes. In these cases, the grid company must send only one consumption statement to DataHub.

The grid company must estimate the consumption and the meter reading if this is necessary to comply with the time limits.

DataHub checks the data in accordance with the rules in Regulation D1 sections 5.1, 8.1 and 10.3 and sends the consumption statement to the balance supplier without undue delay within one hour.

If rejected, DataHub must specify one of the validation rules listed below as reason.

If approved, DataHub is updated with the new information.

DataHub will regularly check for missing consumption statements and notify the grid company by sending a reminder.

4.20.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
The grid company is a legitimate player	E01 Grid company is not correct
Metering point identifiable	E10 Problem with metering point
The message has been received before the official deadline	E17 Date is not within set time limit
Settlement method is profile settlement and type of metering point is either <i>physical</i> or <i>virtual</i>	D15 Settlement method is incorrect
The metering point must have a connection status of <i>connected</i> or <i>disconnected</i> throughout the entire consumption period	D16 Physical status is incorrect
If the metering point sub type is physical, the meter reading and quantity have been specified	E86 Incorrect value
The metering point is registered as a consumption metering point	D18 Metering point type is incorrect
Function code is original or correction	D19 Function code is not valid
For metering points with net settlement group 6, the date for the consumption statement matches the nominal reading date.	D47 Processing not allowed for metering points belonging to net settlement group 6
For correction messages for a consumption interval, one or more original messages have been received for the interval.	D19 Function code is not valid
The quantity value has a valid format	E86 Incorrect value
All requests for consumption statements on previous dates have been received	E50 Invalid period
Quantity and meter reading are whole numbers	E51 Incorrect number of decimals
Quantity and meter reading contain positive values	E98 Reading has incorrect sign
No pending meter reading has been registered for the metering point with an earlier effective date	E17 Date is not within set time limit

4.20.6 Correction to consumption statement for profile-settled metering point

If a grid company discovers an error in a previously sent consumption statement for a metering point, a new correct consumption statement (correction message) must be sent using the code that indicates that the statement replaces the previously sent statement.

Corrections to *consumption or meter readings* for periods where the start and end dates for the period are not changed must be submitted by the grid company as a correction message. The balance supplier will then receive the corrected consumption statement from DataHub as a correction message.

Corrections to *meter reading times* are made by cancelling all consumption statements previously sent, up to and including the period in which the new consumption statement applies. The cancellation is done successively, starting with cancellation of the most recent reading period (see examples below).

Once cancellation is complete, the new correct consumption statements are sent in the correct order as usual. It is the grid company's responsibility to ensure consumption statements for required reading dates are provided.

The balance supplier will first receive the cancellations for the old consumption statements from DataHub, and then receive the new consumption statements as original messages. Note that the procedure used may result in an otherwise correct consumption statement first being cancelled and then resent without any real change in neither the period nor consumption.

4.20.7 Correction examples

A grid company has submitted the following consumption statements with associated meter readings to DataHub:

Calculation	Period	Consumption	Meter reading
1	01.02.2012 – 01.08.2012	625	123625
2	01.08.2012 – 01.02.2013	1275	124900
3	01.02.2013 – 31.05.2013	980	125880
4	31.05.2013 – 30.06.2013	105	125985
5	30.06.2013 – 31.07.2013	125	126110
6	31.07.2013 – 30.08.2013	120	126230

When correcting periods, consumption statements must be cancelled. This also applies if the end date for the latest consumption statement is changed.

Example 1, where period 5 (30.06.2013 – 31.07.2013) with 1 consumption statement is divided into 2 consumption statements.

- a) 30.06.2013 – 15.07.2013 consumption 50, meter reading 126035
- b) 15.07.2013 – 31.07.2013 consumption 75, meter reading 126110

while period 6 is not changed.

- c) 31.07.2013 – 30.08.2013 consumption 120, meter reading 126230

The grid company first cancels consumption statement 6 and then consumption statement 5.

The grid company then sends the new consumption statements in the order a), b) and c).

The relevant balance supplier(s) receive the two cancellations from DataHub.

The relevant balance suppliers receive the new consumption statements as originals.

Example 2, where the start date for period 6 (31.07.2013 – 30.08.2013) is changed to 1.09.2013.

- d) 31.07.2013 – 01.09.2013 consumption 140, meter reading 126250

The grid company cancels consumption statement 6

The grid company then sends the new consumption statement d)

The relevant balance supplier receives the cancellation from DataHub.

The relevant balance supplier receives the new consumption statement as an original.

4.20.8 Time limits for consumption statement for profile-settled metering point

Sender	Recipient	Time limit
Grid company	DataHub	The time limit for submitting a consumption statement is 35 calendar days from the current reading date.
Grid company	DataHub	Corrections can be sent to DataHub for periods starting up to three years back in time.
DataHub	Balance supplier	DataHub must forward a consumption statement within one hour after receipt of the data

4.20.9 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.20.9.1 Submit consumption statement (RSM-011/D10)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Function code		Original/Correction/Cancellation
Period		From last reading date to effective date. The meter reading time must always be set to the beginning of the day (local time), ie to 10:00 or 11:00 PM (UTC) the day before
Product		Active energy
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point

4.20.10 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-020
BRS name	Consumption statement for profile-settled metering point
EDI transactions:	
RSM ID	RSM-011

RSM name	Submit consumption for profile-settled metering point
	and meter reading

4.21 BRS-021: Submission of metered data for metering point

4.21.1 Overview

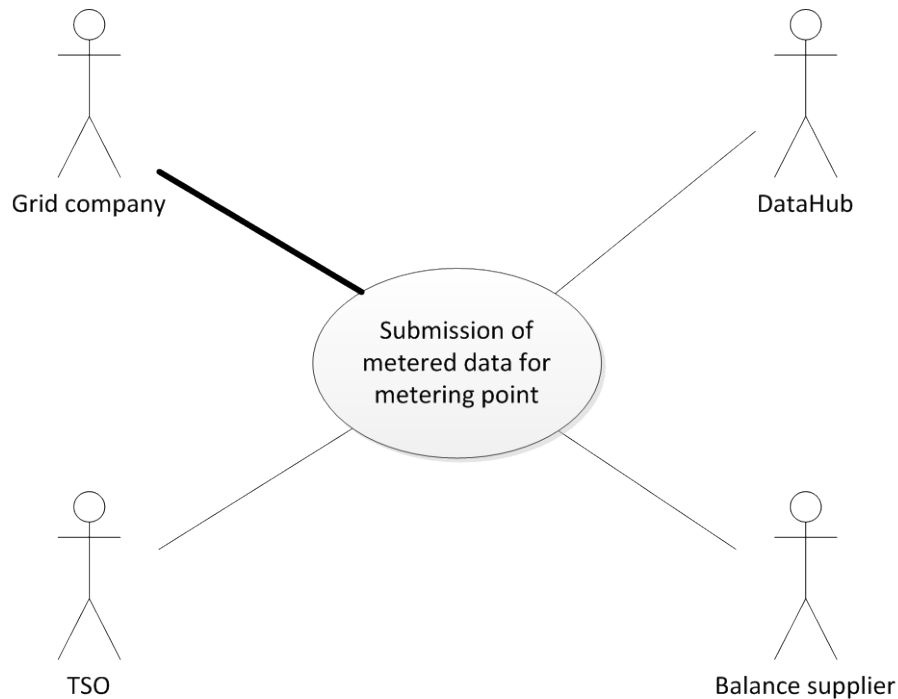


Figure 56 – Use case diagram for Submission of metered data for a metering point

This business process must be used for submission of basic metered time series, ie time series on a quarter-hourly or hourly basis (15/60 values) at metering point level, including:

- Consumption for hourly settled metering point
- Consumption for flex-settled metering point
- Production for a metering point
- Exchanges for a metering point
- Other metering points
- Consumption for hourly-read profile-settled metering points

A different procedure may apply to the submission of data for the latter two, see Regulation D1. Where hourly-read profile-settled metering points are concerned, gaps are allowed, for example, and the time limits for the sending of data may also vary.

The process applies to the sending of metered data to and from DataHub. It is primarily the grid company that is responsible for collecting metered data and sending them to DataHub.

4.21.2 Overview of exchanges

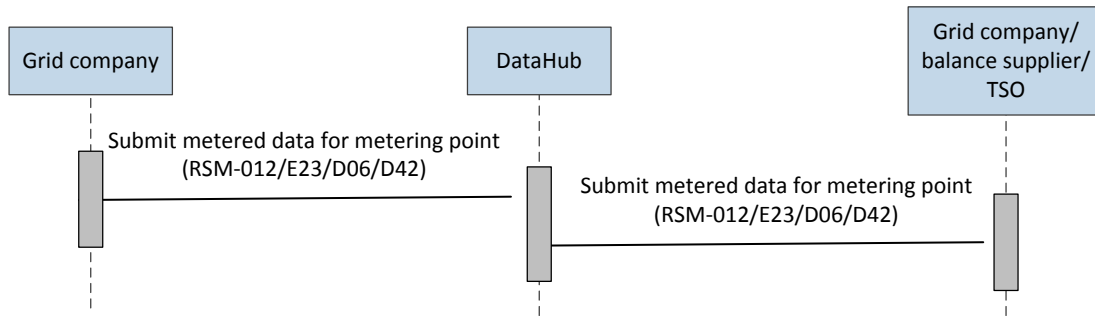


Figure 49 – Sequence diagram for submission of metered data for a metering point

4.21.3 Initial state

For consumption, production and exchange meter readings and other metering data, the grid company retrieves the readings each day, validates them and prepares them for submission.

This is done in line with the rules in Regulation D1.

Note that time series per metering point must only be stated with positive values. An exchange point in the grid must therefore, if necessary, be divided into two metering points, where 'from grid' and 'to grid' are swapped. 'To grid' and 'from grid' must be stated in the master data for the metering point.

4.21.4 Process for sending metered data for a metering point to DataHub

The grid company sends an EDI message with the prepared time series to DataHub.

The message must be specified as original, and may contain one or more time series for DataHub. The only limitation is the maximum physical size of the data sent, see Regulation F.

The grid companies submit the time series to DataHub immediately after obtaining them on all days of the week and without undue delay.

If the status code *missing quantity* is not used all values must be marked with an amount status code.

The following codes can be used:

- Estimated value
- Measured value

If a time series for hourly settled metering points has missing values, the grid company must send the time series again before the collection period expires with an estimated or measured value for all missing values.

For flex-settled metering points, the missing metered data must be replaced with estimated values during submission within five working days after the day of operation. The estimated values must be replaced with measured values no later than three months after the day of operation, if possible.

4.21.5 Recipients of individual metering points (time series)

Metering point type/settlement	Symbol	Receiving player
--------------------------------	--------	------------------

method		
Hourly settled consumption	FBh	Balance supplier (DDQ)
Hourly settled consumption	FBf	Balance supplier (DDQ)
Profile-settled consumption	FBp	Balance supplier (DDQ)
Production	P	Balance supplier, TSO (DDQ, EZ)
Exchange	Ex	Neighboring grid company (DDM)
Other metering points	T	TSO (EZ) Balance supplier (DDQ): <i>Other metering points linked to a parent metering point.</i>

4.21.6 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
The grid company is a legitimate player	E01 Grid company is not correct
Metering point identifiable	E10 Problem with metering point
The message has been received before the official deadline	E17 Date is not within set time limit
The metering point has a status of new or closed down for the submitted period	E50 Invalid period
Quantity contains correct number of decimals	E51 Incorrect number of decimals
Unit of energy corresponding to unit of energy at the metering point	E73 Measuring unit not correct
The quantity is valid (positive number)	E86 Incorrect value
The quantity or counter does not contain decimals	E87 Incorrect number of decimals
Quantity is within range (does not exceed limits)	E90 Metered data is outside limit
Quantity status is correct	D12 Invalid quantity status code
For consumption metering points, settlement method has been entered	D15 Settlement method is incorrect
Metering point resolution is hourly for consumption	D23 Time resolution is incorrect
Metering point resolution is quarter-hourly/hourly for production	D23 Time resolution is incorrect
Metering point resolution is quarter-hourly/hourly/monthly for analysis, other and direct production metering points.	D23 Time resolution is incorrect
The metering point connection status is connected or disconnected	D16 Physical status is incorrect

4.21.7 Metered data is regularly checked

The grid company reviews the time series sent. If DataHub has sent a reminder, or if the grid company has found errors or missing values, these must be replaced with measured values or final estimated values.

The grid company sends an EDI message with the time series that have been changed since data was last sent. The message must still be sent as original. Please note that these EDI messages may contain only the corrected time series.

After expiry of the control period, Energinet fixes the data basis for flex and hourly settled metering points for the day and uses these to calculate the fixed residual consumption and the associated distribution curve. The distribution curve is used by the balance suppliers to distribute consumption in connection with final settlement for electricity customers, and by DataHub in connection with reconciliation.

4.21.8 Submission of corrections until refixation takes place

If the grid company becomes aware of any error in the submitted data after the fixation, or can replace estimated values with measured ones, corrections must be made before the refixation, carried out on the fifth working day after the end of a month, and repeated the following two months. The final refixation therefore takes place on the third working day in the third month after the month of operation.

All values must be marked with an amount status code.

The following codes can be used:

- Estimated value
- Measured value
- Correction of value

The refixed metered data is used as the basis for balance settlement and settlement of wholesale services.

4.21.9 Submission of corrections to metered data to DataHub after final refixation

The final refixation takes place on the third working day in the third month after the month of operation.

If the grid company becomes aware of errors in the submitted data after the final refixation, such errors must still be corrected. The corrections will not be included in the balance settlement, but in subsequent correction settlements (see Regulation D1). DataHub is open to receive corrections from grid companies up until three years after the day of operation.

Any corrections must be sent in an EDI message containing only corrected time series. Corrections are sent in the form of a time series containing the new values, and not the difference from earlier values. There must be no 'gaps' in the time series. For unchanged values the earlier sent value must be forwarded.

All values must be marked with an amount status code.

The following codes can be used:

- Estimated value
- Measured value
- Correction of value

The message must be sent as an original message.

4.21.10 Process for sending metered data for a metering point from DataHub

DataHub checks the time series data received for obvious errors, see Regulation D1, and then records the data received.

DataHub sends the metered data received to the relevant recipients.

Values sent are marked with the quantity status code with which they were received, the first time data is resent, ie with one of the following statuses:

- Missing value
- Estimated value
- Measured value
- Corrected value

The message must be sent as an original message.

4.21.11 Time limits for basic metered data for a metering point

Sender	Recipient	Time limit for submission to DataHub
Grid company	DataHub	<p>General conditions The grid company submits metered data to DataHub all the days of the week, as it is obtained from the metering points.</p> <p>Metered data is sent to DataHub as soon as possible after the grid companies have obtained it (submitted without undue delay)</p> <p>Collection period – for hourly settled metering points, read hourly/quarter-hourly Not later than at 10:00 AM on the third working day after the day of operation (eg Thursday at 10:00 AM for the Monday day of operation).</p> <p>Control period – for hourly settled metering points, read hourly/quarter-hourly Not later than at 9:00 PM on the fifth working day after the day of operation.</p> <p>Collection and control period – for hourly read flex-settled metering points Not later than at 9:00 PM on the fifth working day after the day of operation.</p> <p>Completion period – for hourly read flex-settled metering points Estimated hourly values must be replaced by measured values, as far as possible, by 9:00 PM on the third working day of the third month after the month of operation.</p> <p>Time limit – for monthly/quarterly read production metering points Not later than at 10:00 AM on the third working day after the month of operation.</p> <p>Time limit – for other monthly read metering points – RE share of production Not later than at 9:00 PM on the fifth working day after the month of operation.</p>
DataHub	Recipient	<p>For hourly settled metering points, DataHub forwards the metered data received within one hour after receipt.</p> <p>For flex-settled metering points, DataHub forwards the received metered data to the recipients as soon as possible, and before 8:00 AM the following day for metered data received before 9:00 PM</p>

4.21.12 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.21.12.1 Submit metered data for metering point (RSM-012/E23/D06/D42)

RSM message		Metering point metered data notification
Name	Value	Comment
Business reason	E23	Periodic consumption statement
	D42	Periodic flex statement
	D06	Profile-settled hourly-metered metering point
Metering point ID		
Time period for quantity		
Product		Active energy
		Re-active energy
		Fuel
Type of metering point		Consumption
		Production
		Exchange
		RE production
		Net settlement
		Other
Settlement method		For consumption: Hourly/Flex/Profile
Resolution		Hour/Quarter-hour/Month
Quantity		Eg. kWh with up to 3 decimal places
Quantity status		Estimated
		Measured
		Missing
		Correction (only from DataHub)

4.21.13 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-021
BRS name	Submission of metered data for metering point
EDI transactions:	
RSM ID	RSM-012
RSM name	Submit metered data for metering point

4.22 BRS-022: Submission of load shares

4.22.1 Overview

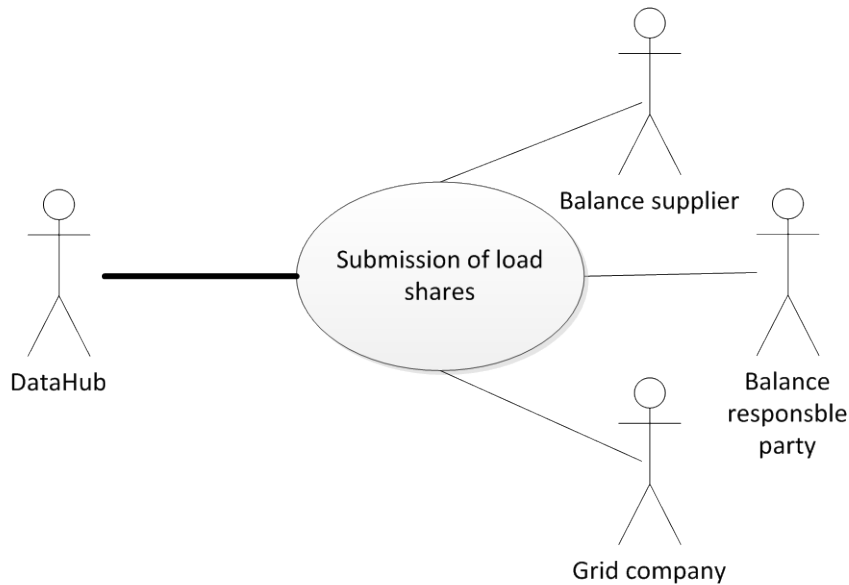


Figure 58 – Use case diagram for Submission of load shares

DataHub calculates load shares per grid area.

The calculation and sending of load shares is a monthly routine initiated by DataHub, such that time limits for the sending of load shares can be complied with.

The process consists of:

- 1) a manual process between the grid company and DataHub, and
- 2) an EDI process

The manual process and the calculation of load shares are described in Regulation H2. The following description starts when the manual process has been completed.

4.22.2 Overview of exchanges

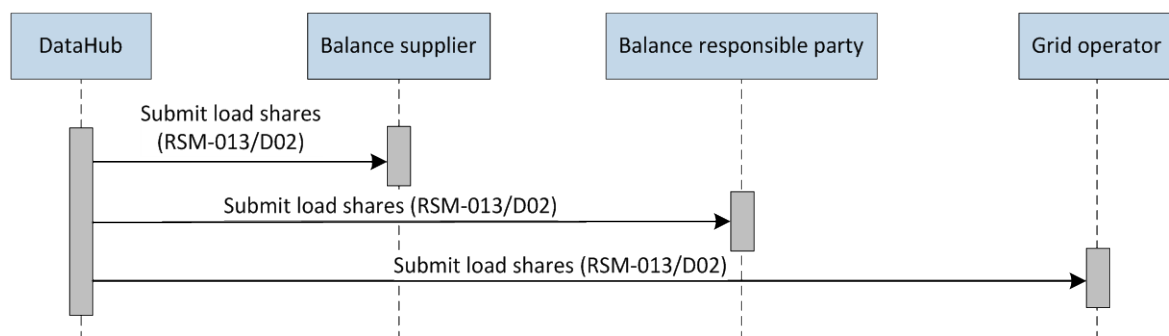


Figure 50 – Sequence diagram for Submission of load shares

4.22.3 Initial state for monthly submission

The manual part of the process has been carried out in DataHub, and the load shares per grid area must now be sent to balance suppliers, the BRP and grid companies via this process.

4.22.4 Process for the submission of load shares

4.22.4.1 Sending load shares to balance suppliers

DataHub sends a message to each balance supplier with the sum of the load shares per grid area, the balance supplier's load shares per tariff, and the balance supplier's total load shares per grid area.

4.22.4.2 Sending load shares to BRPs

DataHub sends a message comprising the sum of load shares per grid area, the BRP's load shares per grid area, and the load shares for the balance suppliers for which the BRP is responsible – specified per grid area.

If the proportional time series are new as the result of a player becoming active in a grid area, they are sent by DataHub without notifying the recipient in advance.

When a balance supplier or BRP is no longer active in a grid area, DataHub stops sending load shares to them.

4.22.4.3 Sending load shares to grid companies

DataHub sends a message with the sum of load shares per grid area, per own tariff and per tariff marked as a tax.

4.22.5 Correction of load shares

Balance suppliers, grid companies and BRPs compare the values with their own estimates. If (material) errors are found in the values received, Energinet must be informed of this as quickly as possible.

This is not done via EDI exchange but via a manual process.

If no errors are found in the load shares sent, the business process has been completed. If errors are found, proceed as described below.

DataHub calculates new corrected load shares from the information available.

The corrected load shares are resent to all affected recipients, in line with the sequence diagram above. After expiry of the time limit for resending, the load shares for the month concerned cannot be corrected. In the case of bankruptcy etc., however, future load shares may be redistributed between the players involved in the given bankruptcy.

DataHub sends load shares in an EDI message with status original when the figures are first forwarded, and if they are corrected at a later date.

4.22.6 Time limits for the submission of load shares

The following time limits also apply to the manual process.

Sender	Recipient	Time limit
DataHub	Balance supplier BRP Grid company	DataHub initiates the calculation of load shares 13 working days before the end of the month. DataHub recalculates the load shares eight working days before the end of the month, if required. DataHub sends load shares by EDI to all recipients seven working days before the end of the month.
Balance supplier BRP	DataHub	Recipients must report any errors to DataHub four working days before the end of the month.
DataHub	Balance supplier BRP Grid company	Any corrected load shares are sent by DataHub two working days before the end of the month.

4.22.7 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.22.7.1 Submit load shares (RSM-013/D02)

RSM message	Notification of load shares	
Name	Value	Comment
Business reason	D02	load shares
Time period for quantity		Start and end of month
Resolution	Month	
Type of metering point	Consumption	
Aggregation		Balance responsible party (BRP) Grid area (Danish Energy Association's identification number) Balance supplier Tariff ID/Player (GLN)
Quantity	kWh	Without decimals
Quantity status	Measured	

4.22.8 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-022
BRS name	Submission of load shares
EDI transactions:	
RSM ID	RSM-013

RSM name	Submit load shares
----------	--------------------

4.23 BRS-023: Submission of calculated energy time series

4.23.1 Overview

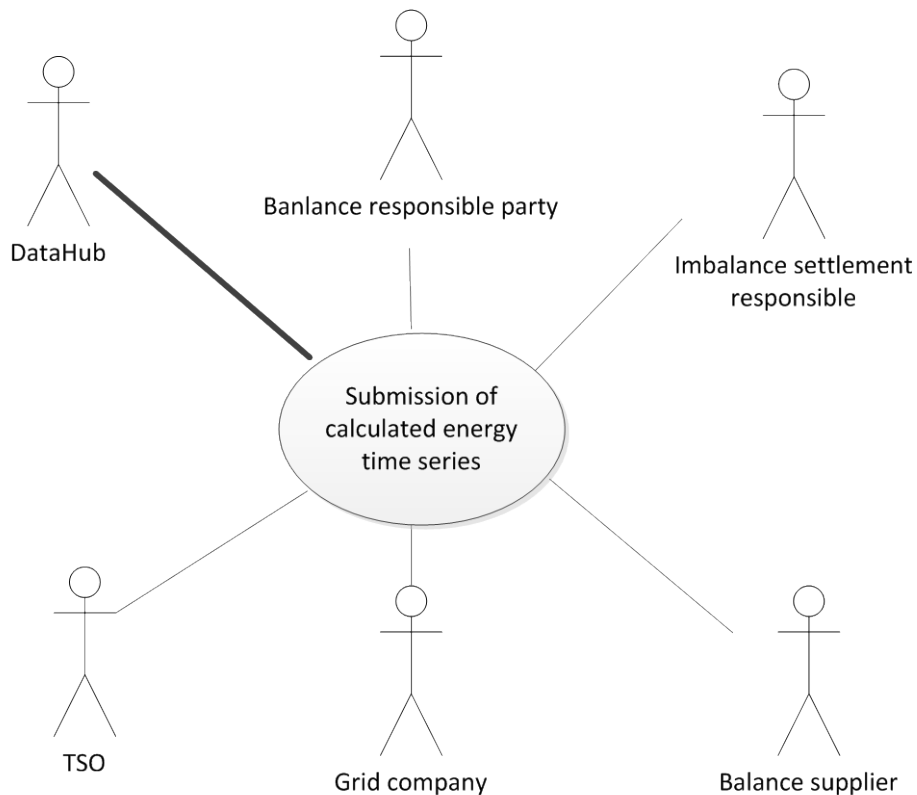


Figure 510 – Use case diagram for Submission of calculated energy time series

This business process is used for sending calculated energy time series data from DataHub to legitimate recipients, such as:

- Grid company
- Balance supplier
- Balance responsible party (BRP)
- Imbalance settlement responsible
- Transmission system operator

The process is used to:

- send time series 1-4 working day(s) after the day of operation
- send time series in connection with fixation
- send time series after fixation
- send time series in connection with refixation
- send time series in connection with correction settlement

See Regulation D1 for a detailed description of the sums to be exchanged and the outlines below.

4.23.2 Overview of exchanges

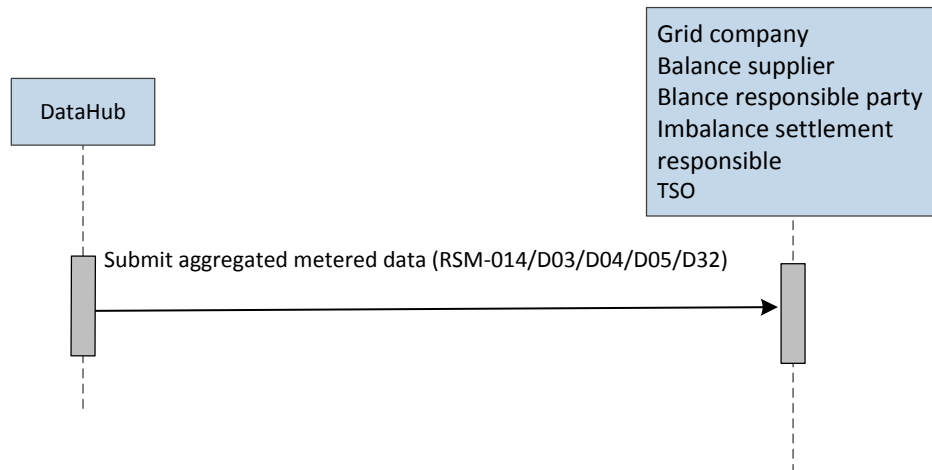


Figure 52 – Sequence diagram for Submission of calculated energy time series

4.23.3 Initial state

DataHub has calculated the various sums and the residual consumption based on the basic metered data sent, in line with Regulation D1.

DataHub indicates a status code for these sums and other calculated values.

The following codes can be used:

- Missing value
- Estimated value
- Measured value

A calculated value which contains just one estimated value in the underlying data per metering point is specified as 'estimated'. The same applies to missing values in the underlying data basis.

4.23.4 Sums sent from DataHub and their recipients

Type of metering point	Symbol
Hourly settled consumption	FBh
Flex-settled consumption	FBf
Profile-settled consumption	FBp
Production	P
Grid loss correction	NT
Exchange	Ex
Other metering points	T

Recipients of aggregations (sums per grid area):

Aggregation		Message	Receiving player	Reason
Exchanges	+ \sum Ex(ToGrid) - \sum Ex(FromGrid)	MPType = Exchange (E20) Aggregation - Grid area	Grid company, TSO (MDR, EZ)	D03 D04 D05 D32

Total production	$\sum P$	MPType = Production (E18) Aggregation - Grid area	Grid company, TSO (MDR, EZ)	D03 D04 D05 D32
Total consumption	$NFB = \sum Ex + \sum P$	MPType = Consumption (E17) Aggregation - Grid area	Grid company, TSO (MDR, EZ)	D03 D04 D05 D32
Total hourly settled consumption	$\sum FBh$	MPType = Consumption (E17) Settlement method = hourly settled (E02) Aggregation - Grid area	Grid company (MDR)	D03 D04 D05 D32
Total flex-settled consumption	$\sum FBf$	MPType = Consumption (E17) Settlement method = flex-settled (D01) Aggregation - Grid area	Grid company (MDR)	D03 D04 D05 D32
Residual consumption	$RESNFB = NFB - \sum FBh - \sum FBf$	MPType = Consumption (E17) Settlement method = profile-settled (E01) Aggregation - Grid area	BRP, Balance supplier, Grid company, TSO (DDK, DDQ, MDR, EZ)	D03 D04 D05
Distribution curve	Distribution curve = $RESNFB / (\text{month's load shares sum})$	MPType = Consumption (E17) Settlement method = profile-settled (E01) Product = Tariff Unit = Danish tariff code (Z14) Aggregation - Grid area	Balance supplier, Grid company (DDQ, MDR)	D04
Hourly settled consumption per balance supplier	$\sum FBh$ per DDQ	MPType = Consumption (E17) Settlement method = hourly settled (E02) Aggregation - Grid area - Balance supplier	BRP, Balance supplier (DDK, DDQ) - DDQ receives all - DDK receives D03, D04, D05	D03 D04 D05 D32
Flex-settled consumption per balance supplier	$\sum FBf$ per DDQ	MPType = Consumption (E17) Settlement method = flex-settled (D01) Aggregation	BRP, Balance supplier (DDK, DDQ) - DDQ receives all - DDK receives D03, D04, D05	D03 D04 D05 D32

		<ul style="list-style-type: none"> - Grid area - Balance supplier 		
Hourly settled consumption per BRP	$\sum FBh$ per DDK	MPType = Consumption (E17) Settlement method = hourly settled (E02) Aggregation <ul style="list-style-type: none"> - Grid area - BRP 	BRP, Imbalance settlement responsible (DDK, DDX)	D03 D04 D05
Flex-settled consumption per BRP	$\sum FBf$ per DDK	MPType = Consumption (E17) Settlement method = flex-settled (D01) Aggregation <ul style="list-style-type: none"> - Grid area - BRP 	BRP, Imbalance settlement responsible (DDK, DDX)	D03 D04 D05
Distributed consumption per balance supplier (incl. grid loss)	RESNFB distributed per load Share \sim ($\sum FBp$ per DDQ)	MPType = Consumption (E17) Settlement method = profile-settled (E01) Aggregation: <ul style="list-style-type: none"> - Grid area - Balance supplier 	BRP, Balance supplier (DDK, DDQ)	D04 D05
Distributed consumption per BRP (incl. grid loss)	RESNFB distributed per load Share \sim ($\sum FBp$ per DDK)	MPType = Consumption (E17) Settlement method = profile-settled (E01) Aggregation <ul style="list-style-type: none"> - Grid area - BRP 	BRP, Imbalance settlement responsible (DDK, DDX)	D04 D05
Production per balance supplier per BRP	$\sum P$ per DDQ per DDK	MPType = Production (E18) Aggregation <ul style="list-style-type: none"> - Grid area - Balance supplier - BRP 	BRP, Balance supplier (DDK, DDQ) <ul style="list-style-type: none"> - DDQ receives all - DDK receives D03, D04, D05 	D03 D04 D05 D32
Production per BRP	$\sum P$ per DDK	MPType = Production (E18) Aggregation <ul style="list-style-type: none"> - Grid area - BRP 	BRP, Imbalance settlement responsible (DDK, DDX)	D03 D04 D05
Periodised consumption per balance supplier (excl. grid loss)	$\sum FBp$ per DDQ	MPType = Consumption (E17) Settlement method = profile-settled (E01) Aggregation: <ul style="list-style-type: none"> - Grid area 	Balance supplier (DDQ)	D32

		- Balance supplier		
Periodised consumption per grid area (excl. grid loss)	$\sum FBp$	MPType = Consumption (E17) Settlement method = profile-settled (E01) Aggregation: - Grid area	Grid company (MDR)	D32
Periodised grid loss	Grid loss, as calculated by balance settlement	MPType = grid loss correction (D13) Settlement method = profile-settled (E01) Aggregation - Grid area	Balance supplier, Grid company (DDQ, MDR)	D32
Hourly grid loss (covers both hourly and flex-settled metering points)	$NT = \sum \text{correction}$ (FPh, FPf, P, Ex)	MPType = grid loss correction (D13) Settlement method = Hour (E02) Aggregation - Grid area	Balance supplier, Grid company, TSO (DDQ, MDR, EZ)	D32

4.23.5 Process for the submission of calculated time series to legitimate recipients until fixation

DataHub sends the various sum series from the 2nd to the 5th working day after the day of operation to the legitimate recipients.

These time series can have 'missing value' status for periods, but at the time of fixation, all values must be present either as measured or estimated values.

The messages must be specified as original and may contain one or more time series for the recipients.

4.23.6 Process for the submission of calculated time series to legitimate recipients in connection with fixation

DataHub sends the fixed sums to the respective balance suppliers, BRPs, grid companies and TSO.

These time series will not normally have 'missing value' status.

The messages must be specified as original and may contain one or more time series for the recipients.

In connection with fixation, a time series (if any) will be distributed in respect of a specific production metering point (system correction metering point) in accordance with the guidelines for BRS-021: Submission of metered data in respect of a metering point.

This system correction metering point is used if there are negative residuals in the calculations. In these cases, an equivalent production is added to the grid area via the system correction metering point. Market players should not, therefore, experience negative residuals.

One consequence of this is that non-metered production exceeding the actual transmission loss in a period is attributed to the system correction metering point, and cannot be “saved” for later reduction in transmission losses in other periods.

Some grid operators will therefore experience a pitch in their transmission loss.

4.23.7 Process for the submission of calculated time series to legitimate recipients after fixation

Between fixation and refixation, DataHub does not automatically send calculated values to market players. However, they can request this data using *BRS-026 – Request for calculated energy time series*.

4.23.8 Process for the submission of calculated time series to legitimate recipients in connection with refixation

DataHub sends the refixed sums to the respective balance suppliers, BRPs, grid companies and TSO.

These time series will not normally have 'missing value' status.

The messages must be specified as original and may contain one or more time series for the recipients.

4.23.9 Process for the submission of calculated time series to legitimate recipients in connection with correction settlement

In connection with correction settlement, ie settlement of wholesale services after refixation, DataHub sends the corrected energy sums to the respective balance suppliers.

These time series will not normally have 'missing value' status.

The messages must be specified as original and may contain one or more time series for the recipients.

4.23.10 Sending time series to legitimate recipients already settled

If a legitimate recipient has previously received an aggregate time series, where there has been a change during the subsequent period which means that the time series will not be sent out after the next aggregation, the DataHub will send a time series for the missing aggregation in respect of that period. The time series will only contain a missing value for all hours.

The time series will be forwarded for all future calculations in respect of the period in which the series was missing until the series once again contains values. (See example in table in section 4.27.6)

4.23.11 Time limits for sending calculated time series

Sender	Recipient	Time limit
DataHub	Grid company Balance supplier Balance responsible party (BRP) Transmission system operator Imbalance settlement responsible	Every day from the 2nd to and including the 5th working day after the day of operation, latest 8:00 AM, DataHub sends the daily calculated sums to legitimate recipients. The data basis is time series received by 9:00 PM the day before publication.

DataHub	Grid company Balance supplier Balance responsible party (BRP) Transmission system operator Imbalance settlement responsible	DataHub sends fixed aggregated time series by 8:00 AM on the sixth working day after the day of operation to all legitimate recipients. If the day of operation is a Monday, aggregated time series must thus normally be sent by 8:00 AM on Tuesday the following week.
DataHub	Grid company Balance supplier Balance responsible party (BRP) Transmission system operator Imbalance settlement responsible	DataHub sends refixed aggregated time series per day for the latest month of operation to all legitimate recipients by 8:00 AM on the sixth working day after the end of the month of operation.
DataHub	Balance suppliers Grid company TSO	DataHub sends refixed aggregated time series per day for the previous month of operation to all legitimate recipients in connection with refixation by 8:00 AM on the 5th working day in the 2nd month after the month of operation.
DataHub	Balance suppliers Grid company TSO	DataHub sends refixed aggregated time series per day for the third last month of operation to all legitimate recipients in connection with refixation by 8:00 AM on the 4th working day in the 3rd month after the month of operation.
DataHub	Balance supplier Grid company	DataHub sends corrected aggregated time series, as a minimum, at reconciliation and three years after the end of the month of operation.

4.23.12 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.23.12.1 Submit aggregated metered data (RSM-014 D03/D04/D05/D32)

RSM message		Notification of aggregated time series
Name	Value	Comment
Business reason	D03	Preliminary (until the fifth day)
	D04	Fixation
	D05	Refixation
	D32	Correction settlement
Version		Eg 18. Version not sent with business reason D03
Metering point ID		
Negative distribution		Consumption/Production/Exchange/Other

RSM message	Notification of aggregated time series	
Settlement method		Hourly/Flex/Profile (only used for consumption metering points and grid loss correction)
Product		Energy Tariff
Resolution		Hour, see Regulation D1
Time period for values		
Quantity	kWh Z14	Up to 3 decimal places. Exchange and residual consumption up to and including fixation may contain negative values. If there are negative values after first fixation, a refixation will happen. The grid loss correction (TypeOfMP=D13) can also contain negative values. Other aggregations are always positive Up to 6 decimal places
Quantity status		Estimated Measured Missing
Aggregation		Balance supplier Balance responsible party (BRP) Grid area

4.23.13 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-023
BRS name	Submission of calculated energy time series
EDI transactions:	
RSM ID	RSM-014
RSM name	Submit calculated time series
Message name	Notification of aggregated time series

4.24 BRS-024: Request for historical data

4.24.1 Overview



Figure 532 – Use case diagram for Historic data request

Historic data is used for preparing quotations for customers.

A potential balance supplier can only obtain historical metered data for the last year of consumption (1 value) in DataHub.

If a balance supplier wishes to obtain further metered data information, this must take place through customer acceptance on the customer portal.

The business process can be used until the start of supply. Business process BRS-025: *Request for metered data for a metering point* can then be used.

4.24.2 Overview of exchanges

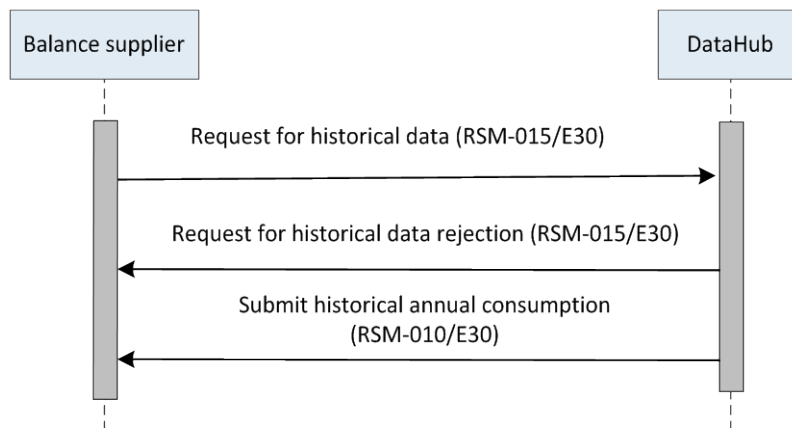


Figure 54 – Sequence diagram for Historic data request

4.24.3 Initial state

The balance supplier needs historic annual consumption in order to give a quotation to the customer.

4.24.4 Process for retrieving historic data

The balance supplier sends a historic data request to DataHub, stating the metering point ID.

DataHub records (logs) the request in order to permit a later check that the request was authorized.

In reply to the balance supplier's request, DataHub sends an EDI message with consumption for the last year, or a rejection.

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If the request is approved, an EDI message with consumption for the last year for the metering point will be sent.

For profile-settled metering points, the sum of consumption covering at least one year is sent (the period may be longer if the reading is made at other times). For hour and flex-settled metering points, the sum of hourly values for a year (365 days) is sent.

Even if there has been change of settlement method in the period for which consumption is to be sent, only the total consumption will be sent.

4.24.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The balance supplier is not the current balance supplier for the metering point	E16 Balance supplier is not correct
Data is available in the period	E0H No data available
The request has been received after the effective date	E17 Date is not within set time limit

4.24.6 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.24.6.1 Request for historical data (RSM-015/E30)

RSM message		Metering point metered data request
Name	Value	Comment
Business reason	E30	Historical data
Metering point ID		

4.24.6.2 Request for historical data rejection (RSM-015/E30)

RSM message		Metering point metered data request rejection
Name	Value	Comment
Business reason	E30	Historical data
Metering point ID		

RSM message	Metering point metered data request rejection	
Reference		Reference to <i>Metering point metered data request</i>
Rejection reason		

4.24.6.3 Submit historical annual consumption (RSM-010/E30)

RSM message	Notification of consumption information	
Name	Value	Comment
Business reason	E30	Historical data
Metering point ID		
Period		One year – but depending on the readings the period may be longer
Quantity		kWh with no decimals – calculated sum
Reference		Reference to <i>Metering point metered data request</i>

4.24.7 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-024
BRS name	Request for historical data
EDI transactions:	
RSM ID	RSM-015
RSM name	Metering point metered data request
Message name	Metering point metered data request
RSM ID	RSM-010
RSM name	Forward various consumption statements
Message name	Notification of consumption information

4.25 BRS-025: Request for metered data for a metering point

4.25.1 Overview

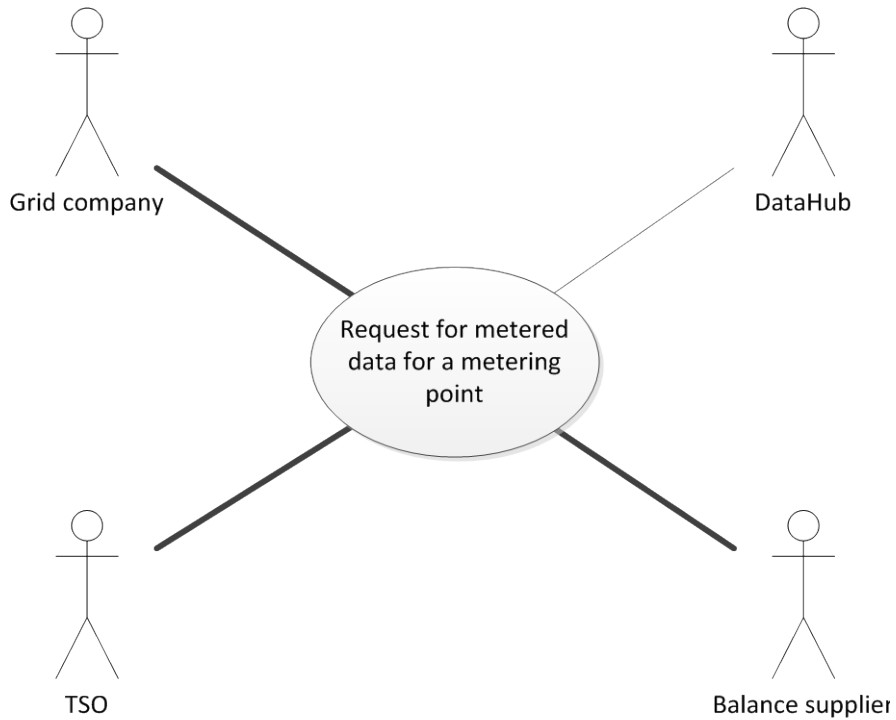


Figure 554 – Use case diagram for Metered data request

If the player requires metered data for one or more metering points, they can use this process to obtain this data.

This process may be used by all legitimate recipients to retrieve data for a metering point. The process cannot be used in the quotation phase, where business process *BRS-024: Request for historical data* is used instead.

4.25.2 Overview of exchanges

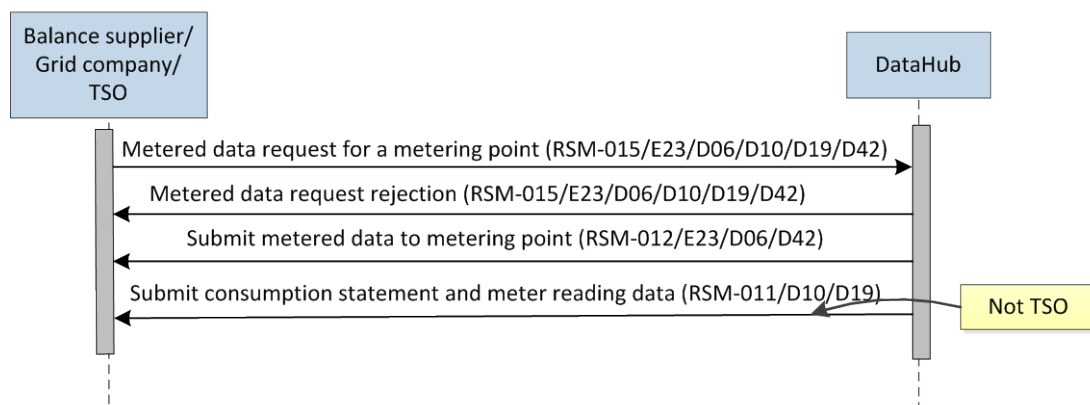


Figure 56 – Sequence diagram for Metered data request

4.25.3 Initial state

A player needs metered data for one or more purposes.

4.25.4 Process for metered data request

The player sends an EDI message requesting metered data for a metering point to DataHub.

A search can be implemented for a specific date or a period. The period may only cover times when the balance supplier has been the supplier for the metering point. Note that if a search relates to a profile-settled metering point, all consumption statements within the period will be sent (this means that the start date for the first consumption statement may be before the start of the period). Please note that this also applies to search for counter values.

A balance supplier who has previously been the supplier for a metering point may also use this process to retrieve data for the period during which the balance supplier was linked to the metering point.

In reply to the player's request, DataHub sends an EDI message with the relevant metered data, or a rejection.

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If the request is approved, an EDI message with the relevant metered data for the metering point for the given period will be sent.

4.25.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The balance supplier is a legitimate player	E16 Balance supplier is not correct
The grid company is a legitimate player	E01 Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
Data is available in the period	E0H No data available
The supplier has been or is the supplier for the metering point during the requested period	E50 Invalid period

4.25.6 Time limits for metered data request

Sender	Recipient	Time limit
DataHub	Market player	Within one hour after receipt of the request, DataHub either sends the relevant data or rejects the request.

4.25.7 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These ‘key data’ refers to the data of significance to process handling in relation to DataHub.

4.25.7.1 Metered data request for a metering point (RSM-015/E23/D10/D19/D06/D42)

RSM message		Metering point metered data request
Name	Value	Comment
Business reason	E23	Periodic consumption statements
	D06	Profile-settled hourly-metered metering point
	D42	Periodic flex statement
	D10	Profile-settled consumption
	D19	Meter reading
Metering point ID		
Period		

4.25.7.2 Metered data request rejection (RSM-015/E23/D10/D06/D42)

RSM message		Metering point metered data request rejection
Name	Value	Comment
Business reason	E23	Periodic consumption statements
	D06	Profile-settled hourly-metered metering point
	D42	Periodic flex statement
	D10	Profile-settled consumption
	D19	Meter reading
Metering point ID		
Reference		Reference to <i>Metering point metered data request</i>
Rejection reason		

4.25.7.3 Submit consumption statement and meter reading data (RSM-011/D10/D19)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D10	Profile-settled consumption
	D19	Meter reading
Metering point ID		
Period		Start and end time for period
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals – positive value or 0/Annual value
Quantity status		Measured/estimated
Reference		Reference to <i>Metering point metered data request</i>

4.25.7.4 Submit metered data for a metering point (RSM-012/E23/D06/D42)

RSM message		Metering point metered data notification

Name	Value	Comment
Business reason	E23	Periodic consumption statement
	D42	Periodic flex statement
	D06	Profile-settled hourly-metered metering point
Metering point ID		
Time period for quantity		
Type of metering point		
Settlement method		For consumption: Hourly/Flex/Profile
Resolution		Hour/Quarter-hour/Other period (year)
Quantity		Eg. kWh with up to 3 decimal places
Quantity status		Estimated/Measured
Reference		Reference to <i>Metering point metered data request</i>

4.25.8 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-025
BRS name	Request for metered data for a metering point
EDI transactions:	
RSM ID	RSM-015
RSM name	Metering point metered data request
Message name	Metering point metered data request
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading
Message name	Meter reading notification
RSM ID	RSM-012
RSM name	Submit metered data for metering point
Message name	Metering point metered data notification

4.26 BRS-026: Request for calculated energy time series

4.26.1 Overview

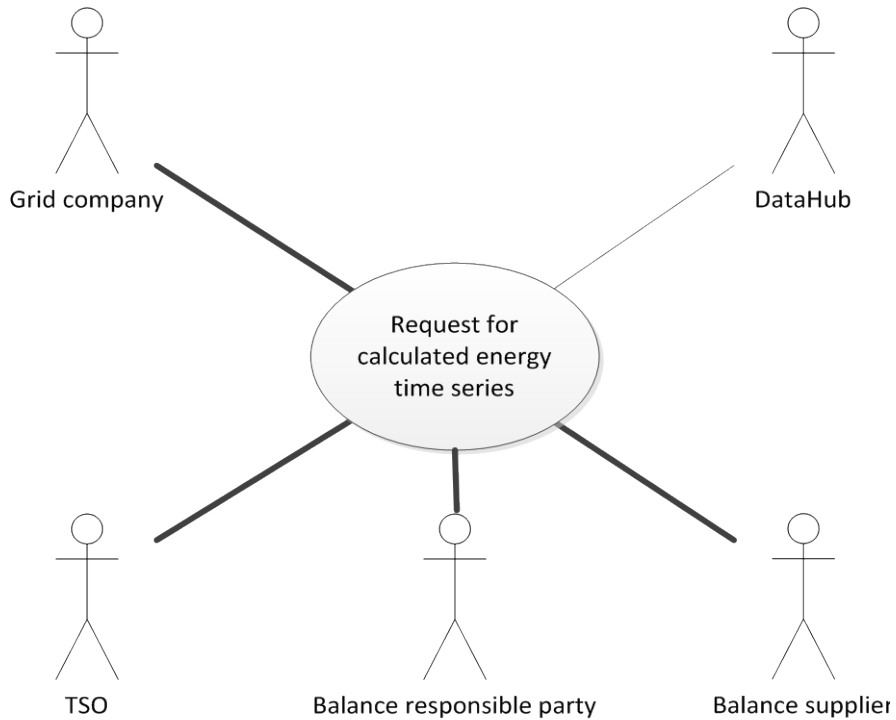


Figure 576 – Use case diagram for Metered data request

If a player requires summed metered data or calculated values, they can use this process to obtain this data.

4.26.2 Overview of exchanges

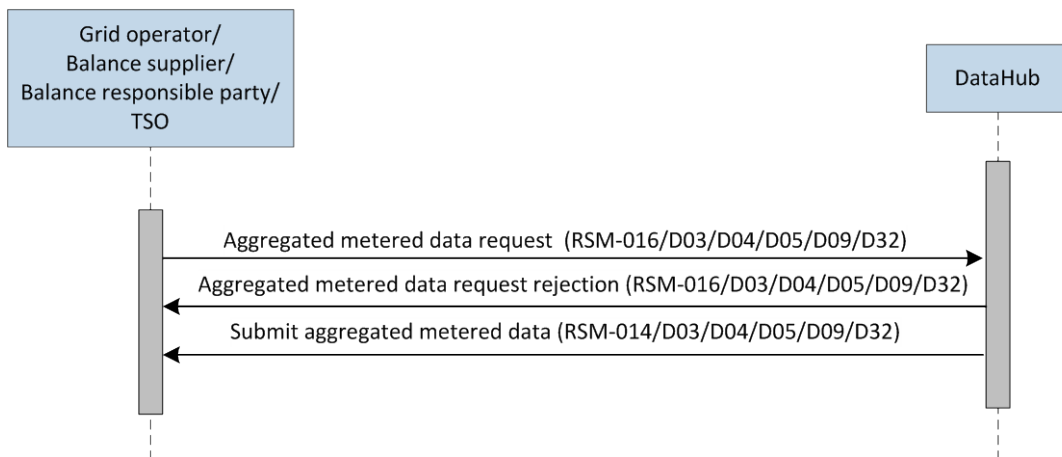


Figure 58 – Sequence diagram for Calculated energy time series request

4.26.3 Initial state

A player needs metered data in aggregated energy time series for one or more purposes.

4.26.4 Process for metered data request

The player sends an EDI message with a request for metered data to DataHub for sums or calculated values for the aggregated values, specified in *BRS-023: Submission of calculated time series*.

A search can be implemented for a specific date or a period.

Search for aggregate values on the basis of different search criteria:

- Balance responsible party (BRP)
- Grid area
- Balance supplier
- Type of metering point
- Settlement method (only consumption metering points)

The various aggregated time series are described in *BRS-023: Submission of calculated energy time series*.

Data may be requested which is:

- Preliminary
- Fixed
- Refixed
- Correction settlement
- Metered data based on current values (not valid for settlement)

The player should be aware of the search combinations outlined below when requesting aggregated metered data.

- The metering point type must always be used together with the other combinations.
- Settlement can only be used when the metering point type is equal consumption
- If the request comes from balance supplier or BRP the ID of the player must be stated.
- Balance supplier must always be used together with grid area.
- Balance supplier is not permitted together with price area.
- Balance supplier may be combined with BRP.
- BRP must always be combined with grid area.
- Grid area may be used alone.

The option to search based on the *meter data based on current values (D09)* reason code will only be possible after processing by DataHub Support, which will enable searching for the individual player.

The following additional restrictions apply to searches based on the *meter data based on current values (D09)* reason code:

- Search cannot be used for the following aggregations in accordance with *BRS-023: Submission of calculated energy time series*: Distribution curve, distributed consumption per electricity supplier (including transmission loss), distributed consumption per BRP (including transmission loss), the periodised consumption per electricity supplier (excluding transmission loss), periodised consumption per grid area (excluding transmission loss), periodised transmission loss, hour grid loss (covers both hour and flex-settled metering points).
- Searches will be limited to a concurrent search such that the start and end date must be in the same calendar month and the search can include a maximum of 1 calendar month (from the first day of a month to the 1st of the next month).

In reply to the balance supplier's request, DataHub sends an EDI message with the relevant metered data, or a rejection.

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If the request is approved, an EDI message with the relevant metered data for the period will be sent.

4.26.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
The balance supplier is a legitimate player during the requested date interval	E16 Balance supplier is not correct
The BRP is a legitimate player during the requested date interval	E18 Balance responsible party is not correct
The grid company is a legitimate player	E0I Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
Data is available in the period	E0H No data available
Date or date range is valid	E50 Invalid period
The combination of search criteria is permitted	D11 The combination of search criteria is not permitted

4.26.6 Time limits for metered data request

Sender	Recipient	Time limit
DataHub	Market player	Within one hour after receipt of the request, DataHub either sends the relevant data or rejects the request.

4.26.7 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.26.7.1 Aggregated metered data request (RSM-016/D03/D04/D05/D09/D32)

RSM message	Aggregated metered data request	
Name	Value	Comment

RSM message	Aggregated metered data request	
Business reason	D03 D04 D05 D09 D32	Preliminary Fixation Refixation Metered data based on current values Correction settlement
Type of metering point		Consumption/Production/Exchange/Grid loss correction
Period		Maximum 1 calendar month for D09
Settlement method		Hourly/Flex/Profile (only used for consumption metering points)
Aggregation		Balance supplier Balance responsible party (BRP) Grid area
Product	57900013305 90	Only used for distribution curve requests

4.26.7.2 Aggregated metered data request rejection (RSM-016/D03/D04/D05/D09/D32)

RSM message	Aggregated metered data request rejection	
Name	Value	Comment
Business reason	D03 D04 D05 D09 D32	Preliminary Fixation Refixation Metered data based on current values Correction settlement
Reference		Reference to <i>Aggregated metered data request</i>
Rejection reason		

4.26.7.3 Submit aggregated metered data (RSM-014/D03/D04/D05/D09/D32)

RSM message	Notification of aggregated time series	
Name	Value	Comment
Business reason	D03 D04 D05 D09 D32	Preliminary (until the fifth day) Fixation Refixation Metered data based on current values Correction settlement
Version		Latest/Blank (current values)
Type of metering point		Consumption/Production/Exchange/Grid loss correction
Settlement method		Hourly/Flex/Profile (only used for consumption metering points and grid loss correction)
Product		Energy Tariff
Resolution		Hour
Time period for values		

RSM message	Notification of aggregated time series	
Quantity	kWh Z14	Up to three decimal places, exchange and residual consumption up to and including fixation may contain negative values. The grid loss correction (Metering Point Type=D13) can also contain negative values. Other aggregations are always positive, up to six decimal places
Quantity status		Estimated Measured Missing
Aggregation		Balance supplier Balance responsible party (BRP) Grid area
Reference		Reference to <i>Aggregated metered data request</i>

4.26.8 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-026
BRS name	Request for calculated energy time series
EDI transactions:	
RSM ID	RSM-016
RSM name	Aggregated metered data request
Message name	Aggregated metered data request
RSM ID	RSM-014
RSM name	Submit calculated time series
Message name	Notification of aggregated time series

4.27 BRS-027: Aggregation of wholesale services

4.27.1 Overview

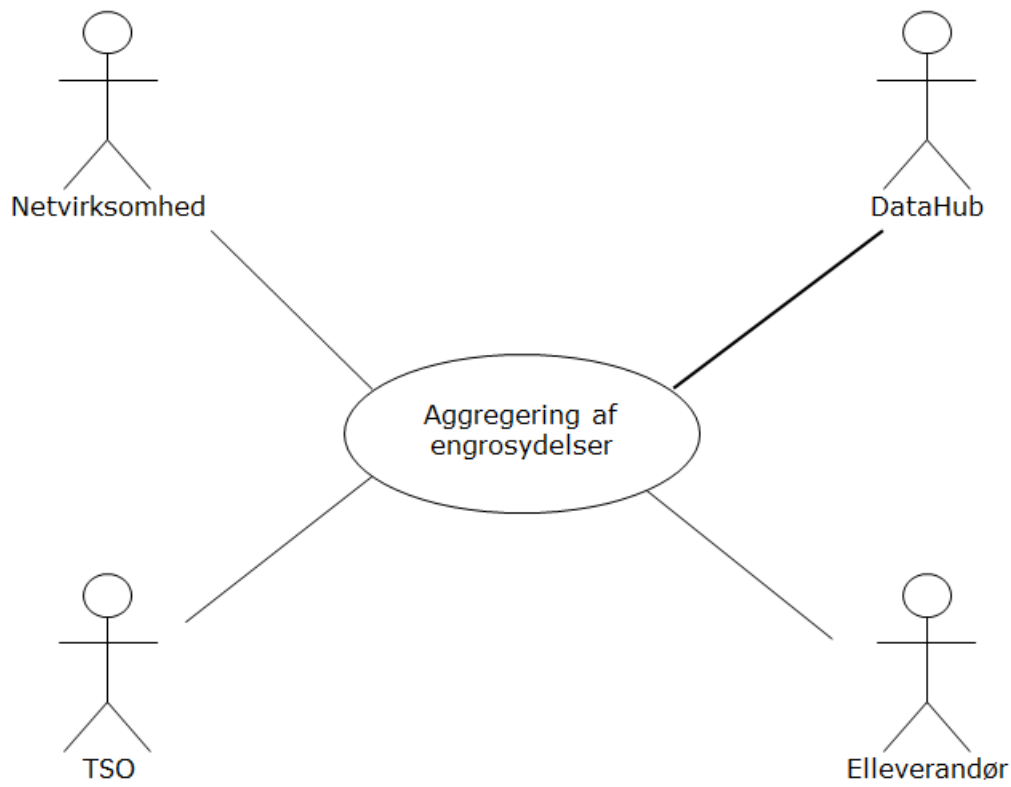


Figure 68 – Use case diagram for Aggregation of wholesale services

For information purposes for grid companies and balance suppliers, wholesale services are calculated in connection with fixation on the fifth working day after the day of operation. The result is sent to players by 8:00 AM on the sixth working day after the day of operation.

The wholesale services for each day of the month relevant to settlement are calculated for the first time during refixation on the fifth working day after the end of a month. Refixation is repeated on the fourth working day in the second month after the month of operation and on the third working day in the third month after the month of operation, where wholesale services are recalculated on a daily basis, and similarly during subsequent correction settlements. The settlement basis for wholesale services at day level and a monthly aggregation are sent by 8:00 AM on the day after the recalculation has been carried out.

Balance suppliers receive data distributed per grid area. Grid companies and TSO receive data for their own grid areas, distributed per balance supplier. Note that for wholesale services marked as a tax, the grid company receives aggregations.

4.27.2 Overview of exchanges

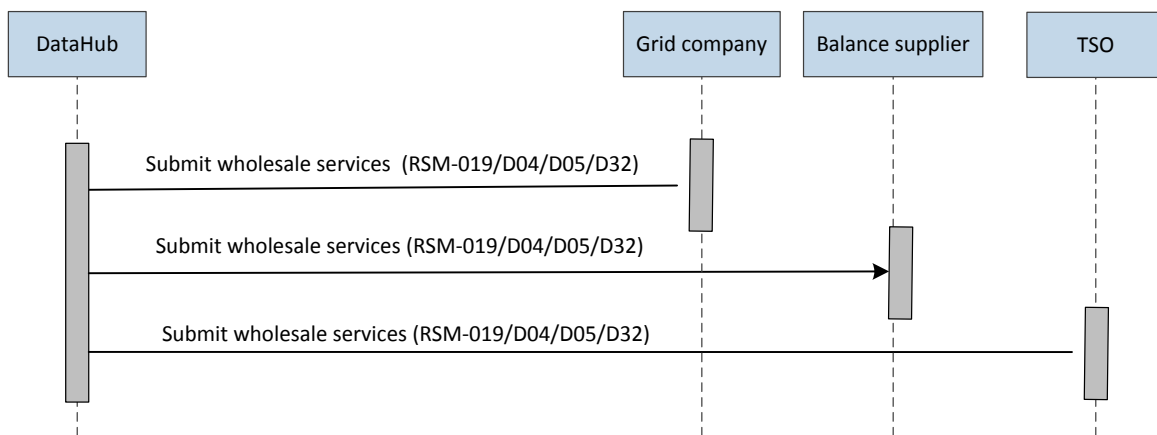


Figure 59 – Sequence diagram for Aggregation of wholesale services

4.27.3 Initial state

DataHub has fixed the data basis on the fifth working day after the day of operation, the fifth working day after the month of operation, during refixation or during correction settlement, and has calculated the various energy sums for the day, in line with Regulation D1.

4.27.4 Process for aggregation of wholesale services

For information purposes, DataHub calculates the aggregated wholesale services after fixation for total consumption and production per balance supplier, for each grid area, in the following division:

At fixation:

This data is sent on the sixth working day after the day of operation:

- Aggregated kWh per tariff (day/hour)
- Tariff price (day/hour)
- Calculated sum (DKK) per tariff (day/hour)

The aggregations per tariff at fixation will be distributed based on hour, flex and profile-settled consumption, calculated respectively per hour or based on estimated annual consumption periodised per day/hour.

Note that the tariff type determines whether kWh per tariff type will be sent per day/hour.

- Aggregated number per fee (day)
- Price per fee (day)
- Calculated sum (DKK) per fee (day)

- Aggregated number per subscription (day)
- Calculated daily price per subscription (day)
- Calculated sum (DKK) per subscription (day)

At refixation:

In connection with refixation (fifth working day after the month of operation, fourth working day in the second month after the month of operation and third working day in the third month after the month of operation), the aggregations are repeated for each day of the given month and a monthly aggregation is calculated.

In connection with refixation the settlement basis is recalculated, taking into account corrections received after refixation for hour and flex-settled metering points, including:

- Change of supplier, including as a result of a move.
- Cancellation of incorrect change of supplier or move.
- Creating and closing down metering points.
- Change of settlement methods.
- Corrections to incorrect tariff, fee, and subscription links.
- Corrections to prices for tariffs, fees and subscriptions.

The daily aggregations are also aggregated in a monthly aggregation:

Aggregated sum (DKK) per tariff (month)

Aggregated sum (DKK) per fee (month)

Aggregated sum (DKK) per subscription (month)

Calculated total sum (DKK) (month).

Note that aggregated kWh per tariff and the number per fee and subscription are not aggregated on a monthly basis. The player may sum the daily aggregations for control purposes.

At correction settlement:

Correction settlement is carried out as a minimum at reconciliation, when the annual statement for all profile-settled metering points is available, and three years after the end of the month of operation, see Regulation H2 and H3.

Correction settlement is carried out by a full recalculation of the settlement basis, taking into account corrections received after refixation and any previous correction settlements for all types of metering points, including:

- Change of supplier, including as a result of a move.
- Cancellation of incorrect change of supplier or move.
- Creating and closing down metering points.
- Change of settlement methods.
- Corrections to incorrect tariff, fee, and subscription links.
- Corrections to prices for tariffs, fees and subscriptions.
- The difference between distributed and periodised consumption.

When recalculating the settlement basis in connection with the reconciliation, and when recalculating three years after the month of operation, the aggregations will be repeated for each day in the given month, and for the monthly aggregation. In exceptional cases, the correction settlement may be re-run ad hoc.

4.27.5 Players receive data

After issuing *BRS-023: Submission of calculated energy time series*, DataHub sends the aggregated wholesale services to the respective balance suppliers and grid companies as multiple time series.

Grid companies receive aggregations for their own grid areas, for both their own wholesale services, and for wholesale services marked as taxes.

Between fixation, refixation and correction settlement, DataHub does not automatically send calculated values to market players. However, they can have data sent to them by:

- Sending a request to DataHub in accordance with the relevant business processes (BRS-028, BRS-029 and BRS-030), in response to which DataHub will automatically send the data specified in the request.
- Accessing DataHub's market portal and activating data transmission.

The player should store the daily aggregations for tariffs, fees and subscriptions for the purpose of checking monthly sums received later.

Note that the sums sent via BRS-027 are only for control purposes. It is the grid company's responsibility to ensure the sums for energy and wholesale services are invoiced correctly, in line with Regulation H3.

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Detailed functionality provided by the market function for a specific system action.

4.27.6 The submission of time series to legitimate recipients who have already settled

If a legitimate recipient has previously received an aggregate time series, where there has been a change during the subsequent period which means that the time series will not be sent out after the next aggregation, the DataHub will send a time series for the missing aggregation in respect of that period. The time series will only contain a missing value for all hours.

The time series will be forwarded for all future refixations in respect of the period in which the series was missing until the series once again contains values.

Series	1st refixation	2nd refixation	3rd refixation	1st correction
Tariff A	✓	÷	÷	÷
Subscription B	✓	✓	÷	✓
Tariff D		✓	✓	÷
Tariff E	✓	✓	✓	✓

Example of when time series with missing values must be included

4.27.7 Process for Aggregation of wholesale services

Sender	Recipient	Time limit
DataHub	Balance suppliers Grid company TSO	DataHub sends aggregated wholesale services to all recipients for information purposes by 8:00 AM on the sixth working day after the day of operation. If the day of operation is a Monday, aggregated time series must thus normally be sent by 8:00 AM on Tuesday the following week.
DataHub	Balance suppliers Grid company TSO	DataHub sends aggregated wholesale services relevant to settlement per day for a month of operations to all legitimate recipients in connection with refixation by 8:00 AM on the sixth working day after the end of a month. A monthly aggregation for the month of operation is also sent.
DataHub	Balance suppliers Grid company TSO	DataHub sends recalculated aggregated wholesale services relevant to settlement per day for a month of operation to all legitimate recipients in connection with refixation by 8:00 AM on the fifth working day in the second month after the month of operation. A monthly aggregation for the month of operation is also sent.
DataHub	Balance suppliers Grid company TSO	DataHub sends recalculated aggregated wholesale services relevant to settlement per day for a month of operation to all legitimate recipients in connection with refixation by 8:00 AM on the fourth working day in the third month after the month of operation. A monthly aggregation for the month of operation is also sent.
DataHub	Balance suppliers Grid company TSO	DataHub sends recalculated aggregated wholesale services to all legitimate recipients in connection with reconciliation, and three years after the end of the month of operation.

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Detailed functionality provided by the market function for a specific system action.

4.27.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.27.8.1 Submit wholesale services (RSM-019/D04/D05/D32)

RSM message	Notification of aggregated wholesale services

Name	Value	Comment
Business reason	D04	Fixation
	D05	Refixation
	D32	Correction settlement
Version		Eg 25
Type of metering point		Consumption/Production/Other
Settlement method		Hourly/Flex/Profile (profile only used for consumption metering points)
Product		Tariff (covers all settlement)
Resolution		Hour/Day/Month, see Regulation D1
Time period for values		
Quantity		kWh by tariff, up to three decimal places, positive Quantity of subscriptions and fees
Quantity status		Calculated
Aggregation		Balance supplier Grid area
Charge type		Subscription/Fee/Tariff
Charge type ID		Charge type ID
Market player		GLN for player
Unit price		DKK per item or kWh including six decimal places
Amount		DKK with up to six decimal places

When fixation the last day of operation in a month, the monthly aggregation is also calculated and sent.

4.27.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-027
BRS name	Aggregation of wholesale services
EDI transactions:	
RSM ID	RSM-019
RSM name	Notify aggregated wholesale services

4.28 BRS-028: Request for aggregated subscriptions or fees

4.28.1 Overview

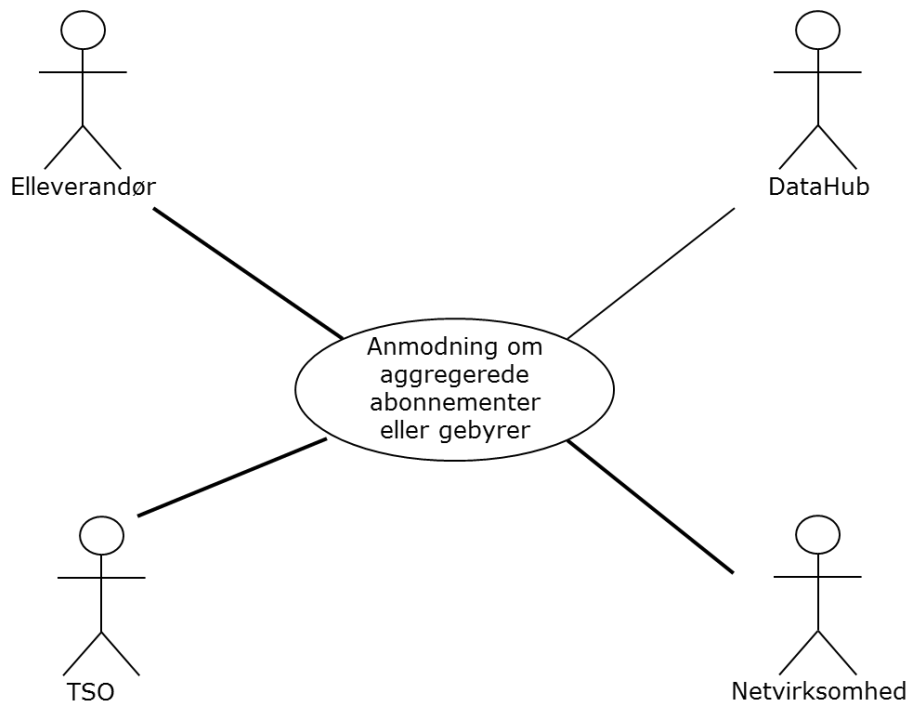


Figure 600 – Use case diagram for Request for aggregated subscriptions or fees

If the need arises to have the daily aggregated wholesale services for subscriptions or fees re-sent, a balance supplier or grid company can send a request to this effect in line with this business process.

4.28.2 Overview of exchanges

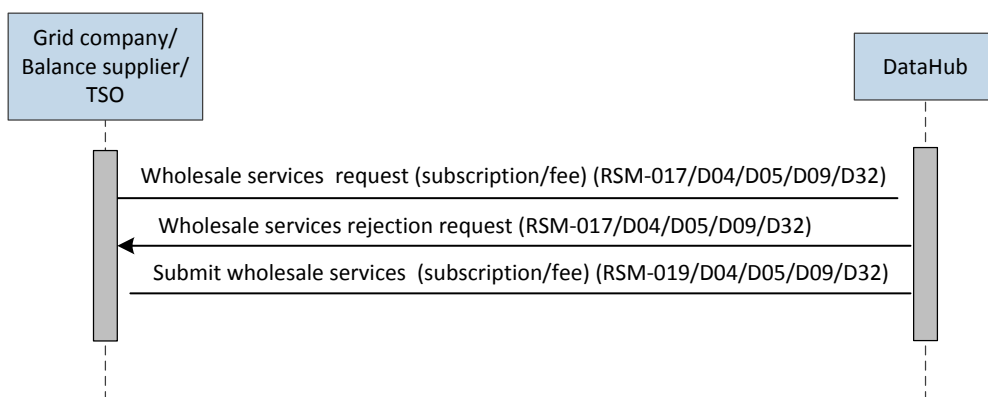


Figure 71 – Sequence diagram for Request for aggregated subscriptions or fees

4.28.3 Initial state

The need arises for a player to obtain data related to aggregated wholesale services from DataHub for subscriptions or fees.

4.28.4 Process for request for aggregated subscriptions or fees

A grid company or balance supplier may send a request for aggregated subscriptions or fees to DataHub.

A player may use the following search criteria:

- Grid area
- Balance supplier (only for grid companies and TSO)
- Charge owner (player)
- Charge type (subscription or fee)
- Charge ID
- Date interval (required)

Data which may be requested:

- Fixed
- Refixed
- Metered data based on current values (not valid for settlement)
- Correction settlement

The option to search based on the *meter data based on current values (D09)* reason code will only be possible after processing by DataHub Support, which will enable searching for the individual player.

The following additional restrictions apply to searches based on the *meter data based on current values (D09)* reason code:

- Searches will be limited to a concurrent search such that the start and end date must be in the same calendar month and the search can include a maximum of 1 calendar month (from the first day of a month to the 1st of the next month).

DataHub receives the message and validates the data in accordance with the validation rules below.

If the data validation triggers an error message, this is forwarded to the message sender.

4.28.5 Validation rules

Validation	Error message
The balance supplier is a legitimate player during the requested date interval	E16 Balance supplier is not correct
The grid company is a legitimate player	E0I Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
Data is available in the period	E0H No data available
Date or date range is valid	E50 Invalid period

The combination of search criteria is permitted	D11 The combination of search criteria is not permitted
---	--

4.28.6 The message sender receives information about aggregated subscriptions or fees

The message sender then receives data relating to fees or subscriptions directly from DataHub.

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Detailed functionality provided by the market function for a specific system action.

4.28.7 Time limits for requests for aggregated subscriptions or fees

Sender	Recipient	Time limit
Grid company Balance supplier TSO	DataHub	Requests for aggregated subscriptions or fees may be submitted at any time
DataHub	Message sender	DataHub must forward data within one hour of receiving the request

4.28.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.28.8.1 Wholesale services request (RSM-017/D04/D05/D09/D32)

RSM message		Request wholesale services
Name	Value	Comment
Business reason	D04	Fixation
	D05	Refixation
	D09	Metered data based on current values
	D32	Correction settlement
Grid area		
Balance supplier ID		Only grid companies and TSO
Date interval		Maximum 1 calendar month for D09
Charge type		Fee/subscription
Charge type ID		
Market player		GLN for player that owns price element

4.28.8.2 Wholesale services request rejection (RSM-017/D04/D05/D09/D32)

RSM message		Wholesale services request rejection
Name	Value	Comment

RSM message	Wholesale services request rejection	
Business reason	D04 D05 D09 D32	Fixation Refixation Metered data based on current values Correction settlement
Reference		Reference to <i>Wholesale services request</i>
Rejection reason		Rejection reason

4.28.8.3 Submit wholesale services (RSM-019/D04/D05/D09/D32)

RSM message	Notification of aggregated wholesale services	
Name	Value	Comment
Business reason	D04 D05 D09 D32	Fixation Refixation Metered data based on current values Correction settlement
Version		Latest/Blank (current values)
Type of metering point		
Settlement method		Hourly/Flex/Profile
Product		Tariff (covers all settlement)
Resolution		Day
Time period for values		
Quantity		Number
Quantity status		Calculated
Aggregation		Balance supplier Grid area
Charge type		Subscription/Fee
Charge type ID		
Market player		GLN for player
Unit price		DKK including six decimal places per quantity
Amount		DKK including six decimal places
Reference		Reference to <i>Wholesale services request</i>

4.28.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-028
BRS name	Request for aggregated subscriptions or fees
EDI transactions:	
RSM ID	RSM-017
RSM name	Wholesale services request
RSM ID	RSM-019
RSM name	Notify aggregated wholesale services

4.29 BRS-029: Request for aggregated tariffs

4.29.1 Overview

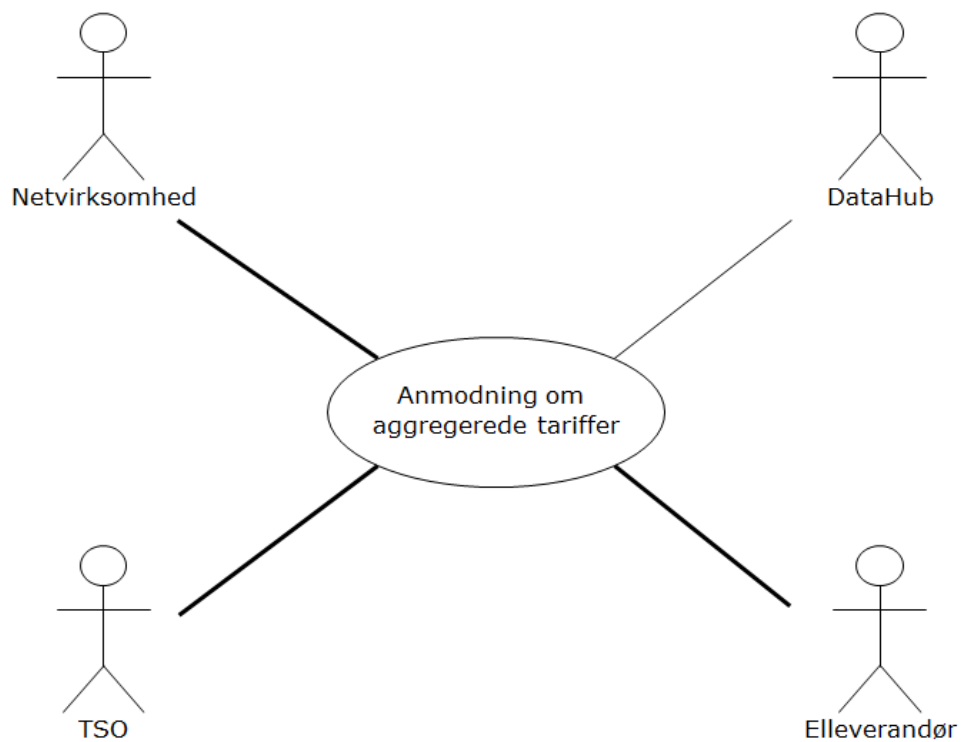


Figure 612 – Use case diagram for Request for aggregated tariffs

If the need arises to have the daily aggregated tariffs re-sent, a balance supplier, grid company or TSO may request this in accordance with this process.

4.29.2 Overview of exchanges

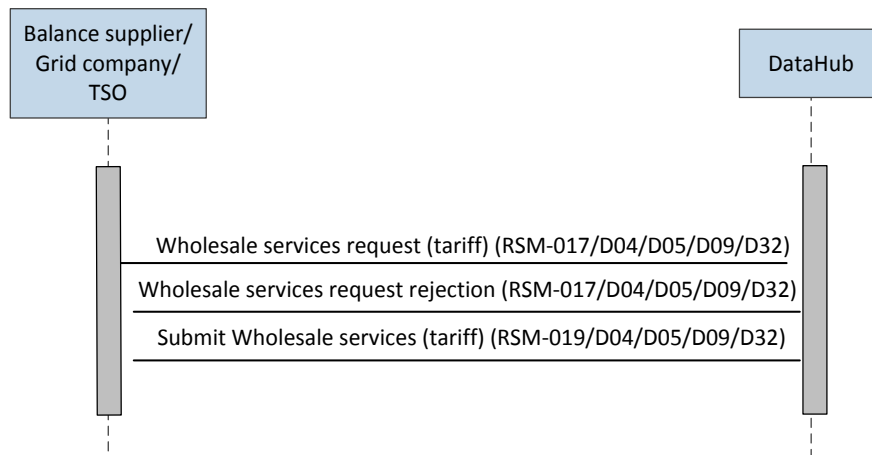


Figure 62 – Sequence diagram for Aggregated tariff request

4.29.3 Initial state

The need arises for a player to obtain data relating to aggregated tariffs.

4.29.4 Process for request for aggregated tariffs

A grid company, balance supplier or TSO may send a request for aggregated tariffs to DataHub.

A player may use the following search criteria:

- Grid area
- Balance supplier (only for grid companies and TSO)
- Charge owner (player)
- Charge type (tariff)
- Charge ID
- Date interval (required)

Data which may be requested:

- Fixed
- Refixed
- Metered data based on current values (not valid for settlement)
- Correction settlement

DataHub receives the message and validates the data in accordance with the validation rules below.

If the data validation triggers an error message, this is forwarded to the message sender.

4.29.5 Validation rules

Validation	Error message
The balance supplier is a legitimate player during the requested date interval	E16 Balance supplier is not correct

The grid company is a legitimate player	E01 Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
Data is available in the period	E0H No data available
Date or date range is valid	E50 Invalid period
The combination of search criteria is permitted	D11 The combination of search criteria is not permitted

4.29.6 The message sender receives information about aggregated tariffs

The message sender then receives data on aggregated wholesale services for tariffs directly from DataHub.

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Detailed functionality provided by the market function for a specific system action.

4.29.7 Time limits for aggregated tariff request

Sender	Recipient	Time limit
Grid company Balance supplier TSO	DataHub	Requests for aggregated wholesale services for tariffs may be submitted at any time
DataHub	Message sender	DataHub must forward data within one hour of receiving the request

4.29.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.29.8.1 Wholesale services request (RSM-017/D04/D05/D09/D32)

RSM message		Request wholesale services
Name	Value	Comment
Business reason	D04	Fixation
	D05	Refixation
	D09	Metered data based on current values
	D32	Correction settlement
Grid area		
Balance supplier ID		Only grid companies and TSO
Date interval		Maximum 1 calendar month for D09
Charge type		Tariff
Charge ID		

RSM message	Request wholesale services	
Market player		GLN for player that owns price element

4.29.8.2 Wholesale services request rejection (RSM-017/D04/D05/D09/D32)

RSM message	Wholesale services request rejection	
Name	Value	Comment
Business reason	D04	Fixation
	D05	Refixation
	D09	Metered data based on current values
	D32	Correction settlement
Reference		Reference to <i>Wholesale services request</i>
Rejection reason		Rejection reason

4.29.8.3 Submit wholesale services (RSM-019/D04/D05/D09/D32)

RSM message	Notification of aggregated wholesale services	
Name	Value	Comment
Business reason	D04	Fixation
	D05	Refixation
	D09	Metered data based on current values
	D32	Correction settlement
Version		Empty = Current values
Type of metering point		Consumption/Production/Other
Settlement method		Hourly/Flex/Profile
Product		Tariff (covers all settlement)
Resolution		Day/hour
Time period for values		
Quantity		kWh, up to three decimal places – always positive
Quantity status		Calculated
Aggregation		Balance supplier
		Grid area
Charge type		Tariff
Charge ID		
Market player		GLN for player
Unit price		DKK including six decimal places per quantity
Amount		DKK including six decimal places
Reference		Reference to <i>Wholesale services request</i>

4.29.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-029
BRS name	Request for aggregated tariffs
EDI transactions:	
RSM ID	RSM-017
RSM name	Request wholesale services
RSM ID	RSM-019

RSM name	Notify aggregated wholesale services
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4.30 BRS-030: Request for settlement basis

4.30.1 Overview

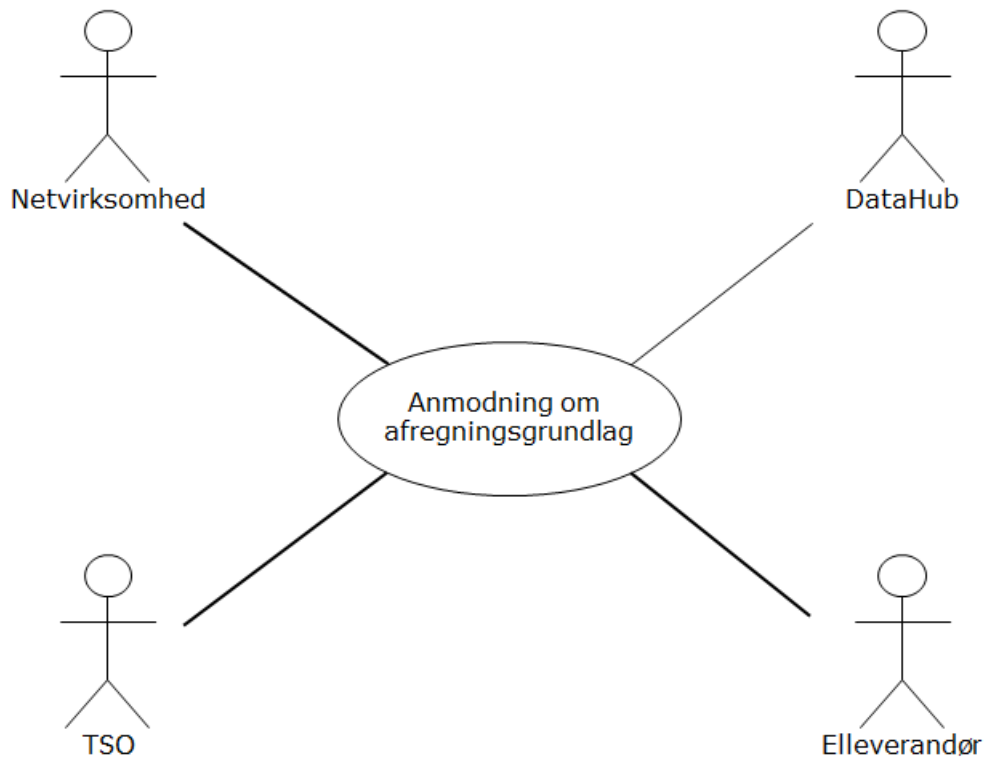


Figure 634 – Use case diagram for Settlement basis request

If the need arises to have information on the monthly aggregations re-sent, a balance supplier, grid company or TSO may request and receive this via this process.

4.30.2 Overview of exchanges

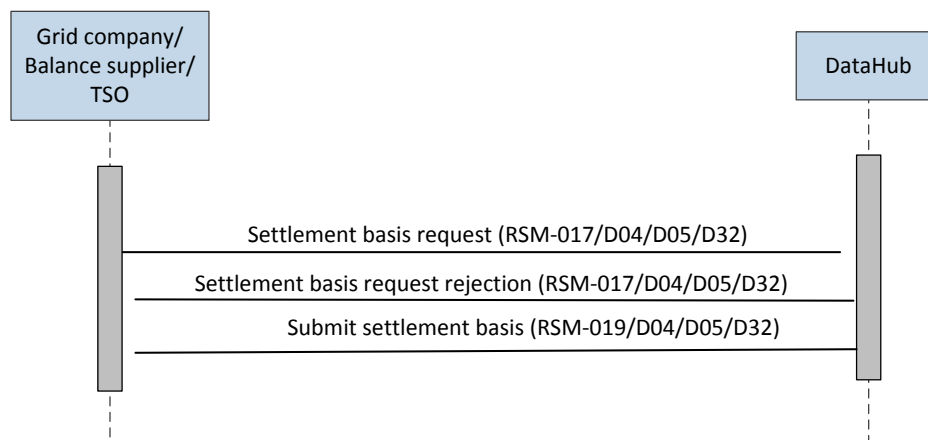


Figure 645 – Sequence diagram for Settlement basis request

4.30.3 Initial state

The need arises for a balance supplier, grid company or Energinet to receive the monthly aggregations.

4.30.4 Process for request for settlement basis

A player submits a request to DataHub, indicating which month is required.

4.30.5 Search criteria

The following search criteria may be used in the message:

- Grid area
- Balance supplier (only for grid companies and Energinet)
- Date interval/date (Only whole months)
- Charge owner (player)
- Charge type
- Charge ID

Data which may be requested:

- Fixed
- Refixed
- Correction settlement

DataHub receives the message and validates the data in accordance with the validation rules below.

If the data validation triggers an error message, this is forwarded to the message sender.

4.30.6 Validation rules

Validation	Error message
The balance supplier is a legitimate player during the requested date interval	E16 Balance supplier is not correct
The grid company is a legitimate player	E01 Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
Data is available in the period	E0H No data available
Date or date range is valid	E50 Invalid period
The combination of search criteria is permitted	D11 The combination of search criteria is not permitted

4.30.7 The player receives data

The player then receives data in accordance with the stated reason.

For searches for monthly sums the total sum will be sent in the result.

If the player finds that the data is not correct, the player may either contact the data owner directly or report the issue by filling in a web form.

Detailed functionality provided by the market function for a specific system action.

4.30.8 Time limits for request for settlement basis

Sender	Recipient	Time limit
DataHub	Balance supplier Grid company TSO	DataHub must forward data within one hour of receiving the request.

4.30.9 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.30.9.1 Settlement basis request (RSM-017/D04/D05/D32)

RSM message		Request wholesale services
Name	Value	Comment
Business reason	D04 D05 D32	Fixation Refixation Correction settlement
Grid area		
Balance supplier ID		Only grid companies and TSO
Date interval		Whole months
Charge type		Fee/Subscription/Tariff
Charge ID		
Market player		GLN for player that owns charge

4.30.9.2 Settlement basis request rejection (RSM-017/D04/D05/D32)

RSM message		Wholesale services request rejection
Name	Value	Comment
Business reason	D04 D05 D32	Fixation Refixation Correction settlement
Reference		Reference to <i>Wholesale services request</i>
Rejection reason		Rejection reason

4.30.9.3 Submit settlement basis (RSM-019/D04/D05/D32)

RSM message		Notification of aggregated wholesale services
Name	Value	Comment
Business reason	D04 D05 D32	Fixation Refixation Correction settlement
Version		Latest/Blank (current values)

RSM message	Notification of aggregated wholesale services	
Type of metering point		Consumption/Production/Other
Settlement method		Hourly/Flex/Profile
Product		Tariff (covers all settlement)
Resolution		Month, see Regulation H3
Time period for values		
Aggregation		Balance supplier Grid area
Charge type		Subscription/Fee/Tariff
Charge ID		
Market player		GLN for player
Amount		DKK including six decimal places
Reference		Reference to <i>Wholesale services request</i>

Monthly aggregations are sent for all whole months specified in the date interval in the *Request settlement basis*. If the search criteria specified the period from 15 January to 15 April, monthly aggregations are returned for February and March.

4.30.10 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-030
BRS name	Request for settlement basis
EDI transactions:	
RSM ID	RSM-017
RSM name	Request wholesale services
RSM ID	RSM-019
RSM name	Notify aggregated wholesale services

4.31 BRS-031: Update subscription price list

4.31.1 Overview

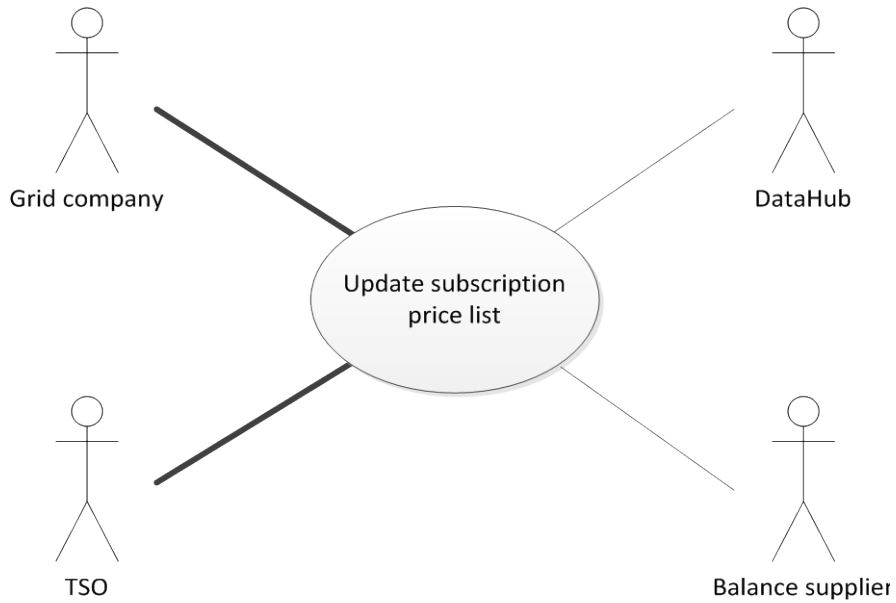


Figure 656 – Use case diagram for Update subscription price list.

A subscription is a fixed price for services relating to grid connections and related services. In DataHub, subscriptions must always be indicated per month. A grid company or TSO that creates or changes a subscription must submit this to DataHub.

Subscriptions are assigned to metering points in accordance with *BRS-037: Settlement master data for a metering point – subscription, fee and tariff links*.

4.31.2 Overview of exchanges

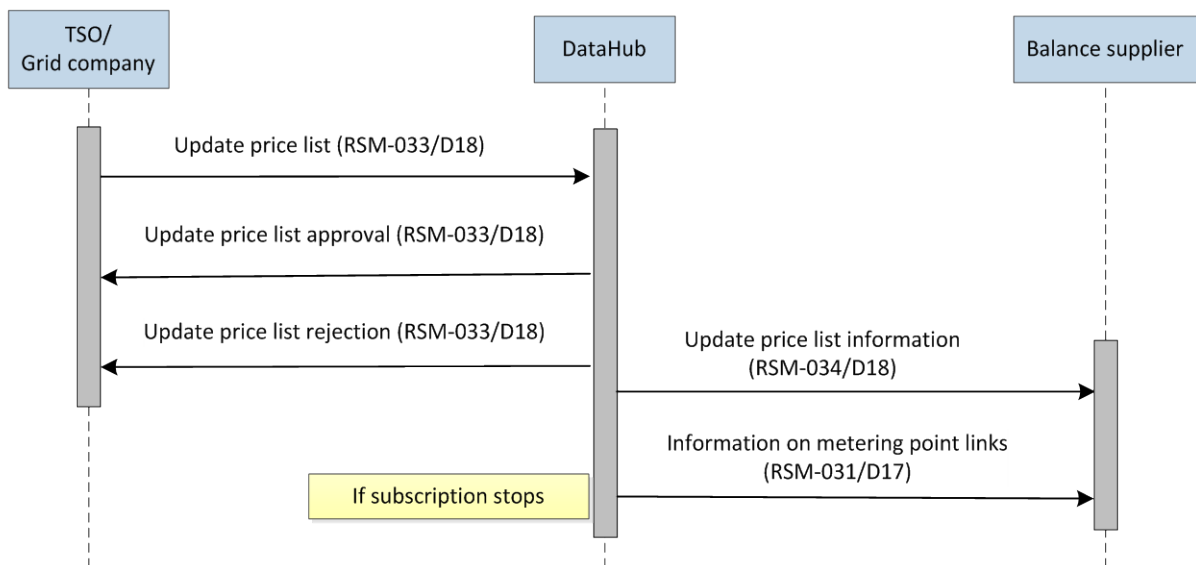


Figure 77 – Sequence diagram for Update subscription price list.

4.31.3 Initial state

The need arises for a grid company or TSO to create, change or cancel a subscription.

4.31.4 Process for update subscription price list

The grid company or TSO sends an EDI message to DataHub with business reason *Update master data price information* and the date from which the subscription is valid. Please note that when a VAT code is specified it may not subsequently be changed.

The grid company or TSO should note that if changes have already been sent after the effective date, the message sent will only be valid until the next change of subscription.

In reply to the grid company or TSO's request for a subscription update, DataHub sends an EDI message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

When a subscription terminates, DataHub sets the existing links the subscription has to metering points in DataHub to end on the effective date. These updates will be sent to affected balance suppliers with the message *Information on metering point links*. Links will be removed regardless of whether the price element is still active from a later date.

If later changes to the price element have been reported, these must be updated with a *Stop* message to completely terminate the price element.

If a subscription ID that has been *Stopped*, is to be restored at a later time, function code *Change* should be used.

Function code *Change* should also be used to change the start date (eg to an earlier date) for a subscription ID which has already been created.

4.31.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
The grid company is a legitimate player	E01 Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
When changing or closing down an existing subscription, the subscription is identifiable (function code = change or stop)	D19 Function code is not valid

With function code <i>new</i> , the submitted subscription ID does not already exist and has not been used previously (now stopped) by the grid company.	D14 Settlement master data is not correct
The message has been received before the official deadline	E17 Date is not within set time limit
Time resolution is correct	D23 Time resolution is incorrect
The subscription is owned by the updating player	D27 Request is not valid
The subscription is less than DKK 1 million	E90 Metered data is outside limit
The subscription has a price	E87 Number of values does not match time resolution
With function code <i>change</i> , the VAT group is unchanged	E86 Incorrect value

4.31.6 Process for sending subscription price list from DataHub

DataHub forwards a message regarding the new or changed subscriptions to all balance suppliers.

After receiving *Information on update of price list*, balance suppliers update their systems with the subscriptions received.

Note that this means that a balance supplier must be able to receive information about subscriptions for grid areas where the balance supplier is not active.

If the balance supplier discovers that the information does not match, they may either contact the grid company directly or draw attention to the problem by filling in a web form.

If the correction relates to binding temporary price reductions, the balance suppliers must include the subscription name and the new price on the invoice to the relevant customers.

4.31.7 Corrections to submitted data

Grid companies or the TSO may only change a subscription if the change is within the notice period for the subscription, by sending an EDI message with function code *change*. The message will be sent to all balance suppliers immediately after approval in DataHub.

If a message with function code *stop* is submitted, links will also be stopped on the effective date. This stop process is effected once the notification period expires for the price element.

Once the notice period expires, corrections can only be made by contacting DataHub Support. If the error is considered to be significant, and a correction is made in DataHub, a *Price list update information* message will be sent to all balance suppliers immediately afterwards.

Detailed functionality provided by the market function for a specific system action.

4.31.8 Time limits for submitting a subscription price list.

Sender	Recipient	Time limit
Grid company TSO	DataHub	<i>Update price list</i> must be sent at least 31 calendar days before the effective date. Note that longer notice periods may apply under Regulation H2, and the <i>Update price list</i> message must be sent to DataHub in conformity with these notice periods.
DataHub	Balance supplier	The <i>Update to metering point links information</i> message must be sent at least 31 calendar days before the effective date.
DataHub	Balance supplier	DataHub must send the <i>Update price list information</i> message within one hour after receiving the data.

4.31.9 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.31.9.1 Update price list (RSM-033/D18)

RSM message		Update price list request
Name	Value	Comment
Business reason	D18	Update master data price information
Function code		Create/Change/Stop
Charge type		Subscription
Market player		GLN for grid company
Charge type ID		The grid company's own subscription ID
Validity date		Date subscription starts, changes or stops
Name		Name of the subscription
Description		An explanatory text about the subscription
Price		DKK, excluding VAT, with up to six decimal places
VAT class		No VAT VAT
Re-invoicing		Yes/No
Tax	No	Tax is not a part of subscription
Resolution	Month	Subscription is always stated for one month

4.31.9.2 Update price list approval (RSM-033/D18)

RSM message		Update price list approval
Name	Value	Comment
Business reason	D18	Update master data price information
Reference		Reference to <i>Update price list request</i>

4.31.9.3 Update price list rejection (RSM-033/D18)

RSM message		Update price list request rejection
Name	Value	Comment
Business reason	D18	Update master data price information
Reference		Reference to <i>Update price list request</i>
Rejection reason		

4.31.9.4 Update price list information (RSM-034/D18)

RSM message		Price list notification
Name	Value	Comment
Business reason	D18	Update master data price information
Function code		Create/Change/Stop
Charge type		Subscription
Market player		GLN for grid company
Charge type ID		The grid company's own subscription ID
Validity date		Date subscription starts, changes or stops
Name		Name of the subscription
Description		An explanatory text about the subscription
Price		Excluding VAT, with up to six decimal places
VAT class		No VAT VAT
Re-invoicing		Yes/No
Tax	No	Tax is not a part of subscription
Resolution	Month	Subscription is always stated for one month

4.31.9.5 Information on metering point links (RSM-031/D17)

RSM message		Master data settlement notification
Name	Value	Comment
Business reason	D17	Update settlement master data
Function code		Stop
Validity date		Stop date for metering point link
Market player		GLN for grid company
Metering point ID		GSRN
Charge type		Subscription
Charge type ID		Player's subscription ID
Number		Number of times the same subscription or fee is to be charged. Must be positive. If the function code is <i>stop</i> , this number is ignored

4.31.10 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-031
BRS name	Update subscription price list
EDI transactions:	
RSM ID	RSM-033
RSM name	Price list changes
RSM ID	RSM-034
RSM name	Send price list.
RSM ID	RSM-031
RSM name	Submit settlement master data

4.32 BRS-032: Update fee price list

4.32.1 Overview



Figure 766 – Use case diagram for Update fee price list.

A fee is the price for an isolated service or task on a given date. Any grid company or TSO that creates or changes a fee must submit this to DataHub.

Balance suppliers can access this data via DataHub and sending messages.

Fees are assigned to metering points in accordance with *BRS-037: Settlement master data for a metering point – subscription, fee and tariff links*.

4.32.2 Overview of exchanges

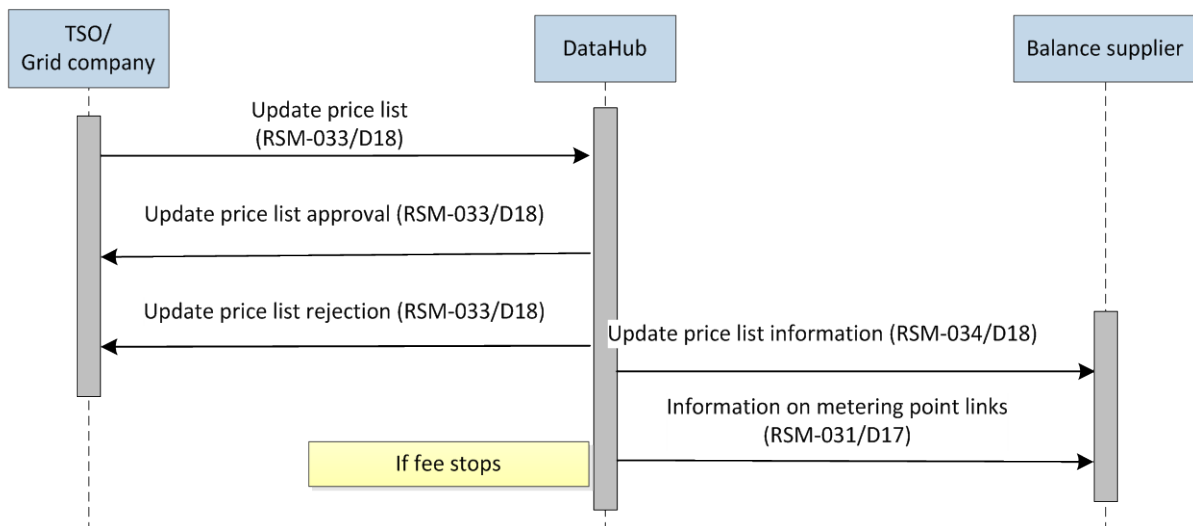


Figure 79 – Sequence diagram for Update fee price list.

4.32.3 Initial state

A grid company or TSO changes an existing fee, creates a new fee or stops a fee.

4.32.4 Process for update fee price list

The grid company or TSO sends an EDI message to DataHub, with business reason *Update price information master data*. Please note that when a VAT code is specified it may not subsequently be changed.

In reply to the grid company or TSO's request for a fee update, DataHub sends an EDI message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

When a fee terminates, DataHub sets the existing links the fee has to metering points to end on the effective date. These updates will be sent to affected balance suppliers with the *Update metering point links information* message. Links will be removed regardless of whether the price element is still active from a later date. If later changes to the price element have been reported, these must be updated with a *Stop* message to completely terminate the price element.

If a fee ID that has been *Stopped*, is to be restored at a later time, function code *Change* should be used.

Function code *Change* should also be used to change the start date (eg to an earlier date) for a fee ID which has already been created.

4.32.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
The grid company is a legitimate player	E01 Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
When changing or closing down an existing fee, the fee is identifiable (function code = change or stop)	D19 Function code is not valid
With function code <i>new</i> , the submitted fee ID does not already exist and has not been used previously (now stopped) by the grid company.	D14 Settlement master data is not correct
The message has been received before the official deadline	E17 Date is not within set time limit
Time resolution is correct	D23 Time resolution is incorrect
The fee is owned by the updating player	D27 Request is not valid

The fee is less than DKK 1 million	E90 Metered data is outside limit
The fee has one price assigned	E87 Number of values does not match time resolution
With function code <i>change</i> , the VAT group is unchanged	E86 Incorrect value

4.32.6 Process for sending fee price list from DataHub

DataHub forwards information on fees to all balance suppliers.

After receiving information on fees, balance suppliers update their systems with the fees received.

If the balance supplier discovers that the information does not match, they may either contact the grid company directly or draw attention to the problem by filling in a web form.

Note that this means that a balance supplier must be able to receive information about fees for grid areas where the balance supplier is not active.

If the correction relates to binding temporary price reductions, the balance suppliers must include the fee name and the new price on the invoice to the relevant customers.

4.32.7 Corrections to submitted data

Grid companies or the TSO may only change a fee if the change occurs within the notice period for fees. Changes are made by sending a price list message with function code *change*. The message will be sent to all balance suppliers immediately after approval in DataHub.

If a message with function code *stop* is submitted, links will also be stopped on the effective date. This stop process is effected once the notification period expires for the price element.

Once the notice period expires, corrections can only be made by contacting DataHub Support. If the error is considered to be significant, and a correction is made in DataHub, a *Price list update information* message will be sent to all balance suppliers immediately afterwards.

4.32.8 Time limits for submitting a fee price list

Sender	Recipient	Time limit
Grid company TSO	DataHub	The <i>Update price list</i> message must be sent at least 31 calendar days before the effective date Note that longer notice periods may apply under Regulation H2, and the <i>Update price list</i> message must be sent to DataHub in conformity with these notice periods.

DataHub	Balance supplier	The <i>Update to metering point links information</i> message must be sent at least 31 calendar days before the effective date.
DataHub	Balance supplier	DataHub must send the <i>Update price list information</i> message within one hour after receiving the data

4.32.9 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.32.9.1 Update price list (RSM-033/D18)

RSM message		Update price list request
Name	Value	Comment
Business reason	D18	Update master data price information
Function code		Create/Change/Stop
Charge type		Fee
Market player		GLN for grid company
Charge type ID		The grid company's own fee ID
Validity date		Date fee starts, changes or stops
Name		Name of the fee
Description		An explanatory text about the fee
Price		DKK, excluding VAT, with up to six decimal places
VAT class		No VAT VAT
Re-invoicing		Yes/No
Tax	No	Tax is not a part of the fee
Resolution	Day	The fee is always stated for a specific effective date

4.32.9.2 Update price list approval (RSM-033/D18)

RSM message		Update price list approval
Name	Value	Comment
Business reason	D18	Update master data price information
Reference		Reference to <i>Update price list request</i>

4.32.9.3 Update price list rejection (RSM-033/D18)

RSM message		Update price list request rejection
Name	Value	Comment
Business reason	D18	Update master data price information
Reference		Reference to <i>Update price list request</i>
Rejection reason		

4.32.9.4 Update price list information (RSM-034/D18)

RSM message		Price list notification
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Name	Value	Comment
Business reason	D18	Update master data price information
Function code		Create/Change/Stop
Charge type		Fee
Market player		GLN for grid company
Charge type ID		The grid company's own fee ID
Validity date		Date fee starts, changes or stops
Name		Name of the fee
Description		An explanatory text about the fee
Price		Excluding VAT, with up to six decimal places
VAT class		No VAT VAT
Re-invoicing		Yes/No
Tax	No	Tax is not a part of the fee
Resolution	Day	The fee is always stated for a specific effective date

4.32.9.5 Information on metering point links (RSM-031/D17)

RSM message	Master data settlement notification	
Name	Value	Comment
Business reason	D17	Update settlement master data
Function code		Stop
Validity date		Stop date for metering point link
Market player		GLN for grid company
Metering point ID		GSRN
Charge type		Fee
Charge type ID		The player's fee ID
Number		Number of times the same subscription or fee is to be charged. Must be positive. If the function code is <i>stop</i> , this number is ignored

4.32.10 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-032
BRS name	Update fee price list
EDI transactions:	
RSM ID	RSM-033
RSM name	Price list changes
RSM ID	RSM-034
RSM name	Send price list.
RSM ID	RSM-031
RSM name	Submit settlement master data

4.33 BRS-033: Update tariff price list

4.33.1 Overview

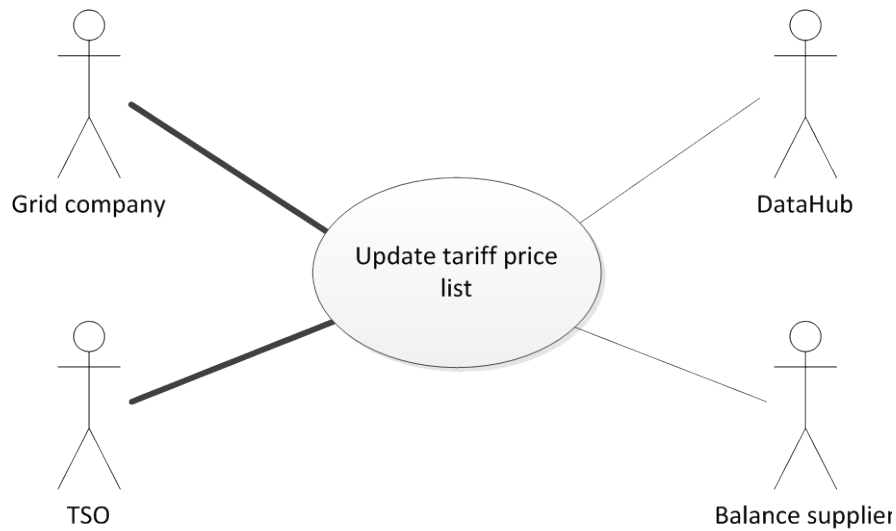


Figure 670 – Use case diagram for Update tariff price list.

A tariff is a price for the grid company and TSO's services, and is a price per kWh. Any grid company or TSO that creates or changes a tariff must submit this to DataHub.

Taxes are handled in DataHub as tariffs, and the TSO sets up taxes from SKAT (the Danish Taxation Authority) in DataHub.

Balance suppliers can access this data via DataHub and sending messages.

Grid companies get access to tariffs marked as tax via DataHub and messages sent.

Tariffs are linked to metering points in accordance with business process *BRS-037: Settlement master data for a metering point – subscription, fee and tariff links*.

4.33.2 Overview of exchanges

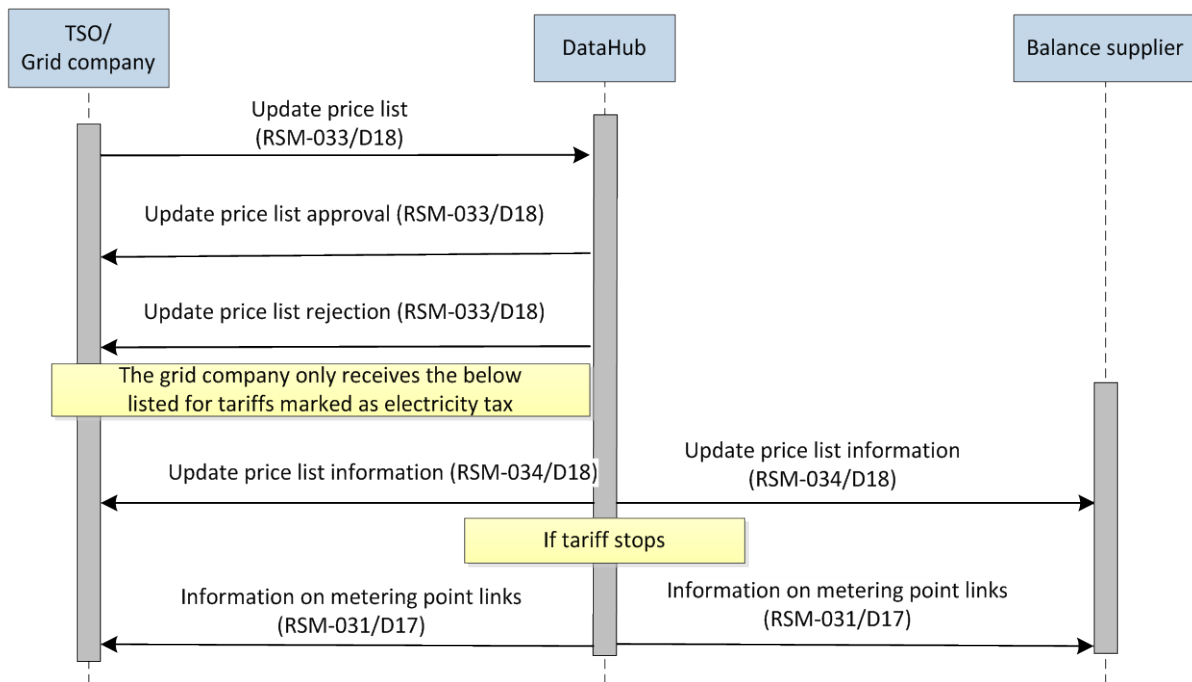


Figure 681 – Sequence diagram for Tariff price list

4.33.3 Initial state

The need arises for a grid company or TSO to create, change or cancel a tariff.

4.33.4 process for Tariff price list

The grid company or TSO creates, changes or ends a tariff and submits an EDI message with reason code *Update master data price information* to DataHub. Please note that when a VAT code is specified it may not subsequently be changed.

The grid company or TSO should note that if changes have already been sent after the effective date, the message sent will only be valid until the next change of tariff.

In reply to the player's request for an update to a price element, DataHub sends an EDI message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

When a tariff ends, DataHub sets the existing links the tariff has to metering points to end on the effective date. These updates will be sent to affected balance suppliers and grid companies with the *Update metering point links information* message. Links will be removed regardless of whether the tariff is still active from a later date. If later changes to the price element have been reported, these must be updated with a *Stop* message to completely terminate the price element.

If a tariff ID that has been *Stopped*, is to be restored at a later time, function code *Change* should be used. Function code *Change* should also be used to change the start date (including an earlier start date) for a tariff ID which has already been created.

4.33.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
The grid company is a legitimate player	E01 Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
When changing or closing down an existing tariff, the tariff is identifiable (function code = change or stop)	D19 Function code is not valid
With function code <i>new</i> , the submitted tariff ID does not already exist and has not been used previously (now stopped) by the grid company.	D14 Settlement master data is not correct
The message has been received before the official deadline	E17 Date is not within set time limit
Time resolution is correct	D23 Time resolution is incorrect
The tariff is owned by the updating player	D27 Request is not valid
The tariff is less than DKK 1 million	E90 Metered data is outside limit
The tariff has the right number of linked values	E87 Number of values does not match time resolution
The resolution must match the existing resolution when using function code <i>Change</i> .	D23 Time resolution is incorrect
With function code <i>change</i> , the VAT group is unchanged	E86 Incorrect value

4.33.6 Process for sending tariff price list from DataHub

DataHub forwards tariff information to all balance suppliers, and also to grid companies for tariffs marked as a tax.

After receiving information on tariffs, balance suppliers and grid companies update their systems with the tariffs received.

If the balance supplier discovers that the information does not match, they may either contact the grid company directly or draw attention to the problem by filling in a web form.

Note that this means that a balance supplier will receive information about tariffs for grid areas where the balance supplier is not active.

If the data relates to binding temporary price reductions (statutory regulation), the balance suppliers must include the tariff name and the new price on invoices to the relevant customers.

If the grid company discovers that the information on tariffs marked as taxes does not match, they can contact DataHub Support directly or draw attention to the problem by filling in a web form.

4.33.7 Corrections to submitted data

Players may only change tariffs if the change lies within the notice period for tariffs. Changes are made by sending a tariff message with function code *change*. The message will be sent to all balance suppliers immediately after approval in DataHub.

If a message with function code *stop* is submitted, links will also be stopped on the effective date. This stop process is effected once the notification period expires for the price element.

Once the notice period expires, corrections can only be made by contacting DataHub Support. If the error is considered to be significant, and a correction is made in DataHub, a *Price list update information* message will be sent to all balance suppliers immediately afterwards.

Detailed functionality provided by the market function for a specific system action.

4.33.8 Time limits for submission of tariff price list

Sender	Recipient	Time limit
Grid company TSO	DataHub	The <i>Update price list</i> message must be sent at least 31 calendar days before the effective date. Note that longer notice periods may apply under Regulation H2, and the <i>Update price list</i> message must be sent to DataHub in conformity with these notice periods.
DataHub	Grid company Balance supplier	The <i>Update to metering point links information</i> message must be sent at least 31 calendar days before the effective date.
DataHub	Balance supplier	DataHub must send the <i>Update price list information</i> message within one hour after receiving the data.

4.33.9 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.33.9.1 Update price list (RSM-033/D18)

RSM message	Update price list request	
Name	Value	Comment

RSM message		Update price list request
Name	Value	Comment
Business reason	D18	Update master data price information
Function code		Create/Change/Stop
Charge type		Tariff
Market player		GLN for grid company (including TSO)
Charge type ID		Player's own tariff ID
Validity date		Date tariff starts, changes or stops
Name		Name of the tariff
Description		An explanatory text about the tariff
Price		DKK, excluding VAT, with up to six decimal places
VAT class		No VAT VAT
Re-invoicing		Yes/No
Tax	No	
Resolution		Tariff is stated for a day or hour.

4.33.9.2 Update price list information (RSM-034/D18)

RSM message		Price list notification
Name	Value	Comment
Business reason	D18	Update master data price information
Function code		Create/Change/Stop
Charge type		Tariff
Market player		GLN for grid company (including TSO)
Charge type ID		Player's own tariff ID
Validity date		Date tariff starts, changes or stops
Name		Name of the tariff
Description		An explanatory text about the tariff
Price		Excluding VAT, with up to six decimal places
VAT class		No VAT VAT
Re-invoicing		Yes/No
Tax		Whether the tariff is a tax – Yes/No
Resolution		Tariff is stated for a day or hour

4.33.9.3 Update price list approval (RSM-033/D18)

RSM message		Update price list approval
Name	Value	Comment
Business reason	D18	Update master data price information
Reference		Reference to <i>Update price list request</i>

4.33.9.4 Update price list rejection (RSM-033/D18)

RSM message		Update customer master data rejection
Name	Value	Comment

RSM message		Update customer master data rejection
Business reason	D18	Update master data price information
Reference		Reference to <i>Update price list request</i>
Rejection reason		

4.33.9.5 Information on metering point links (RSM-031/D17)

RSM message		Master data settlement notification
Name	Value	Comment
Business reason	D17	Update settlement master data
Function code		Stop
Validity date		Stop date for metering point link
Market player		GLN for grid company
Metering point ID		GSRN
Charge type		Tariff
Charge type ID		The player's tariff ID
Number	1	Number is always set to 1 for tariffs

4.33.10 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-033
BRS name	Update tariff price list
EDI transactions:	
RSM ID	RSM-033
RSM name	Price list changes
RSM ID	RSM-034
RSM name	Send price list.
RSM ID	RSM-031
RSM name	Submit settlement master data

4.34 BRS-034: Request price list

4.34.1 Overview

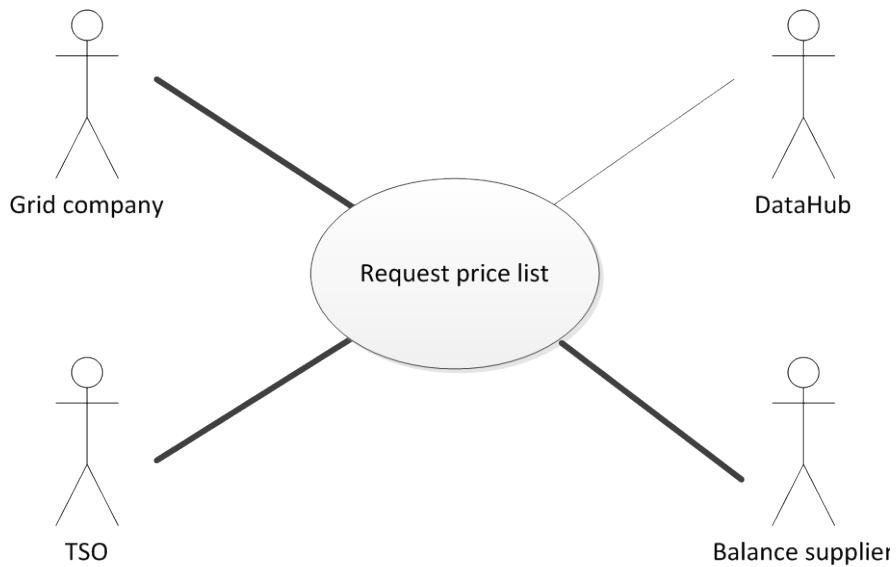


Figure 692 – Use case diagram for Price list request

If the need arises to have *Price list information* re-sent, a player may request this.

The balance supplier may request any price list.

The grid company and TSO may request their own data, such as their own tariffs.

4.34.2 Overview of exchanges

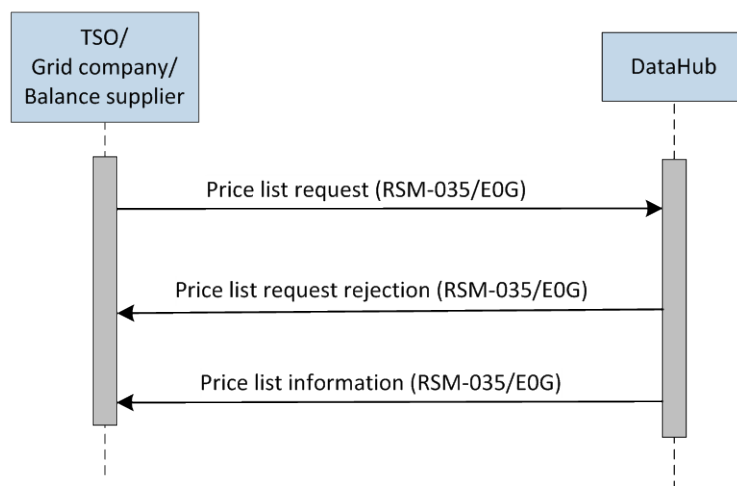


Figure 703 – Sequence diagram for Price list request

4.34.3 Initial state

The need arises for a balance supplier, grid company or TSO to receive price list information.

4.34.4 Process for price list request

The player sends a *Price list query* EDI message to DataHub.

The player may use a combination of one or more of the search criteria below.

In response to the player's request, DataHub sends a message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If the request is approved, an EDI message with the relevant price lists for the metering point for the given period will be sent.

4.34.5 Search criteria

The following search criteria may be used in the message:

- Market player
- Charge type (subscription, fee or tariff)
- Charge type ID
- Date interval/date (A search may be made using a date or a period, up to a maximum of 14 months due to the data volume)

4.34.6 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
The grid company is a legitimate player	E0I Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
The balance supplier is a legitimate player	E16 Balance supplier is not correct
Date or date range is valid	E50 Invalid period
Data is available in the period	E0H No data available

Detailed functionality provided by the market function for a specific system action.

4.34.7 Content of reply messages

The content of the reply message is all price elements that are/were applicable throughout the entire query period. The various instances are distinguished by date and function code.

For example, if a subscription, AA, is created on 1 Jan and the price is changed on 15 Jan and the price element is closed down again on 20 Jan and this BRS is used to inquire about subscription AA during the period 1-31 Jan, the message will contain:

Date	Price element	Function code
01.01	AA	Create
15.01	AA	Change
20.01	AA	Stop

If the query only covers the period 10-31 Jan, the same set of data will be returned, as creation on 01.01 is the active instance on 10.01.

The function code will reflect the relationship the price element was created with. This also means that if you are missing the first entry in your own system, and only query the period from 15.01 and onwards, the first entry received will be a *change* entry, and you will actually have to create (and not change) the entry your own system.

4.34.8 Time limits for price list request

Sender	Recipient	Time limit
DataHub	Balance supplier Grid company TSO	Within one hour after receipt of the request, DataHub either sends the relevant data or rejects the request.

4.34.9 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.34.9.1 Price list query (RSM-035/E0G)

RSM message		Price list query
Name	Value	Comment
Business reason	E0G	Master data for verification
Market player		GLN for grid company/TSO
Charge type		Subscription/Fee/Tariff
Charge type ID		
Period		Date interval/Date A search can be made for a snapshot on a specific day by only filling in the start date

4.34.9.2 Price list query rejection (RSM-035/E0G)

RSM message		Price list query rejection
Name	Value	Comment
Business reason	E0G	Master data for verification
Reference		Reference to Price list query
Rejection reason		

4.34.9.3 Price list information (RSM-035/E0G)

RSM message		Price list query response
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Name	Value	Comment
Business reason	EOG	Master data for verification
Function code		Create/Change/Stop
Market player		GLN for grid company/TSO
Charge type		Subscription/Fee/Tariff
Charge type ID		Player's own ID
Effective date		Date charge type starts, changes or ends
Name		Name of the price element
Description		An explanatory text about the price element
Price		Excluding VAT
VAT class		No VAT VAT will be charged
Re-invoicing		Yes/No
Tax		
Resolution		Price element resolution is Hour, Day or Month
Reference		Reference to <i>Price list query</i>

4.34.10 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-034
BRS name	Request for subscription, fee or tariff price list
EDI transactions:	
RSM ID	RSM-035
RSM name	Price list query

4.35 BRS-035: Discontinued

4.36 BRS-036: Update production obligation
 4.36.1 Overview

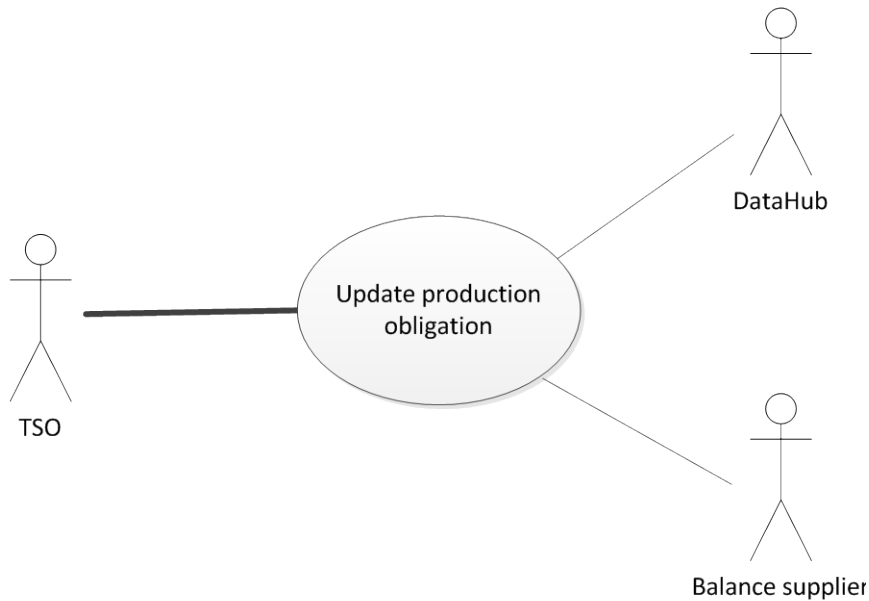


Figure 714 – Use case diagram for Update production obligation

The TSO can update whether or not a production metering point is subject to a production obligation. This business process is used by the TSO to update master data information.

For metering points covered by a production obligation, balance suppliers cannot implement a change of supplier and only the balance supplier registered for the production obligation may implement move-ins.

An update to production obligation will mean that all future change of supplier and move transactions for the metering point are cancelled or stopped. The TSO can only update master data if the balance supplier responsible for the production obligation is registered as the balance supplier for the metering point.

4.36.2 Overview of exchanges

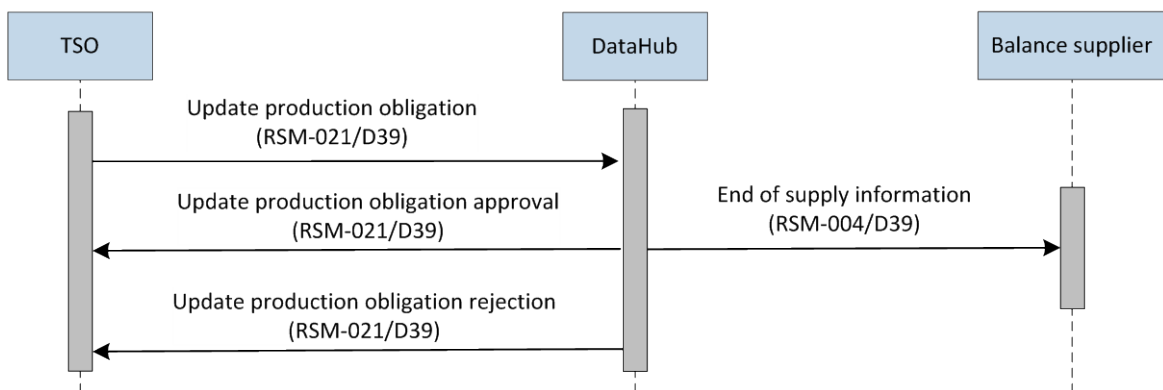


Figure 85 – Sequence diagram for Submission of master data – TSO

4.36.3 Initial state

The TSO has decided that a metering point should either be assigned to or removed from production obligation.

4.36.4 Process for the submission of master data from the TSO

The TSO sends an EDI message for the metering point to DataHub with business reason *Update production obligation*.

In response to the request, the TSO sends a message with a reply status (approved/rejected).

If approved, DataHub updates the metering point with the new information.

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

4.36.5 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
TSO is a legitimate player	D26 TSO is not correct
The metering point is registered as a production metering point	D18 Metering point type is incorrect
The metering point is not registered as closed down	D16 Physical status is incorrect
The balance supplier on the effective date is the production obligation balance supplier	E16 Balance supplier is not correct
The message has been received before the official deadline	E17 Date is not within set time limit

4.36.6 Process for the submission of information from DataHub

DataHub sends no data as a result of the update.

However, DataHub cancels any future change of supplier or move transactions for the metering point and sends cancellations to the relevant balance suppliers.

4.36.7 Time limits for submission of master data

Sender	Recipient	Time limit
TSO	DataHub	The message to update master data under this business process must have a validity date no later than three working days after the submission date or the previous working day

DataHub	Balance suppliers	DataHub must forward any data within one hour of receiving changes
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4.36.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.36.8.1 Update production obligation (RSM-021/D39)

RSM message	Update metering point master data request	
Name	Value	Comment
Business reason	D39	Production obligation
Metering point ID		
Validity date		Date from which changed master data applies
Production obligation		Yes / No
Other master data is submitted by the grid company in line with Chapter 5: Master data		

4.36.8.2 Update production obligation approval (RSM-021/D39)

RSM message	Update metering point master data approval	
Name	Value	Comment
Business reason	D39	Production obligation
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>

4.36.8.3 Update production obligation rejection (RSM-021/D39)

RSM message	Update metering point master data rejection	
Name	Value	Comment
Business reason	D39	Production obligation
Metering point ID		
Reference		Reference to <i>Update metering point master data request</i>
Rejection reason		

4.36.8.4 End of supply information (RSM-004/D39)

RSM message	Change of balance supplier notification	
Name	Value	Comment
Business reason	D39	Production obligation
Metering point ID		
Effective date		

4.36.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-036
BRS name	Update production obligation
EDI transactions:	
RSM ID	RSM-021
RSM name	Update metering point master data

4.37 BRS-037: Settlement master data for a metering point – subscription, fee and tariff links

4.37.1 Overview

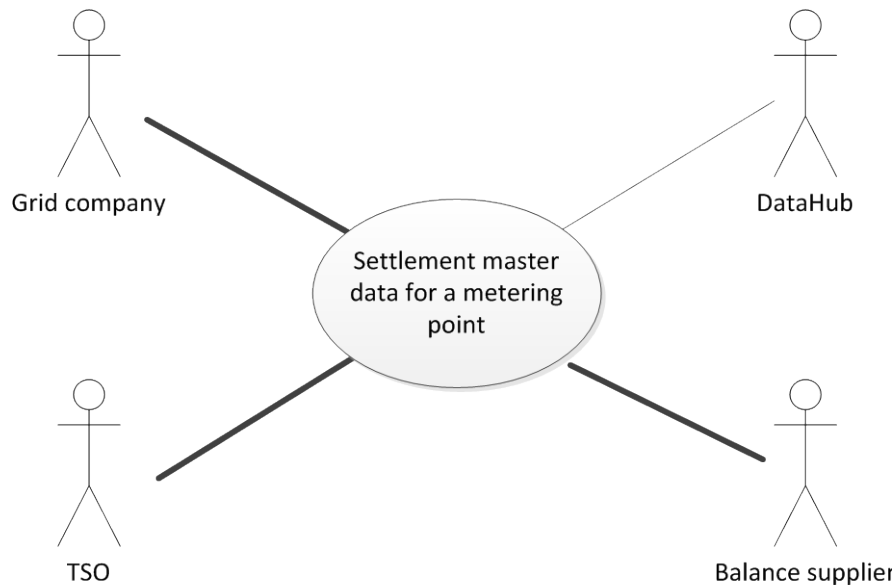


Figure 86 – Use case diagram for settlement data for a metering point

This process handles subscription, fee and tariff links for a metering point.

To create a correct wholesale settlement basis, the price elements in the submitted price lists must be linked to the metering points in DataHub, and these links must be forwarded to the relevant players.

Grid companies and the TSO must submit links for their own subscriptions, fees and tariffs per metering point to DataHub.

When metering points are created, DataHub links all relevant taxes (and TSO tariffs). Master data is then passed on to the relevant balance suppliers. It is then the balance supplier's responsibility to maintain this master data for taxes and TSO tariffs, in accordance with the collection conditions for the specific metering point.

If the link relates to a tariff marked as a tax, the balance supplier for the metering point is responsible for correctly linking to a metering point.

DataHub passes on all links to the relevant balance suppliers, and links relating to tariffs marked as taxes to the relevant grid company.

The chapter on 7 "Handling of linking" includes a further review of price linking.

4.37.2 Overview of exchanges

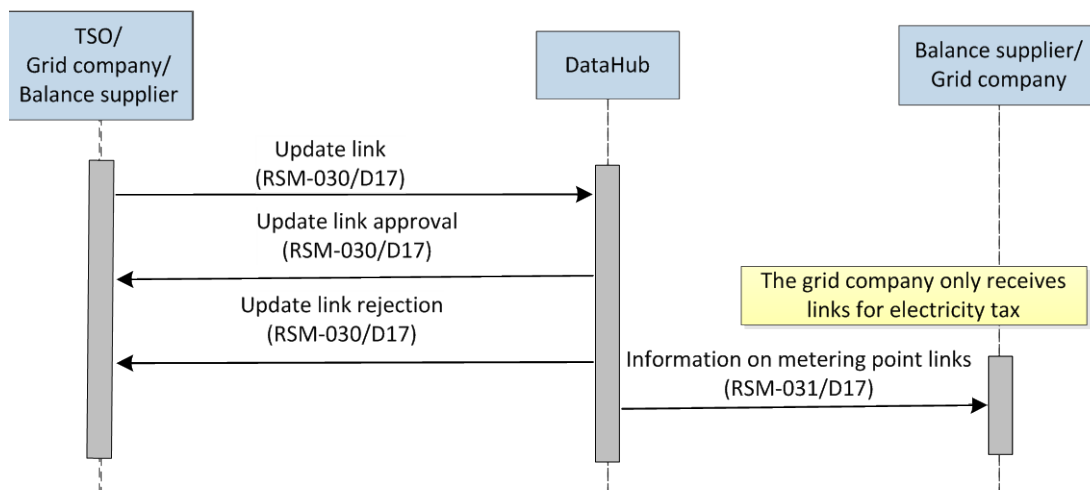


Figure 87 – Sequence diagram for settlement data for a metering point

4.37.3 Initial state

The need arises for a player to create or remove a link (subscription, fee or tariff) for a metering point, or to change the *number* data field for a subscription or fee.

4.37.4 Process for linking settlement master data for a metering point

The grid company or TSO sends an *Update link* EDI message with function code *Create* to DataHub with information on the subscriptions, fees and tariffs to be linked to the metering point.

The balance supplier sends an *Update link* EDI message with function code *Create* to DataHub with tariff links for the metering point, as taxes and PSOs are handled as tariffs in DataHub.

In reply to the grid company's notification, the TSO or balance supplier sends DataHub an EDI message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

The effective date for which a subscription is linked is the date the subscription applies from, and it will apply from this date onwards (the number of times per month specified in the message).

A fee will only be collected on the effective date (and the number of times specified in the message).

A tariff is linked on the effective date and applies from then on. The *number* data field cannot be used for tariffs. It is always set to 1.

4.37.5 Process for ending settlement master data for a metering point

To terminate a price element link to a metering point, the player sends an *Update link* EDI message with function code *Stop* to DataHub. The message contains information about which subscriptions, fees or tariffs should no longer be linked to the metering point. The validity date is the date the link ends.

In response to the player's request, DataHub sends an EDI message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

When a subscription, fee or tariff is terminated in line with business process *BRS-031: Update subscription price list*, *BRS-032: Update fee price list* or *BRS-033: Update tariff price list*, DataHub automatically sets the given links for the metering point to terminate from the effective date for the reported stop.

DataHub then sends an *Update to metering point links information* message with the affected metering points to the relevant balance suppliers.

Note that terminating a link only affects the link on the validity date and not later links (including changes) with the same charge type ID. These must also be updated with a *Stop* to terminate the charge type ID link completely.

4.37.6 Process for changing settlement master data for a metering point

This process can only be used to change the *Number* data field for subscription and fee links on a specific date.

Note that changing a link only affects the link on the validity date and not later links (including changes) with the same charge type ID. These must also be updated with the new number if the change is meant to apply at these times.

To change the *Number* data field for an existing link to a metering point, the player responsible for master data sends an *Update link* EDI message with function code *Change* to DataHub with information on new content in the *Number* data field and the date of the change.

In response to the player's request, DataHub sends an EDI message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub is updated with the new information.

4.37.7 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The metering point is not registered as an exchange metering point (E20), an analysis metering point (D02) or a metering point for internal calculation (D99)	D18 Metering point type is incorrect

The balance supplier is a legitimate player	E16 Balance supplier is not correct
The grid company is a legitimate player	E01 Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
When creating settlement master data, the same settlement master data does not exist for the metering point	D14 Settlement master data is not correct
Charge type ID for settlement master data exists on the effective date	D14 Settlement master data is not correct
The metering point is not registered as closed down	D16 Physical status is incorrect
The message has been received before the official deadline	E17 Date is not within set time limit
Validity date is correct in relation to the metering point status	E50 Invalid period
The reporting of special taxes by the balance supplier is permitted for the metering point	E22 Metering point blocked for change of supplier

4.37.8 Process for settlement master data for a metering point from DataHub

DataHub sends an *Information on metering point links* EDI message about the new or changed master data for the metering point to the relevant balance suppliers.

In this context, relevant balance suppliers means:

- For fees, the balance supplier who is supplier at the metering point on the effective date.
- For subscriptions, the balance supplier who is supplier for the metering point on the effective date and all future balance suppliers.
- For tariffs, the balance supplier who is supplier on the effective date and all future balance suppliers.

After receiving settlement master data, balance suppliers update their systems with the information received.

If the balance supplier discovers that the information does not match, they may either contact the grid company directly or draw attention to the problem by filling in a web form.

Note that this means that a future balance supplier must be able to receive settlement master data messages before supply commences. A balance supplier must also be able to receive settlement master data messages after supply to a metering point has ended, with respect to any corrections.

If settlement master data relates to subscriptions or tariffs marked as mandatory for re-invoicing, the balance suppliers must include the subscription name or tariff name and new price on the invoice to relevant customers.

DataHub sends an *Information on metering point links* EDI message regarding tariffs marked as taxes to the relevant grid company.

After receiving settlement master data, the grid company updates their system with the information received.

Note that settlement master data is not forwarded to the player which submitted the *Update link* message.

Note that a tariff (zero tariff) must be forwarded for metering points that are tax-exempt.

Note that when establishing electrical heating for a metering point, DataHub changes tariff links for the parent consumption metering point on the *Electrical heating tax date*. DataHub then sends the changed tariff links as part of this process.

Note that when removing electrical heating for a metering point, DataHub changes tariff links for both the parent consumption metering point and child metering point on the *Electrical heating tax date* (stop date for electrical heating) (D14). DataHub then sends the changed tariff links as part of this process.

4.37.9 Corrections

Messages with an effective date 2-90 days back in time are considered corrections. They are received in the normal manner with an effective date outside the time limit permitted in the regulation. Corrections must be carried out by the player directly and may only correct genuine errors.

Once the time limit expires, corrections can only be made by contacting DataHub Support. If a correction is made in DataHub, an *Information on metering point links* message will be sent to the relevant balance suppliers immediately after the correction.

4.37.10 Time limits for settlement master data for a metering point

Sender	Recipient	Time limit
Grid company	DataHub	Requests to update settlement master data must be made within 90 calendar days after the effective date. Note that under Regulation H3, other time limits may apply which must be observed. Normally no later than 1 working day after the effective date, but 35 calendar days for fees.
TSO	DataHub	Requests to update settlement master data must be made as quickly as possible and no later than 3 years after the effective date.
Balance supplier	DataHub	Tax link: Information on settlement master data must be sent within 21 calendar days after the effective date. Note that under Regulation H3, other time limits may apply which must be observed. Normally no later than one working day after the effective date.
DataHub	Balance supplier	DataHub must send data within one hour of receiving it.

4.37.11 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These ‘key data’ refers to the data of significance to process handling in relation to DataHub.

4.37.11.1 Update link (RSM-030/D17)

RSM message		Update settlement master data request
Name	Value	Comment
Business reason	D17	Update settlement master data
Function code		Create/Change/Stop
Market player		Owner of the price element. GLN for grid company/TSO (the balance supplier must use the GLN for TSO for tariff links)
Metering point ID		GSRN
Charge type		Subscription/Fee/Tariff
Charge type ID		Player's ID for subscription/fee/tariff
Validity date		Start date for update to metering point link
Number		Number of times the same subscription or fee is to be charged. Must be positive. If the function code is <i>stop</i> , this number is ignored. Number is always set to 1 for tariffs

4.37.11.2 Update link approval (RSM-030/D17)

RSM message		Update settlement master data approval
Name	Value	Comment
Business reason	D17	Update settlement master data
Metering point ID		
Reference		Reference to <i>Update settlement master data request</i>

4.37.11.3 Update link rejection (RSM-030/D17)

RSM message		Update settlement master data rejection
Name	Value	Comment
Business reason	D17	Update settlement master data
Metering point ID		
Reference		Reference to <i>Update settlement master data request</i>
Rejection reason		

4.37.11.4 Information on metering point links (RSM-031/D17)

RSM message		Master data settlement notification
Name	Value	Comment
Business reason	D17	Update settlement master data
Function code		Create/Change/Stop
Market player		GLN for grid company/TSO

RSM message		Master data settlement notification
Name	Value	Comment
Metering point ID		GSRN
Charge type		Tariff
Charge type ID		Player's ID for tariff
Validity date		Date on which metering point link becomes active
Number		Number of times the same subscription or fee is to be charged. Must be positive. If the function code is <i>stop</i> , this number is ignored. Number is always set to 1 for tariffs

4.37.12 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-037
BRS name	Settlement master data for metering point – Tariff
EDI transactions:	
RSM ID	RSM-030
RSM name	Change to settlement master data
RSM ID	RSM-031
RSM name	Submit settlement master data

4.38 BRS-038: Request for settlement master data for metering point

4.38.1 Overview

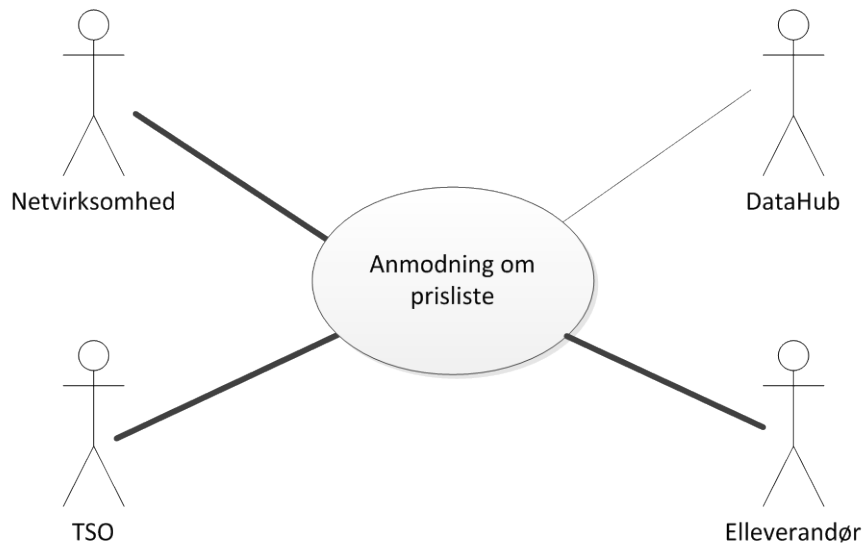


Figure 88 – Use case diagram for Request settlement master data for metering point

To see which subscriptions, fees and tariffs have to be paid for a given metering point, a balance supplier (current, previous or potential), grid company or TSO can request settlement master data for the metering point.

The chapter on 7 “Handling of linking” includes a further review of price linking.

4.38.2 Overview of exchanges

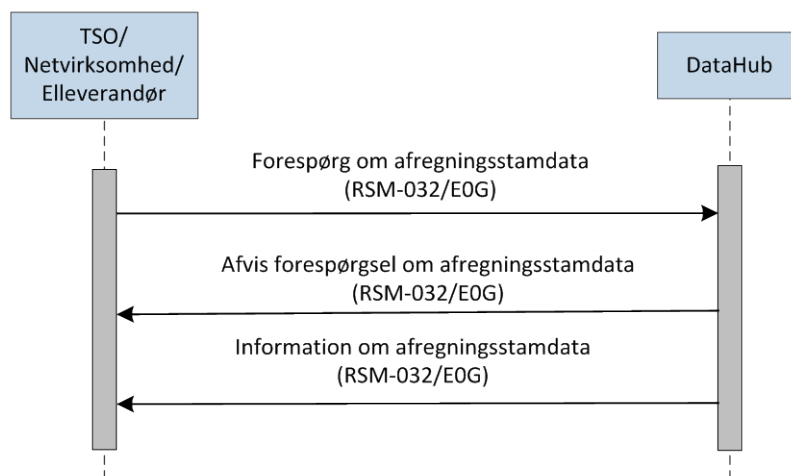


Figure 89 – Sequence diagram for Settlement master data for metering point request

4.38.3 Initial state

A grid company or balance supplier needs to see settlement links for a metering point, or the TSO needs to see tariff links.

4.38.4 Process for submitting a request for settlement master data

A player sends an EDI message with a request for settlement master data to DataHub.

In response to the player's query, DataHub sends an EDI message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If approved, DataHub sends an EDI message containing the relevant metering point data to the player.

4.38.5 Search criteria

The following may be used as search criteria for a request for settlement master data.

- Metering point ID
- Date interval/date (A search may be made using a date or a period, up to a maximum of 14 months (425 days) due to the data volume)

4.38.6 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The balance supplier is a legitimate player	E16 Balance supplier is not correct
Date or date range is valid	E50 Invalid period
The grid company is a legitimate player	E01 Grid company is not correct
TSO is a legitimate player	D26 TSO is not correct
Data is available	E0H No data available

4.38.7 Content of reply message

The content of the reply message is all links that are/were applicable throughout the entire query period. The various instances are distinguished by date and function code.

For example, if a link to subscription AA is created on 1 Jan and the number is changed on 15 Jan and the link is terminated again on 20 Jan and this BRS is used to query links during the period 1-31 Jan, the message will contain:

Date	Price element	Number	Function code
01.01	AA	1	Create
15.01	AA	3	Change

20.01	AA	0	Stop
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If the query only covers the period 10-31 Jan, the same set of data will be returned, as the link created on 01.01 is the active link on 10.01.

The function code will reflect the relationship the link was created with. This also means that if you are missing the first entry in your own system, and only query the period from 15.01 and onwards, the first entry received will be a *change* entry, and you will actually have to create (and not change) the entry your own system.

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Detailed functionality provided by the market function for a specific system action.

4.38.8 Time limits for settlement master data for a metering point

Sender	Recipient	Time limit
Grid company Balance supplier TSO	DataHub	Requests for settlement master data for a metering point may be submitted at any time.
DataHub	Grid company Balance supplier	DataHub must forward data within one hour of receiving the request.

4.38.9 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.38.9.1 Settlement master data query (RSM-032/EOG)

RSM message		Settlement master data query
Name	Value	Comment
Business reason	EOG	Master data for verification
Metering point ID		
Period		Date interval/Date A search can be made for a snapshot on a specific day by only filling in the start date

4.38.9.2 Settlement master data query rejection (RSM-032/EOG)

RSM message		Settlement master data query rejection
Name	Value	Comment
Business reason	EOG	Master data for verification
Metering point ID		
Reference		Reference to <i>Settlement master data query</i>
Rejection reason		

4.38.9.3 Settlement master data information (RSM-032/EOG)

RSM message		Settlement master data query reply
Name	Value	Comment
Business reason	EOG	Master data for verification
Metering point ID		
Market player		GLN for grid company
Charge type		Subscription, fee or tariff
Charge type ID		Player's subscription, fee or tariff ID
Validity date		
Number		
<i>Reference</i>		Reference to <i>Settlement master data query</i>

4.38.10 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-038
BRS name	Request for settlement master data for metering point
EDI transactions:	
RSM ID	RSM-032
RSM name	Settlement master data query

4.39 BRS-039: Request for service from grid company

4.39.1 Overview

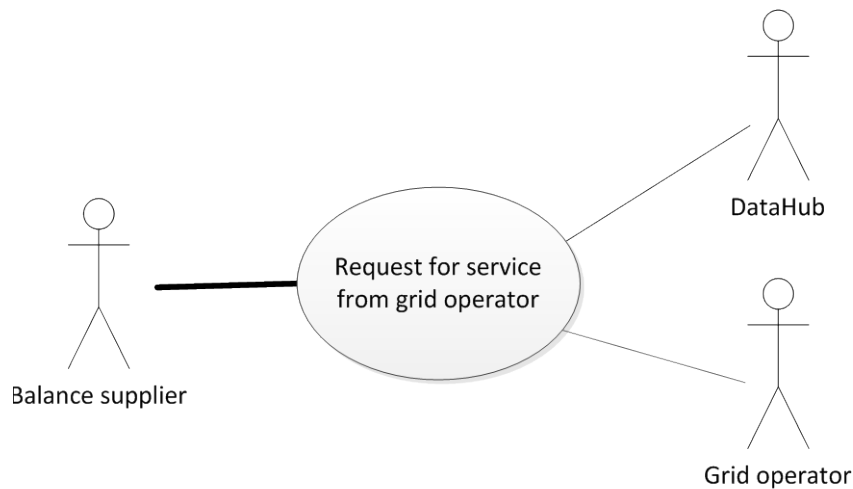


Figure 90 – Use case diagram for Request for service from grid company

This business process allows a balance supplier to ask a grid company to provide selected well-defined services via an EDI message.

The grid company may either carry out or reject the service request.

The following services are covered:

1. Ordinary metering point disconnection*
2. Reconnect a metering point
3. Extra meter reading (consumption statement)
4. Close down metering point
5. Meter check
6. Change to Flex-settlement
7. Change to Hourly-settlement

*Note: Requests for disconnection associated with expiry of the customer agreement cannot be handled via this process, but must be effected via BRS-002 *End of supply*.

A request for *Ordinary disconnection* may only be submitted by the balance supplier by agreement with the metering point customer. However, for business customers, after the electricity supplier has completed the reminder procedure, it may submit a request for disconnection if the customer has been made aware that non-payment will lead to disconnection of the electricity supply (tacit acceptance).

A request for *connection, reconnection, change of settlement method and closing down a metering point* may only be submitted by the balance supplier by agreement with the metering point customer.

If the grid company accepts a service request, the grid company must initiate the relevant business processes for the service by sending messages to DataHub.

4.39.2 Overview of exchanges

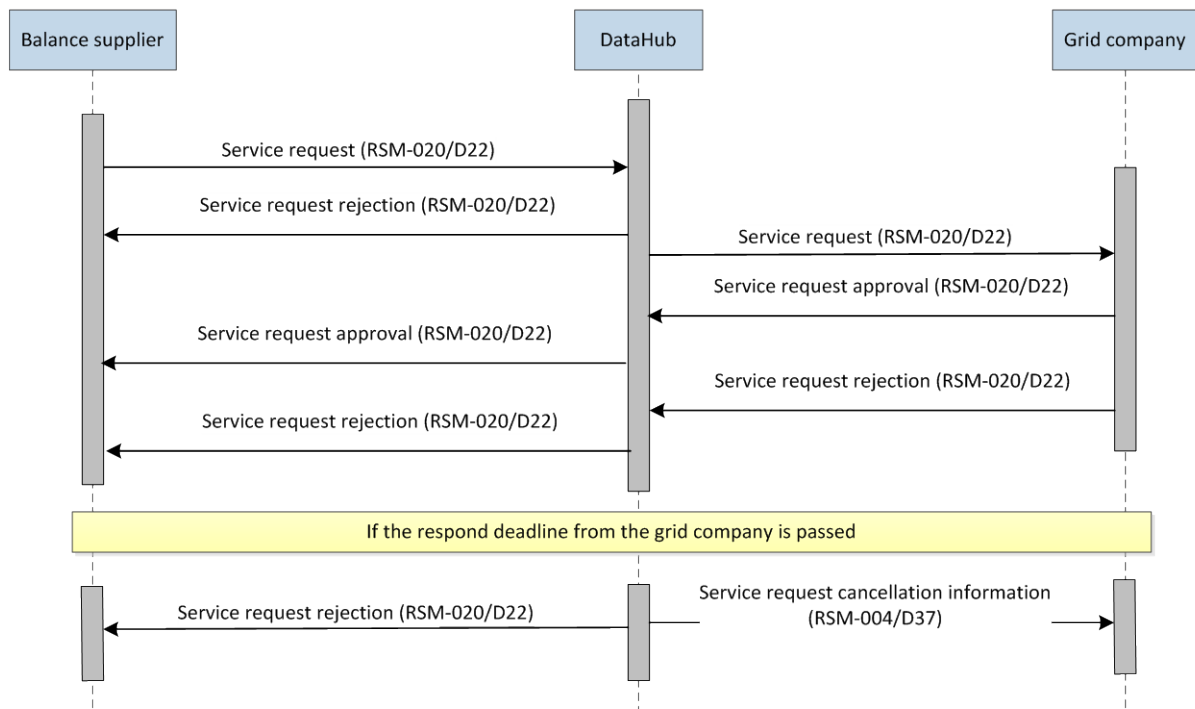


Figure 721 – Sequence diagram for Request for service from grid company

4.39.3 Initial state

A balance supplier needs a service performed on a metering point from a grid company.

4.39.4 Process for service request

The balance supplier sends an EDI message to DataHub requesting a service.

DataHub registers the request and validates the message before forwarding it to grid company.

If rejected, DataHub sends an EDI message with reply status *rejected* to the balance supplier, stating one of the reasons given below under validation rules.

If approved, DataHub forwards the request received from the balance supplier to the grid company.

In reply to the balance supplier's request, the grid company sends an EDI message with a reply status (approved/rejected) to DataHub, which forwards the reply to the balance supplier and the process is complete.

The grid company sends the reply to the balance supplier when the grid company has determined whether the action can be carried out in accordance with the applicable legislation, regulations, trade agreements, etc.

If rejected, the grid company must state one of the reasons listed in the *Reject Request service* table.

If the request is approved, the grid company initiates the requested service and the relevant business process by notifying DataHub.

If the grid company does not reply within the time limit, DataHub sends *request for service rejection* to the balance supplier with *incorrect process* as the Rejection reason, and a *request for service cancellation* EDI message to the grid company.

4.39.5 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The electricity supplier is the supplier to the metering point as at the date of submission	E16 Balance supplier is not correct
The grid company is the player responsible for the metering point	E01 Grid company is not correct
The request has been filled in correctly	D27 Request is not valid

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Detailed functionality provided by the market function for a specific system action.

Service request has been filled in correctly	D27 Request is not valid
There is no pending change of supplier for the metering point	D39 Current termination of supply

4.39.6 Time limits for service request

Sender	Recipient	Time limit
Balance supplier	DataHub	Requests may be submitted at any time
DataHub	Grid company	DataHub must forward the request to the grid company within one hour of receiving it.
Grid company	DataHub	The grid company must reply as soon as possible. If a reply has not been sent within 30 calendar days after receiving the request, the request will be deleted in DataHub, and DataHub sends a <i>request for service rejection</i> message with business reason <i>service request</i> to the balance supplier, and a <i>request for service cancellation</i> EDI message to the grid company
DataHub	Balance supplier	DataHub must send a reply within one hour after receiving a reply from the grid company, or after expiry of the time limit for a reply from the grid company.

4.39.7 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.39.7.1 Request for service (RSM-020/D22)

RSM message		Request for service
Name	Value	Comment
Business reason	D22	Service request
Metering point ID		
Service request		Ordinary disconnection Reconnection Extra meter reading Closing down Meter check Change to Flex-settlement Change to Hourly-settlement
Requested implementation period		The specified period must be within the interval in which the balance supplier is the supplier for the metering point
Market player		Balance supplier's GLN number. Must be filled in if the service request is 'Ordinary disconnection' For other service requests, filling in the field is optional for the balance supplier.

4.39.7.2 Service approval (RSM-020/D22)

RSM message		Approve service
Name	Value	Comment
Business reason	D22	Service request
Metering point ID		
Reference		Reference to <i>Service request</i>

4.39.7.3 Service rejection (RSM-020/D22)

RSM message		Reject service
Name	Value	Comment
Business reason	D22	Service request
Metering point ID		
Reference		Reference to <i>Service request</i>
Rejection reason		The grid company must use the following Rejection reason: D28 (Service request rejection) If the grid company fails to reply, D20 is specified (Incorrect process)

4.39.7.4 Service request cancellation information (RSM-004/D37)

RSM message	Change of balance supplier notification	
Name	Value	Comment
Business reason	D37	Service request cancellation
Metering point ID		
Effective date		

4.39.8 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-039
BRS name	Request service from grid company
EDI transactions:	
RSM ID	RSM-020
RSM name	Service query
RSM ID	RSM-004
RSM name	Change of balance supplier notification

4.40 BRS-040: Change of balance responsible party - BRP by balance supplier

4.40.1 Overview

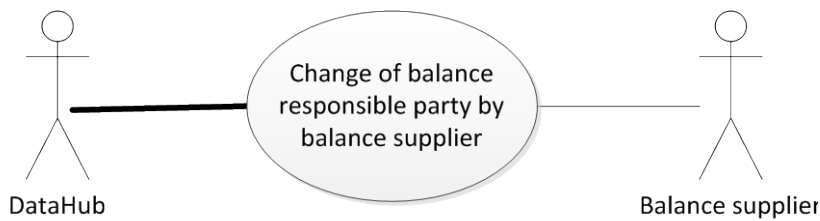


Figure 92 – Use case diagram for Change of BRP by balance supplier

This process is used by the balance supplier to change BRP for consumption and production metering points. A change of BRP must be reported to DataHub via the market portal.

The process is manual.

Note that for consumption metering points, the balance supplier changes BRP for the entire grid area, as a balance supplier may only have one BRP per grid area.

For production metering points, the BRP can be changed for either the entire grid area or one or more selected metering points in a grid area, as a balance supplier may have several BRPs in a grid area.

4.40.2 Overview of exchanges

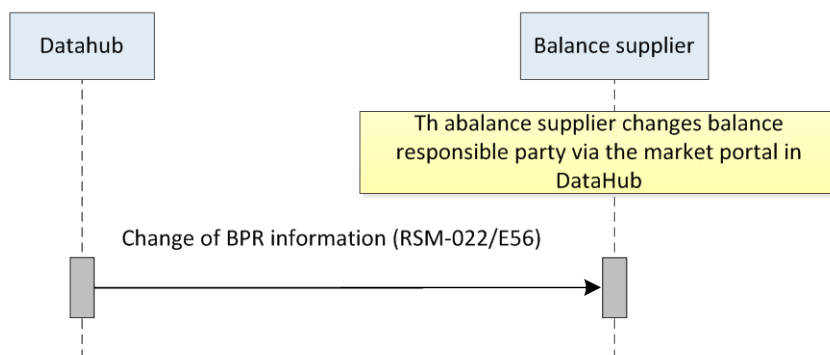


Figure 733 – BRS-040: Change of BRP by balance supplier

4.40.3 Initial state for Change of BRP by balance supplier

A balance supplier has entered into a contract with a new BRP from a given point in time, covering all consumption or production metering points in one or more grid areas, or selected production metering points in one or more grid areas.

4.40.4 Process for Change of BRP by balance supplier

Upon an agreement with a BRP, a balance supplier may change the BRP in DataHub via the market portal.

The balance supplier can choose in the market portal whether or not DataHub should send a message to the balance supplier in connection with the change of BRP, regarding the affected metering points. The balance supplier may choose to have an email and/or a master data message sent.

4.40.5 Notification of BRP

The BRP will receive an email indicating the balance supplier and which grid area(s) the balance supplier has specified the BRP as covering.

For production metering points, the BRP may be specified at metering point level.

4.40.6 Time limits for change of BRP by balance supplier

Sender	Recipient	Time limit
Balance supplier	DataHub	After concluding an agreement with an approved BRP, the balance supplier can change BRP effective from any date, giving 10 working days' notice.
Balance supplier	DataHub	A change of BRP cannot be made more than 60 days before the effective date.
DataHub	Balance supplier	DataHub must send a master data message no later than one working day after the effective date

4.40.7 Data content

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.40.7.1 Change of BRP information (RSM-022/E56)

RSM message		Metering point master data notification
Name	Value	Comment
Business reason	E56	Change of BRP
Metering point ID		
Validity date		Date from which changed master data applies
Balance supplier		
Start of supply		
Balance responsible party (BRP)		Name of the new BRP
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

4.40.8 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-040
BRS name	Change of BRP by balance supplier
EDI transactions:	
RSM ID	RSM-022
RSM name	Metering point master data notification

4.41 BRS-041: Discontinued

4.42 BRS-042: Initiate cancel change of supplier by customer

4.42.1 Overview

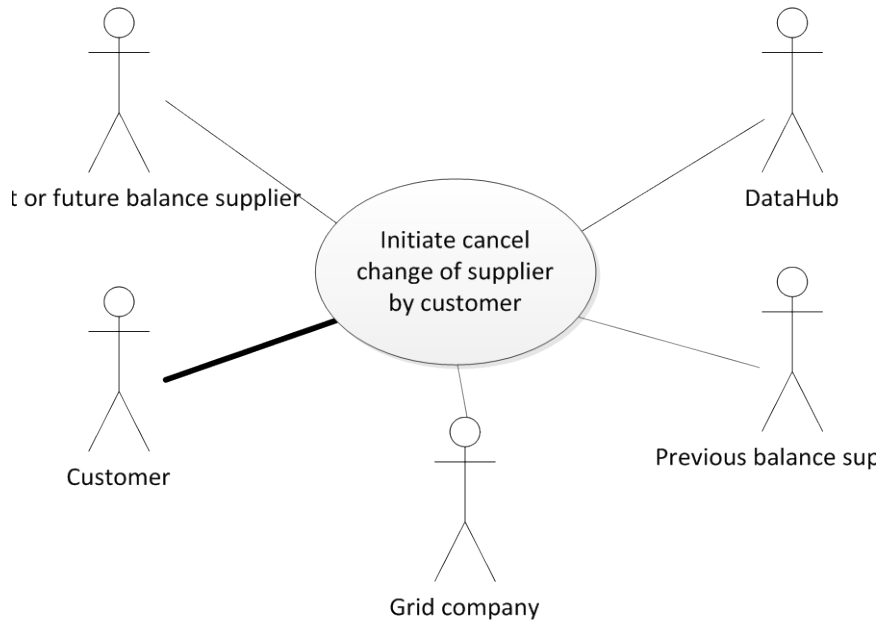


Figure 94 – Use case diagram for Initiate cancel change of supplier by customer

Customers must be able to initiate a process to handle an incorrect change of supplier in DataHub via the customer portal.

When a customer initiates the process to cancel a change of supplier, no attention is given to whether the three working day deadline for cancellation has expired.

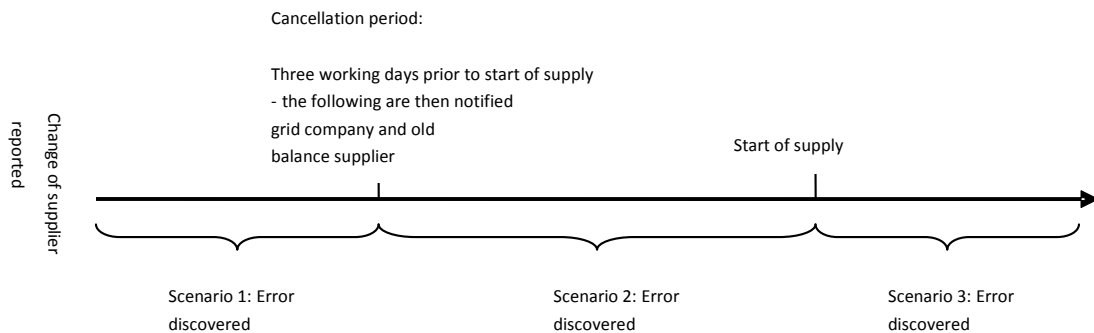


Figure 95 – Scenarios for discovering errors in connection with change of supplier

The process is partly manual and partly based on the exchange of EDI messages.

Once the process has been initiated, various outcomes are possible depending on whether the current or future 'incorrect' balance supplier accepts that an error has occurred, and whether or not the previous balance supplier will take back the customer if so.

This means that the process results in one of the following situations:

- the customer's current/future balance supplier denies that an error has occurred
- the customer gets their previous balance supplier back
- the customer retains their current balance supplier

The customer must be informed that even if the current or future 'incorrect' balance supplier accepts a cancellation, the customer may still end up keeping the current balance supplier if the previous balance supplier does not take back the customer.

4.42.2 Overview of exchanges

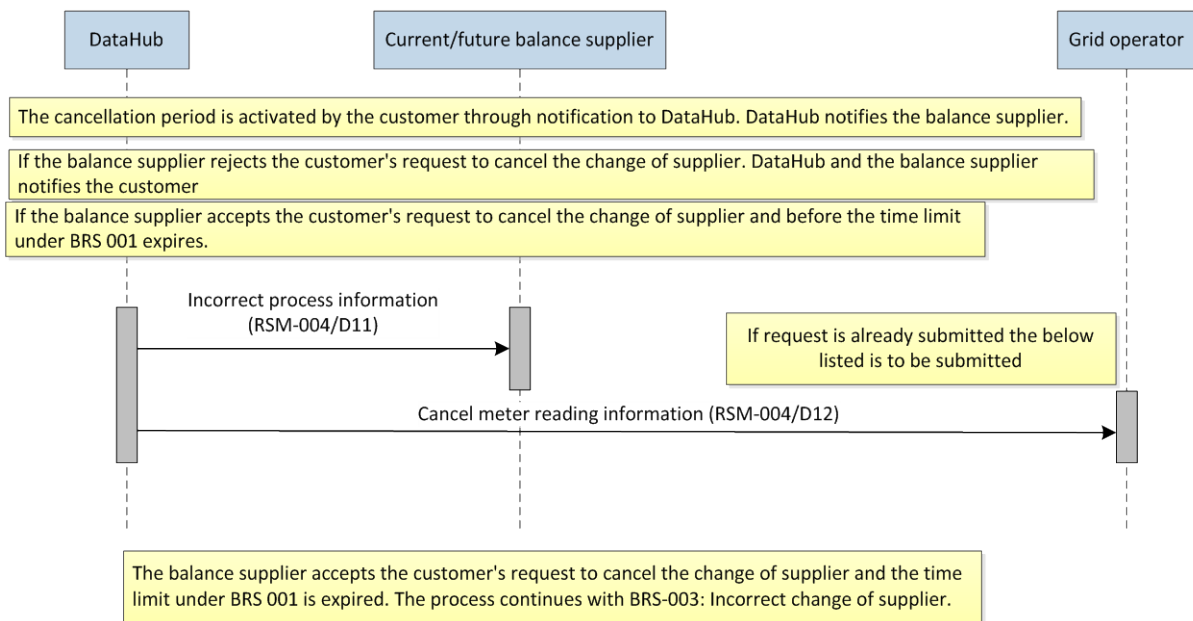


Figure 746 – Sequence diagram for Initiate cancel change of supplier by customer

4.42.3 Initial state

The customer has reported an incorrect change of supplier via the customer portal.

4.42.4 Process for Initiate cancel change of supplier by customer

DataHub registers the customer's notification and the process continues by DataHub sending a web form with the customer's notification to the balance supplier the customer views as 'incorrect'. The web form must contain the metering point ID, customer name, reason for the cancellation request (change of mind or error) and the final date for the balance supplier to accept or reject the customer's cancellation request.

The balance supplier must return the web form before the time limit expires, accepting or rejecting the customer's cancellation request.

4.42.5 The balance supplier rejects the customer's request to cancel the change of supplier

If the balance supplier concludes (after contacting the customer, if necessary), that the customer's claim is not correct, the web form is returned to DataHub with the reply.

The balance supplier must also notify the customer directly.

The customer also receives a message from DataHub on their login page regarding the balance supplier's rejection. Information is also provided about the customer's options to appeal, and the general option to change supplier with 10 working days' notice.

The customer is also made aware that terminating a valid agreement may have financial consequences.

The process is then completed in DataHub.

4.42.6 The balance supplier accepts the customer's request to cancel the change of supplier

If the balance supplier accepts the customer's request, or if the balance supplier does not reply within the time limit, the process to cancel the change of supplier will be initiated.

The balance supplier's failure to reply to the web form will be seen as equivalent to acceptance. It will also be logged that the balance supplier has not responded within the time limit.

The remainder of the process depends on whether acceptance (formal or implicit) was given before or after expiry of the cancellation period for a change of supplier.

Scenario 1:

If the case concerns a future balance supplier and acceptance is given before expiry of the cancellation period, DataHub will cancel the change of supplier immediately after acceptance by the balance supplier.

DataHub sends an *Incorrect process information* message to the future balance supplier.

If DataHub has sent a *Meter reading request* EDI message to the grid company in connection with the change of supplier, when cancelled, DataHub will send a *Meter reading cancellation information* message to the grid company so that the grid company can cancel the pending meter reading.

This completes the BRS-001 process underway, and process BRS-042 is also completed at the same time.

Scenario 2 and 3:

If acceptance is given after expiry of the cancellation period, the process continues with *BRS-003: Incorrect change of supplier*.

4.42.7 Time limits for incorrect change of supplier

Sender	Recipient	Time limit
DataHub	Balance supplier(s)	DataHub sends a web form within 1 hour after receipt of the customer's request
DataHub	Current/future balance supplier	The balance supplier must send an approve/reject notification to DataHub via web form within 5 working days.
DataHub	Balance supplier	If the balance supplier has not responded within the time limit, DataHub will continue the process within 1 hour after expiry of the time limit

4.42.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These ‘key data’ refers to the data of significance to process handling in relation to DataHub.

4.42.8.1 Incorrect process information (RSM-004/D11)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D11	Incorrect process
Metering point ID		
Effective date		Start date for incorrect change of supplier

4.42.8.2 Cancel meter reading information (RSM-004/D12)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D12	Cancel meter reading request
Metering point ID		
Effective date		Start date for incorrect change of supplier

4.42.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-042
BRS name	Initiate cancel change of supplier by customer
EDI transactions:	
RSM ID	RSM-004
RSM name	Change of balance supplier notification

4.43 BRS-043: Change of supplier at short notice

4.43.1 Overview

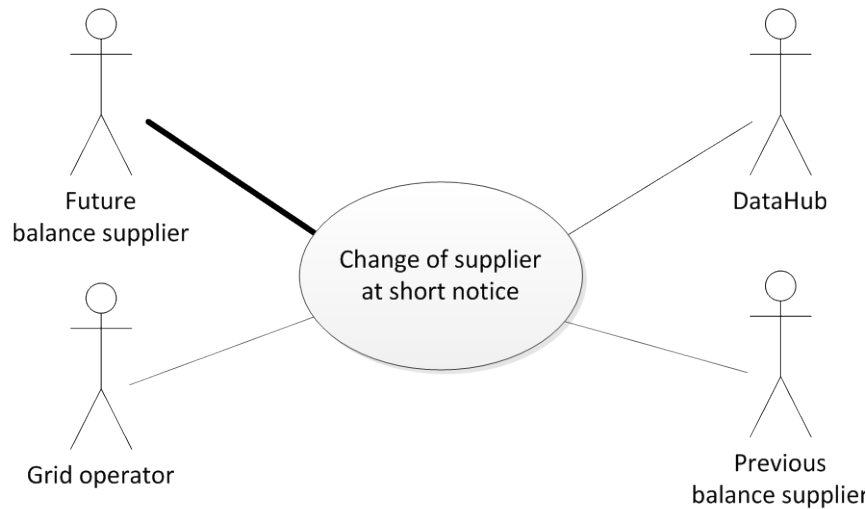


Figure 97 – Use case diagram for change of supplier at short notice

A change of supplier is a change of balance supplier for a given metering point.

It is always the balance supplier taking over the metering point (future balance supplier) who must notify DataHub of the change of supplier. The customer is not allowed to do it himself.

A change of supplier relates to a consumption or production metering point. A metering point is the smallest unit in the power system for which a change of supplier can be effected.

In the EDI communication, a metering point is defined by an 18-digit GSRN number.

This process may only be used in the following circumstances:

- End of supply has been submitted for the metering point (*BRS-002: End of supply*)
- There are 10 working days or less until the effective date for the coming end of supply.

The change of supplier will be effected as quickly as possible (ie the same day), but not earlier than the effective date for the submitted end of supply.

Changes of supplier at short notice cannot be cancelled.

The ordinary renewal of a contract with a current balance supplier is not normally considered a change of supplier, and cannot be used.

4.43.2 Overview of exchanges

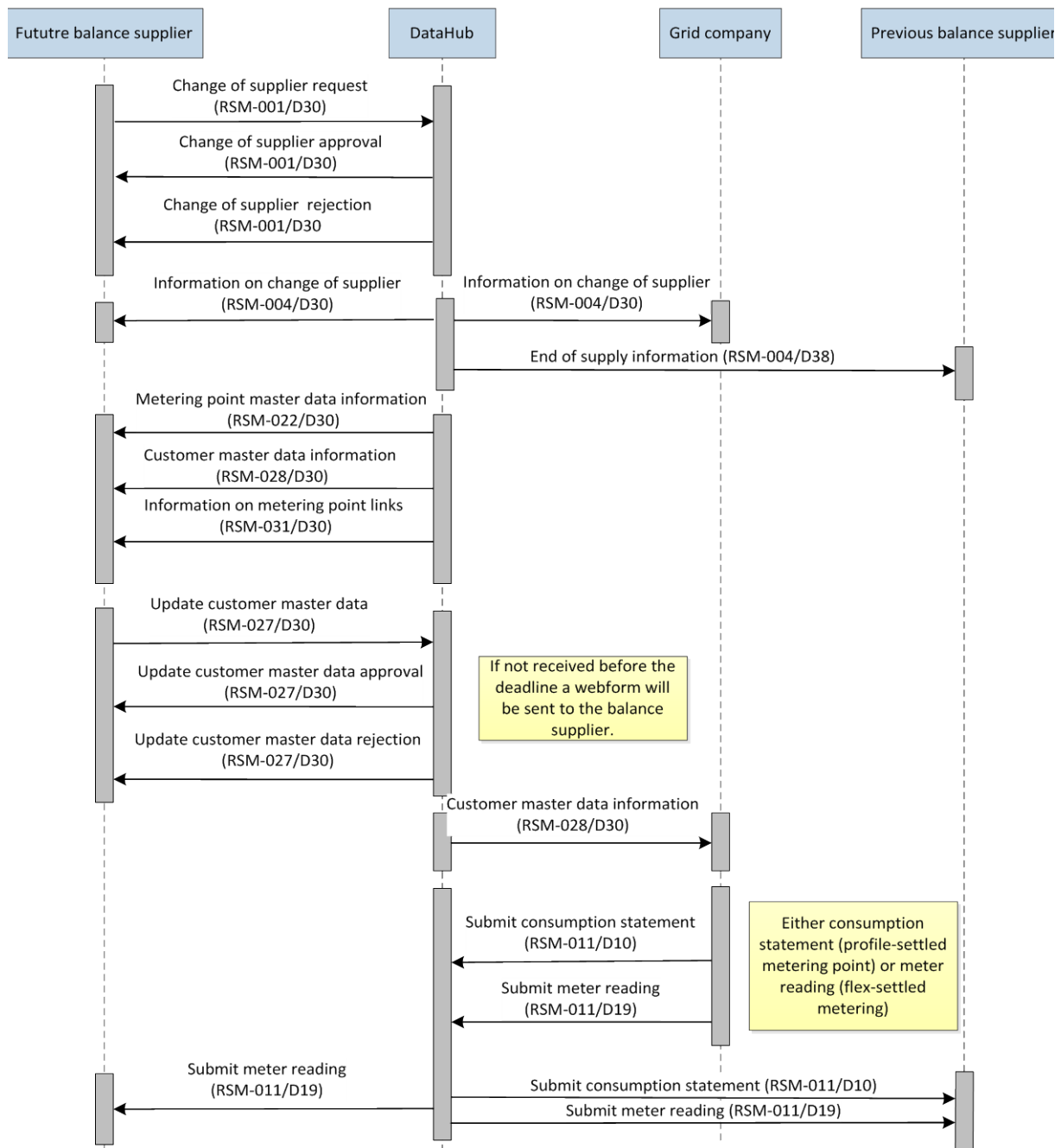


Figure 98 – Sequence diagram for Change of supplier at short notice

4.43.3 Initial state

Before a change of supplier can be initiated, the future balance supplier has to have informed of the customer that an end of supply has been submitted for the metering point. If an end of supply has not been reported, the change of supplier will be rejected.

4.43.4 Process for change of supplier at short notice

Once the contract is concluded, the future balance supplier sends the *Request change of supplier* EDI message with business reason *change at short notice* to DataHub.

More detailed specification of the content for CPR/CVR numbers is available in Regulation I: *Master data*. The specific handling of CPR/CVR numbers in DataHub is described in BRS-015, *Submission of customer master data by balance supplier*.

In reply to the balance supplier's notification of change of supplier, DataHub sends an EDI message with a reply status (approved/rejected).

If rejected, DataHub must specify one of the reasons listed below under the validation rules.

If the change of supplier is approved, DataHub sends an *Information on actual start of supply* EDI message with the correct effective date to the future balance supplier, as they do not necessarily know the effective date at the time of the notification.

DataHub then sends EDI messages containing relevant master data for the metering point to the balance supplier. If the metering point has child metering points, master data for these metering points will be included. The balance supplier should note that the balance supplier's system must be able to receive child metering points before the parent metering point.

For the *Customer master data information* message, only the data not linked to the previous balance supplier will be sent. This means that no information will be sent regarding CPR numbers.

For *Metering point link information*, only the information registered as valid on the effective date or later will be sent.

The balance supplier is responsible for checking the change of supplier is effected for the correct metering point and customer, based on the customer name and metering point address.

The grid company will be notified that a balance supplier has been assigned to the metering point by DataHub sending a *Change of supplier information* EDI message with business reason *Change at short notice*.

When the future balance supplier has confirmed that the change of supplier has been correctly effected, the balance supplier must check the information the balance supplier is responsible for under Regulation I, and submit an *Update customer master data* message with business reason *Change at short notice* to DataHub before the time limit expires.

The *customer master data* submitted for the metering point must always include information on customer name(s) and associated CPR/CVR number(s). If there are two customers for the metering point, there must be CPR numbers for both.

Note that electrical heating status cannot be changed in this business process. If an attempt is made to change this, the message will be rejected with the error: *Change to electrical heating status not permitted*.

The submitted master data will be validated in line with the rules in *BRS-015: Submission of customer master data by balance supplier*.

The balance supplier must return the updated master data to DataHub before the deadline.

Any other future balance suppliers for the metering point will also receive *Customer master data information* with business reason *Update customer master data*, in line with BRS-015.

If DataHub does not receive the necessary master data information from the balance supplier before the deadline, a reminder will be sent to the balance supplier via email.

A future balance supplier should note that the customer master data sent will apply from the effective date. This applies even if the future balance supplier has received later updates to customer master data. It will therefore be the future balance supplier's responsibility to update the customer master data on the effective date, if the balance supplier wishes to use this customer master data submitted later.

If the metering point has a connection status of *new*, the process is effected as a change of supplier for a connected metering point. However, a consumption or meter reading will not be made for the metering point. However, the supply of electricity will only commence once the balance supplier has received a master data message with connection status *connected* and an effective date for start of supply.

4.43.5 Validation rules

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The metering point is registered as a consumption or production metering point	D18 Metering point type is incorrect
The metering point is registered as a production metering point and is not subject to a purchase obligation	E22 Metering point blocked for change of supplier
End of supply has been submitted for the metering point	D38 End of supply has not been reported for the metering point
There are less than 10 days to the effective date for end of supply	E17 Date is not within set time limit
Status of metering point is new, connected or disconnected	D16 Physical status is incorrect
The metering point has a balance supplier assigned	E22 Metering point blocked for change of supplier
The metering point customer is not registered as (<i>unknown</i>)	E22 Metering point blocked for change of supplier
The balance supplier is a legitimate player	E16 Balance supplier is not correct

The balance responsible party is a legitimate player	E18 Balance responsible party is not correct
There has been no change of supplier on the day	E22 Metering point blocked for change of supplier
The message has been received before the official deadline	E17 Date is not within set time limit
CPR/CVR corresponds to registered information*	D17 CPR/CVR is not correct
A move has not been requested for the metering point	D07 Move in progress
The new electricity supplier is the same as the current electricity supplier	E16 The electricity supplier is not correct

* CPR/CVR numbers are validated using the following rules:

CPR:

- If at least one of the customers registered for the metering point has a blank CPR number in DataHub, the change of supplier is accepted.
- If there are no customers with a 'blank' CPR number for the metering point, the change of supplier is only accepted if there is a match with one of the CPR numbers registered for the metering point.

CVR (customer CVR)

- If the customer CVR field in DataHub is blank, the change of supplier is accepted.
- If the customer CVR field in DataHub is not blank, the change of supplier is accepted if there is a match with the CVR number registered for the metering point.

Note that a change from CPR to CVR and vice versa must be effected as a move.

4.43.6 Notifying the grid company

DataHub sends a *Change of supplier information* message immediately after the change of supplier is approved. The grid company is obliged to halt any disconnection process immediately upon receipt of this message.

DataHub sends customer master data to the grid company after receiving it from the balance supplier.

In the exceptional case that the balance supplier has not submitted customer master data as specified, DataHub will forward the customer master data registered for the metering point 60 calendar days after the effective date. The business process is then closed.

Customer master data must be submitted with the business reason *Change of supplier at short notice*.

4.43.7 End of supply information

For metering points for which confirmation of the change of supplier has been sent, DataHub informs the previous balance supplier of end of supply immediately after approval, by sending an *End of supply information* EDI message specifying the end date.

4.43.8 Effective date

For metering points for which confirmation of the change of supplier has been sent, DataHub will activate the change from the effective date.

The future balance supplier starts supply on the effective date.

The previous balance supplier stops supply on the effective date.

4.43.9 Submit consumption statement/meter reading

The future balance supplier can submit meter readings and estimated annual consumption to DataHub in accordance with *BRS-018: Submission of meter reading by balance supplier* and *BRS-016: Submission of EAC by balance supplier*. However, this cannot be done before the effective date for start of supply.

For profile-settled metering points, the grid company will make a reading on the effective date in accordance with its rules. If the grid company has received meter readings from a balance supplier, the grid company may choose to use these values as a basis for its reading.

For profile-settled metering points, the grid company sends an EDI message to DataHub with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, the grid company sends an EDI message to DataHub with business reason *Meter reading*. The message contains the meter reading on the effective date.

There can be several meter reading requests on the same day from different processes. In such cases, the grid company only needs to make and send one meter reading.

For profile-settled metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Meter reading*. The message contains the meter reading on the effective date.

The previous balance supplier then sends the final settlement to the customer.

For profile-settled and flex-settled physical metering points, DataHub sends an EDI message to the future balance supplier with business reason *Meter reading*. The message contains the meter reading on the effective date.

For profile-settled metering points, the consumption statement will often result in a new value for the estimated annual consumption. If this is the case, the grid company submits the updated annual consumption using business process *BRS-017: Submission of EAC by grid company*

Note that if the consumer is assigned to net settlement group 6, any surplus production for the D04 metering point must be submitted when changing supplier.

4.43.10 Special provisions for production metering points

DataHub will reject change of supplier away from production metering points covered by a production obligation. The customer must contact Energinet and surrender their production obligation right in line with the applicable rules, after which Energinet will remove the block preventing a change of supplier from being effected for the metering point.

4.43.11 Time limits for change of supplier at short notice

Sender	Recipient	Time limit
Future balance supplier	DataHub	<p>A change of supplier using this process can only be made for metering points for which end of supply has been submitted.</p> <p>Change of supplier at short notice can be submitted to DataHub no earlier than 10 working days before and no later than on the effective date for end of supply, and must be reported to DataHub as soon as possible after the conclusion of the contract.</p> <p>The change of supplier may be scheduled to take effect from the end of supply effective date up until the last working day before the effective date. After this, the change of supplier can take place from the current date up until the grid company reports disconnection of the metering point.</p>
DataHub	Balance supplier	<p>DataHub sends an approval/rejection within one hour of receiving a request for change of supplier.</p> <p>Immediately after sending approval, DataHub sends master data for the metering point.</p>
DataHub	Previous Balance supplier	DataHub sends <i>end of supply</i> information immediately after approval of the change of supplier.
DataHub	Grid company	DataHub sends a <i>Change of supplier information</i> message immediately after the change of supplier is approved.
Future balance supplier	DataHub	<p>The future balance supplier must submit <i>customer master data</i> no later than 4 working days after the effective date. If this is not done, the balance supplier will receive a reminder to send customer master data, which is subsequently submitted to DataHub using business process <i>BRS-015: Submission of customer master data</i>.</p>

DataHub	Grid company	DataHub sends <i>customer master data</i> to the grid company within 1 hour of receiving it from the future balance supplier. If customer master data has not been received from the balance supplier within 60 calendar days after the effective date, the customer master data registered in DataHub will be forwarded to the grid company.
Grid company	DataHub	The grid company sends a consumption statement for a profile-settled metering point and a meter reading, if available, for a profile or flex-settled metering point, as soon as possible and within 35 calendar days after the effective date, in line with Regulation D1.
DataHub	Previous balance supplier	DataHub forwards the consumption statement and/or meter reading for the measuring point within one hour of receipt.
DataHub	Future balance supplier	DataHub forwards the meter reading for the measuring point, if available, within one hour of receipt.

4.43.12 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

4.43.12.1 Change of supplier request (RSM-001/D30)

RSM message	Request start of supply	
Name	Value	Comment
Business reason	D30	Change at short notice
Metering point ID		
Supply start date		Today's date or until the expected termination date, this date can also be used
Balance supplier ID		
Balance responsible party ID		
CPR		Either a CPR or CVR number must be provided
CVR		Customer CVR

4.43.12.2 Change of supplier request approval (RSM-001/D30)

RSM message	Start of supply approval	
Name	Value	Comment
Business reason	D30	Change at short notice
Metering point ID		
Reference		Reference to Start of supply request

4.43.12.3 Change of supplier request rejection (RSM-001/D30)

RSM message	Start of supply rejection	
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RSM message		Start of supply rejection
Name	Value	Comment
Business reason	D30	Change at short notice
Metering point ID		
Reference		Reference to Start of supply request
Rejection reason		

4.43.12.4 Metering point master data information (RSM-022/D30)

RSM message		Metering point master data notification
Name	Value	Comment
Business reason	D30	Change at short notice
Metering point ID		
Validity date		Supply start date
Balance supplier		GLN for balance supplier
Start of supply		Supply start date
Balance responsible party ID		GLN
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

Master data for any child metering points will also be sent to the balance supplier.

4.43.12.5 Information on metering point links (RSM-031/D30)

Only sent to the balance supplier if there are links for the metering point.

RSM message		Master data settlement notification
Name	Value	Comment
Business reason	D30	Change at short notice
Validity date		Date for metering point link
Function code		Registered value for link (Create/Change/Stop)
Metering point ID		
Market player		GLN for grid company
Charge type		Subscription/fee/tariff
Charge type ID		Market player's ID for charge type
Number		

Master data for any child metering points will also be sent to the balance supplier if there are links for the metering point.

4.43.12.6 Customer master data information (RSM-028/D30)

RSM message		Customer master data notification
Name	Value	Comment
Business reason	D30	Change at short notice
Metering point ID		
Validity date		Supply start date
Electrical heating		Yes/No
Electrical heating tax date		Calculation start date
Web access code		
Consumer category		

RSM message	Customer master data notification	
Customer name and if any, second customer name		
Customer CVR		
Data access CVR		
Address(es)		Reading card/voting card/disconnect card/ "address 4". See chapter 5: Master data
Other master data is sent to the balance supplier and grid company in line with Chapter 5: Master data		

4.43.12.7 Update customer master data (RSM-027/D30)

RSM message	Update customer master data request	
Name	Value	Comment
Business reason	D30	Change at short notice
Metering point ID		
Validity date		The supply start date is the same as the end date until this is reached – and then the current date
Electrical heating		Electrical heating status cannot be changed in this process
Electrical heating tax date		Electrical heating tax date cannot be changed in this process
Consumer category		
Customer name and if any, second customer name		
CPR		CPR must be specified for each registered customer
Customer CVR		
Data access CVR		
Address(es)		Reading card/voting card/disconnect card/ "address 4". See chapter 5: Master data
The balance supplier may send other master data in line with Chapter 5: Master data		

4.43.12.8 Update customer master data approval (RSM-027/D30)

RSM message	Update customer master data approval	
Name	Value	Comment
Business reason	D30	Change at short notice
Metering point ID		
Reference		Reference to <i>Update balance supplier master data request</i>

4.43.12.9 Update customer master data rejection (RSM-027/D30)

RSM message	Update customer master data rejection	
Name	Value	Comment
Business reason	D30	Change at short notice
Metering point ID		
Reference		Reference to <i>Update balance supplier master data request</i>
Rejection reason		

4.43.12.10

Customer master data information (RSM-028/D30/E34)

RSM message		Customer master data notification
Name	Value	Comment
Business reason	D30 E34	Change at short notice Update customer master data (future balance suppliers)
Metering point ID		
Validity date		Supply start date
Electrical heating		Yes/No
Electrical heating tax date		Calculation start date
Web access code*		
Consumer category		
Customer name and if any, second customer name		
CPR*		Up to 2 CPR numbers Not sent from DataHub
Customer CVR		
Data access CVR*		
Address(es)		Reading card/voting card/disconnect card/ "address 4". See chapter 5: Master data
Other master data is sent in line with chapter 5: Master data		

The grid company does not receive data marked with*

4.43.12.11

Information on actual start of supply (RSM-004/D30)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D30	Change at short notice
Metering point ID		
Effective date		Date for start of supply

4.43.12.12

Change of balance supplier information (RSM-004/D30)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D30	Change at short notice
Metering point ID		
Effective date		Date for start of supply

4.43.12.13

End of supply information (RSM-004/D38)

RSM message		Change of balance supplier notification
Name	Value	Comment
Business reason	D38	End of supply at short notice
Metering point ID		
Effective date		Date for end of supply

4.43.12.14

Submit consumption statement (RSM-011/D10)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D10	Profile-settled consumption
Metering point ID		
Period		From last reading date to effective date
Type of metering point		Consumption
Settlement method		Profile-settled
Quantity		kWh without decimals
Quantity status		Measured/estimated
Meter reading		Must be submitted for a physical metering point

Statements for any child metering points will also be sent to the balance supplier.

4.43.12.15

Submit meter reading (RSM-011/D19)

RSM message		Meter reading notification
Name	Value	Comment
Business reason	D19	Meter reading
Metering point ID		
Reading date		Change of supplier date
Meter reading		Must be submitted for a physical metering point

Meter readings for any child metering points will also be sent to the balance supplier.

4.43.13 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-043
BRS name	Change of supplier at short notice
EDI transactions:	
RSM ID	RSM-001
RSM name	Start of supply
RSM ID	RSM-004
RSM name	Change of balance supplier notification
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-031
RSM name	Submit settlement master data
RSM ID	RSM-027
RSM name	Update customer master data
RSM ID	RSM-028
RSM name	Submit customer master data

4.44 BRS-044: Mandatory change of supplier for metering point

4.44.1 Overview

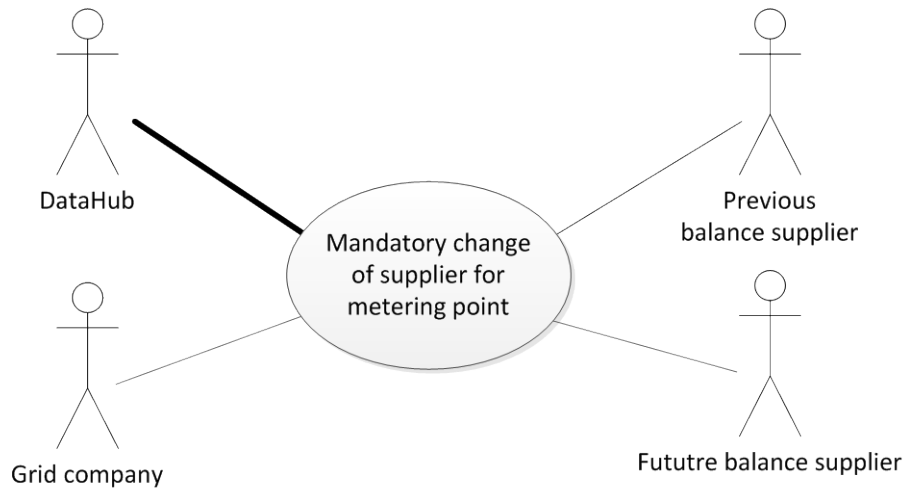


Figure 99 – Use case diagram for Mandatory change of supplier for metering point

If a balance supplier goes bankrupt or another supplier has to take over all of a supplier's metering points, this can be handled using this process with the applicable notice.

In the event of a bankruptcy, metering points will be distributed based on the Danish Energy Agency's method, in line with Regulation H1.

4.44.2 Overview of exchanges

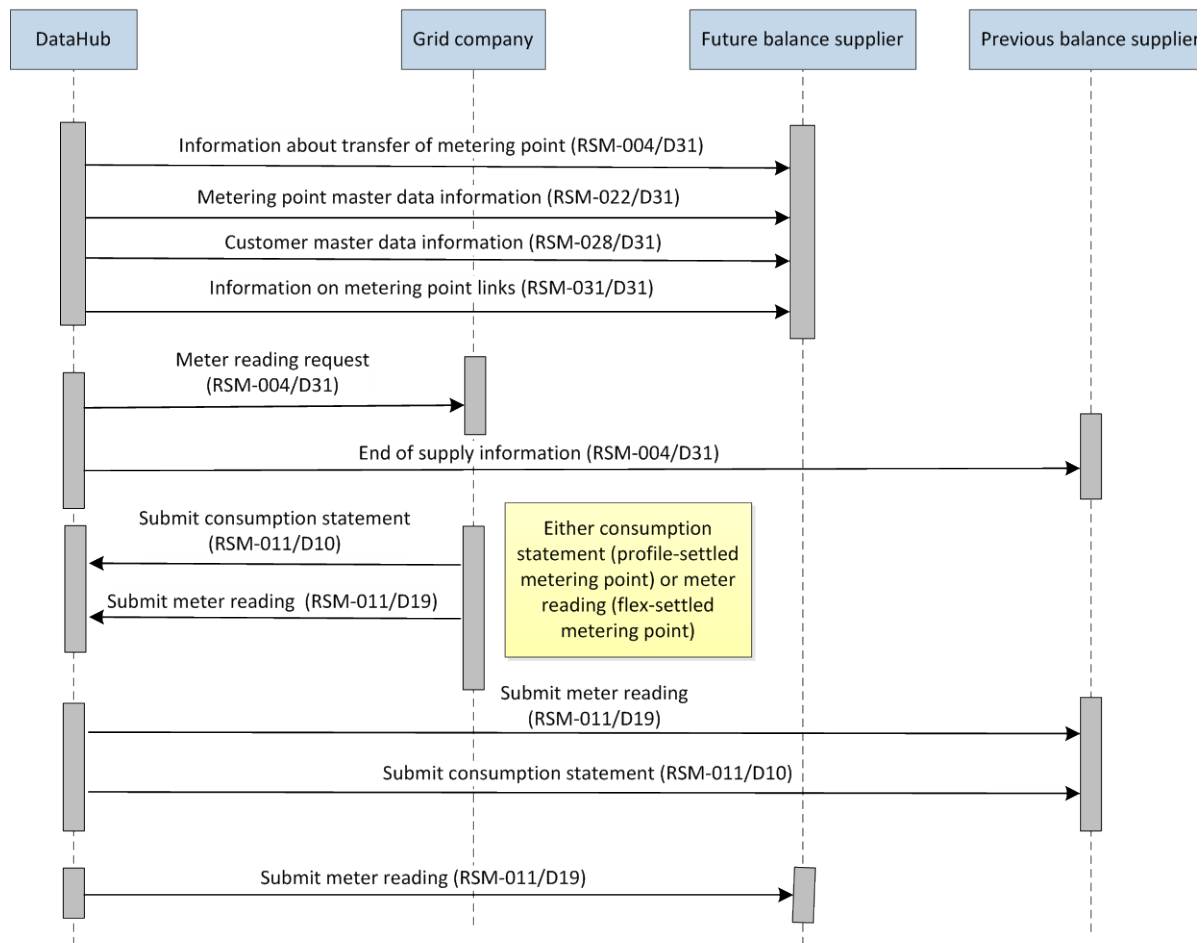


Figure 100 – Sequence diagram for Mandatory change of supplier for metering point

4.44.3 Initial state

DataHub initiates the mandatory change of supplier.

4.44.4 Process for mandatory change of supplier for metering point

DataHub sends the *Information on transfer of metering point* EDI message to the future balance supplier, specifying the supply start date.

DataHub then sends EDI messages containing relevant master data for the metering point to the future balance supplier. If the metering point has child metering points, master data for these metering points will be included. The balance supplier should note that the balance supplier's system must be able to receive child metering points before the parent metering point.

For the *Customer master data information* message, only the data not linked to the previous balance supplier will be sent. This means that no information will be sent regarding CPR numbers.

For *Metering point link information*, only the information registered as valid on the effective date or later will be sent.

Note that the transfer to the future balance supplier is made with start of supply on the effective date determined by the legislation. The date may therefore be retroactive.

The future balance supplier cannot refuse to take over the metering point.

The CPR number registered for the metering point is not passed on and is therefore deleted in DataHub.

After the effective date, the balance supplier must check customer master data for the assigned customer, as part of the general master data responsibility, and submit updated customer master data to DataHub where necessary, in line with *BRS-015: Submission of customer master data by balance supplier*.

DataHub informs the previous balance supplier of end of supply by sending an *End of supply information* EDI message with the stop date.

Note that the previous balance supplier cannot reject the end of supply.

4.44.5 Notifying the grid company

DataHub sends a *Meter reading request* for the metering point to the grid company if the metering point does not have status *new*.

Before sending the message, DataHub checks whether a reading request has already been sent for the day. If so, no EDI message is sent to the grid company.

4.44.6 Effective date

The previous balance supplier stops supply on the effective date.

The future balance supplier starts supply on the effective date.

4.44.7 Send consumption statement

The previous balance supplier may submit a meter reading to DataHub in line with *BRS-018 Submission of meter reading by balance supplier*.

For profile-settled metering points, the grid company will make a reading on the effective date in accordance with its rules.

If the grid company has received meter readings from the balance supplier, the grid company may choose to use these values as a basis for its reading.

For profile-settled metering points, the grid company sends an EDI message to DataHub with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, the grid company sends an EDI message to DataHub with business reason *Meter reading*. The message contains the meter reading on the effective date.

There can be several meter reading requests on the same day from different processes. In such cases, the grid company only needs to make and send one meter reading.

For profile-settled metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Profile-settled consumption* for use in final settlement. The message always contains a consumption statement, and for physical metering points, a meter reading on the effective date.

For flex-settled physical metering points, DataHub sends an EDI message to the previous balance supplier with business reason *Meter reading*. The message contains the meter reading on the effective date.

The previous balance supplier then sends the final settlement to the customer.

For profile-settled and flex-settled physical metering points, DataHub sends an EDI message to the future balance supplier with business reason *Meter reading*. The message contains the meter reading on the effective date.

4.44.8 Special provisions for production metering points

Production metering points are not transferred to the default balance supplier in grid areas covered by default supply.

4.44.9 Time limits for mandatory change of supplier for metering point

Sender	Recipient	Time limit
Grid company	DataHub	The grid company submits the consumption statement and any meter reading to DataHub no later than 35 calendar days after the effective date, in line with Regulation D1.

4.44.10 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields, which are included in the individual data flows, are listed below. 'Key data' refers to the data of significance to process handling in relation to DataHub.

4.44.10.1 Meter reading request (RSM-004/D31)

RSM message		Change of balance supplier notification	
Name	Value	Comment	
Business reason	D31	Transfer metering point	
Metering point ID			
Effective date			

4.44.10.2 Information about transfer of metering point (RSM-004/D31)

RSM message		Change of balance supplier notification	
Name	Value	Comment	
Business reason	D31	Transfer metering point	
Metering point ID			

RSM message	Change of balance supplier notification	
Effective date		

4.44.10.3 Metering point master data information (RSM-022/D31)

RSM message	Metering point master data notification	
Name	Value	Comment
Business reason	D31	Transfer metering point
Metering point ID		
Validity date		Supply start date
Balance supplier		
Start of supply		
Balance responsible party ID		
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

If any, master data for child metering points will also be sent to the balance supplier.

4.44.10.4 Information on metering point links (RSM-031/D31)

Only sent to the balance supplier if there are links for the metering point.

RSM message	Master data settlement notification	
Name	Value	Comment
Business reason	D31	Transfer metering point
Validity date		Date for metering point link
Function code		Registered value for link (Create/Change/Stop)
Metering point ID		
Market player		GLN for grid company
Charge type		Subscription/fee/tariff
Charge type ID		Market player's ID for charge type
Number		

If any, master data for coupled metering points will also be sent to the balance supplier if there are links for the coupled metering point.

4.44.10.5 Customer master data information (RSM-028/D31)

RSM message	Customer master data notification	
Name	Value	Comment
Business reason	D31	Transfer metering point
Metering point ID		
Validity date		Supply start date
Web access code		
Customer name and if any, second customer name		
CPR		Removed from metering point
Customer CVR		
Data access CVR		
Other master data is sent to the balance supplier in line with Chapter 5: Master data		

4.44.10.6

End of supply information (RSM-004/D31)

RSM message		Change of balance supplier notification	
Name	Value	Comment	
Business reason	D31	Transfer metering point	
Metering point ID			
Effective date			

4.44.10.7

Submit consumption statement (RSM-011/D10)

RSM message		Meter reading notification	
Name	Value	Comment	
Business reason	D10	Profile-settled consumption	
Metering point ID			
Period		From last reading date to effective date	
Type of metering point		Consumption	
Settlement method		Profile-settled	
Quantity		kWh without decimals	
Quantity status		Measured/estimated	
Meter reading		Must be submitted for a physical metering point	

If any, statements for child metering points will also be sent to the balance supplier.

4.44.10.8

Submit meter reading (RSM-011/D19)

RSM message		Meter reading notification	
Name	Value	Comment	
Business reason	D19	Meter reading	
Metering point ID			
Reading date		Change of supplier date	
Meter reading		Must be submitted for a physical metering point	

If any, meter readings for child metering points will also be sent to the balance supplier.

4.44.10.9

Submit metered data for metering point (RSM-012/E23/D42)

RSM message		Metering point metered data notification	
Name	Value	Comment	
Business reason	E23	Periodic consumption statement	
	D42	Periodic flex statement	
Metering point ID			
Time period for quantity			
Product		Active energy Re-active energy Fuel	
Type of metering point		Consumption Production Exchange RE production Net settlement Technical	

RSM message	Metering point metered data notification	
Settlement method		For consumption: Non-profile/Flex/Profile
Resolution		Hourly/Quarter-hour/Monthly
Quantity	kWh	Up to 3 decimal places
Quantity status		Estimated Measured Missing Correction (only from DataHub)

If any, metered data for child metering points will also be sent to the balance supplier.

4.44.11 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-044
BRS name	Mandatory change of supplier for metering point
EDI transactions:	
RSM ID	RSM-004
RSM name	Change of balance supplier notification
RSM name	Submit settlement master data
RSM ID	RSM-022
RSM name	Submit metering point master data
RSM ID	RSM-028
RSM name	Submit customer master data
RSM ID	RSM-031
RSM name	Submit settlement master data
RSM ID	RSM-011
RSM name	Submit consumption for profile-settled metering point and meter reading
RSM ID	RSM-012
RSM name	Submit metered data for metering point

4.45 BRS-045: Send missing data log

4.45.1 Overview



Figure 751 – Use case diagram for Send missing data log

A missing data log is sent from DataHub each day for each grid area, comprising three messages to the grid company.

Business reason	Criteria	Included period
Hour (D25)	<ul style="list-style-type: none"> All consumption metering points (E17) which are hourly settled (E02). All production metering points (E18) which are read hourly or quarter-hourly All exchange metering points (E20) which are read hourly or quarter-hourly All child metering points linked to E17/E02 parent or E18 parent metering points. 	3-65 days of operation before the effective date (current date)
	<ul style="list-style-type: none"> Other metering points (D01-D99) which are read monthly 	5-65 days after the month of operation, a reminder is issued for data
	<ul style="list-style-type: none"> Other metering points (D01-D99) which are read hourly or quarter-hourly 	5-65 days of operation before the effective date (current date)
Flex (D26)	<ul style="list-style-type: none"> All consumption metering points (E17) which are flex-settled (D01) All child metering points linked to E17/D01 parent metering points. 	5-65 days of operation before the effective date (current date)
Profile (D27)	<ul style="list-style-type: none"> All consumption metering points (E17) which are profile-settled (E01). All child metering points linked to E17/E01 parent metering points. 	From 21 days of operation and up to 3 years before the effective date
		5-65 days of operation before the effective date (current date)

For all missing data, the initial state taken will be how the master data looked when the missing data occurred. For example, if there is missing data for 30 days ago and the metering point was profile-settled at the time, and missing data for 6 days ago and the metering point had been changed to hourly settled at the time, the metering point will be listed for both Hour and Profile.

Note that reminders are not sent for D04 metering points, as there is no requirement to submit metered data for these metering points. Furthermore, no reminder will be sent in respect of hourly series for profile-settled

metering points (RSM-0012/D06), but it is possible via the DataHub market portal to search for and email missing submissions.

In addition to the daily data sent via EDI messages, the grid company may request an overview of missing submissions via the DataHub portal.

4.45.2 Overview of exchanges

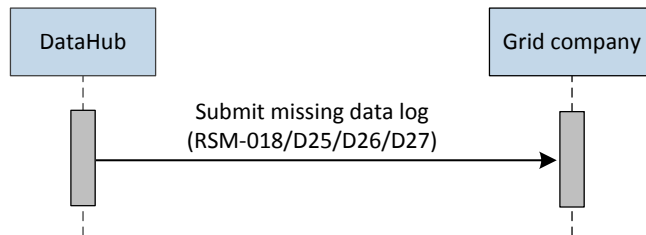


Figure 762 – Sequence diagram for Send missing data log

4.45.3 Initial state for submission

DataHub checks for missing metered data once a day.

4.45.4 Process for Send missing data log

DataHub sends an EDI message to each grid company with metering points listing missing metered data.

4.45.5 Time limits for Send missing data log

Sender	Recipient	Time limit
DataHub	Grid company	DataHub sends missing data logs each day

4.45.6 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These ‘key data’ refers to the data of significance to process handling in relation to DataHub.

4.45.6.1 Submit missing data log (RSM-018/D25/D26/D27)

RSM message	Missing data notification	
Name	Value	Comment
Business reason	D25 D26 D27	Missing non-profiled time series Missing flex time series Missing profiled reading
Metering point ID		
Date		Specified in UTC time with hours and minutes

RSM message	Missing data notification	
Reason		For profile-settled metering points, state the business reason for a missing reading (eg move-in E65)
Repetition		Number of reminders sent

4.45.7 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-045
BRS name	Send missing data log
EDI transactions:	
RSM ID	RSM-018
RSM name	Send missing data log

4.46 BRS-046: Submission of contact address from grid company

4.46.1 Overview

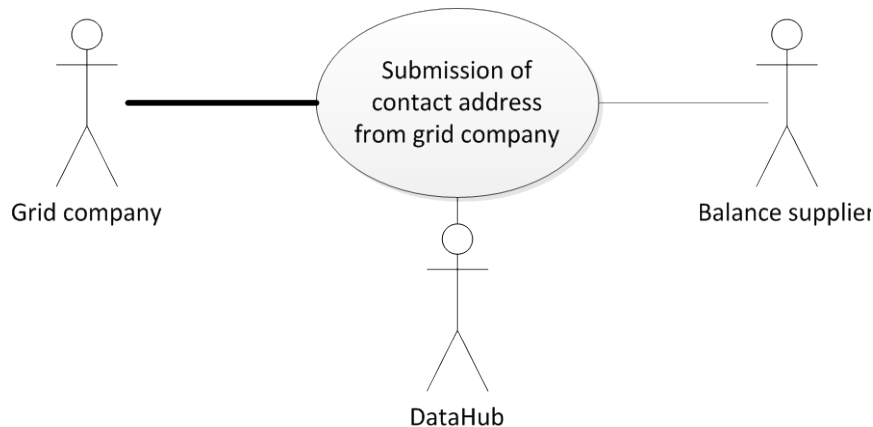


Figure 103 – Use case diagram for Submission of contact addresses from grid company

If a grid company has contact address information that has not been received from the balance supplier, the grid company may choose to notify the balance supplier. This is done using this process. The balance supplier decides whether or not the contact addresses should be used, and they are therefore not recorded in DataHub.

4.46.2 Overview of exchanges

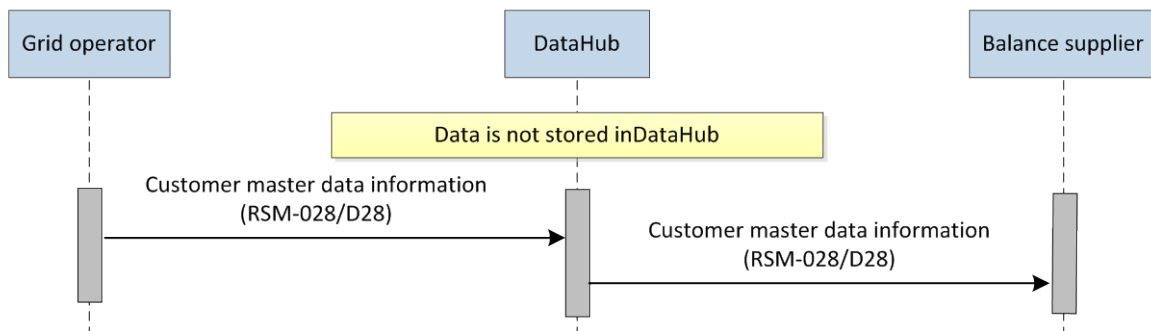


Figure 774 – Sequence diagram for Submission of contact addresses from grid company

4.46.3 Initial state

A grid company has contact information that it has not received from the balance supplier.

4.46.4 Submission of contact addresses from grid company

A grid company or TSO sends an EDI message to DataHub with business reason *Proposed customer information*.

DataHub receives the message and it is validated in DataHub in accordance with the validation rules below.

The submitted customer information will not be saved in DataHub.

The grid company must send a complete proposal for new contact information, including existing information that does not need to be changed.

If the grid company sends a master data message without contact information, it is a proposal to remove existing contact information from the metering point.

4.46.5 Validation rules

List of business rules that are applied/validated during processing of the received market data (incl. exceptions).

Validation	Error message
Metering point identifiable	E10 Problem with metering point
The grid company is a legitimate player	Grid company is not correct E0I
The balance supplier is a legitimate player	E16 Balance supplier is not correct
The metering point is registered as a consumption or production metering point	D18 Metering point type is incorrect

4.46.6 Submission of contact addresses from grid company – from DataHub

Previous balance suppliers receive an EDI message with contact address information from DataHub.

The balance supplier may choose to use the information received. If the balance supplier wants to use the customer data, it is sent to DataHub in line with *BRS-015: Submission of customer master data by balance supplier*.

Detailed functionality provided by the market function for a specific system action.

4.46.7 Time limits for sending contact addresses

Sender	Recipient	Time limit
Grid company	DataHub	Customer information may be submitted by the grid company at any point in time
DataHub	Balance supplier	DataHub must forward customer information within one hour of receiving data

4.46.8 Data content

For an exhaustive list of data fields, see *EDI transactions for the Danish electricity market*.

The most important data fields that form part of the individual data flows are listed below. These 'key data' refers to the data of significance to process handling in relation to DataHub.

Note that the various players only receive the master data they are entitled to receive.

4.46.8.1 Customer master data information (RSM-028/D28)

RSM message		Update customer master data request
Name	Value	Comment
Business reason	D28	Proposed contact information
Metering point ID		
Validity date		Current date
Address(es) If not included – a proposal to remove contact address(es)		
Name1		
Name2		May be used for attn./PO Box
Street name		Date master data enters into force
Street code		
House number		
Floor		
Door		
Place name		
Postcode		
City		
Country		Enter country code
Municipality code		
Email		
Tel.		
Mobile phone		
Address code		Code for contact information
Same as MP		Yes/No. If the address is the same as for the metering point, enter Yes

4.46.9 Identification of process and transactions

The following table lists the unique names for the business process and the EDI transactions used.

BRS ID	BRS-046
BRS name	Submission of contact addresses from grid company
EDI transactions:	
RSM ID	RSM-028
RSM name	Submit customer master data

4.47 Discontinued

4.48 Discontinued

5. Master data

This chapter contains a copy of the content of the RSM document. In the event of any discrepancies, the RSM document takes priority.

5.1 Metering point master data

Name	Comment	Use
Business reason	Reason for exchanging master data	Always
Metering point ID	GSRN for metering point	Always
Parent metering point ID	If the metering point has a link to a parent metering point, enter it here	Used only for child metering points.
Validity date	Date from which changed master data applies	Always
Connection status	New/Connected/Disconnected/Closed down When a metering point has a status of closed down it cannot be reconnected.	Always
Settlement method	Hourly/Flex/Profile	Only for consumption metering points and grid loss correction (D13)
Meter reading frequency	OTHER/Hourly/Quarter-hour	
Nominal reading date	Up to 12 dates.	Only for profile-settled consumption metering points
Reading method	Remote/Manual.	Only for profile-settled consumption metering points
Hourly time series	Yes/No. Set to No for remote-read profile-settled metering points, for which hourly data is not submitted.	Only for profile-settled remote-read consumption metering points
Metering point sub type	Physical/Virtual/Calculated	Always
Type of metering point	Consumption/Production/Exchange/Other	Always
Disconnection type	Remote disconnection/Manual disconnection	Only included for consumption and production metering points
Connection type	Direct connection/Installation connection	Only included for consumption and production metering points, where net settlement is different from group 0. Must not be included in other situations.
Net settlement group		Always for consumption and production metering points
Grid area	Specified when being created. Cannot be changed	Always
Maximum power kW		Optional
Maximum current Amps		Optional

Name	Comment	Use
MP capacity	In kW	Must be included for consumption and production metering points, where net settlement is different from group 0. Must not be included for consumption and production metering points, where the net settlement group is 0. Permitted for D01 and D04 to D12 metering points.
Estimated annual consumption	Cannot be changed in the master data; is an independent process. Expected annual value must be present for a profile-settled consumption metering point.	Must be stated for profile-settled consumption metering point. Optional for other types of metering points
Product	GLN code	Always
Energy unit	Unit metering point is measured in	Always
Ignore mandatory limit	The default value is <i>no</i> NOT be sent to the balance supplier	Only for profile-settled consumption metering points
Plant GSRN		Mandatory for production and D01 metering points. Mandatory on E17, if the net settlement group <>0 Optional for D04-D12 metering point type
Production obligation	Can only be updated by Energinet	Only for production metering points
FromGrid		Only for exchange metering points
ToGrid		Only for exchange metering points
Location description	Metering point comment – may be used to describe where the metering point is located in buildings or on large sites. For example, 'Building 12, near back door' or 'wind turbine 17, 2nd row no. 2'	Optional
Balance supplier	GLN	NOT sent to grid company
Start date	Start date for supply from balance supplier	NOT sent to grid company
Balance responsible party (BRP)	GLN	NOT sent to grid company
Meter number		Optional. However, must be stated if metering point sub type is <i>physical</i>
Meter conversion factor		Optional. However, must be stated if metering point sub type is <i>physical</i>
Meter number of digits		Optional. However, must be stated if metering point sub type is <i>physical</i>
Meter type	Code. Accumulated/Balanced	Optional. However, must be stated if metering point sub type is <i>physical</i>
Meter unit type	Typically kWh, but other permitted values are MWh, kVARh and MVARh	Optional. However, must be stated if metering point sub type is <i>physical</i>

Name	Comment	Use
Wash instructions	Washable/Not washable	Mandatory for consumption and production metering points
Street name	Street name must be stated. If the street has not been given a name, enter <i>unknown</i>	Optional, must be stated if the address is used
Street code	The street code from BBR is stated if available.	Optional
House number	House number and letter (where used).	Optional
Floor	The floor must be indicated using a number, and a basement as K1, K2 etc. In residential blocks where TH, MF etc. are used, this information should be stated in the <i>Door</i> field.	Optional
Door	Used to enter apartment numbers and apartment locations in multi-storey buildings.	Optional
City sub-division name	Area name or local name.	Optional
Postcode		Optional, must be stated if the address is used
Postal district	City name	Optional, must be stated if the address is used
Municipality code	The three-digit code used by the authorities. Must be stated, if possible.	Optional
Country code	Must be specified using two characters in line with the ISO 3166 2-alpha code. http://www.iso.org/iso/country_names_and_code_elements	Optional
Reference		Must be used if master data is sent in reply to a request
Child metering point ID	List of all child metering points.	Only used in reply to a request for master data.

5.2 Customer master data

Name	Comment	Use
Business reason	Reason for exchanging master data	Always
Metering point ID	GSRN	Always
Validity date	Date from which changed master data applies	Always
Electrical heating	Yes/No	Always for consumption metering point
Electrical heating tax date	Date for start/end of calculation.	Must be submitted when starting/stopping electrical heating

Web access code	Code the customer uses to access the customer portal	Not for grid companies or potential balance suppliers
Consumer category		
Customer name and if any, second customer name	For companies with a CVR number, only the first customer name may be filled in	For move-out and end of supply transactions, (unknown) is entered in customer 1 and customer 2 is blank
CPR	Up to 2 CPR numbers Not sent from DataHub.	Never sent from DataHub Current balance supplier can update CPR
Customer CVR		
Data access CVR*	Always two CVR numbers from the balance supplier (customer and data access). Can be the same as customer CVR	Not for grid companies or potential and future balance suppliers in connection with move-in
Balance supplier status	Active/Inactive Set by DataHub Indicates whether there is a balance supplier for the metering point.	
Start of supply		Not for potential balance suppliers or grid companies
Address(es)		Must be repeated each address type NEVER sent to potential or future balance suppliers in connection with move-in
MP relation type	Voting card Reading card Disconnect card Address 4 One address is permitted for each type.	Must be filled in if contact address has to be included
Same as MP	Yes/No	Reply is mandatory if contact address has to be included
Name1	The name of the company or person entered as a contact. If the name cannot fit in this field alone, the <i>Name2</i> field may be used, or the name may be abbreviated in line with the CPR register rules for address names. ²	Optional
Name2 (Att./Post box)	This is a supplementary field to <i>Name</i> . It can be used as an attention field or for a PO box	Optional
Street name	Street name must be stated. If the street has not been given a name, enter <i>unknown</i>	Optional, must be stated if the address is used
Street code	The street code from BBR is stated if available.	Optional

² Machine created abbreviation: If there are more than 8 middle names, the rest are discarded. If the surname is more than 31 characters long, the eighth first name should be abbreviated to an initial. If there is still not enough space, the seventh first name, and so on...

House number	House number and letter (where used).	Optional
Floor	The floor must be indicated using a number, and a basement as K1, K2 etc. In residential blocks where TH, MF etc. are used, this information should be stated in the <i>Door</i> field.	Optional
Room ID	Used to enter apartment numbers and apartment locations in multi-storey buildings.	Optional
City sub-division name	Area name or local name.	Optional
Postcode		Optional, must be stated if the address is used
Postal district	City name	Optional, must be stated if the address is used
Municipality code	The three-digit code used by the authorities. Must be stated, if possible.	Optional
Country code	Must be specified using two characters in line with the ISO 3166 2-alpha code. http://www.iso.org/iso/country_names_and_code_elements	Optional
Email	An email address. If several addresses are to be used, separated with semicolons.	Optional
Tel.	A contact number. For foreign numbers, enter a prefix like 0044 as +44	Optional
Mobile phone	A contact number. For foreign numbers, enter a prefix like 0044 as +44	Optional
Reference	Must be used if master data is sent in reply to a request	

6. Managing electrical heating

6.1.1 Overview

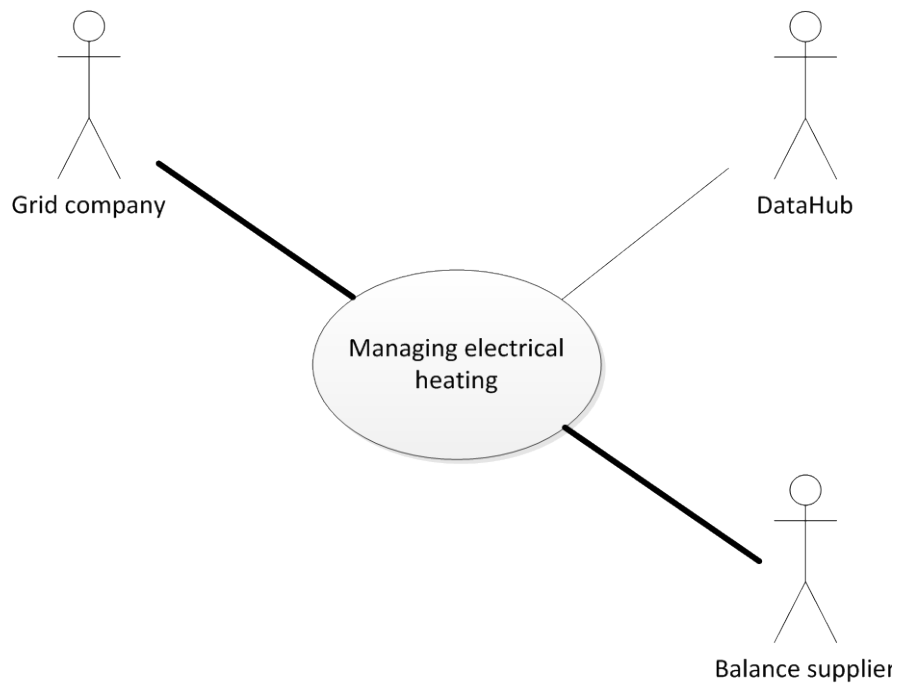


Figure 78 – Use case diagram for managing electrical heating

The balance supplier is responsible for ensuring a customer can add or remove electrical heating on a metering point. The change can only take place while the balance supplier is registered as the supplier for the metering point.

Registering or removing electrical heating is a complex process which involves completing several business processes (BRSs) in a certain order and in interaction with the grid company and DataHub.

The most important elements in the above processes are described in this chapter.

6.2 Registering electrical heating for a metering point

6.2.1 Overview of processes involved in registering electrical heating

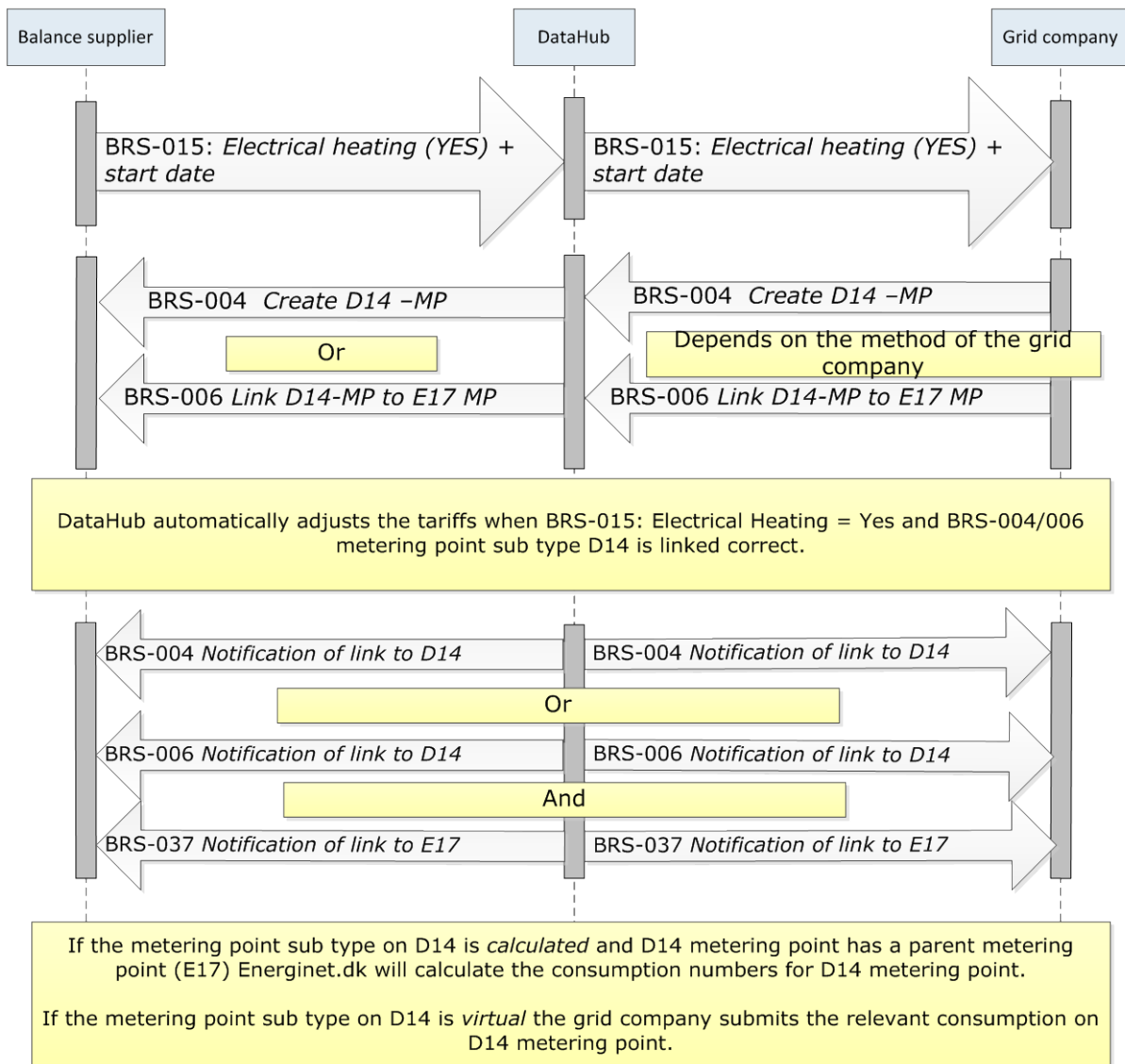


Figure 79 – Sequence diagram for registering electrical heating for a metering point

6.2.2 Process for adding electrical heating to a metering point

1. If a balance supplier takes over a metering point for which electrical heating is already registered, and this registration is correct, the balance supplier need not take any further action towards DataHub in this regard.
If the registration is incorrect, electrical heating should be removed from the metering point as described in section 6.3.2.
2. If a balance supplier takes over or already supplies a metering point for which electrical heating has to be registered, the balance supplier submits (once they have taken over supply to the metering point) a customer master data message (BRS-015), where *electrical heating* is changed from *NO* to *YES* and *Electrical heating tax date* is set to the required start date.

The start date may be up to 21 calendar days back in time. However, the start date may never be before the date on which the balance supplier took over supply to the metering point.

3. DataHub registers the changed customer master data, effective from the *validity date* for the master data message, and forwards the new customer master data to the grid company. The grid company creates a child metering point (D14) for the consumption metering point (BRS-004), or links an existing D14 metering point to the consumption metering point. The link date must match the *Electrical heating tax date*, otherwise the master data update will be rejected.

In order to handle creation of the D14 metering point retroactively, this is permitted for D14 metering points that have a parent relationship. If the grid company creates a D14 metering point with a parent link on a date that does not match the *Electrical heating tax date*, the request is rejected.

If an existing D14 metering point without a parent link is used, the grid company must ensure that the link to the parent takes place on the *Electrical heating tax date*. The grid company is obliged to make the connection no later than 1 working day after receipt of a message about establishing electroheat.

4. When DataHub receives a D14 metering point without a parent link, DataHub automatically changes its connection status from *new* to *connected* on the creation date.
5. When DataHub receives a D14 metering point with a parent link, and electrical heating is registered on the parent metering point, the following checks/changes are performed:
 - a. DataHub checks that the link date matches the *Electrical heating tax date*, otherwise the master data change is rejected (see above)
 - b. DataHub assigns the correct electricity taxes for the E17 and D14 metering points with a start date equal to the *Electrical heating tax date* (the validity date for the link to the parent)
6. The grid company receives information on the new D14 electricity tax links as part of the BRS-004/BRS-006 process. Changed links for the parent metering point (E17) are received as part of BRS-037.
7. The balance supplier receives metering point master data and information on the new D14 electricity tax links as part of the BRS-004/BRS-006 process. Changed links for the parent metering point (E17) are received as part of BRS-037.
8. The grid company must ensure that the connection status for the D14 metering point is changed to *connected* in their own system.

6.2.3 Special conditions when registering electrical heating

1. It is not possible to register electrical heating as an integrated part of a move-in or change of supplier (BRS-001, BRS-009 or BRS-043). In these cases, electrical heating is registered afterwards on the first day of supply by submitting BRS-015.

Note that it is not possible to make changes to electrical heating before the move-in/change of supplier processes have been fully completed by the balance supplier (ie the balance supplier has submitted updated customer master data).

If the balance supplier updates master data for electrical heating in connection with the above processes, DataHub will reject the master data update with the error message, *Change to electrical heating status not permitted*.

2. If the balance supplier is blocked from making changes to 'special tax conditions', the balance supplier cannot change electrical heating using BRS-015.
- 3.

6.3 Removing electrical heating for a metering point

6.3.1 Overview of processes involved in removing electrical heating

Detailed functionality provided by the market function for a specific system action.

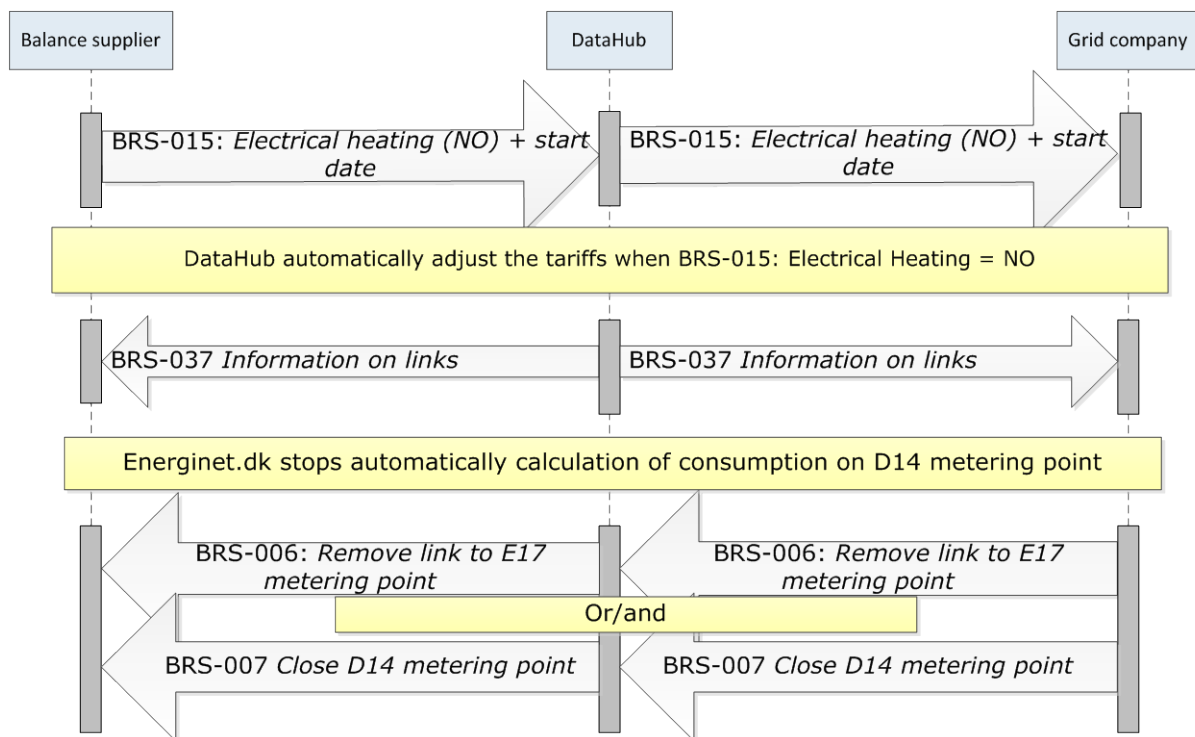


Figure 803 – Sequence diagram for removing electrical heating for a metering point

6.3.2 Process for removing electrical heating for a metering point

1. If a balance supplier takes over a metering point for which the electrical heating registration must immediately be removed, or later needs to remove the electrical heating registration, the process below is used.
2. The balance supplier submits a customer master data message (BRS-015), where *electrical heating* is changed from *YES* to *NO* and the *Electrical heating tax date* is set to the date electrical heating is to cease. The stop date can be up to 21 calendar days back in time, but never further before the balance supplier's supply start date.
3. DataHub registers the changed master data, effective from the *validity date*, and forwards the changed customer master data to the grid company.
4. DataHub changes the link for the E17 metering point to normal electricity tax and stops the electricity tax links for the D14 metering point on the *Electrical heating tax date* (the desired stop date for electrical heating).
5. The changed electricity tax links are sent to the balance supplier and grid company using BRS-037.
6. The grid company removes the parent link for the child metering point (D14) by submitting either BRS-006 or BRS-007. The parent link cannot be removed before the *Electrical heating tax date* (the desired end date for electrical heating). For discontinuation of the D14 metering point, the ordinary rules for discontinuation apply.
7. As part of the BRS-006/BRS-007 process, the balance supplier is notified that the parent link has been removed, or that the D14 metering point has been closed down.

6.3.3 Special conditions when removing electrical heating

1. It is not possible to remove electrical heating as an integrated part of a move-in or change of supplier (BRS-001, BRS-009 or BRS-043). In these cases, electrical heating is removed afterwards on the first day of supply by submitting BRS-015.
2. Removal of electrical heating is possible up to 21 calendar days back in time.
3. If the grid company does not remove the parent link on the D14 metering point on the stop date, the D14 metering point will continue to be included in the wholesale settlement, but since there is no linked electricity tax, this has no practical significance.

In connection with the implementation of *BRS-002: End of supply*, electrical heating (if registered) is removed from the metering point and the Electrical heating tax date is set to the actual metering point disconnection date.

6.3.4 Description of how the DataHub processes proposed modifications of electroheat

The table below should be understood as follows.

First is the **condition** relating to electroheat.

Next is the **scenario** pertaining to the **condition**.

Profit/loss for the **scenario** shows what happens with the process.

And **tariff services** shows how tariffs are processed in the **scenario**

ELECTROHEAT (START/STOP)	Scenarios					
	#1	#2	#3	#4	#5	#6
TERMS AND CONDITIONS						
Electroheat [START] before [START] date	X					
Electroheat [START] after [START] date		X				
Electroheat [START] for MP without electroheat			X			
Electroheat [STOP] before [STOP] date				X		
Electroheat [STOP] after [STOP] date					X	
Electroheat [STOP] for MP with electroheat						X
RESULTS						
Registration of new electroheat start date for E17	X		X			
Cancellation of future electroheat start date for E17	X					
Registration of new electroheat stop date for E17				X		X
Cancellation of future electroheat stop date for E17				X		
Application is rejected by DataHub		X			X	
<i>Adjustment of tariff services at the time of electroheat start/stop:</i>						
[EA-001] is removed from the Parent E17 MP as of the new electroheat start date [EA-001] is added to Child D14 MP as of the new electroheat start date [EA-002] is added to Parent E17 MP as of the new electroheat start date [EA-003] is added to Child D14 MP as of the new electroheat start date	X		X			
[EA-001] is added to Parent E17 MP as of the new electroheat stop date [EA-001] Remove from Child D14 MP from the new electroheat stop date [EA-002] is removed from the Parent E17 MP as of the new electroheat stop date [EA-003] is removed from the Child D14 MP as of the new electroheat stop date				X		X

6.4 Electrical heating calculation engine

6.4.1 The grid company's choice of method for calculating D14 consumption

The grid company may choose to use DataHub to calculate consumption for the electrical heating metering point (D14).

In order to use the calculation function in DataHub, the grid company must register the metering point type for the electric heating metering point as *calculated* and the meter reading frequency as *Time*.

The calculation function only works if electrical heating has been registered as described above.

6.4.2 Description of calculation function in DataHub

For a metering point with electrical heating the calculation function in DataHub assumes the full tax will be paid on a yearly basis on the first 4,000 kWh and reduced tax on consumption above 4,000 kWh. The 4,000 kWh (following referred to as estimated consumption) is distributed over the year, such that the full tax is paid each day on $4,000 \text{ kWh}/(\text{number of days in the year})$, if there is sufficient total consumption.

The annual estimated consumption is defined according to the table below:

Settlement method/time for consumption statement	Annual value for estimated consumption
Flex-/Hour	4,000 kWh
Profile - estimated	Smallest value of 4,000 kWh and estimated annual consumption on E17 metering point
Profile - read	4,000 kWh
Net settlement group 2 until the tax period is settled	As Flex-/Hour
Net settlement group 2 by the settlement of the tax period	The corrected D14 limit
Net settlement group 6 until the tax period is settled	As profile – expected
Net settlement group 6 by the settlement of the tax period	The corrected D14 limit

The electrical heating year starts on 1 January for flex and hourly settled metering points, and on the first nominal reading date for profile-settled metering points. This means that the first electrical heating year will be a bit shorter, but this is compensated for by reducing the 4,000 kWh proportionately.

In the event of a move, change of supplier, end of supply, removal of electrical heating or closure of the metering point, the electrical heating year is divided into shorter accounting periods. When the start date for the electrical heating year is passed, or on the effective date for one of above events, the calculation function is 'reset' and a new period is started. If a period is shorter than a year, full electricity tax must be paid on consumption corresponding to the proportion of $4,000 \text{ kWh} = (\text{number of days in the period})/(\text{number of days in the electrical heating year}) * 4,000 \text{ kWh}$.

DataHub takes into account the entire relevant period when calculating consumption on the D14 metering point, but only registers consumption on the electrical heating metering point (D14) for the days on which the point is registered with metering point sub type *calculated* in DataHub, and where a balance supplier is linked to the parent metering point (E17).

The calculation function varies a bit depending on the settlement method set for the E17 metering point.

6.4.3 Correction model for flex and hourly settled metering points

Fair values are calculated for these metering points on the D14 metering point based on the following principles:

The day's attributed consumption on the D14 metering point is calculated such that full electricity tax is paid for the period for consumption corresponding to the day's proportionate share of the 4,000 kWh, where possible.

In practice, this means that the following formulas are used:

Firstly, the 'highest possible energy consumption at the full electricity tax rate for the period', is calculated as the lowest of the following values:

$$a = (\text{accumulated consumption for E17 for the period})$$

$$b = (\text{number of days in the period}) * (4,000 \text{ kWh}/\text{number of days in the electrical heating year})$$

The day's consumption at the full electricity tax rate is then calculated as:

(highest possible consumption at the full electricity tax rate in the period) - (the sum of already registered consumption for the D14 metering point in the period)

The above formula means that the D14 metering point is constantly updated, ie there is no need to correct previous fair values for the D14 metering point in connection with period accounting. However, if a move-in happens back in time the new period can be recalculated due to the accumulated values.

6.4.3.1 Example D-14 calculation for hourly-/flex settled metering points

The example shown below illustrates how a calculation for flex- and hourly-settled metering points appears:

	Day 1	Day 2	Day 3	Day 4	Day 5
Daily read/estimated consumption	15,000	5,000	5,000	25,000	1,000
Accumulated consumption for E17 (a)	15,000	20,000	25,000	50,000	51,000
Daily estimated consumption to full tax payment (4000/365)	10,959	10,959	10,959	10,959	10,959
Accumulated estimated consumption to full tax payment (b)	10,959	21,918	32,877	43,836	54,795
Highest possible consumption to full electricity tax in the period(c)=Min(a;b)	10,959	20,000	25,000	43,836	51,000
The day's consumption attribution for D14: (c) - already attributed consumption	10,959	9,041	5,000	18,836	7,164
Accumulated consumption attribution for D14	10,959	20,000	25,000	43,836	51,000

The blue rows state the daily consumption for E17 and the accumulated consumption for E17. The pink row states the estimated consumption to full tax payment (4,000 kWh/(number of days in the electrical heating year), while the dark red is the accumulated value for the estimated consumption to full tax payment. E.g. on day 3:

3 x 10,959 kWh = 32,877 kWh.

The light green value states the highest possible consumption to full tax (smallest value between a and b), the medium green value states the consumption attributed to D14 on the day concerned and the dark green states the accumulated attribution of consumption for D14. The accumulated consumption for D14 is always the smallest value of (accumulated consumption for E17 / accumulated estimated consumption to full tax payment), as described in 6.4.3.

Note that in some days the formula means that more consumption for D14 will be attributed than registered for E17. E.g. this happens on day 2, where 9,041 kWh are attributed even though the consumption for E17 is only 5,000 kWh.

Also, there will be days where more consumption is attributed to D14 than the daily estimated consumption to full tax payment. E.g. this happens on day 4, where 18,836 kWh are attributed even though the estimated consumption to full tax payment is only 10,959 kWh. The reason for the above is, that electrical heating must always be calculated on the basis of the accumulated annual consumption and therefore is independent from the consumption on the concerned day.

6.4.4 Calculation model for profile-settled metering points

Fair values are calculated for these metering points based on the following principles:

A daily consumption is entered for the D14 metering point as explained below.

- a) If the expected annual consumption for the parent metering point (E17) is greater than 4,000 kWh: $(4000 \text{ kWh}) / (\text{number of days in the year})$ is entered.
- b) If the expected annual consumption for the parent metering point (E17) is less than 4000 kWh: $(\text{expected annual consumption}) / (\text{number of days in the year})$ is entered.

If the expected annual consumption is changed in the period, no historical correction of D14 is initially carried out, but the attribution of consumption to D14 is corrected forward according to the new expected annual consumption.

In connection with the submission of a consumption statement covering the entire tax period, the D14 fair values are corrected using the same calculation model as described above, if the periodised consumption activates changes in the D-14 consumption originally calculated per day in the period.

6.4.4.1 Example D-14 calculation of profile-settled metering points

The example centers on an estimated annual consumption of 5000 kWh, while in reality only 3700 kWh has been consumed according to the latter reading.

Until a consumption statement covering the entire tax period is available the below model (profile estimated) is used:

	Day 1	Day 2	Day 3	Day 4	Day 5
Accumulated consumption for E17 (a) Is not used (always>=(b))					
Daily estimated consumption to full tax payment (4000/365)	10,959	10,959	10,959	10,959	10,959
Accumulated estimated consumption to full tax payment (b)	10,959	21,918	32,877	43,836	54,795
The day's consumption attribution for D14	10,959	10,959	10,959	10,959	10,959
Accumulated consumption attribution for D14	10,959	21,918	32,877	43,836	54,795

By the settlement of the period where the actual consumption has been read to 3700 kWh, the result is corrected as shown below (model profile-read):

	Day 1	Day 2	Day 3	Day 4	Day 5
Accumulated consumption for E17 (a)(3700/365)	10,137	20,274	30,411	40,548	50,685
Daily estimated consumption to full tax payment (4000/365)	10,959	10,959	10,959	10,959	10,959
Accumulated estimated consumption to full tax payment (b)	10,959	21,918	32,877	43,836	54,795
The day's consumption attribution for D14	10,137	10,137	10,137	10,137	10,137
Accumulated consumption attribution for D14	10,137	20,274	30,411	40,548	50,685

In this way a full tax of 4000 kWh will be paid on an annual basis until the reading is available. By the reporting of the consumption statement the full tax payment consumption (D14-value) is reduced to the actual read periodised consumption of 3,700 kWh. Vice-versa, if the read periodised consumption in the example had been larger than 4,000 kWh, no corrections of the D14-values would be carried out, unless the expected annual consumption at some point during the year has been less than 4000 kWh.

Note that an even daily distribution of the E17 consumption and the D14 consumption is used by periodizing in the electrical heating engine. In this way the accumulated E17 consumption for the tax period used in the electrical heating engine, can differ from the correct periodised E17 consumption which always **must** be periodised to daily/hourly level according to the distribution curve.

6.4.5 Calculation timing

Fair value for the D14 metering point is calculated in connection with fixation. The D14 values are then only corrected:

- For hourly- and profile-settled metering points: If the hourly values for the parent metering point (E17) is changed
- For profile-settled metering points:
 - When changing the expected annual consumption the values are corrected forward, if the new expected annual consumption involves a change in the daily attribution to the D14 metering point
 - When submitting consumption statements covering the entire tax period
- In connection with a retroactive move-in

6.4.6 Starting electrical heating calculation

In connection with the registration of electrical heating, calculation on the D14 metering point starts on the Electrical heating tax date.

6.4.7 Information on D14 consumption

DataHub sends the calculated fair values for the D14 metering point to the grid company and the balance supplier in connection with fixation, and if the values are later changed. D14-time series are sent as hourly dissolved time series and contain the daily attribution in position 1. Additional positions will have the value 0.

6.5 Special conditions for combined electrical heating and net settlement

6.5.1 Background

If electrical heating is registered for a net-settled metering point in net settlement group 2 or 6, calculation of the D14 values in the calculation engine will be done slightly differently to accommodate the legal guidelines *E.A.4.3.6.2. Rules for electricity in heating of all-year residences*. The guideline is available on SKAT's website: <http://skat.dk/SKAT.aspx?old=2061621>.

According to the guideline, net settled installations do not require electricity tax on *net settled energy* defined as "Own produced solar cell energy exchanged with the collective electricity grid in the net settlement solution".

Group 4 installations cannot benefit from the solution, since *net settled energy* is not included in this group.

6.5.2 Net settlement group 2 (hourly-based net settlement)

Initially the D14 values for this net settlement group are calculated as normal according to the flex-/hour model, with the key difference that they can only be considered interim values until the *Electrical heating tax date* (1 January) has passed. Once the Electrical heating tax date has passed, the *reduction in consumption at full electricity tax rate for the year* is calculated using the following formula:

Reduction in consumption at full tax rate for the year = annual sum (minimum (D06;D07) per hour)

The D14 calculation is then corrected for the whole year based on the same principle as described in section 5.4.3, but where the (4,000 kWh) in the calculation of 'b' are replaced by (4000 kWh - *reduction in consumption at full tax rate for the year*).

6.5.2.1 Example correction of D14-calculation for net settlement group 2

The example is based on a consumption statement as in section 5.4.3.1 for flex- and hourly-settled metering points. The D14-calculation is the same until it is possible to calculate the annual reduction.

Not until the electrical heating year is final the reduction can be calculated and the D14-calculation repeated/corrected.

If the annual reduction is calculated to e.g. 3000 kWh this means that the 4000 kWh initially used must be reduced to (3000-4000) kWh = 1000 kWh. The corrected D14-calculation is shown below.

	Day 1	Day 2	Day 3	Day 4	Day 5
Daily read/estimated consumption	15,000	5,000	5,000	25,000	1,000
Accumulated consumption for E17 (a)	15,000	20,000	25,000	50,000	51,000
Daily estimated consumption to full tax payment (1000/365)	2,740	2,740	2,740	2,740	2,740
Accumulated estimated consumption to full tax payment (b)	2,740	5,480	8,220	10,960	13,700
Highest possible consumption to full electricity tax in the period(c)=Min(a;b)	2,740	5,480	8,220	10,960	13,700
The day's consumption attribution for D14: (c) - already attributed consumption	2,740	2,740	2,740	2,740	2,740
Accumulated consumption attribution for D14	2,740	5,480	8,220	10,960	13,700

In that way the D14-consumption for the entire period is reduced on the basis of the new estimated consumption to full tax payment, which is 2,740 kWh per day.

6.5.3 Net settlement group 6 (year-based net settlement)

Initially the D14 values for this net settlement group are calculated as normal according to the profile model, with the key difference that during correction in connection with the submission of the annual consumption a reduction is made to the *electrical heating consumption at full tax rate*, corresponding to:
Minimum (annual sum (D07); annual sum (D06)).

6.5.3.1 Example correction of D14-calculation for net settlement group 6

The example is based on the example from the profile calculation (section 6.4.4.1). The annual reduction in the example is set to 2000 kWh. This means that full electricity tax must be paid for (4000-2000) kWh = 2000 kWh and reduced tax on the remaining 1700 kWh.

Day 1	Day 2	Day 3	Day 4	Day 5
-------	-------	-------	-------	-------

Accumulated consumption for E17 (a) (3700/365)	10,137	20,274	30,411	40,548	50,685
Daily estimated consumption to full tax payment (2000/365)	5,479	5,479	5,479	5,479	5,479
Accumulated estimated consumption to full tax payment (b)	5,479	10,958	16,437	21,916	27,395
The day's consumption attribution for D14	5,479	5,479	5,479	5,479	5,479
Accumulated consumption attribution for D14	5,479	10,958	16,437	21,916	27,395

In that way the D14-consumption for the entire period is reduced on the basis of the new estimated consumption to full tax payment, which is 5,479 kWh per day.

6.6 The grid company chooses to submit D14 values

If the grid company wants to control the submission of hourly values for the D14 metering point directly, the D14 metering point should be created with metering point type *virtual*.

This model is necessary, for example, in cases where there are several electrical heating installations for the same metering point, where each installation must pay the full electricity tax on the first 4,000 kWh, or in total an amount of energy corresponding to (number of installations) * 4,000 kWh.

The DataHub calculation engine can only handle a standard installation, where the metering point covers a single installation.

If there are no special conditions to take into account, it is recommended that grid companies use the DataHub calculation engine, as this simplifies the work for balance suppliers.

If the grid company chooses to submit hourly values itself, the grid company must notify the balance suppliers as to which model is being used to calculate the hourly values.

6.7 The balancesupplier's settlement of tax payment with the costumer

The balance supplier is responsible for charging the end customer with the correct tax.

The balance supplier should especially note that for profile-settled metering points, the D14 metering point is updated in connection with available consumption statements covering the entire period.

In connection with receiving a consumption statement, the balance supplier may at any time recalculate the hourly/daily D14 consumption using the same formula as in Energinet's calculation engine.

6.8 Time limits and data content

6.8.1 Time limits for electrical heating

See the respective BRS descriptions for specification of the time limits.

6.8.2 Data content

See the respective BRS descriptions for specification of the data content.

7. Håndtering af tilknytninger

8. Principles for handling metering points and metering point structures

8.1 Metering point states

Each metering point in DataHub can be in one of the following three states:

1. Stand-alone metering point – a metering point that is neither a parent or child metering point
2. Parent metering point – a metering point with one or more linked child metering points
3. Child metering point – a metering point with one, and only one, linked parent metering point

A metering point can only be in one of the above states. A parent metering point cannot be a child metering point for another parent metering point, and a child metering point cannot be a parent metering point for other child metering points.

8.2 Metering point structures

As explained above, the metering point structure is a two-level structure. This chapter explains how to link groups of metering points.

The concept of metering point types is defined and described in section 4.4.7.

Only consumption metering points (E17) or production metering points (E18) can be parent metering points.

Child metering points can be metering points of group 3 or group 4 (see section 4.4.7).

As also explained, only consumption metering points (E17), production metering points (E18) and exchange metering points (E20) are included in balance settlement, and only consumption and production metering points are involved directly in the electricity market (changes of supplier and moves can only be effected for these two metering point types).

Other metering point types (group 3 or group 4) are created to handle information about energy volumes, meter readings and wholesale services which cannot be handled directly using a consumption or production metering point.

These metering point types are always either stand-alone metering points or child metering points.

If one of these points is created as a stand-alone metering point, it is usually because it has not yet been decided which structure the metering point is to be part of, the metering point is a pure analysis metering point, or it is to be used for intermediate calculation in a structure in DataHub.

Child metering points are created when a consumption or production metering point needs to be able to handle more information or more wholesale services for an installation than a single metering point can contain.

Child metering points have no customer master data and lack a number of other metering point master data attributes, such as balance supplier and BRP (see the complete list of possible attributes in the table in section 5.3.1).

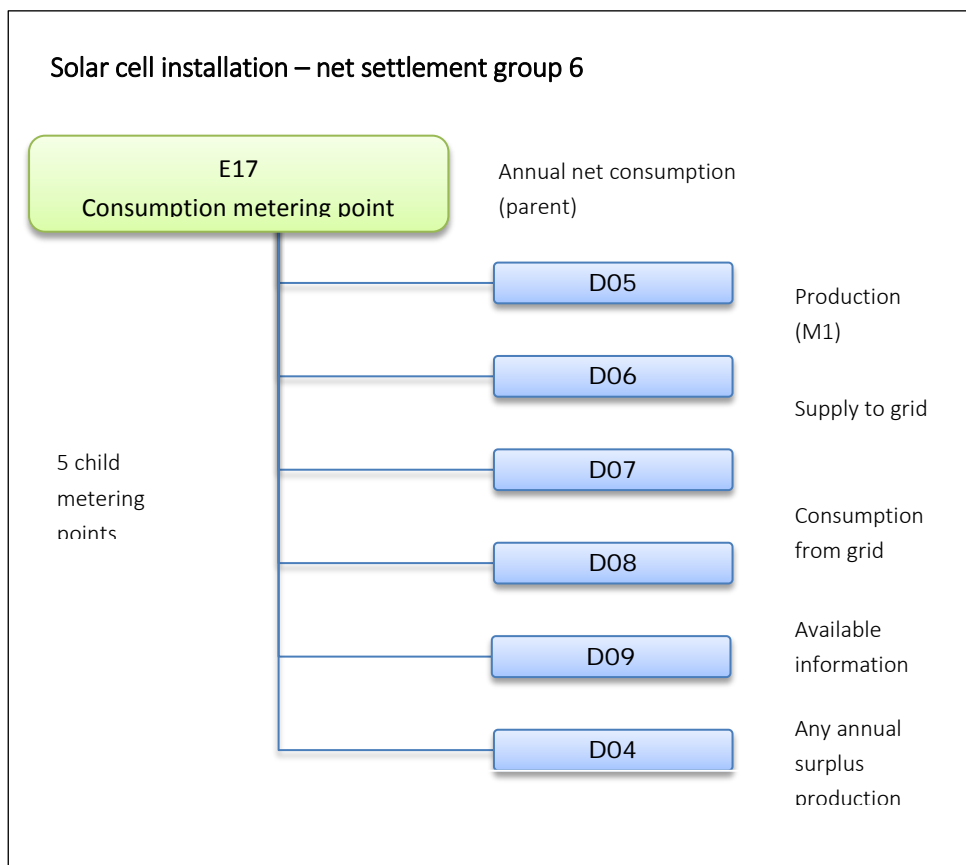
Child metering points follow the parent metering point in relation to customer, balance supplier and BRP, ie the child metering point follows the parent metering point in connection with moves and changes of supplier from the date they are linked. For example, if a fee is linked to a stand-alone metering point up to a given date, and another metering point is only linked to the parent metering point after this date, the fee will not be applied.

When there is a need to define a more complex installation (such as an installation with several consumption meters or a net-settled installation) a metering point family is built consisting of a parent metering point and the necessary number of linked child metering points.

The parent/child link is established using the *Parent metering point ID* master data field, in which the relevant parent metering point number is entered for the child metering points.

It is not possible from the parent metering point master data to see which child metering points are linked to the metering point. If such a list is required, it can always be obtained by the player using *BRS-005 Request for master data*.

The figure below shows how metering point structures can be used in the description of a solar cell installation.



8.2.1 Master data handling

Creating and closing down metering points and changes to master data for a metering point are generally handled in the same way regardless of the metering point type, and the relevant players are automatically notified of these changes in line with the rules. However, a parent metering point cannot be closed down before any linked child metering points are either closed down or detached from the parent metering point.

Note that if a child metering point becomes linked to a metering point, or changes are made to master data for child metering points already linked, the relevant players will automatically be informed.

Note that the order in which master data is forwarded cannot be guaranteed. The player's system must therefore be able to handle receiving master data for child metering points prior to receiving master data for the associated parent metering point.

8.2.2 Linking and detaching child metering points

Child metering points are linked or detached by updating the master data for the metering point. To create a link, the relevant parent metering point ID is entered in the *Parent metering point ID* field, whereas a link is detached by either blanking out the field or changing it to a different parent metering point ID.

When a child metering point is linked to a parent metering point, the balance supplier for the parent metering point is identified, and relevant master data for the child metering point is sent to the current and any future balance suppliers for the parent metering point.

When a child metering point is detached from a parent metering point, an *Information on removal of child metering point* message is similarly sent to the current and any future balance suppliers for the parent metering point.

8.2.3 Incorrectly defined relationships

The validation rules in DataHub prevent child metering points being linked to parent metering points that do not exist.

8.2.4 Settlement factors

As mentioned above, child metering points are not included in balance settlement for market electricity.

However, they are included in the calculation of wholesale services, ie the wholesale services linked to a child metering point will be included in the aggregations the balance supplier for the associated parent metering point receives and will thus be invoiced for.

Balance suppliers should also be aware that child metering points may contain information about energy volumes and meter readings, which must be forwarded to the customer for the parent metering point.

8.2.5 Net-settled installations

Parent/child structures will be primarily used to describe net-settled installations. For correct creation of these installations in DataHub, see 'Guidelines for net settlement for own producers'.

8.2.6 Metering points not included in either balance or wholesale settlement

Metering points can be created in DataHub which are not included in balance settlement or wholesale settlement, but have purely been created for analysis or a similar purpose.

If the grid company or TSO links wholesale services to such stand-alone metering points, these will not be included in aggregations, as there is no balance supplier for this type of metering point.

9. ITX

This chapter is a general review of the process engine in DataHub, called ITX. ITX stands for Interacting Transaction eXecution and has several functions. The primary task is to run processes correctly in relation to each other, but other things are also handled, such as the receipt and cancellation of processes.

Understanding ITX is important, as it is ITX that cancels a process if it has a lower rank than another process, or if a future change of supplier has to be cancelled due to a move-in. For exact rules, see the spreadsheet containing ITX rules, available on Energinet's website together with the BRS guide.

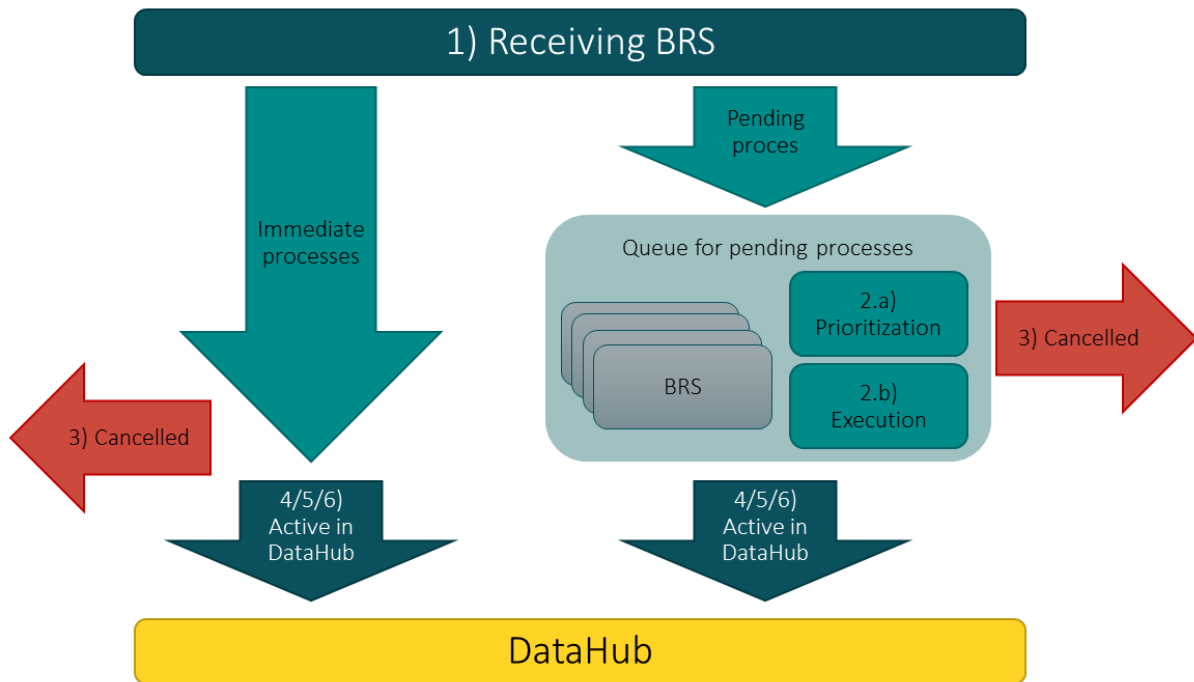
A process in this context is a BRS. Processes are generally divided in two main types:

- Immediate processes. These processes are handled and stored in DataHub immediately. The data included with such a process will thus become known to other processes. An example is BRS-007 *Closing down a metering point* with an effective date in the future. If a player subsequently submits a BRS-009 *Move-in* with a later effective date it will be rejected, because DataHub knows the metering point has been closed down on a given date in the future.
- Pending processes. These processes are placed in a queue, and have no impact on other processes as long as they remain in the queue. Only the sender can continue to work with the process while ever it is in the queue. At a predefined time prior to the effective date (usually when the cancellation period expires), the processes in the queue are prioritised and handled. At this time, a process that was previously approved can end up being cancelled due to another process. Processes in the *pending process* category:
 - BRS-001 *Change of supplier*
 - BRS-002 *End of supply*
 - BRS-009 *Move-in*
 - BRS-010 *Move-out*

ITX manages the prioritisation and execution of the processes in relation to each other, and due to the large number of processes, there is a very large number of possible combinations. A number of rule tables have been made to explain these factors, which can be found in a separate rule spreadsheet. The rule tables are briefly outlined below:

- Table 1.x describes the mutual rejection rules between processes at the time a process is received.
- Table 2 describes the execution priority if two processes have the same effective date.
- Table 3.x explains which other processes must be cancelled due to the executed process chosen in Table 2 and how the player is informed of the cancellation.
- Table 4.x explains which future balance suppliers receive what information as a result of the executed process chosen in Table 2. Messages with an actual effective date before start of supply contain an effective date corresponding to start of supply. The last message received contains all updates prior to start of supply.
- Table 5.x describes what adjustments have to be made in the executed process and/or other processes due to the executed process.
- Table 6 describes how data in any later processes must be handled in relation to the executed process.

The figure below presents an overview of the total ITX functionality:



The numbers in the figure correspond to the rule tables mentioned above. Note that a process which has entered the queue system can leave the queue in two ways. Either by being executed and stored in DataHub as a completed process, or by being cancelled. A cancelled process will always appear in the DataHub transaction list as cancelled. The exact rules for the various tables are listed in ITX rule spreadsheet.

Executed processes

As part of an executed process, an RSM-004 message stopping supply immediately may be invoked. This is because there is a known future event pending in relation to the submitted effective date. For example, if a change of supplier is submitted for 10 days' time, and a close down metering point transaction exists for a later date, the player will receive an RSM-004 message closing down the metering point together with the change of supplier in the same process.

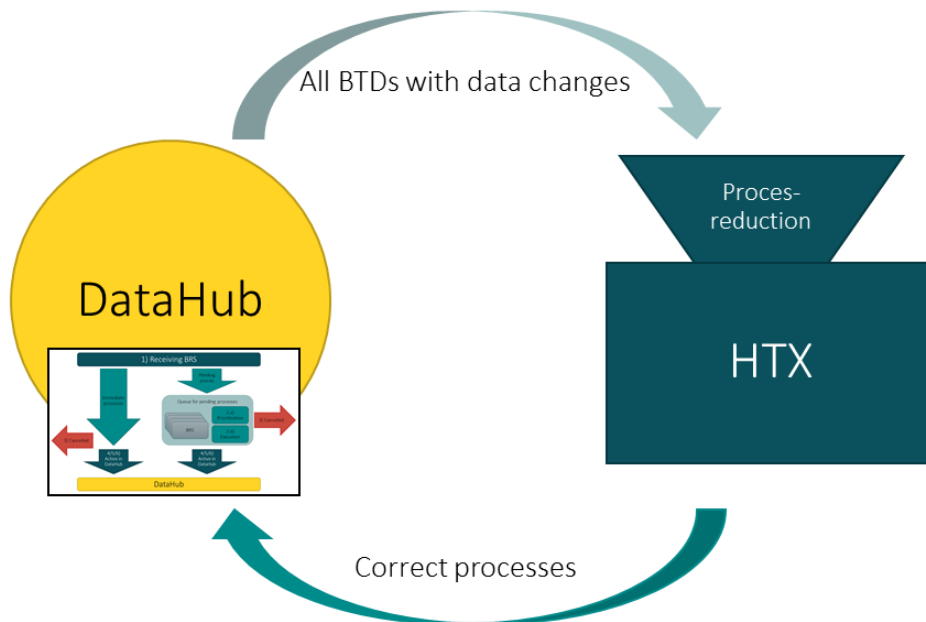
ITX cancelled processes

A process can be cancelled via the process or via ITX. When a process is cancelled, an RSM-004 message is sent with a business reason code. The business reason code is listed in ITX spreadsheet and typically corresponds to the process that cancels the process, see the BRS-guide. If the code 'X99' appears in the ITX spreadsheet, this means that DataHub does not inform any player about the cancellation, for example by using BRS-014 several times within the same day. If no specific code is used by a BRS when cancelling another process, the shared code 'D45' is used.

10. HTX

This chapter is a general view of the correction tool, which Energinet uses to correct historical time lines for data and processes. HTX stands for **H**istorical **T**ransaction **e**Xecution. The primary purpose of the tool is to ensure compliance with the validation rules and ITX rules by corrections executed by Energinet.

HTX is a part of DataHub and can only be used by Energinet. In general a HTX process appears in line with the figure below:



The process for executing a correction is following:

- 1) Extract all processes from a given date until today. This is executed by the system on the basis of all data in DataHub according to the stated criteria.
- 2) Reduce the number of processes to the minimum number of processes. This occurs in order to minimize the number of correction needs. If 5 changes of meters (BRS-014) happen within the same day, only the last needs to be extracted. If a move and a submission of customer master data have been made within the same day, only a move of the correct customer master data is necessary etc.
- 3) Handle/correct processes. This is the only manual process which is executed by an operator in collaboration with the player/players, who needs a correction of a timeline.
- 4) Submit the processes back to DataHub. Submission of data occurs as if it is executed by the player. The difference consist in Energinet handling the execution and that there are no temporal restrictions.
- 5) DataHub handles the submitted revised processes. Initial the old processes are cancelled and replaced by the new (through ITX). In general this happens with the ITX



cancellation code 'X99', so that the players are not informed about all of the cancellations.

- 6) Finally the new processes are executed via ITX. Basically no master data messages are sent out unless the player has asked for it.
- 7)

If the process fails the process is restarted. Either a new extract is created or the former extract is reused.

10.1.1 Processes which can be corrected via HTX

Not all processes are covered by HTX. For example only corrections of BRS-001 and not BRS-043 can be made.

The table states which processes can be corrected through HTX.

Supported

- BRS-001 Change of supplier
- BRS-002 End of supply
- BRS-004 Create metering point

- BRS-006 Submission of master data - grid company

- BRS-007 Close down metering point
- BRS-008 Connection of metering point with status new
- BRS-009 Move-in
- BRS-010 Move-out
- BRS-012 Change of settlement method
- BRS-013 Disconnection and reconnection of metering point
- BRS-014 Meter management
- BRS-015 Submission of customer master data by balance supplier
- BRS-017 Submission of EAC by grid company
- BRS-036 Update production obligation

Not supported

- BRS-003 Incorrect change of supplier
- BRS-011 Incorrect move
- BRS-037 Settlement master data for a metering point - subscription, fee and tariff links
- BRS-040 Change of BRP

- BRS-043 Change of supplier at short notice

The processes which can be corrected, can be corrected back in time as long as the available data are placed in DataHub.

10.1.2 Message flow in corrected processes

In general a HTX correction will not result in any sending of messages to the players' IT systems. However, the operator can send the following messages for each process that can be corrected:

- Master data messages - RSM-022/RSM-028/RSM-031
- Start/end of supply - RSM-004

The messages can be sent per:

- Process
- Player
- Message

This means that the operator can choose to implement a correction without the players receiving any information (default) or that RSM-004 Start of supply and End of supply comes out, e.g. if a complex correction of a move (complex BRS-011) is necessary.

All messages being sent out are sent with the normal business reason codes. This means that correction of a metering point requiring change of settlement method 2 years ago will send out 2 years old master data messages, if requested. Only when the messages are older than permitted by the normal time limits, they can be identified as corrections.