

Danish Business Transactions for the Electricity and Gas Market

Appendix to:

Danish Guide for Change of Supplier, version 2

&

*Business Scenarios for EDI-communication in the Gas
Market*

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Change Log

The change log contains any changes added following the previous version or release. A change in **version** indicates significant changes to structure or syntax, whereas a new **release** contains smaller changes.

| Chapter | Transaction | Change |
|---------|-------------|---|
| 2.1 | BT-001 | Figure 1 has been changed, excluding BT-004 on submission of master data (UTILMD E07) – this is a separate business transaction only used by the gas market in relation to BT-001. |
| 2.1.3 | BT-001 | Reference to BT-004 when mentioning separate message for returning master data in the gas market. |
| 2.1.4 | BT-001 | This section has been deleted in accordance with the above changes, dealing with return of master data in BT-004. |
| 2.1.5 | BT-001 | Is now chapter 2.1.4 and describes the third optional flow instead of the fourth flow. The following chapters are renamed accordingly. |
| 2.1.5 | BT-001 | Table 4 is renamed "Validation of third dataflow". |
| 2.1.5 | BT-001 | This is the previous 2.1.6. Now describes the fourth dataflow instead of the fifth dataflow. |
| 2.1.8 | BT-001 | This is the previous 2.1.9. Dependency matrix for UTILMD E07 is deleted, as this is dealt with in BT-004 instead. |
| 2.1.9 | BT-001 | This is the previous 2.1.11. OBPI is changed to BPI – this change is carried out several times throughout the document. |
| 2.1.9. | BT-001 | Message UTILMD E07 is deleted from the Unique Identification table. |
| 2.1.10 | BT-001 | This is the previous 2.1.12. In the examples, the IG version is changed from 03 to 02. |
| 2.4.1 | BT-004 | Added Reason For Transaction (RFT) E01, E03 and E40 for the gas market. |
| 2.4.7 | BT-004 | In the examples for E07 for Gas has there been inserted missing ":" in "NAD+IT" segment |
| 2.6 | BT-008 | BT-008 has been changed so that it is now possible to send more information about one Serial ID; instead of using NAD+XX, this transaction will be using LIN+ line number at the beginning of a repetition. |

1. Introduction and general principles

This document is a collection of all the *Business Transactions* that are used in the *Business Scenario* documents for the Danish electricity market and gas market respectively. More specifically, these documents are:

- *Danish Guide for Change of Supplier version 2* (electricity)
- *Danish Business Scenarios for EDI- communication in the Gas Market* (gas)

The electricity and the gas market use the same *Business Transactions*. There are, however, some small differences in the two markets' use of the *Business Transactions*. Consequently, whenever there is a difference between the electricity and the gas market or something applies to one of the markets only, it is specified in the document. Also the two markets' use of terminology differ. Therefore, Appendix 1 maps the terminology used in this document to the terminology used in the gas market.

A *Business Transaction* in this document must be addressed in accordance with *EDI-communication (Regulation F)*, which describes the information flow for general error handling. This includes the validation of interchange documents that have to be carried out before a more specific validation described in a *Business Transaction*.

2. Business Transactions

A *Business Transaction* is an independent element. It is independent of other EDI transactions. Business Transactions can be used as “bricks” in the Business Processes.

A Business Transaction specifies interchange of EDI documents (messages) between the IT systems of two actors. Furthermore, it specifies a part of the internal handling within an actor’s IT system. To indicate the interchanged documents and their validation *Activity Diagrams* are used.

Activity Diagrams

Interchange of messages between IT systems of two actors is illustrated in an *Activity diagram*. It shows the name of the EDI message, such as *UTILMD 392* and the actors this message is interchanged between, in this case a *Balance Supplier* and a *Metering Point Administrator*. Most of the messages are *UTILMD* but also *MSCONS* and *APERAK* are used. In the message a code is used to state a reason for transaction such as *E03* for *change of supplier*.

Validation tables

Recipient of the message validates the message and afterwards, undertakes a specific validation in accordance with a *Validation Table*, which is documented in a *Business Transaction*. After the received message is processed, an EDI message is sent back as an answer.

Both the initiating message and the answer message contains a list of *Attributes*, which are included in the message as referred to as a *Dependency Matrix*.

Dependency Matrix for Attributes

A *Dependency Matrix* exists for all the messages a *Business Transaction* contains. The *Dependency Matrix* shows the dependency of the *Attributes* in a message. An *Attribute* can be “required”, “dependent” or “not used” in a message.

The first column in a *Dependency Matrix* named *Attribute* refers to the *Attributes* that are specified in a *Data Model* in the individual Danish EDI Message Implementation Guides.

The second and third column in a *Dependency Matrix* named RFT Gas and RFT Electricity refers to the *Reason for transaction* for the gas and electricity market respectively. *Reason for transaction* (E03, E05 etc.) refers to the name of each

message. In these columns it is specified, whether an attribute is *Required (R)*, *Dependent (D)* or *Not used (X)* in a message. The Attribute *Request for acknowledgement* is always required. It can have value *NA (No acknowledgement needed)* or *AB (Message acknowledgement is required - APERAK)*.

2.1. BT-001: Start of Supply (UTILMD 392 / UTILMD 414)

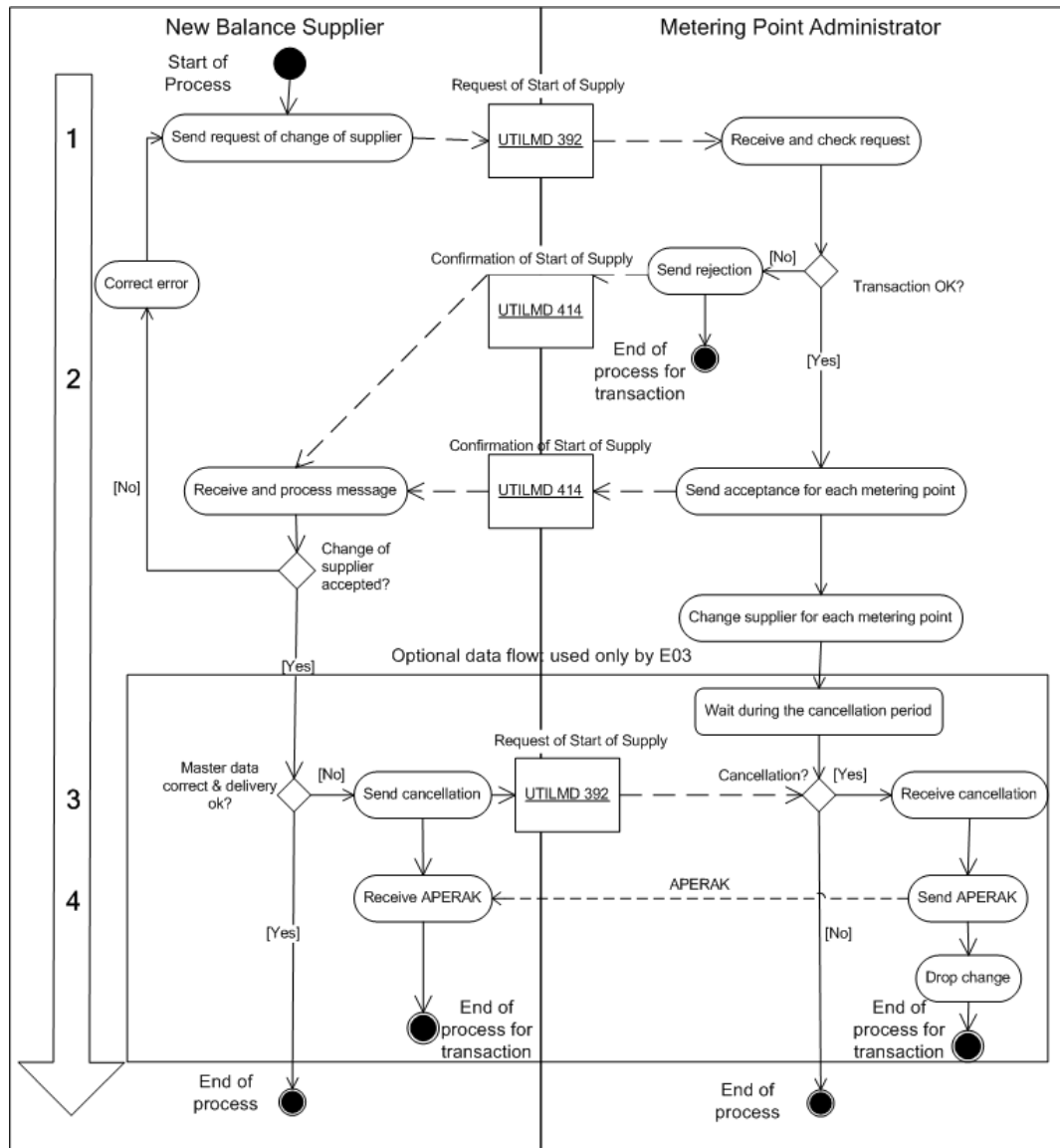


Figure 1: BT-001: Start of Supply (UTILMD 392/UTILMD 414)

Business Transaction, BT-001, is used by the *Balance Supplier* to send a *request for start of supply* to the *Metering Point Administrator*.

2.1.1. Initiation of the transaction

The transaction is initiated by a UTILMD message with a document name code 392 (*Request of start of supply*). The message can hold one or more transactions that all use the same *Reason For Transaction (RFT)*. The values can be:

- *E01 (Move)*
- *E03 (Change of supplier)*
- *E40 (Switch on drop)*: Only used for bilateral agreed switches that are to be carried out by the systems shortly after the time limit for change of supplier

2.1.2. First dataflow: UTILMD 392

The message in the first dataflow is sent with data as referred to in the *dependency matrix* (see section 2.1.6).

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, each transaction is verified in accordance with the business rules, which are documented in Table 1.

| Electricity /Gas | RFT | Validation | Reason for answer |
|---------------------|-------------------|---|---|
| Electricity/ Gas | E03 | The <i>Message Sender</i> (Balance Supplier) must not be equal to present <i>Balance Supplier</i> for the <i>Metering point</i> | E59 (Already existing relation (Rejection)) |
| Electricity/ Gas | E01 E03 E40 | The <i>Metering point</i> must be administered by the <i>Metering Point Administrator</i> | E10 (Installation address or metering point not identifiable) |
| Electricity/ Gas | E01 E03 E40 | The <i>Metering point</i> must be allowed to change <i>Balance Supplier</i> | E22 (Metering point blocked for switching) |
| Electricity/ Gas | E01 E03 E40 | The <i>Balance Supplier</i> must be approved (authorised) at <i>Contract Start Date</i> . | E16 (Unauthorised supplier) |

| | | | |
|---------------------|-------------------|---|--|
| Electricity | E01 E03 E40 | The <i>Balance Responsible</i> must be approved (authorised) at <i>Contract Start Date</i> | E18 (Unauthorised Balance responsible) |
| Electricity | E01 E03 E40 | The <i>Balance Responsible</i> for a <i>profiled Metering point</i> must correspond to the official nominated | E18 (Unauthorised Balance responsible) |
| Electricity/ Gas | E01 E03 | The Change of Supplier is already done for the switch date | E22 (Metering point blocked for switching) |
| Electricity/ Gas | E03 | The message must be received within the official time limit for change of supplier | E17 (Requested switch date not within time limits) |
| Electricity/ Gas | E01 | The message must be received within the time limit for move | E17 (Requested switch date not within time limits) |
| Electricity/ Gas | E40 | The <i>Metering point</i> must be opened for switch after time limit for the change of supplier | E17 (Requested switch date not within time limits) |

Table 1: BT-001: Validation of first dataflow: UTILMD 392

If all metering points cannot be validated before sending the response, they must be validated during the cancellation period. This is, however, only possible when the value of RFT is E03 (change of supplier).

2.1.3. Second dataflow: UTILMD 414

For all transactions received in the first dataflow an answer has to be given in one or more *UTILMD 414* messages. If a transaction fulfils all conditions in the validation table for the first dataflow, it must be approved by setting the *status for answer* to “39” (*approved*). If not, the *status for answer* is set to “41” (*rejected*) and the *Reason for answer* as shown in the validation table shall be used. For the remaining data, the message is sent with data as referred to in the dependency matrix (*see section 2.1.7*). An APERAK is not requested as UTILMD 414 is used as a receipt for UTILMD 392.

Electricity/Gas difference

In the electricity market, this UTILMD 414 answer also returns master data to the new Balance Supplier, if the transaction is approved. The gas market, however, has a separate message for returning master data, see BT-004 which specifically handles the transaction of master data (UTILMD E07).

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, each transaction is tested in accordance with the business rules, which are documented in Table 2.

| Electricity /Gas | RFT | Validation | Error code |
|---------------------|-------------------|--|---|
| Electricity/ Gas | E01 E03 E40 | The <i>Contract start date</i> must be as stated in the first dataflow | 42 (Error in content of a data element) |
| Electricity | E01 E03 E40 | The <i>Balance responsible party ID</i> must be as stated in the first dataflow | 42 (Error in content of a data element) |
| Electricity/ Gas | E01 E03 E40 | The <i>Balance Supplier</i> must be <i>Sender</i> of the <i>Request of start of supply</i> | 42 (Error in content of a data element) |

Table 2 BT-001: Validation of second dataflow: UTILMD 414

The Balance Supplier receives UTILMD 414 and examines the message for rejected metering points. Errors in rejected metering points must be corrected and resent in a new message.

In case of verification failure, a negative *APERAK* is sent in accordance with *EDI-communication (Regulation F)*. Please note that it is not allowed to send a positive *APERAK* for transactions that have passed the verification.

The *Balance Supplier* must verify the confirmed transactions manually to ensure that the switches are taking place for the correct customers. If this is not the case then the optional fourth (and fifth) dataflow can be applied to cancel the change (when RFT is E03 (change of supplier)).

2.1.4. Third dataflow: UTILMD 392 cancellation (optional)

This optional data flow can only be used when the Business Transaction is initiated by a RFT of E03 (*Change of supplier*).

A *Balance Supplier* can cancel an already sent *request for start of supply* by sending the transaction again with a new *transaction id* and E05 (*Cancellation of*

transaction) as *RFT* and the *transaction id* of the transactions to be cancelled as *Reference to transaction id*. In that case the *Balance Supplier* must request an acknowledgement (*APERAK*).

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, each transaction is verified in accordance with the business rules, which are documented in Table 3.

| Electricity/ Gas | RFT | Validation | Error code |
|---------------------|-----|--|--|
| Electricity/ Gas | E05 | The <i>Reference to Transaction id</i> must be equal to the <i>Transaction id</i> that <i>Message Sender</i> has sent before | 42 (Error in content of a data element) |
| Electricity/ Gas | E05 | Time of reception must be within the official time limit for cancellation | 51 (The message was received too late)/ 42 (Error in content of a data element) |

Table 3 BT-001: Validation of third dataflow: UTILMD 392

2.1.5. Fourth dataflow: APERAK (dependent on third dataflow)

If a transaction fulfils all the conditions in the validation tables, it must be approved. This is done by sending a positive *APERAK* with *message function* “34” (*Accepted with amendment*), the *error code* “100” (*The object is approved*) and “Godkendt/Approved” as *error description*. The transaction reference shall indicate the *Transaction ID*.

In case of verification failure, the transaction is rejected by a negative *APERAK* with the *message function* “34” (*Accepted with amendment*) and the *error code* value as indicated in the validation table. The name of the *attribute* that is the cause for failure must be stated in both Danish and English in the error description. The transaction reference shall indicate the *Transaction ID*.

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, the application is not allowed to reject the transactions.

2.1.6. UTILMD 392 - Dependency Matrix for Attributes

| Attributes | RFT Gas | | | | RFT Electricity | | | |
|--------------------------------|---------|-----|-----|-----|-----------------|-----|-----|-----|
| | E01 | E03 | E05 | E40 | E01 | E03 | E05 | E40 |
| IG version | R | | | | R | | | |
| BT combined ID | | | | | | | | |
| Market | | | | | | | | |
| Message date | | | | | | | | |
| Message function | | | | | | | | |
| Message id | | | | | | | | |
| Message name | | | | | | | | |
| Message recipient | | | | | | | | |
| Message sender | | | | | | | | |
| Request for acknowledgement | | | | | | | | |
| Time zone (UTC+0) | | | | | | | | |
| Metering point id | | | | | | | | |
| Reason for transaction | | | | | | | | |
| Transaction id | | | | | | | | |
| Reference to transaction | X | X | R | X | X | X | R | X |
| Consumer party name | R | X | X | X | R | X | X | X |
| Consumer party contact address | R | X | X | X | R | X | X | X |
| Contract start date | R | | | | R | | | |
| Balance responsible party id | X | | | | | | | |

Table 4 BT-001: Dependency Matrix for attributes: UTILMD 392

R= Required, D= Dependent, X= not used

2.1.7. UTILMD 414 - Dependency Matrix for Attributes

| Attributes | RFT Gas | | | RFT Electricity | | |
|------------------------------------|---------|-----|-----|-----------------|------|-----|
| | E01 | E03 | E40 | E01 | E03 | E40 |
| IG version | | | | | | |
| BT combined ID | | | | | | |
| Market | | | | | | |
| Message date | | | | | | |
| Message function | | | | | | |
| Message id | | | | | | |
| Message name | | | | | | |
| Message recipient | | R | | | R | |
| Message sender | | | | | | |
| Request for acknowledgement | | | | | | |
| Time zone (UTC+0) | | | | | | |
| Metering point id | | | | | | |
| Reason for transaction | | | | | | |
| Transaction id | | | | | | |
| Reference to transaction | | | | | | |
| Status for answer | | | | | | |
| Reason for answer | | D* | | | D* | |
| Consumer Party name | X | D** | D** | X | D** | D** |
| Contract start date | | D** | | | | |
| Validity start date | | | | | | |
| Balance responsible party id | | | | | | |
| Balance supplier party id | | X | | | | D** |
| Estimated annual volume | | | | | | |
| Metering point address | | | | | | |
| Settlement method | | | | | D** | |
| Next scheduled meter reading date | | X | | | D*** | |
| Physical status for metering point | | | | | | D** |

Table 5 BT-001: Dependency matrix for attributes: UTILMD 414

R= Required, D= Dependent, X= not used

* Not used when *Status for answer* is "39" (approved).** Not used when *Status for answer* is "41" (rejected).*** Not used when *Status for answer* is "41" (rejected) or if it is a Non-profiled metering point

2.1.8. APERAK - Dependency Matrix for Attributes

| Attributes | Electricity/ Gas |
|------------------------|---------------------|
| IG version | R |
| BT combined ID | |
| Message date | |
| Message function | |
| Message recipient | |
| Message sender | |
| Reference to message | |
| Application error code | |
| Error description | |
| Transaction reference | |

Table 6 BT-001: Dependency matrix for attributes: APERAK
R= Required

2.1.9. Unique Identification

| BT ID | DK-BT-001 |
|--------------------|---|
| BT navn | Start of Supply |
| BT version | 3 |
| BT combined ID | DK-BT-001-003 |
| BPI | DK-CUS33 |
| EDI Messages: | |
| Message ID | UTILMD 392 |
| Message name | Request of Start of Supply |
| Message IG version | 5.0 B |
| DK IG version | 3 |
| Message ID | UTILMD 414 |
| Message name | Confirmation of Start of Supply |
| Message IG version | 5.0 B |
| DK IG version | 3 |
| Message ID | APERAK |
| Message name | Application error and acknowledgement message |
| Message IG version | 2.4 B |
| DK IG version | 3 |

2.1.10. Examples

2.1.10.1. Electricity: UTILMD 392-E03 (Change of Supplier for one metering point)

Electricity example:

UNA: +. ? '
UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1400+UN
I KT001++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
BGM+392+MES001+9+NA'
DTM+137: 200310011200: 203'
DTM+735: ?+0000: 406'
MKS+23+E01: : 260'
NAD+MS+5799999933318: : 9'
NAD+MR+5799999911118: : 9'
I DE+24+TrI D01'
DTM+92: 200311302300: 203'
STS+7++E03: : 260'
LOC+172+571313199988888819: : 9'
NAD+DDK+5799999922213: : 9'
UNT+13+1'
UNZ+1+UNI KT001'

Gas example:

UNA: +. ? '
UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1400+UN
I KT001++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
BGM+392+222+9+NA'
DTM+137: 200310011200: 203'
DTM+735: ?+0000: 406'
MKS+27+E01: : 260'
NAD+MS+5799999933318: : 9'
NAD+MR+5799999911118: : 9'
I DE+24+10250907'
DTM+92: 200312010500: 203'
STS+7++E03: : 260'
LOC+172+571515199988888819: : 9'
UNT+12+1'
UNZ+1+UNI KT001'

2.1.10.2. UTILMD 392-E03 (Change of Supplier for more than one metering point)

Electricity example (and gas example if 23 is replaced with 27 in MKS, xxxx2300 is replaced with xxxx0500 the next day in DTM and the last NAD segment is removed (balance supplier id)):

UNA: +. ? '
UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1400+UN
I KT002++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
BGM+392+MES002+9+NA'
DTM+137: 200310011200: 203'
DTM+735: ?+0000: 406'

MKS+23+E01: : 260'
 NAD+MS+5799999933318: : 9'
 NAD+MR+5799999911118: : 9'
 I DE+24+Tri D02'
 DTM+92: 200311302300: 203'
 STS+7++E03: : 260'
 LOC+172+571313199988888819: : 9'
 NAD+DDK+5799999922213: : 9'
 I DE+24+Tri D03'
 DTM+92: 200311302300: 203'
 STS+7++E03: : 260'
 LOC+172+571313199988888826: : 9'
 NAD+DDK+5799999922213: : 9'
 I DE+24+Tri D04'
 DTM+92: 200311302300: 203'
 STS+7++E03: : 260'
 LOC+172+571313199988888833: : 9'
 NAD+DDK+5799999922237: : 9'
 UNT+23+1'
 UNZ+1+UNI KT002'

2.1.10.3. UTILMD 392-E05 (Cancellation)

Electricity example:

UNA: +. ? '
 UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1400+UN
 I KT003++DK-CUS+++DK'
 UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
 BGM+392+MES003+9+AB'
 DTM+137: 200310011200: 203'
 DTM+735: ?+0000: 406'
 MKS+23+E01: : 260'
 NAD+MR+5799999911118: : 9'
 NAD+MS+5799999933318: : 9'
 I DE+24+Tri D05'
 DTM+92: 200301312300: 203'
 STS+7++E05: : 260'
 LOC+172+571313199988888819: : 9'
 RFF+TN: Tri D01'
 NAD+DDK+5799999922213: : 9'
 UNT+14+1'
 UNZ+1+UNI KT003'

Gas example:

UNA: +. ? '
 UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1400+UN
 I KT003++DK-CUS+++DK'
 UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
 BGM+392+MES003+9+AB'
 DTM+137: 200310011200: 203'
 DTM+735: ?+0000: 406'
 MKS+27+E01: : 260'
 NAD+MR+5799999911118: : 9'
 NAD+MS+5799999933318: : 9'
 I DE+24+Tri D05'
 DTM+92: 200312010500: 203'
 STS+7++E05: : 260'
 LOC+172+571515199988888819: : 9'

RFF+TN: TrI D01'
UNT+13+1'
UNZ+1+UNI KT003'

2.1.10.4. UTILMD 414-E03 (Approval of Change of Supplier for one metering point)

Electricity example:

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031001: 1415+UN
I KT011++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
BGM+414+MES011+9+NA'
DTM+137: 200310011215: 203'
DTM+735: ?+0000: 406'
MKS+23+E01: : 260'
NAD+MS+5799999911118: : 9'
NAD+MR+5799999933318: : 9'
I DE+24+TrI D11'
DTM+157: 200311302300: 203'
DTM+92: 200311302300: 203'
DTM+752: 0201: 106'
STS+7++E03: : 260'
STS+E01: : 260+39'
LOC+172+571313199988888819: : 9'
RFF+TN: TrI D01'
CCI +++E02: : 260'
CAV+E01: : 260'
CCI +++E15: : 260'
CAV+E22: : 260'
SEQ++1'
QTY+31: 6400: KWH'
NAD+DDQ+5799999933318: : 9'
NAD+DDK+5799999922213: : 9'
NAD+I T+++Jensens vej : : 5+Frederi ci a++7000+DK'
NAD+UD+++Jens Jensen: Hanne Hansen'
UNT+26+1
UNZ+1+UNI KT011'

Gas example:

UNA: +. ? '
UNB+UNOC: 3+5791111333334: 14+5790000333318: 14+031001: 1415+UN
I KT011++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
BGM+414+222+9+NA'
DTM+137: 200303271352: 203'
DTM+735: ?+0000: 406'
MKS+27+E01: : 260'
NAD+MR+5791111333334: : 9'
NAD+MS+5790000333318: : 9'
I DE+24+24400111114'
DTM+92: 200401010500: 203'
STS+7++E03: : 260'
STS+E01: : 260+39'
LOC+172+571515199988888819: : 9'
RFF+TN: 10250907'

NAD+UD+++John Jensen'
UNT+15+1'
UNZ+1+UNI KT011'

2.1.10.5. UTILMD 414-E03 (Approval of Change of Supplier for more than one metering point – incl. one non-profiled metering point)

Electricity example:

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031001: 1415+UN
I KT012++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
BGM+414+MES012+9+NA'
DTM+137: 200310011215: 203'
DTM+735: ?+0000: 406'
MKS+23+E01: : 260'
NAD+MS+5799999911118: : 9'
NAD+MR+5799999933318: : 9'
I DE+24+TrI D12'
DTM+157: 200311302300: 203'
DTM+92: 200311302300: 203'
DTM+752: 0201: 106'
STS+7++E03: : 260'
STS+E01: : 260+39'
LOC+172+571313199988888819: : 9'
RFF+TN: TrI D02'
CCI +++E02: : 260'
CAV+E01: : 260'
CCI +++E15: : 260'
CAV+E22: : 260'
SEQ++1'
QTY+31: 6400: KWH'
NAD+DDQ+5799999933318: : 9'
NAD+DDK+5799999922213: : 9'
NAD+I T++++Jensens vej : : 5+Frederici a++7000+DK'
NAD+UD+++Jens Jensen: Hanne Hansen'
I DE+24+TrI D13'
DTM+157: 200311302300: 203'
DTM+92: 200311302300: 203'
DTM+752: 0101: 106'
DTM+752: 0201: 106'
DTM+752: 0301: 106'
DTM+752: 0401: 106'
DTM+752: 0501: 106'
DTM+752: 0601: 106'
DTM+752: 0701: 106'
DTM+752: 0801: 106'
DTM+752: 0901: 106'
DTM+752: 1001: 106'
DTM+752: 1101: 106'
DTM+752: 1201: 106'
STS+7++E03: : 260'
STS+E01: : 260+39'
LOC+172+571313199988888826: : 9'
RFF+TN: TrI D03'
CCI +++E02: : 260'
CAV+E01: : 260'

CCI+++E15: : 260'
 CAV+E22: : 260'
 SEQ++1'
 QTY+31: 5000: KWH'
 NAD+DDQ+5799999933318: : 9'
 NAD+DDK+5799999922213: : 9'
 NAD+IT+++Christian X alle: : 5+Frederici a++7000+DK'
 NAD+UD+++Hanne Hansen: Hans Hansen'
 IDE+24+TrID14'
 DTM+157: 200311302300: 203'
 DTM+92: 200311302300: 203'
 STS+7++E03: : 260'
 STS+E01: : 260+39'
 LOC+172+571313199988888833: : 9'
 RFF+TN: TrID04'
 CCI+++E02: : 260'
 CAV+E02: : 260'
 CCI+++E15: : 260'
 CAV+E22: : 260'
 SEQ++1'
 QTY+31: 99000: KWH'
 NAD+DDQ+5799999933318: : 9'
 NAD+DDK+5799999922237: : 9'
 NAD+IT+++Bygade: : 4+Vejl e++7100+DK'
 NAD+UD+++El patron A/S'
 UNT+72+1'
 UNZ+1+UNIKT012'

2.1.10.6. UTILMD 414-E03 (One approval and one rejection of Change of Supplier)

Electricity example:

UNA: +. ? '
 UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031001: 1415+UN
 IKT013++DK-CUS+++DK'
 UNH+1+UTILMD: D: 02B: UN: E5DK02+DK-BT-001-003'
 BGM+414+MES013+9+NA'
 DTM+137: 200310011215: 203'
 DTM+735: ?+0000: 406'
 MKS+23+E01: : 260'
 NAD+MS+5799999911118: : 9'
 NAD+MR+5799999933318: : 9'
 IDE+24+TrID15'
 DTM+157: 200311302300: 203'
 DTM+92: 200311302300: 203'
 DTM+752: 0201: 106'
 STS+7++E03: : 260'
 STS+E01: : 260+39'
 LOC+172+571313199988888819: : 9'
 RFF+TN: TrID02'
 CCI+++E02: : 260'
 CAV+E01: : 260'
 CCI+++E15: : 260'
 CAV+E22: : 260'
 SEQ++1'
 QTY+31: 6400: KWH'
 NAD+DDQ+5799999933318: : 9'
 NAD+DDK+5799999922213: : 9'
 NAD+IT+++Jensens vej : : 5+Frederici a++7000+DK'
 NAD+UD+++Jens Jensen: Hanne Hansen'

IDE+24+TrID16'
 STS+7++E03: : 260'
 STS+E01: : 260+41+E10: : 260'
 LOC+172+571313199988888840: : 9'
 RFF+TN: TrID09'
 UNT+31+1'
 UNZ+1+UNI KT013'

2.1.10.7. UTILMD 392-E01 (Move)

Electricity example:

UNA: +. ? '
 UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1400+UN
 IKT004++DK-CUS+++DK'
 UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
 BGM+392+MES004+9+NA'
 DTM+137: 200310011200: 203'
 DTM+735: ?+0000: 406'
 MKS+23+E01: : 260'
 NAD+MS+5799999933318: : 9'
 NAD+MR+5799999911118: : 9'
 IDE+24+TrID04'
 DTM+92: 200311302300: 203'
 STS+7++E01: : 260'
 LOC+172+571313199988888819: : 9'
 NAD+DDK+5799999922213: : 9'
 NAD+UD+++Jens Jensen:Hanne Hansen+Jensens
 vej : : 5+Frederici a++7000+DK'
 UNT+14+1'
 UNZ+1+UNI KT004'

Gas example:

UNA: +. ? '
 UNB+UNOC: 3+5790000333318: 14+5791111333334: 14+031001: 1400+UN
 IKT001++DK-CUS+++DK'
 UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
 BGM+392+222+9+NA'
 DTM+137: 200303271352: 203'
 DTM+735: ?+0000: 406'
 MKS+27+E01: : 260'
 NAD+MR+5790000333318: : 9'
 NAD+MS+5791111333334: : 9'
 IDE+24+10250907'
 DTM+92: 200401010500: 203'
 STS+7++E01: : 260'
 LOC+172+571515199988888819: : 9'
 NAD+UD+++John Jensen+Jensensvej : : 5+Frederici a++7000+DK'
 UNT+13+1'
 UNZ+1+UNI KT001'

2.1.10.8. UTILMD 414-E01 (Approval of Move for one metering point)

Electricity example:

UNA: +. ? '
 UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031001: 1415+UN
 IKT018++DK-CUS+++DK'
 UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'

BGM+414+MES011+9+NA'
DTM+137: 200310011215: 203'
DTM+735: ?+0000: 406'
MKS+23+E01: : 260'
NAD+MS+5799999911118: : 9'
NAD+MR+5799999933318: : 9'
I DE+24+TrI D18'
DTM+157: 200311302300: 203'
DTM+92: 200311302300: 203'
DTM+752: 0201: 106'
STS+7++E03: : 260'
STS+E01: : 260+39'
LOC+172+571313199988888819: : 9'
RFF+TN: TrI D04'
CCI +++E02: : 260'
CAV+E01: : 260'
CCI +++E15: : 260'
CAV+E22: : 260'
SEQ++1'
QTY+31: 6400: KWH'
NAD+DDQ+5799999933318: : 9'
NAD+DDK+5799999922213: : 9'
NAD+I T++++Jensens vej : : 5+Frederi ci a++7000+DK'
UNT+25+1
UNZ+1+UNI KT018'

Gas example:

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031001: 1415+UN
I KT018++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-001-003'
BGM+414+MES011+9+NA'
DTM+137: 200310011215: 203'
DTM+735: ?+0000: 406'
MKS+27+E01: : 260'
NAD+MS+5799999911118: : 9'
NAD+MR+5799999933318: : 9'
I DE+24+TrI D18'
DTM+92: 200312010500: 203'
STS+7++E03: : 260'
STS+E01: : 260+39'
LOC+172+571515199988888819: : 9'
RFF+TN: TrI D04'
UNT+14+1
UNZ+1+UNI KT018'

2.2. BT-002: End of Supply - from MPA (UTILMD 406)

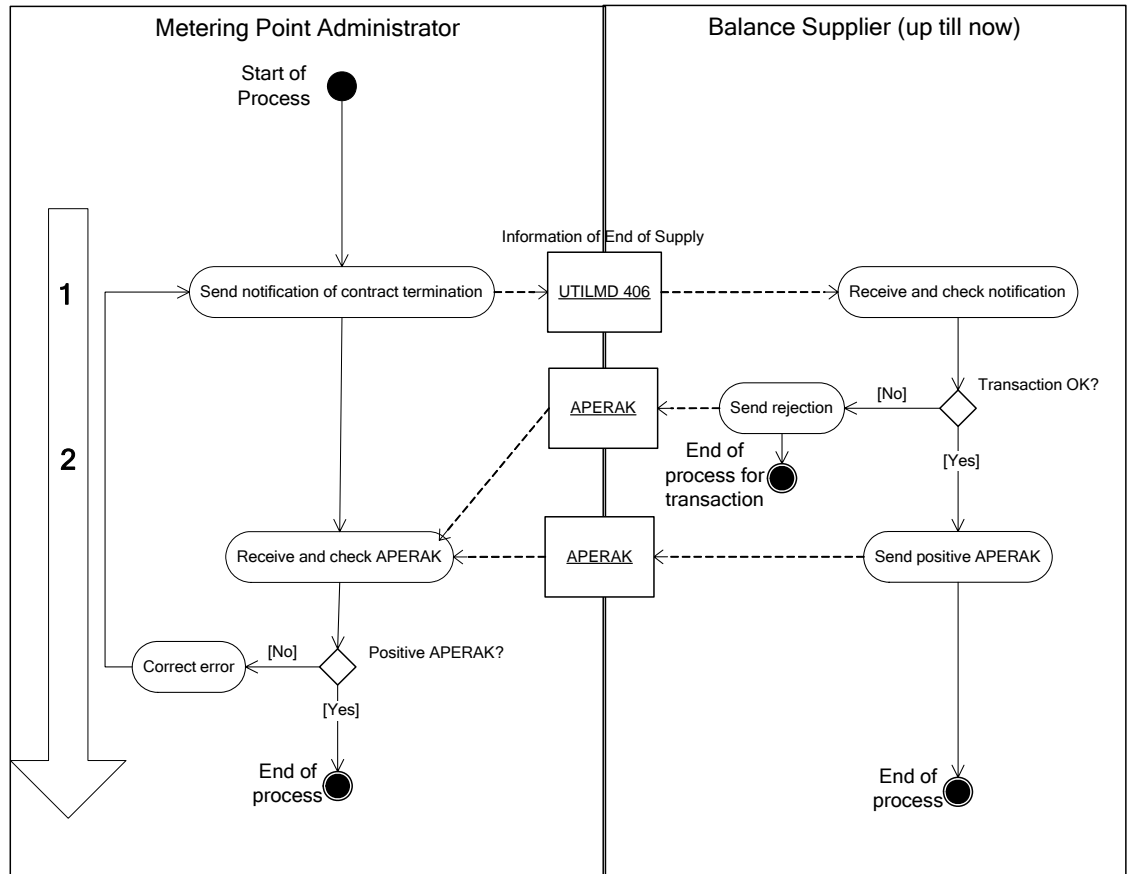


Figure 2: BT-002: End of Supply - from MPA (UTILMD 406).

Business Transaction BT-002 is used by the Metering Point Administrator to inform the Balance Supplier about the end of supply. The Balance Supplier must end the supply at the Contract stop date.

2.2.1. Initiation of the transaction

The transaction is initiated by a *UTILMD* message with a document name code 406 (*Information of end of supply*). The message can hold one or more transactions that all use the same *Reason for Transaction (RFT)*. The values can be:

- *E01 (Move)*
- *E03 (Change of supplier)*

2.2.2. First dataflow: UTILMD 406

The message is sent with data as referred to in the dependency matrix (*see section 2.2.4*).

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, each transaction is verified in accordance with the business rules, which are documented in Table 7.

| Electricity / Gas | RFT | Validation | Error code |
|---------------------|------------|--|--|
| Electricity/ Gas | E01 E03 | The <i>Message Recipient</i> must be the present Balance Supplier to the <i>Metering point</i> | 60 (The object of the transaction is not recognised)/ 42 (Error in content of a data element) |
| Electricity/ Gas | E01 E03 | Time of receipt of the message must be within the official time limit. | 51 (The message was received too late)/ 42 (Error in content of a data element) |

Table 7: BT-002: Validation of first dataflow: UTILMD 406

2.2.3. Second dataflow: APERAK

If a transaction fulfils all the conditions in Table 7, it must be approved. This is done by sending a positive *APERAK* with *message function* “34” (*Accepted with amendment*), the *error code* “100” (*The object is approved*) and “Godkendt/Approved” as *error description*. The transaction reference shall indicate the *Transaction ID*.

In case of verification failure, the transaction is rejected by a negative *APERAK* with *message function* “34” (*Accepted with amendment*) and the *error code* value indicated in the validation table. The name of the attribute that is the cause for failure must be stated in both Danish and English in the *error description*. The transaction reference shall indicate the *Transaction ID*.

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, the application is not allowed to reject the transactions.

2.2.4. UTILMD 406 - Dependency Matrix for Attributes

| Attributes | RFT Electricity/Gas | |
|-----------------------------|---------------------|-----|
| | E01 | E03 |
| IG version | R | |
| BT Combined ID | | |
| Market | | |
| Message date | | |
| Message function | | |
| Message id | | |
| Message name | | |
| Message recipient | | |
| Message sender | | |
| Request for acknowledgement | | |
| Time zone (UTC+0) | | |
| Metering point id | | |
| Reason for transaction | | |
| Transaction id | | |
| Contract stop date | | |

Table 8 BT-002: Dependency matrix for attributes: UTILMD 406

R= Required

2.2.5. APERAK - Dependency Matrix for Attributes

| Attributes | Electricity/ Gas |
|------------------------|---------------------|
| IG version | R |
| BT combined ID | |
| Message date | |
| Message function | |
| Message recipient | |
| Message sender | |
| Reference to message | |
| Application error code | |
| Error description | |
| Transaction reference | |

Table 9 BT-002: Dependency matrix for attributes: APERAK

R= Required

2.2.6. Unique Identification

| | |
|----------------------|---|
| BT ID | DK-BT-002 |
| BT navn | End of Supply – from MPA |
| BT version | 3 |
| BT combined ID | DK-BT-002-003 |
| BPI | DK-CUS |
| EDI Messages: | |
| Message ID | UTILMD 406 |
| Message name | Information of End of Supply |
| Message IG version | 5.0 B |
| DK IG version | 3 |
| Message ID | APERAK |
| Message name | Application error and acknowledgement message |
| Message IG version | 2.4 B |
| DK IG version | 3 |

2.2.7. Examples

2.2.7.1. UTILMD 406-E03: End of Supply from MPA for one metering point

Electricity example (and gas example if 23 is replaced with 27 in MKS and xxxx2300 is replaced with xxxx0500 next day in DTM):

```

UNA: +. ? '
UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031007: 1400+UN
I KT021++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-002-003'
BGM+406+MES021+9+AB'
DTM+137: 200310071200: 203'
DTM+735: ?+0000: 406'
MKS+23+E01: : 260'
NAD+MS+5799999933318: : 9'
NAD+MR+5799999911118: : 9'
I DE+24+TrI D21'
DTM+93: 200310312300: 203'
STS+7++E03: : 260'
LOC+172+571313199988888819: : 9'
UNT+12+1'
UNZ+1+UNI KT021'

```

2.2.7.2. UTILMD 406-E03 (End of Supply from MPA for more than one metering point)

Electricity example (and gas example if 23 is replaced with 27 in MKS and xxxx2300 is replaced with xxxx0500 in DTM):

```

UNA: +. ? '

```

UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031007: 1400+UN
 I KT022++DK-CUS+++DK'
 UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-002-003'
 BGM+406+MES022+9+AB'
 DTM+137: 200310071200: 203'
 DTM+735: ?+0000: 406'
 MKS+23+E01: : 260'
 NAD+MS+5799999933318: : 9'
 NAD+MR+5799999911118: : 9'
 I DE+24+TrI D22'
 DTM+93: 200310312300: 203'
 STS+7++E03: : 260'
 LOC+172+571313199988888819: : 9'
 I DE+24+TrI D23'
 DTM+93: 200310312300: 203'
 STS+7++E03: : 260'
 LOC+172+571313199988888826: : 9'
 UNT+16+1'
 UNZ+1+UNI KT022'

2.2.7.3. Positive APERAK (answer to UTILMD 406-E03)

Electricity & Gas example

UNA: +. ? '
 UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1432+UN
 I KT085++DK-CUS+++DK'
 UNH+1+APERAK: D: 96A: UN: E2DK02+DK-BT-002-003'
 BGM+++34'
 DTM+137: 200310011432: 203'
 RFF+ACW: MES021'
 NAD+FR+5799999933318: : 9'
 NAD+DO+5799999911118: : 9'
 ERC+100: : ZZZ'
 FTX+AAO+++Godkendt / Approved'
 RFF+LI: TrI D21'
 UNT+10+1'
 UNZ+1+UNI KT085'

2.2.7.4. Negative APERAK (answer to UTILMD 406-E03)

Electricity example (and gas example if code 60 is replaced with code 42 in

ERC):
 UNA: +. ? '
 UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1432+UN
 I KT086++DK-CUS+++DK'
 UNH+1+APERAK: D: 96A: UN: E2DK02+DK-BT-002-003'
 BGM+++34'
 DTM+137: 200310011432: 203'
 RFF+ACW: MES021'
 NAD+FR+5799999933318: : 9'
 NAD+DO+5799999911118: : 9'
 ERC+60: : ZZZ'
 FTX+AAO+++Mål epunkt ikke kendt / Meteringpoint not
 recognised, 1234567890123456: 78'
 RFF+LI: TrI D21'
 UNT+10+1'
 UNZ+1+UNI KT086'

2.3. BT-003: End of Supply - to MPA (UTILMD 432)

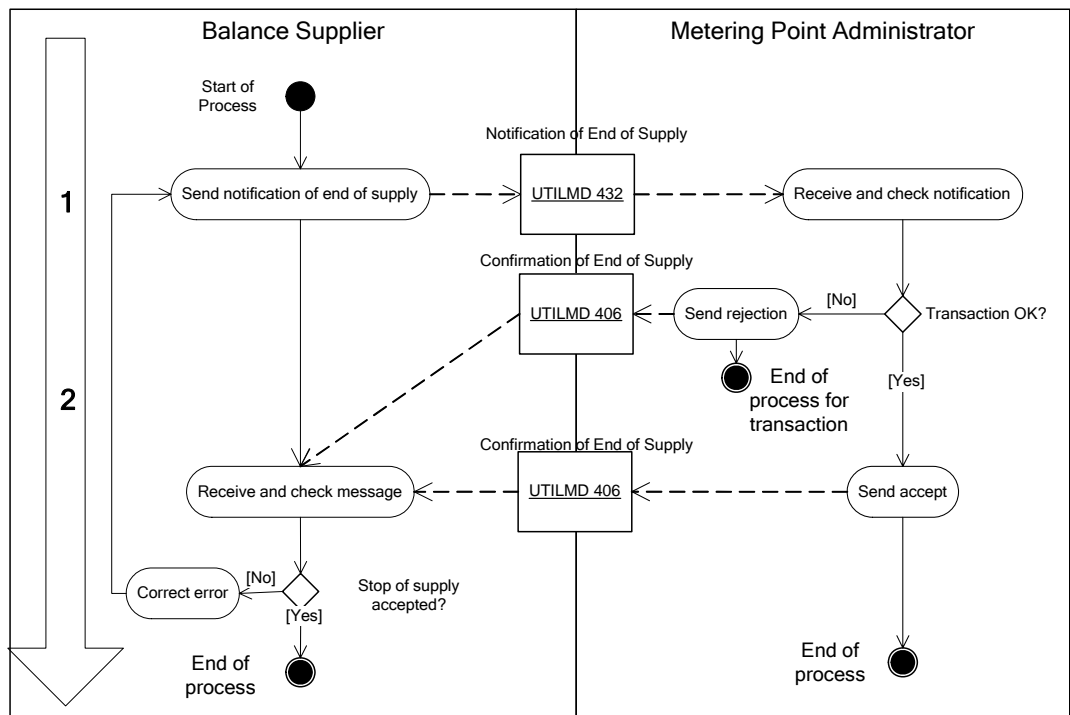


Figure 3: BT-003: End of Supply – to MPA (UTILMD 432)

Business Transaction BT-003 is used by the *Balance Supplier* to inform the *Metering Point Administrator* about the end of supply. The *Balance Supplier* will end the supply at the *Contract stop date*.

2.3.1. Initiation of the transaction

The transaction is initiated by a *UTILMD* message with a document name code 432 (Notification of end of supply). The message can hold one or more transactions that all use the same *Reason For Transaction (RFT)*. The value can be:

- *E20 (End of supply)*

2.3.2. First dataflow: UTILMD 432

The message is sent with data as referred to in the dependency matrix (*see section 2.3.4*).

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, each transaction is verified in accordance with the business rules, which are documented in Table 10.

| Electricity/ Gas | RFT | Validation | Reason for answer |
|---------------------|-----|---|---|
| Electricity/ Gas | E20 | The <i>Message Sender (Balance Supplier)</i> must be equal to the present <i>Balance Supplier</i> for the <i>Metering point</i> | E16 (Unauthorised supplier) |
| Electricity/ Gas | E20 | The <i>Metering point</i> must be administered by the <i>Metering Point Administrator</i> . | E10 (Installation address or metering point not identifiable) |
| Electricity/ Gas | E20 | The message must be received within the official time limit | E17 (Requested switch date not within time limits) |

Table 10 BT-003: Validation of first dataflow: UTILMD 432

2.3.3. Second dataflow: UTILMD 406

For all transactions received in the first dataflow, an answer has to be given in one or more *UTILMD 406* messages. If a transaction fulfils all conditions in the validation table for the first dataflow, it must be approved by setting status for answer to “39” (*approved*). If not, the status for answer is set to “41” (*rejected*) and *Reason for answer* shown in Table 10 must be used. For the remaining data, the message is sent with data as referred to in the dependency matrix (*see section 2.3.5*).

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

If a rejection is received from the *Metering Point Administrator* the *Balance Supplier* can correct the error and send a new *UTILMD 432* with a new *Transaction id*. Alternatively, the *Balance Supplier* can contact the *Metering Point Administrator* to solve the problem.

Afterwards, the application is not allowed to reject the transactions.

2.3.4. UTILMD 432 - Dependency Matrix for Attributes

| Attributes | RFT Gas/Electricity |
|-----------------------------|---------------------|
| | E20 |
| IG version | R |
| BT combined ID | |
| Market | |
| Message date | |
| Message function | |
| Message id | |
| Message name | |
| Message recipient | |
| Message sender | |
| Request for acknowledgement | |
| Time zone (UTC+0) | |
| Metering point id | |
| Reason for transaction | |
| Transaction id | |
| Contract stop date | |

Table 11 BT-003: Dependency matrix for attributes: UTILMD 432

R= Required

2.3.5. UTILMD 406 answer - Dependency Matrix for Attributes

| Attributes | RFT Gas/Electricity |
|-----------------------------|---------------------|
| | E20 |
| IG version | R |
| BT combined ID | |
| Market | |
| Message date | |
| Message function | |
| Message id | |
| Message name | |
| Message recipient | |
| Message sender | |
| Request for acknowledgement | |
| Time zone (UTC+0) | |
| Metering point id | |
| Reason for transaction | |
| Transaction id | |
| Reference to transaction | |
| Status for answer | |
| Reason for answer | D* |
| Contract stop date | D** |

Table 12 BT-003: Dependency matrix for attributes: UTILMD 406

R= Required, D= Dependent

* Only when Status for answer is 41 (rejected)

** Contract stop date is not used when Status for answer is 41 (rejected)

2.3.6. Unique Identification

| | |
|----------------------|-------------------------------|
| BT ID | DK-BT-003 |
| BT navn | End of Supply – to MPA |
| BT version | 3 |
| BT combined ID | DK-BT-003-003 |
| BPI | DK-CUS |
| EDI Messages: | |
| Message ID | UTILMD 432 |
| Message name | Notification of End of Supply |
| Message IG version | 5.0 B |
| DK IG version | 3 |
| Message ID | UTILMD 406 |
| Message name | Confirmation of End of Supply |
| Message IG version | 5.0 B |
| DK IG version | 3 |

2.3.7. Examples

2.3.7.1. UTILMD 432-E20 (End of Supply to MPA for one metering point)

Electricity example (and gas example if 23 is replaced with 27 in MKS and xxxx2300 is replaced with xxxx0500 next day in DTM):

```

UNA: +. ? '
UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031107: 1300+UN
I KT031++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-003-003'
BGM+432+MES031+9+NA'
DTM+137: 200211071200: 203'
DTM+735: ?+0000: 406'
MKS+23+E01: : 260'
NAD+MS+5799999933318: : 9'
NAD+MR+5799999911118: : 9'
I DE+24+TrI D31'
DTM+93: 200311302300: 203'
STS+7++E20: : 260'
LOC+172+571313199988888819: : 9'
UNT+12+1'
UNZ+1+UNI KT031'

```

2.3.7.2. UTILMD 406-E20 (Confirmation of End of Supply from MPA for one metering point)

Electricity example (and gas example if 23 is replaced with 27 in MKS and xxxx2300 is replaced with xxxx0500 in DTM):

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+020808: 1200+UN
I KT024++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-003-003'
BGM+406+MES023+9+NA'
DTM+137: 200208081000: 203'
DTM+735: ?+0000: 406'
MKS+23+E01: : 260'
NAD+MS+5799999911118: : 9'
NAD+MR+5799999933318: : 9'
I DE+24+TrI D24'
DTM+93: 200305302200: 203'
STS+7++E20: : 260'
STS+E01: : 260+39'
LOC+172+571313199988888819: : 9'
RFF+TN: TrI D31'
UNT+14+1'
UNZ+1+UNI KT024'

2.3.7.3. UTILMD 432-E20 (End of Supply to MPA for more than one metering point)

Electricity example (and gas example if 23 is replaced with 27 in MKS and xxxx2300 is replaced with xxxx0500 in DTM):

UNA: +. ? '
UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031107: 1300+UN
I KT032++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-003-003'
BGM+432+MES032+9+NA'
DTM+137: 200211071200: 203'
DTM+735: ?+0000: 406'
MKS+23+E01: : 260'
NAD+MS+5799999933318: : 9'
NAD+MR+5799999911118: : 9'
I DE+24+TrI D32'
DTM+93: 200311302300: 203'
STS+7++E20: : 260'
LOC+172+571313199988888819: : 9'
I DE+24+TrI D33'
DTM+93: 200311302300: 203'
STS+7++E20: : 260'
LOC+172+571313199988888826: : 9'
UNT+16+1'
UNZ+1+UNI KT032'

2.3.7.4. Negative APERAK (answer to UTILMD 432-E20)

Electricity example (and gas example if code 45 is replaced with code 42 in ERC):

UNA: +. ? '
UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1432+UN
I KT087++DK-CUS+++DK'
UNH+1+APERAK: D: 96A: UN: E2DK02+DK-BT-003-003'
BGM+++34'
DTM+137: 200310011432: 203'
RFF+ACW: MES031'
NAD+FR+5799999933318: : 9'
NAD+DO+5799999911118: : 9'
ERC+45: : ZZZ'
FTX+AAO+++Stopdato ikke korrekt / Contract Stop date not
correct, 12072003-2300
RFF+LI: TrID31'
UNT+10+1'
UNZ+1+UNI KT087

2.4. BT-004: Master Data for Metering Point (UTILMD E07)

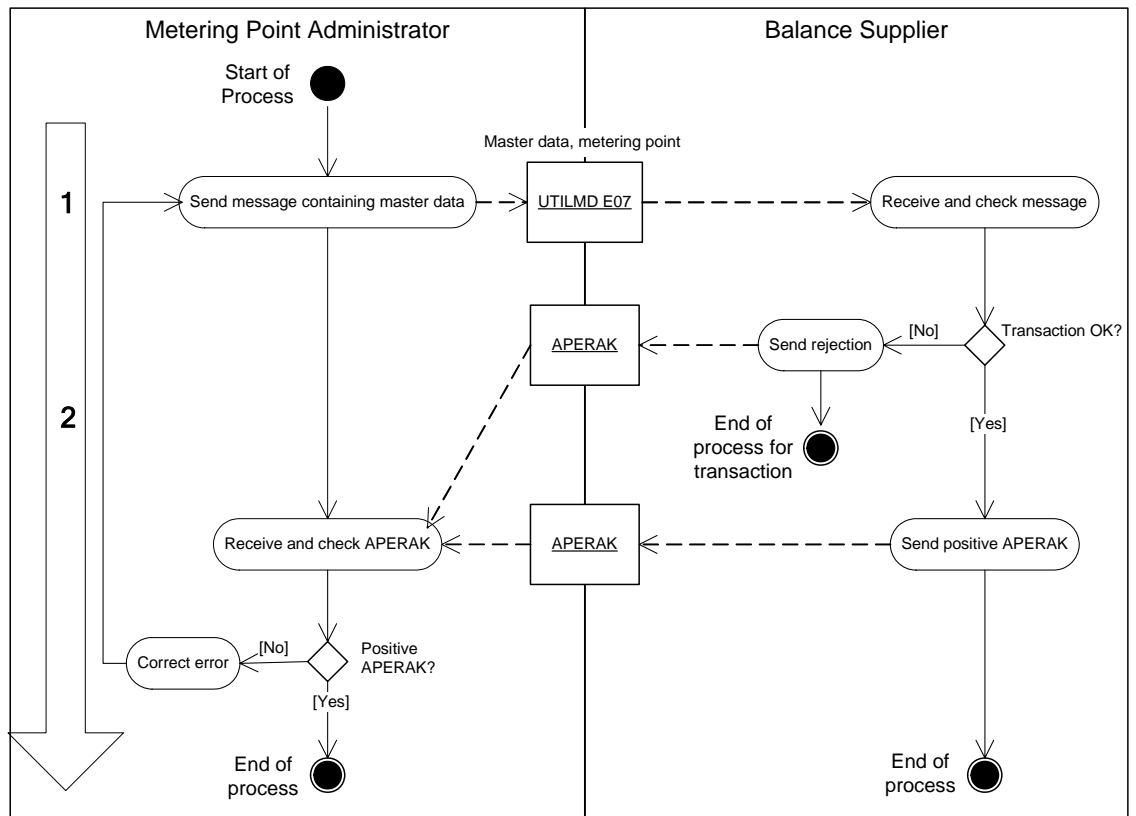


Figure 4: BT-004: Master Data Information for Metering Point (UTILMD E07)

Business Transaction BT-004 is used by the *Metering Point Administrator* to send an EDI message containing master data for a *Metering point* to the *Balance Supplier*. It is also used to indicate that a change has been made to the metering point that the Balance Supplier shall be informed about.

2.4.1. Initiation of the transaction

The transaction is initiated by a *UTILMD* message with a document name code *E07* (*Master data, metering point*). The message can hold one or more transactions that all use different *Reason for Transaction (RFT)*. The value can be:

- E01 Move (only Gas)
- E03 Change of Supplier (only Gas)

- E40 Short warning (only Gas)
- E32 Update of master data, metering point

- Z02 Change of meter location address
- Z03 Change of next scheduled meter reading date
- Z04 Change of estimated annual volume
- Z05 Change of consumer party name
- Z06 Change of physical status for metering point
- Z07 Change of settlement method

If RFT is Z07 this will also change the Next scheduled reading meter date. Additionally, if RFT is Z05 this may change the consumer party name, add a second consumer party name or remove a second consumer party name.

2.4.2. First dataflow: UTILMD E07

The Metering Point Administrator sends a message with master data for the metering point as referred to in the dependency matrix (*see section 2.4.4*) to the Balance Supplier.

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, each transaction is verified in accordance with the business rules, which are documented in Table 13.

| Electricity/ Gas | RFT | Validation | Error code |
|---------------------|-----|--|--|
| Electricity/ Gas | E32 | The <i>Message Recipient</i> must be Balance Supplier to the <i>Metering point</i> | 60 (The object of the transaction is not recognised)/ 42 (Error in content of a data element) |

Table 13: BT-004: Validation of first dataflow: UTILMD E07

As the message contains all master data for the metering point the receiver will only have to take the data that is relevant for the actual RFT. Trying to check the

remaining data with present own values may result in errors if several changes have been made to a metering point and that the transactions are received in the wrong order.

2.4.3. Second dataflow: APERAK

If a transaction fulfils all the conditions in Table 13, it must be approved. This is done by sending a positive *APERAK* with *message function* “34” (*Accepted with amendment*), the *error code* “100” (*The object is approved*) and “Godkendt/Approved” as *error description*. The transaction reference shall indicate the *Transaction ID*.

In case of verification failure, the transaction is rejected by a negative *APERAK* with *message function* “34” (*Accepted with amendment*) and the *error code* value indicated in the validation table. The name of the attribute that is the cause for failure must be stated in both Danish and English in the *error description*. The transaction reference shall indicate the *Transaction ID*.

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, the application is not allowed to reject the transactions.

2.4.4. UTILMD E07 - Dependency Matrix for Attributes

| Attributes | RFT Gas | RFT Electricity |
|------------------------------------|---------|-----------------|
| | ALL | ALL |
| IG version | R | R |
| BT combined ID | | |
| Market | | |
| Message date | | |
| Message function | | |
| Message id | | |
| Message name | | |
| Message recipient | | |
| Message sender | | |
| Request for acknowledgement | | |
| Time zone (UTC+0) | | |
| Metering point id | | |
| Reason for transaction | | |
| Transaction id | | |
| Contract start date | | |
| Validity start date | | |
| Balance supplier | | |
| Estimated annual volume | | |
| Balance responsible party id | X | |
| Consumer party name | R | |
| Metering point address | | |
| Settlement method | | |
| Next scheduled meter reading date | D* | D* |
| Physical status for metering point | R | R |

Table 14 BT-004: Dependency matrix for attributes: UTILMD E07

R= Required, D= Dependent, X= not used

* Only for profiled metering point

2.4.5. APERAK - Dependency Matrix for Attributes

| Attributes | Electricity/ Gas |
|------------------------|---------------------|
| IG version | R |
| BT combined ID | |
| Message date | |
| Message function | |
| Message recipient | |
| Message sender | |
| Reference to message | |
| Application error code | |
| Error description | |
| Transaction reference | |

Table 15 BT-004: Dependency matrix for attributes: APERAK

R= Required

2.4.6. Unique Identification

| BT ID | DK-BT-004 |
|--------------------|---|
| BT navn | Master Data Information for Metering Point |
| BT version | 3 |
| BT combined ID | DK-BT-004-003 |
| BPI | DK-CUS |
| EDI Messages used | |
| Message ID | UTILMD E07 |
| Message name | Master Data, metering point |
| Message IG version | 5.0 B |
| DK IG version | 3 |
| Message ID | APERAK |
| Message name | Application error and acknowledgement message |
| Message IG version | 2.4 B |
| DK IG version | 3 |

2.4.7. Examples

2.4.7.1. UTILMD E07-E32 (Update of Master data)

Electricity example:

UNA: +. ? '

UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031001: 1415+UN
I KT042++DK-CUS+++DK'

UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-004-003'

BGM+E07: : 260+MES042+9+AB'
DTM+137: 200310011215: 203'
DTM+735: ?+0000: 406'
MKS+23+E01: : 260'
NAD+MS+5799999911118: : 9'
NAD+MR+5799999933318: : 9'
I DE+24+TrI D42'
DTM+92: 200301312300: 203'
DTM+157: 200301312300: 203'
DTM+752: 0301: 106'
STS+7++E32: : 260'
LOC+172+571313199988888819: : 9'
CCI +++E02: : 260'
CAV+E01: : 260'
CCI +++E15: : 260'
CAV+E22: : 260'
SEQ++1'
QTY+31: 6400: KWH'
NAD+DDQ+5799999933318: : 9'
NAD+DDK+5799999922213: : 9'
NAD+I T+++Jensens vej : : 5+Frederi ci a++7000+DK'
NAD+UD+++Jens Jensen: Hanne Hansen'
I DE+24+TrI D43'
DTM+92: 200302282300: 203'
DTM+157: 200302282300: 203'
DTM+752: 0101: 106'
DTM+752: 0201: 106'
DTM+752: 0301: 106'
DTM+752: 0401: 106'
DTM+752: 0501: 106'
DTM+752: 0601: 106'
DTM+752: 0701: 106'
DTM+752: 0801: 106'
DTM+752: 0901: 106'
DTM+752: 1001: 106'
DTM+752: 1101: 106'
DTM+752: 1201: 106'
STS+7++E32: : 260'
LOC+172+571313199988888825: : 9'
CCI +++E02: : 260'
CAV+E01: : 260'
CCI +++E15: : 260'
CAV+E22: : 260'
SEQ++1'
QTY+31: 5000: KWH'
NAD+DDQ+5799999933318: : 9'
NAD+DDK+5799999922213: : 9'
NAD+I T+++Chri sti an X al l e: : 5+Frederi ci a++7000+DK'
NAD+UD+++Hanne Hansen: Hans Hansen'
UNT+51+1'
UNZ+1+UNI KT042'

Gas example:

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031001: 1415+UN
I KT042++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-004-003'
BGM+E07: : 260+MES042+9+AB'
DTM+137: 200310011215: 203'

DTM+735: ?+0000: 406'
MKS+27+E01: : 260'
NAD+MS+5799999911118: : 9'
NAD+MR+5799999933318: : 9'
I DE+24+TrI D42'
DTM+92: 200301310500: 203'
DTM+157: 200301310500: 203'
DTM+752: 0301: 106'
STS+7++E32: : 260'
LOC+172+571515199988888819: : 9'
CCI +++E02: : 260'
CAV+E01: : 260'
CCI +++E15: : 260'
CAV+E22: : 260'
SEQ++1'
QTY+31: 6400: KWH'
NAD+DDQ+5799999933318: : 9'
NAD+I T++++: : 714; 67; 12; St; 2+Frederi ci a++7000+DK'
NAD+UD+++Jens Jensen: Hanne Hansen'
I DE+24+TrI D43'
DTM+92: 200302280500: 203'
DTM+157: 200302280500: 203'
DTM+752: 0101: 106'
DTM+752: 0201: 106'
DTM+752: 0301: 106'
DTM+752: 0401: 106'
DTM+752: 0501: 106'
DTM+752: 0601: 106'
DTM+752: 0701: 106'
DTM+752: 0801: 106'
DTM+752: 0901: 106'
DTM+752: 1001: 106'
DTM+752: 1101: 106'
DTM+752: 1201: 106'
STS+7++E32: : 260'
LOC+172+571515199988888825: : 9'
CCI +++E02: : 260'
CAV+E01: : 260'
CCI +++E15: : 260'
CAV+E22: : 260'
SEQ++1'
QTY+31: 5000: KWH'
NAD+DDQ+5799999933318: : 9'
NAD+I T++++: : 631; 43; 12; St; 2+vej l e++7100+DK'
NAD+UD+++Hanne Hansen: Hans Hansen'
UNT+49+1'
UNZ+1+UNI KT042'

2.4.7.2. UTILMD E07-Z06 (Change of physical status for metering point)

Electricity example:

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031001: 1415+UN
I KT041++DK-CUS+++DK'
UNH+1+UTI LMD: D: 02B: UN: E5DK02+DK-BT-004-003'
BGM+E07: : 260+MES041+9+AB'
DTM+137: 200310011215: 203'
DTM+735: ?+0000: 406'
MKS+23+E01: : 260'

NAD+MS+5799999911118: : 9'
 NAD+MR+5799999933318: : 9'
 I DE+24+TrI D41'
 DTM+92: 200301312300: 203'
 DTM+157: 200310032200: 203'
 DTM+752: 0201: 106'
 STS+7++Z06: : DK'
 LOC+172+57131319998888819: : 9'
 CCI +++E02: : 260'
 CAV+E01: : 260'
 CCI +++E15: : 260'
 CAV+E22: : 260'
 SEQ++1'
 QTY+31: 6400: KWH'
 NAD+DDQ+5799999933318: : 9'
 NAD+DDK+5799999922213: : 9'
 NAD+I T++++Jensens vej : : 5+Frederi ci a++7000+DK'
 NAD+UD+++Jens Jensen: Hanne Hansen'
 UNT+24+1'
 UNZ+1+UNI KT041'

Gas example:

UNA: +. ? '
 UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031001: 1415+UN
 I KT041++DK-CUS+++DK'
 UNH+1+UTI LMD: D: 02B: UN: DKGAS1+DK-BT-004-003'
 BGM+E07: : 260+MES041+9+AB'
 DTM+137: 200310011215: 203'
 DTM+735: ?+0000: 406'
 MKS+27+E01: : 260'
 NAD+MS+5799999911118: : 9'
 NAD+MR+5799999933318: : 9'
 I DE+24+TrI D41'
 DTM+92: 200301310500: 203'
 DTM+157: 200310030400: 203'
 DTM+752: 0201: 106'
 STS+7++Z06: : DK'
 LOC+172+57151519998888819: : 9'
 CCI +++E02: : 260'
 CAV+E01: : 260'
 CCI +++E15: : 260'
 CAV+E22: : 260'
 SEQ++1'
 QTY+31: 6400: KWH'
 NAD+DDQ+5799999933318: : 9'
 NAD+I T++++: : 631; 43; 12; 12; st; 2+Frederi ci a++7000+DK'
 NAD+UD+++Jens Jensen: Hanne Hansen'
 UNT+23+1'
 UNZ+1+UNI KT041'

2.4.7.3. Positive APERAK (answer to UTILMD E07-Z06)

Electricity & Gas example

UNA: +. ? '
 UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1432+UN
 I KT081++DK-CUS+++DK'
 UNH+1+APERAK: D: 96A: UN: E2DK02+DK-BT-004-003'
 BGM+++34'

DTM+137: 200310011432: 203'
RFF+ACW: MES041'
NAD+FR+5799999933318: : 9'
NAD+DO+5799999911118: : 9'
ERC+100: : ZZZ'
FTX+AAO+++Godkendt / Approved'
RFF+LI: TrID41'
UNT+10+1'
UNZ+1+UNI KT081'

2.4.7.4. Negative APERAK (answer to UTILMD E07-Z06)

Electricity example (and gas example if code 60 is replaced with code 42 in ERC):

UNA: +. ? '
UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1432+UNI
KT082++DK-CUS+++DK'
UNH+1+APERAK: D: 96A: UN: E2DK02+DK-BT-004-002'
BGM+++34'
DTM+137: 200310011432: 203'
RFF+ACW: MES041'
NAD+FR+5799999933318: : 9'
NAD+DO+5799999911118: : 9'
ERC+60: : ZZZ'
FTX+AAO+++Mål epunkt ikke kendt/ Meteringpoint not
recognised: 123456789012345678' NB max 70 tegn
RFF+LI: TrID41'
UNT+10+1'
UNZ+1+UNI KT082'

2.5. BT-007: Consumption for Metering Point, profiled (MSCONS Z01)

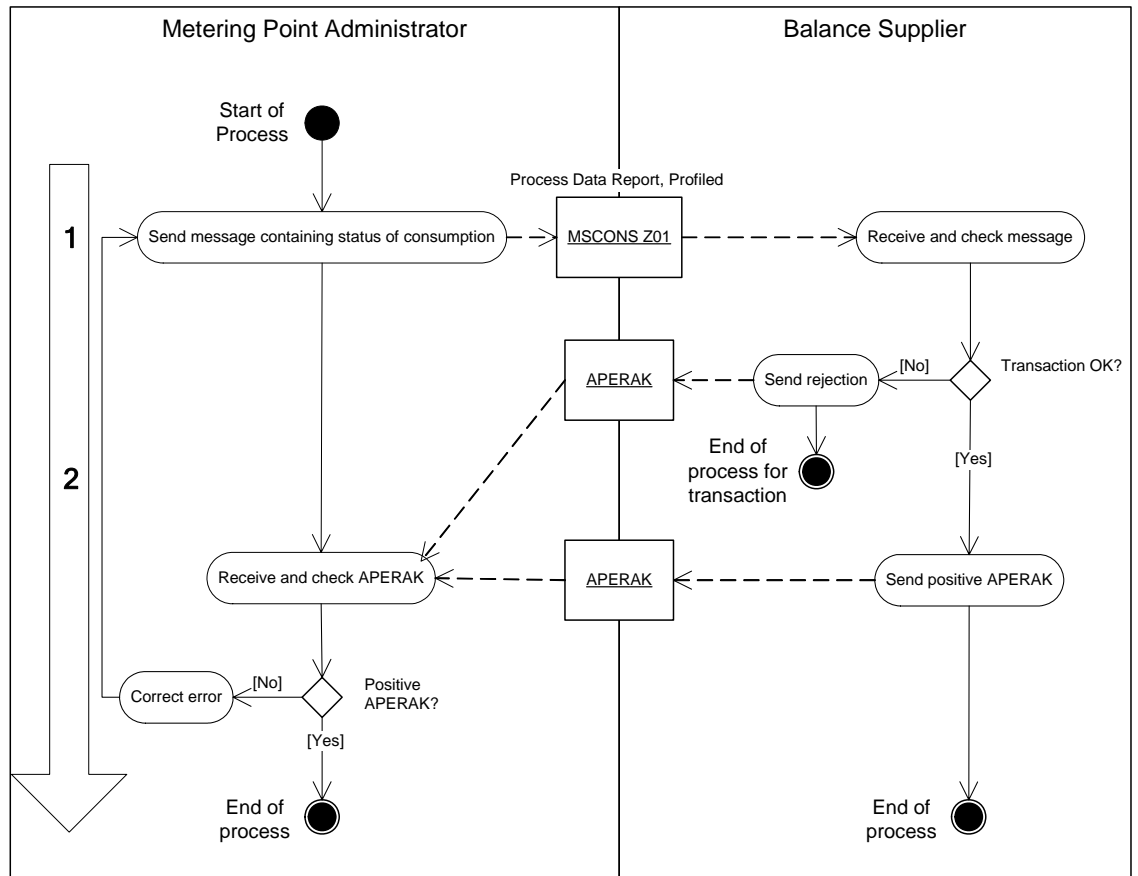


Figure 5: BT-007: Consumption for Metering Point, profiled (MSCONS Z01)

Business Transaction BT-007 is used by the *Metering Point Administrator* to send an EDI message containing status for consumption for a (profiled) *Metering point* to the *Balance Supplier*. *MSCONS Z01* can have the following functions:

- 9 Original
- 5 Replace (for corrections)

2.5.1. Initiation of the transaction

The transaction is initiated by an *MSCONS Z01 (Process Data Report, Profiled)* message. The message can hold one or more transactions that all use the same *Reason for Meter Reading (RFMR)*. The values can be:

- 1 (*Periodical*) – used for normal statement of consumption.
- 2 (*Change of supplier*) – used for final settlement.
- 3 (*Non-Periodical*) – used for settlement purpose outside normal meter reading period.
- 9 (*Change of settlement method*) - used when settlement is changed from profiled to metered.

2.5.2. First dataflow: MSCONS Z01

The message is sent with data as referred to in the dependency matrix (*see section 2.5.4*).

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, each transaction is verified in accordance with the business rules, which are documented in Table 16.

| Electricity /Gas | RFMR | Validation | Error code |
|---------------------|------|--|--|
| Electricity/ Gas | 1 | The <i>Message Recipient</i> must be <i>Balance Supplier</i> to the <i>Metering point</i> | 60 (The object of the transaction is not recognised)/ 42 (Error in content of a data element) |
| | 2 | | |
| | 3 | | |
| | 9 | | |
| Electricity/ Gas | 1 | Quantity has not been received before for the metered time interval, unless message function is '5' | 50 (Error in the message period)/ 42 (Error in content of a data element) |
| | 2 | | |
| | 3 | | |
| | 9 | | |
| Electricity /Gas | 1 | <i>Quantity time intervals</i> must be consecutive (no “holes”, no “overlap”) in relation to previous received <i>Quantity</i> . | 42 (Error in content of a data element) |
| 2 | | | |
| Gas | 3 | | |
| Electricity | 9 | | |
| Electricity/ Gas | 9 | The end of <i>Quantity time interval</i> must equal to <i>Validity start date</i> in BS-012 (electricity) or BS-212 (gas) | 42 (Error in content of a data element) |
| Electricity | 2 | The <i>Product code</i> must be 9011 or 9016 | 42 (Error in content of a data element) |
| | 9 | | |

| Electricity /Gas | RFMR | Validation | Error code |
|---------------------|------------------|---|--|
| Electricity | 1 3 | The <i>Product code</i> must be 9011, 9016 or 9015 | 42 (Error in content of a data element) |
| Electricity/ Gas | 1 2 3 9 | The <i>Measure unit</i> must be kWh (electricity) or Nm ³ and kWh _o (gas). | 43 (The content of a coded data element is not in accordance with the code list)/ 42 (Error in content of a data element) |
| Electricity/ Gas | 1 2 3 9 | Quantity must be without decimals | 42 (Error in content of a data element) |
| Electricity | 1 2 3 9 | The <i>Quantity time intervals</i> must be within <i>Metered time interval for Product code 9011 and 9016</i> | 44 (The value of a data element is out of range) |
| Electricity | 1 2 3 9 | The <i>Quantity status code</i> must be 99 or 136 | 43 (The content of a coded data element is not according to the code list) |
| Gas | 1 2 3 | In the case of consumption the sign of quantity for the period is positive | 42 (Error in content of a data element) |

Table 16: BT-007: Validation of first dataflow: MSCONS Z01

2.5.3. Second dataflow: APERAK

If a transaction fulfils all the conditions in Table 16, it must be approved. This is done by sending a positive *APERAK* with *message function* “34” (*Accepted with amendment*), the *error code* “100” (*The object is approved*) and “Godkendt/Approved” as *error description*. The transaction reference shall indicate the *Transaction ID*.

In case of verification failure, the transaction is rejected by a negative *APERAK* with *message function* “34” (*Accepted with amendment*) and the *error code* value indicated in the validation table. The name of the attribute that is the cause for failure must be stated in both Danish and English in the *error description*. The transaction reference shall indicate the *Transaction ID*.

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, the application is not allowed to reject the transactions.

2.5.4. MSCONS Z01 - Dependency Matrix for Attributes

| Attributes | Gas | Electricity |
|-----------------------------|-----|-------------|
| IG version | R | R |
| BT combined ID | | |
| Message date | | |
| Message function (9 or 5) | | |
| Message id | | |
| Message name | | |
| Message recipient | | |
| Message sender | | |
| Request for acknowledgement | | |
| Time zone (UTC+0) | | |
| Metered time interval | | |
| Metering point id | | |
| Product code | | |
| Measure unit | | |
| Quantity time interval | | |
| Quantity | | R |
| Quantity status code | | |
| Reason for meter reading | | |

Table 17 BT-007: Dependency matrix for attributes: MSCONS Z01

R= Required, D= Dependent

* Not used for product code 9015

2.5.5. APERAK - Dependency Matrix for Attributes

| Attributes | Electricity/ Gas |
|------------------------|---------------------|
| IG version | R |
| BT combined ID | |
| Message date | |
| Message function | |
| Message recipient | |
| Message sender | |
| Reference to message | |
| Application error code | |
| Error description | |

Table 18 BT-007: Dependency matrix for attributes: APERAK

R= Required

2.5.6. Unique Identification

| BT ID | DK-BT-007 |
|--------------------|---|
| BT navn | Consumption for Metering Point, Profiled |
| BT version | 3 |
| BT combined ID | DK-BT-007-003 |
| BPI | DK-CUS |
| EDI Messages: | |
| Message ID | MSCONS Z01 |
| Message name | Process Data Report, profiled |
| Message IG version | 2.4 D |
| DK IG version | 3 |
| Message ID | APERAK |
| Message name | Application error and acknowledgement message |
| Message IG version | 2.4 B |
| DK IG version | 3 |

2.5.7. Examples

2.5.7.1. MSCONS Z01: Consumption for one profiled Metering Point

Electricity example

UNA: +. ? '

UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+040104: 1315+UNI
KT071++DK-CUS++DK'
UNH+1+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-007-003'
BGM+Z01: : 260+MES071+9+AB'
DTM+137: 200401041215: 203'
DTM+163: 200212312300: 203'
DTM+164: 200310312300: 203'
DTM+ZZZ: 0: 805'
NAD+FR+5799999911118: : 9'
NAD+DO+5799999933318: : 9'
UNS+D'
NAD+XX'
LOC+90+571313199988888819: : 9'
LI N+1++9011: : : DK'
MEA+AAZ++KWH'
QTY+136: 3500'
DTM+324: 200212312300200310312300: Z13'
CCI +++Z04'
MEA+SV++ZZ: 1'
LI N+2++9016: : : DK'
MEA+AAZ++KWH'
QTY+136: 6500'
DTM+324: 200212312300200310312300: Z13'
CCI +++Z04'
MEA+SV++ZZ: 1'
LI N+3++9015: : : DK'
MEA+AAZ++KWH'
QTY+31: 7000'
CCI +++Z04'
MEA+SV++ZZ: 1'
CNT+1: 17000'
UNT+30+01'
UNZ+1+UNI KT071'

Gas example:

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+040104: 1315+UNI
KT071++DK-CUS++DK'
UNH+1+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-007-003'
BGM+Z01: : 260+444+9+AB'
DTM+137: 200303271505: 203'
DTM+163: 200212310500: 203'
DTM+164: 200331210500: 203'
DTM+ZZZ: 0: 805'
NAD+FR+5799999911118: : 9'
NAD+DO+5799999933318: : 9'
UNS+D'
NAD+XX'
LOC+90+571515199988888833: : 9'
LI N+1++3002: : : DK'
MEA+AAZ++KWH'
QTY+136: 7400'
DTM+324: 200212310500200312310500: Z13'
CCI +++Z04'
MEA+SV++ZZ: 1'
LI N+2++3004: : : DK'
MEA+AAZ++MTQ'
QTY+136: 672'

DTM+324: 200212310500200312310500: Z13'
CCI +++Z04'
MEA+SV++ZZ: 1'
CNT+1: 8072'
UNT+25+1'
UNZ+1+UNI KT071'

2.5.7.2. Positive APERAK (answer to MSCONS Z01)

Electricity & Gas example:

UNA: +. ? '
UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1432+UN
I KT091++DK-CUS+++DK'
UNH+1+APERAK: D: 96A: UN: E2DK02+DK-BT-007-003'
BGM+++34'
DTM+137: 200310011432: 203'
RFF+ACW: MES071'
NAD+FR+5799999933318: : 9'
NAD+DO+5799999911118: : 9'
ERC+100: : ZZZ'
FTX+AAO+++Godkendt / Approved'
RFF+AES: 571313199988888819'
UNT+10+1'
UNZ+1+UNI KT091'

2.5.7.3. Negative APERAK (answer to MSCONS Z01)

Electricity example (and gas example if code 60 is replaced with code 42 in ERC):

UNA: +. ? '
UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031001: 1432+UN
I KT092++DK-CUS+++DK'
UNH+1+APERAK: D: 96A: UN: E2DK02+DK-BT-007-003'
BGM+++34'
DTM+137: 200310011432: 203'
RFF+ACW: MES071'
NAD+FR+5799999933318: : 9'
NAD+DO+5799999911118: : 9'
ERC+60: : ZZZ'
FTX+AAO+++Mål epunkt ikke kendt / Meteringpoint not
recognised: 123456789012345678'
RFF+AES: 571313199988888819'
UNT+10+1'
UNZ+1+UNI KT092'

2.5.7.4. MSCONS Z01 (Consumption for one profiled Metering Point, reason: Change of Supplier)

Electricity example:

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+040104: 1315+UN
I KT271++DK-CUS+++DK'
UNH+1+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-007-003'

BGM+Z01: : 260+MES071+9+AB'
DTM+137: 200401041215: 203'
DTM+163: 200212312300: 203'
DTM+164: 200310312300: 203'
DTM+ZZZ: 0: 805'
NAD+FR+5799999911118: : 9'
NAD+DO+5799999933318: : 9'
UNS+D'
NAD+XX'
LOC+90+571313199988888819: : 9'
LI N+1++9011: : : DK'
MEA+AAZ++KWH'
QTY+136: 3500'
DTM+324: 200212312300200310312300: Z13'
CCI +++Z04'
MEA+SV++ZZ: 2'
LI N+2++9016: : : DK'
MEA+AAZ++KWH'
QTY+136: 6500'
DTM+324: 200212312300200310312300: Z13'
CCI +++Z04'
MEA+SV++ZZ: 2'
CNT+1: 10000'
UNT+25+01'
UNZ+1+UNI KT271'

Gas example:

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+040104: 1315+UN
I KT071++DK-CUS++DK'
UNH+1+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-007-003'
BGM+Z01: : 260+444+9+AB'
DTM+137: 200303271505: 203'
DTM+163: 200212310500: 203'
DTM+164: 200331210500: 203'
DTM+ZZZ: 0: 805'
NAD+FR+5799999911118: : 9'
NAD+DO+5799999933318: : 9'
UNS+D'
NAD+XX'
LOC+90+571515199988888833: : 9'
LI N+1++3002: : : DK'
MEA+AAZ++KWH'
QTY+136: 7400'
DTM+324: 200212310500200312310500: Z13'
CCI +++Z04'
MEA+SV++ZZ: 2'
LI N+2++3004: : : DK'
MEA+AAZ++MTQ'
QTY+136: 672'
DTM+324: 200212310500200312310500: Z13'
CCI +++Z04'
MEA+SV++ZZ: 2'
CNT+1: 8072'
UNT+25+1'
UNZ+1+UNI KT071'

2.6. BT-008: Time series transmission (MSCONS 7)

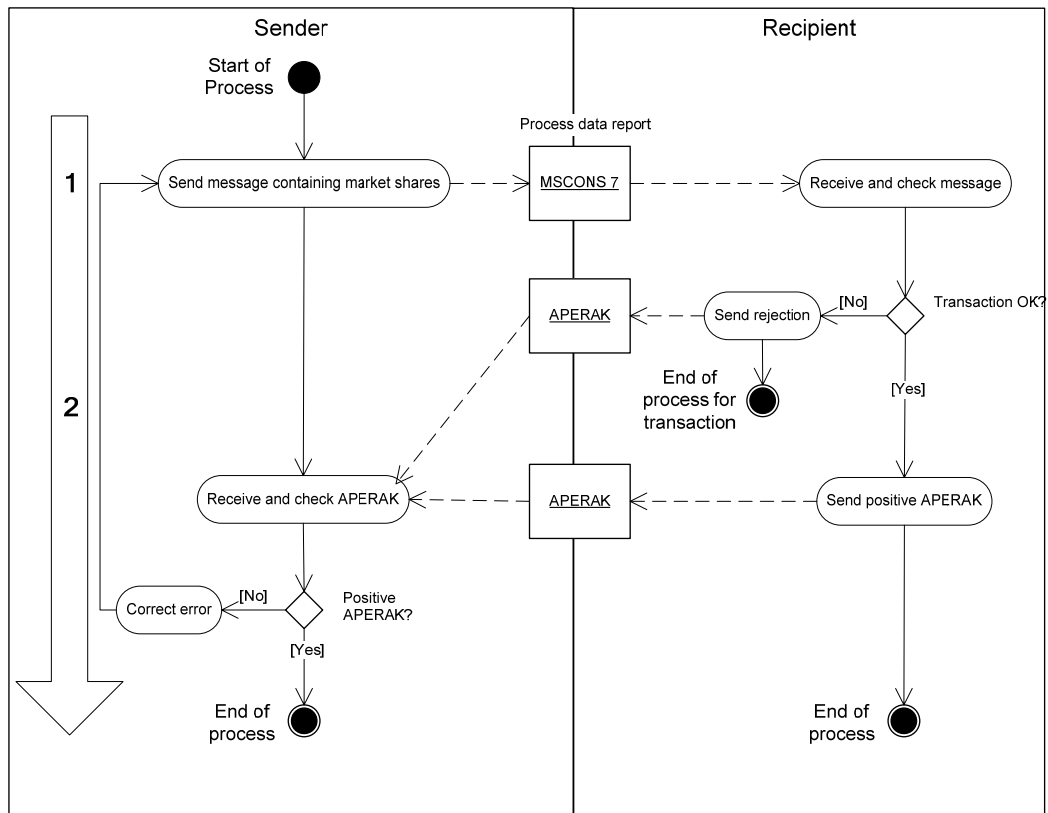


Figure 6: BT-008: Report time series (MSCONS 7)

Business Transaction, BT-008 is a general transaction used by *Metered Data Aggregator* or other parties to send an EDI message containing one or more time series to a receiving party. The receiving party could be: a Balance Supplier, a Balance Responsible Party, a System Operator, a Metering Point Administrator, the Elfor organisation or any other party which is entitled to receive such data.

Being a generic transaction it is not possible to specify all specific dependency and validation in this documentation. The processing is instead relying on dependencies specified in the product code specification that can be found in the list of Danish ebIX product codes or has been bilaterally defined.

All IT-system must enable the users to set up time series and documents in a flexible way so time series for all types of product codes can be implemented by the users themselves.

The BT-008 has been changed so that it is now possible to send more information about one Serial ID; instead of using NAD+XX, this transaction will be using LIN+ lineno at the beginning of a repetition.

2.6.1. Initiation of the transaction

The transaction is initiated by a *MSCONS 7 (Process Data Report, Time Series)* message. The message can hold one or more time series.

Time series can be *dynamic* or *non-dynamic*. Dynamic time series can be sent without notice to the receiver. Time series with consumption for *Metering points (metered) (product code 9012)* is a dynamic time series. All other time series are non-dynamic.

Before sending non-dynamic time series, the receiver must be informed of the *Serial ID* to be used for the time series and its relevant master data. Master data includes:

- Serial ID (set by sender)
- Time zone to be used (UTC is recommended)
- Product code
- Actual value of *Company* attributes
- Actual value of *Area* attributes
- Measure unit and precision to be used (kWh with up to 3 decimals if not otherwise agreed)
- Length of quantity time interval

It may also be bilateral agreed to use automatic receipt of corrected values indicated by message function = 5 (see section 2.6.2).

2.6.2. First dataflow: MSCONS 7

The message is sent with data as referred to in the dependency matrix. Please note that most dependencies are specified by the product code. MSCONS 7 can have the following *functions*:

- 9 Original
- 5 Replace (for corrections)

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, each time series is verified in accordance with the business rules, which are documented in Table 19.

| Electricity/ Gas | Validation | Error code |
|---------------------|--|--|
| Electricity/ Gas | Time zone for the message must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Message Recipient</i> must be <i>Balance Supplier</i> to the <i>Metering point</i> for <i>product code 9012 (electricity)</i> or <i>product code 3002/3004/3006 (gas)</i> | 60 (The object of the transaction is not recognised)/ 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Serial ID</i> and the master data must be informed beforehand (except for dynamic time series) | 60 (The object of the transaction is not recognised)/ 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Product code</i> must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Area 1</i> (if required) must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Area 2</i> (if required) must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Company 1</i> (if required) must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Company 2</i> (if required) must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Measure unit</i> must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Quantity time intervals</i> must be within <i>Metered time interval</i> | 44 (The value of a data element is out of range)/ 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Quantity time intervals</i> must have the length specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | <i>Quantity time intervals</i> must be consecutive (no "holes" and no "overlap") and always with ascending intervals | 42 (Error in content of a data element) |
| Electricity/ Gas | The precision (number of decimals) of the <i>Quantity</i> must be less or equal to what is specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Quantity status code</i> must be <i>99, 136, Z02 or Z03 (or Z01 for gas)</i> | 43 (The content of a coded data element) |

| Electricity/ Gas | Validation | Error code |
|---------------------|--|---|
| | | does not correspond to the code list)/ 42 (Error in content of a data element) |
| Electricity | The <i>Metered time interval</i> is still open for update for the <i>Serial ID</i> unless <i>message function</i> is "5" and automatic receipt of corrected values has been agreed | 50 Error in the message period |

Table 19: Validation of first dataflow: MSCONS 7

2.6.3. Second dataflow: APERAK

If a time series fulfils all the conditions in Table 19, it must be approved. This is done by sending a positive *APERAK* with *message function* "34" (*Accepted with amendment*), the *error code* "100" (*The object is approved*) and "Godkendt/Approved" as *error description*. The transaction reference shall indicate the *Serial ID*.

In case of verification failure, the time series is rejected by a negative *APERAK* with *message function* "34" (*Accepted with amendment*) and the *error code* value indicated in the validation table. The name of the attribute that is the cause for failure must be stated in both Danish and English in the *error description*. The transaction reference shall indicate the *Serial ID*.

Receipt

On receipt, the *APERAK* is validated according to *EDI-communication (Regulation F)*.

Afterwards, the application is not allowed to reject the transactions in the *APERAK*.

2.6.4. MSCONS 7 - Dependency Matrix for Attributes

| Attributes | |
|-----------------------------|----|
| IG version | R |
| BT combined ID | R |
| Message date | R |
| Message function (9 or 5) | R |
| Message id | R |
| Message name | R |
| Message recipient | R |
| Message sender | R |
| Request for acknowledgement | R |
| Time zone | R |
| Metered time interval | R |
| Serial ID | R |
| Product code | R |
| Area 1 | D* |
| Area 2 | D* |
| Company 1 | D* |
| Company 2 | D* |
| Measure unit | R |
| Quantity time interval | R |
| Quantity | R |
| Quantity status code | R |

Table 20: BT-008: Dependency matrix for attributes: MSCONS 7

* Dependency specified in the product code list

R= Required, D= Dependent

2.6.5. APERAK - Dependency Matrix for Attributes

| Attributes | Electricity |
|------------------------|-------------|
| IG version | R |
| BT combined ID | |
| Message date | |
| Message function | |
| Message recipient | |
| Message sender | |
| Reference to message | |
| Application error code | |
| Error description | |
| Transaction reference | |

Table 21: BT-008: Dependency matrix for attributes: APERAK

R= Required

2.6.6. Unique Identification

| | |
|----------------------|---|
| BT ID | DK-BT-008 |
| BT name | Time series transmission |
| BT version | 3 |
| BT combined ID | DK-BT-008-003 |
| BPI | DK-TIS-MET |
| EDI Messages: | |
| Message ID | MSCONS 7 |
| Message name | Process Data Report, time series |
| Message IG version | 2.4 D |
| DK IG version | 3 |
| Message ID | APERAK |
| Message name | Application error and acknowledgement message |
| Message IG version | 2.4 B |
| DK IG version | 3 |

2.6.7. Examples

2.6.7.1. MSCONS 7 (Consumption data from MPA to Supplier)

Electricity example:

```

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
33510++DK-TI S-MET+++DK'
UNH+1+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
BGM+7+E99989+9+AB'
DTM+137: 200311261131: 203'
DTM+163: 200311232300: 203'
DTM+164: 200311242300: 203'
DTM+ZZZ: 0: 805'
NAD+FR+5799999911118: : 9'
NAD+DO+5799999933318: : 9'
UNS+D'
NAD+XX'
LOC+90+571313199988888833: : 9'
LIN+1++9012: : : DK'
MEA+AAZ++KWH'
QTY+136: 1000'
DTM+324: 200311232300200311240000: Z13'
QTY+136: 1000'
DTM+324: 200311240000200311240100: Z13'
QTY+136: 1000'
DTM+324: 200311240100200311240200: Z13'
QTY+136: 1000'
DTM+324: 200311240200200311240300: Z13'
QTY+136: 1000'
DTM+324: 200311240300200311240400: Z13'
QTY+136: 1000'
DTM+324: 200311240400200311240500: Z13'
QTY+136: 2000'
DTM+324: 200311240500200311240600: Z13'

```

QTY+136: 2000'
DTM+324: 200311240600200311240700: Z13'
QTY+136: 2000'
DTM+324: 200311240700200311240800: Z13'
QTY+136: 2000'
DTM+324: 200311240800200311240900: Z13'
QTY+136: 2000'
DTM+324: 200311240900200311241000: Z13'
QTY+136: 2000'
DTM+324: 200311241000200311241100: Z13'
QTY+136: 2000'
DTM+324: 200311241100200311241200: Z13'
QTY+136: 2000'
DTM+324: 200311241200200311241300: Z13'
QTY+136: 2000'
DTM+324: 200311241300200311241400: Z13'
QTY+136: 2000'
DTM+324: 200311241400200311241500: Z13'
QTY+136: 2000'
DTM+324: 200311241500200311241600: Z13'
QTY+136: 500'
DTM+324: 200311241600200311241700: Z13'
QTY+136: 500'
DTM+324: 200311241700200311241800: Z13'
QTY+136: 500'
DTM+324: 200311241800200311241900: Z13'
QTY+136: 500'
DTM+324: 200311241900200311242000: Z13'
QTY+136: 500'
DTM+324: 200311242000200311242100: Z13'
QTY+136: 500'
DTM+324: 200311242100200311242200: Z13'
QTY+136: 500'
DTM+324: 200311242200200311242300: Z13'
CNT+1: 31500'
UNT+65+1'
UNZ+1+ E233510'

Gas example:

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
33510++DK-TI S-MET+++DK'
UNH+1+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
BGM+7+E99989+9+AB'
DTM+137: 200311261131: 203'
DTM+163: 200311230400: 203'
DTM+164: 200311240400: 203'
DTM+ZZZ: 0: 805'
NAD+FR+5799999911118: : 9'
NAD+DO+5799999933318: : 9'
UNS+D'
NAD+XX'
LOC+90+571313199988888833: : 9'
LI N+1++3001: : : DK'
MEA+AAZ++KWH'
QTY+136: 1000'
DTM+324: 200311230400200311230500: Z13'
QTY+136: 1000'

DTM+324: 200311230500200311230600: Z13'
QTY+136: 1000'
DTM+324: 200311230600200311230700: Z13'
QTY+136: 1000'
DTM+324: 200311230700200311230800: Z13'
QTY+136: 1000'
DTM+324: 200311230800200311230900: Z13'
QTY+136: 1000'
DTM+324: 200311230900200311231000: Z13'
QTY+136: 2000'
DTM+324: 200311231000200311231100: Z13'
QTY+136: 2000'
DTM+324: 200311231100200311231200: Z13'
QTY+136: 2000'
DTM+324: 200311231200200311231300: Z13'
QTY+136: 2000'
DTM+324: 200311231300200311231400: Z13'
QTY+136: 2000'
DTM+324: 200311231400200311231500: Z13'
QTY+136: 2000'
DTM+324: 200311231500200311231600: Z13'
QTY+136: 2000'
DTM+324: 200311231600200311231700: Z13'
QTY+136: 2000'
DTM+324: 200311231700200311231800: Z13'
QTY+136: 2000'
DTM+324: 200311231800200311231900: Z13'
QTY+136: 2000'
DTM+324: 200311231900200311232000: Z13'
QTY+136: 2000'
DTM+324: 200311232000200311232100: Z13'
QTY+136: 500'
DTM+324: 200311232100200311232200: Z13'
QTY+136: 500'
DTM+324: 200311232200200311232300: Z13'
QTY+136: 500'
DTM+324: 200311232300200311240000: Z13'
QTY+136: 500'
DTM+324: 200311240000200311240100: Z13'
QTY+136: 500'
DTM+324: 200311240100200311240200: Z13'
QTY+136: 500'
DTM+324: 200311240200200311240300: Z13'
QTY+136: 500'
DTM+324: 200311240300200311240400: Z13'
LI N+2++3003: : : DK'
MEA+AAZ++MTQ'
QTY+136: 1000'
DTM+324: 200311230400200311230500: Z13'
QTY+136: 1000'
DTM+324: 200311230500200311230600: Z13'
QTY+136: 1000'
DTM+324: 200311230600200311230700: Z13'
QTY+136: 1000'
DTM+324: 200311230700200311230800: Z13'
QTY+136: 1000'
DTM+324: 200311230800200311230900: Z13'
QTY+136: 1000'
DTM+324: 200311230900200311231000: Z13'
QTY+136: 2000'

DTM+324: 200311231000200311231100: Z13'
 QTY+136: 2000'
 DTM+324: 200311231100200311231200: Z13'
 QTY+136: 2000'
 DTM+324: 200311231200200311231300: Z13'
 QTY+136: 2000'
 DTM+324: 200311231300200311231400: Z13'
 QTY+136: 2000'
 DTM+324: 200311231400200311231500: Z13'
 QTY+136: 2000'
 DTM+324: 200311231500200311231600: Z13'
 QTY+136: 2000'
 DTM+324: 200311231600200311231700: Z13'
 QTY+136: 2000'
 DTM+324: 200311231700200311231800: Z13'
 QTY+136: 2000'
 DTM+324: 200311231800200311231900: Z13'
 QTY+136: 2000'
 DTM+324: 200311231900200311232000: Z13'
 QTY+136: 2000'
 DTM+324: 200311232000200311232100: Z13'
 QTY+136: 500'
 DTM+324: 200311232100200311232200: Z13'
 QTY+136: 500'
 DTM+324: 200311232200200311232300: Z13'
 QTY+136: 500'
 DTM+324: 200311232300200311240000: Z13'
 QTY+136: 500'
 DTM+324: 200311240000200311240100: Z13'
 QTY+136: 500'
 DTM+324: 200311240100200311240200: Z13'
 QTY+136: 500'
 DTM+324: 200311240200200311240300: Z13'
 QTY+136: 500'
 DTM+324: 200311240300200311240400: Z13'
 CNT+1: 31500'
 UNT+115+1'
 UNZ+1+ E233510'

2.6.7.2. MSCONS 7 (Calorific values)

Gas example:

Notice that the LOC segment is to be repeated for each M/R Station. The LIN segment is used twice for each M/R Station; first for the daily values (thirty-one times 24-hour values), and secondly for the monthly average (one value). The underlying SG 10 (QTY & DTM) is to be repeated for each time period.

UNA: +. ? '
 UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
 33510++DK-TI S-MET+++DK'
 UNH+127+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
 BGM+7+REF6262+9+AB'
 DTM+137: 200410021540: 203'
 DTM+163: 200409010400: 203'
 DTM+164: 200410010400: 203'
 DTM+ZZZ: 0: 805'

NAD+FR+5799999911118: : 9'
NAD+DO+5799999933318: : 9'
UNS+D'
NAD+XX'
LOC+90+57911112222312323: : 9'
LI N+1++3007: : : DK'
MEA+AAZ++Z15'
QTY+136: 12. 234'
DTM+324: 200409010400200409020400: Z13'
QTY+136: 12. 133'
DTM+324: 200409020400200409030400: Z13'
QTY+136: 12. 235'
DTM+324: 200409030400200409040400: Z13'
...
QTY+136: 12. 338'
DTM+324: 200409300400200410010400: Z13'
LI N+2++3008: : : DK'
MEA+AAZ++Z15'
QTY+136: 12. 234'
DTM+324: 200409010400200410010400: Z13'
NAD+XX'
LOC+90+57911112222312357: : 9'
LI N+1++3007: : : DK'
MEA+AAZ++Z15'
QTY+136: 12. 133'
DTM+324: 200409010400200409020400: Z13'
...
QTY+136: 12. 238'
DTM+324: 200409300400200410010400: Z13'
LI N+2++3008: : : DK'
MEA+AAZ++Z15'
QTY+136: 12. 194'
DTM+324: 200409010400200410010400: Z13'
CNT+1: 787. 936'
UNT+125+127'
UNZ+1+E233510'

2.6.7.3. MSCONS 7 Adjusted Residual Consumption

Gas example:

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
33510++DK-TI S-MET+++DK'
UNH+127+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
BGM+7+REF6262+9+AB'
DTM+137: 200410121540: 203'
DTM+163: 200409010400: 203'
DTM+164: 200410010400: 203'
DTM+ZZZ: 0: 805'
NAD+FR+5799999911118: : 9'
NAD+DO+5799999933318: : 9'
UNS+D'
NAD+XX'
LOC+90+57955112222312323: : 9'
LI N+1++1082: : : DK'
MEA+AAZ++KWH'
QTY+136: 757125125. 343'
DTM+324: 200409010400200410010400: Z13'

CNT+1: 757125125. 343'
 UNT+16+127'
 UNZ+1+E233510'

2.6.7.4. MSCONS 7 (M/R Consumption)

Gas example:

Notice that the LOC segment is to be repeated for each M/R station. LIN can be repeated if there is more information for each M/R station. The underlying SG 10 (QTY & DTM) is to be repeated for each time period.

UNA: +. ? '
 UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
 33510++DK-TI S-MET+++DK'
 UNH+127+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
 BGM+7+REF6262+9+AB'
 DTM+137: 200409151540: 203'
 DTM+163: 200409150400: 203'
 DTM+164: 200409160400: 203'
 DTM+ZZZ: 0: 805'
 NAD+FR+5799999911118: : 9'
 NAD+DO+5799999933318: : 9'
 UNS+D'
 NAD+XX'
 LOC+90+579111122222312323: : 9'
 LIN+1++3030: : : DK'
 MEA+AAZ++KWH'
 QTY+136: 125. 34'
 DTM+324: 200409150400200409150500: Z13'
 QTY+136: 225. 34'
 DTM+324: 200409150500200409150600: Z13'
 QTY+136: 121. 34'
 DTM+324: 200409150600200409150700: Z13'
 ...
 QTY+136: 25. 34'
 DTM+324: 200409160300200409160400: Z13'
 NAD+XX'
 LOC+90+579111122222312357: : 9'
 LIN+1++3030: : : DK'
 MEA+AAZ++KWH'
 QTY+136: 725. 34'
 DTM+324: 200409150400200409150500: Z13'
 QTY+136: 825. 34'
 DTM+324: 200409150500200409150600: Z13'
 ...
 CNT+1: 6864. 78'
 UNT+204+127'
 UNZ+1+E233510'

2.6.7.5. MSCONS 7 (Gas Flow Adjustments)

Gas example:

UNA: +. ? '
 UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
 33510++DK-TI S-MET+++DK'

UNH+127+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
 BGM+7+REF6262+9+AB'
 DTM+137: 200409151540: 203'
 DTM+163: 200409150400: 203'
 DTM+164: 200409160400: 203'
 DTM+ZZZ: 0: 805'
 NAD+FR+5799999911118: : 9'
 NAD+DO+5799999933318: : 9'
 UNS+D'
 NAD+XX'
 LOC+90+579111122222312323: : 9'
 LI N+1++3060: : : DK'
 MEA+AAZ++KWH'
 QTY+136: 125. 34'
 DTM+324: 200409150400200409150500: Z13'
 QTY+136: 225. 34'
 DTM+324: 200409150500200409150600: Z13'
 QTY+136: 121. 34'
 DTM+324: 200409150600200409150700: Z13'
 ...
 QTY+136: -25. 34'
 DTM+324: 200409160300200409160400: Z13'
 CNT+1: 6864. 78'
 UNT+63+127'
 UNZ+1+E233510'

2.6.7.6. MSCONS 7 (DMS Consumption)

Gas example:

Notice that the LOC segment is to be repeated for each VRP. The underlying SG 10 (QTY & DTM) is to be repeated for each time period.

UNA: +. ? '
 UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
 33510++DK-TI S-MET+++DK'
 UNH+127+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
 BGM+7+REF6262+9+AB'
 DTM+137: 200409161540: 203'
 DTM+163: 200409150400: 203'
 DTM+164: 200409160400: 203'
 DTM+ZZZ: 0: 805'
 NAD+FR+5799999911118: : 9'
 NAD+DO+5799999933318: : 9'
 UNS+D'
 NAD+XX'
 LOC+90+579221122222312323: : 9'
 LI N+1++3040: : : DK'
 MEA+AAZ++KWH'
 QTY+136: 125. 34'
 DTM+324: 200409150400200409150500: Z13'
 QTY+136: 225. 34'
 DTM+324: 200409150500200409150600: Z13'
 QTY+136: 121. 34'
 DTM+324: 200409150600200409150700: Z13'
 ...
 QTY+136: 25. 34'
 DTM+324: 200409160300200409160400: Z13'

NAD+XX'
 LOC+90+579331122222312357: : 9
 LI N+1++3040: : : DK'
 MEA+AAZ++KWH'
 QTY+136: 725. 34'
 DTM+324: 200409150400200409150500: Z13'
 QTY+136: 825. 34'
 DTM+324: 200409150500200409150600: Z13'
 ...
 CNT+1: 6864. 78'
 UNT+204+127'
 UNZ+1+E233510'

2.6.7.7. MSCONS 7 (Residual Consumption to Transmission)

Gas example:

Notice that the LOC segment is to be repeated for each VRP and Lin if there is more information.

UNA: +. ? '
 UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
 33510++DK-TI S-MET+++DK'
 UNH+127+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
 BGM+7+REF6262+9+AB'
 DTM+137: 200409161540: 203'
 DTM+163: 200409150400: 203'
 DTM+164: 200409160400: 203'
 DTM+ZZZ: 0: 805'
 NAD+FR+5799999911118: : 9'
 NAD+DO+5799999933318: : 9'
 UNS+D'
 NAD+XX'
 LOC+90+579221122222312323: : 9'
 LI N+1++3050: : : DK'
 MEA+AAZ++KWH'
 QTY+136: 125. 34'
 DTM+324: 200409150400200409160400: Z13'
 NAD+XX'
 LOC+90+579331122222312357: : 9'
 LI N+1++3050: : : DK'
 MEA+AAZ++KWH'
 QTY+136: 725. 34'
 DTM+324: 200409150400200409160400: Z13'
 CNT+1: 6864. 78'
 UNT+22+127'
 UNZ+1+E233510'

2.6.7.8. MSCONS 7 (Residual Consumption to Supplier)

Gas example:

Notice that the LOC segment is to be repeated for each Distribution zone.

UNA: +. ? '
 UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
 33510++DK-TI S-MET+++DK'

UNH+127+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
BGM+7+REF6262+9+AB'
DTM+137: 200409161540: 203'
DTM+163: 200409150400: 203'
DTM+164: 200409160400: 203'
DTM+ZZZ: 0: 805'
NAD+FR+5799999911118: : 9'
NAD+DO+5799999933318: : 9'
UNS+D'
NAD+XX'
LOC+90+57955112222312323: : 9'
LI N+1++3020: : : DK'
MEA+AAZ++KWH'
QTY+136: 125125. 34'
DTM+324: 200409150400200409160400: Z13'
CNT+1: 125125. 34'
UNT+16+127'
UNZ+1+E233510'

2.6.7.9. MSCONS 7 (Reconciliation – to Transmission)

Gas example:

Notice that the LOC segment is to be repeated for each VRP.

UNA: +. ? '
UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
33510++DK-TI S-MET+++DK'
UNH+127+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
BGM+7+REF6262+9+AB'
DTM+137: 200410051540: 203'
DTM+163: 200409010400: 203'
DTM+164: 200410010400: 203'
DTM+ZZZ: 0: 805'
NAD+FR+5799999911118: : 9'
NAD+DO+5799999933318: : 9'
UNS+D'
NAD+XX'
LOC+90+57922112222312323: : 9'
LI N+1++3011: : : DK'
MEA+AAZ++KWH'
QTY+136: 125125. 125'
DTM+324: 200409010400200410010400: Z13'
LI N+2++3012: : : DK'
MEA+AAZ++KWH'
QTY+136: 333333333. 222'
DTM+324: 200409010400200410010400: Z13'
NAD+XX'
LOC+90+57922112222312357: : 9'
LI N+1++3011: : : DK'
MEA+AAZ++KWH'
QTY+136: -27. 127'
DTM+324: 200409010400200410010400: Z13'
LI N+2++3012: : : DK'
MEA+AAZ++KWH'
QTY+136: 444444. 333'
DTM+324: 200409010400200410010400: Z13'
CNT+1: 333902875. 553'
UNT+29+127'

UNZ+1+E233510'

2.6.7.10. MSCONS 7 (Reconciliation – to Supplier)

Gas example:

UNA: +. ? '
 UNB+UNOC: 3+5799999911118: 14+5799999933318: 14+031126: 1233+E2
 33510++DK-TI S-MET+++DK'
 UNH+127+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-008-003'
 BGM+7+REF6262+9+AB'
 DTM+137: 200410051540: 203'
 DTM+163: 200409010400: 203'
 DTM+164: 200410010400: 203'
 DTM+ZZZ: 0: 805'
 NAD+FR+5799999911118: : 9'
 NAD+DO+5799999933318: : 9'
 UNS+D'
 NAD+XX'
 LOC+90+579331122222312357: : 9'
 LI N+1++3011: : : DK'
 MEA+AAZ++KWH'
 QTY+136: -444318. 778'
 DTM+324: 200409010400200410010400: Z13'
 LI N+2++3012: : : DK'
 MEA+AAZ++KWH'
 QTY+136: 444444. 333'
 DTM+324: 200409010400200410010400: Z13'
 LI N+3++3050: : : DK'
 MEA+AAZ++KWH'
 QTY+136: 125. 555'
 DTM+324: 200409010400200410010400: Z13'
 CNT+1: 251. 110'
 UNT+24+127'
 UNZ+1+E233510'

2.6.7.11. Positive APERAK (answer to MSCONS 7 - Consumption data from MPA to Supplier)

Electricity & gas example:

UNA: +. ? '
 UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031126: 1247+UN
 I KT095++DK-TI S-MET+++DK'
 UNH+1+APERAK: D: 96A: UN: E2DK02+DK-BT-008-003'
 BGM+++34'
 DTM+137: 200311261246: 203'
 RFF+ACW: E99989'
 NAD+FR+5799999933318: : 9'
 NAD+DO+5799999911118: : 9'
 ERC+100: : ZZZ'
 FTX+AAO+++Godkendt / Approved'
 RFF+AES: 571313199988888833'
 UNT+10+1'
 UNZ+1+UNI KT095'

2.6.7.12. Negative APERAK (answer to MSCONS 7 - Consumption data from MPA to Supplier)

Electricity example (and gas example if code 43 is replaced with code 42 in ERC):

UNA: +. ? '
 UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031126: 1247+UNI KT096++DK-TI S-MET+++DK'
 UNH+1+APERAK: D: 96A: UN: E2DK02+DK-BT-008-003'
 BGM+++34'
 DTM+137: 200311261246: 203'
 RFF+ACW: E99989'
 NAD+FR+5799999933318: : 9'
 NAD+DO+5799999911118: : 9'
 ERC+43: : ZZZ'
 FTX+AAO+++Ansvarlig for målepunkt ikke kendt/ Responsible for Meteringpoint not recognised: 14'
 RFF+AES: 57131319998888833'
 UNT+10+1'
 UNZ+1+UNI KT096'

2.6.7.13. Negative APERAK (answer to MSCONS 7 - Consumption data from MPA to Supplier)

Electricity example (and gas example if code 43 is replaced with code 42 in ERC):

:
 UNA: +. ? '
 UNB+UNOC: 3+5799999933318: 14+5799999911118: 14+031126: 1247+UNI KT096++DK-TI S-MET+++DK'
 UNH+1+APERAK: D: 96A: UN: E2DK02+DK-BT-008-003'
 BGM+++27'
 DTM+137: 200311261246: 203'
 RFF+ACW: E99989'
 NAD+FR+5799999933318: : 9'
 NAD+DO+5799999911118: : 9'
 ERC+43: : ZZZ'
 FTX+AAO+++Ukendt Combined Id / Unknown Combined Id: DK-BT-099-003'
 UNT+9+1'
 UNZ+1+UNI KT096'

2.7. BT-009: Reconciliation data transmission (MSCONS 7)

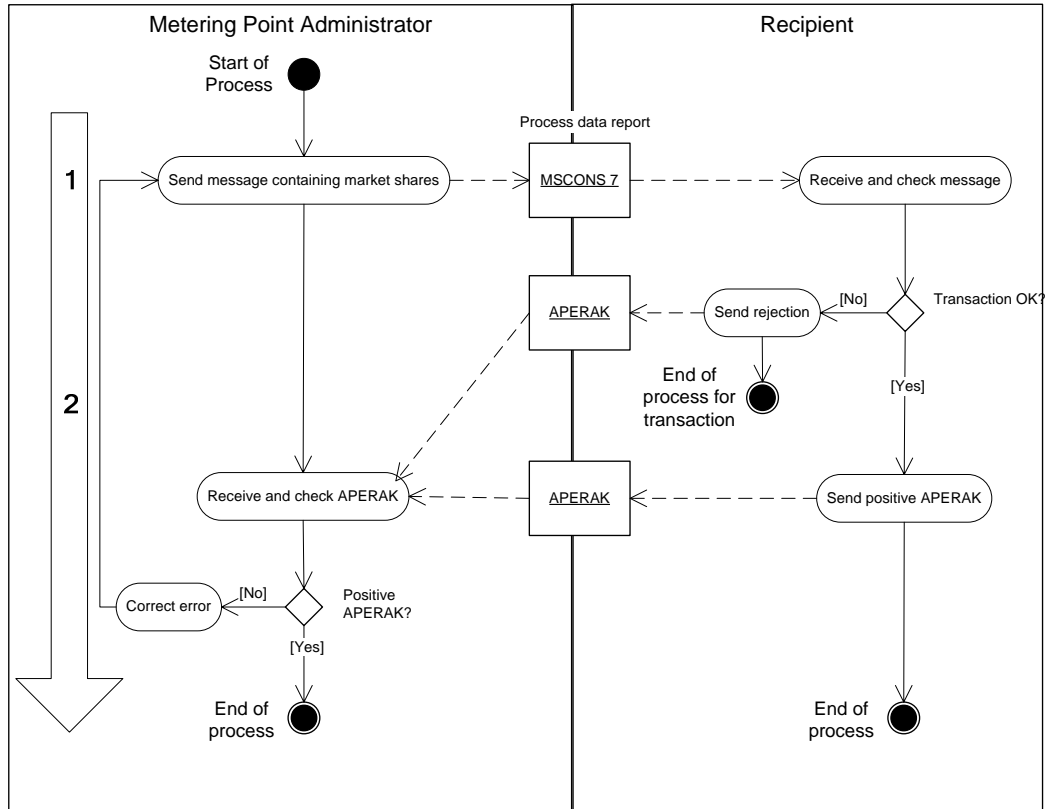


Figure 7: BT-009: Report reconciliation data (MSCONS 7)

Business Transaction, BT-009 is used by the *Metering Point Administrator* to send an EDI message containing the reconciliation data to a receiving party. The receiving party could be: a *Balance Supplier*, a *Balance Responsible Party*, a *System Operator* or the *Elfor* organisation.

2.7.1. Initiation of the transaction

The transaction is initiated by a *MSCONS 7 (Process Data Report, Time Series)* message. The message can hold one or more time series. Before time series are sent the receiver must be informed of the *Serial ID* to be used for the time series and its relevant master data.

2.7.2. First dataflow: MSCONS 7

The message is sent with data as referred to in the dependency matrix. Please note that most dependencies are specified in the product code table. MSCONS 7 has *message function* “9 (Original)” for all usage of this Business Transaction.

Receipt

On receipt of the message the validation is carried out in accordance with *EDI-communication (Regulation F)*.

Afterwards, each time series is verified in accordance with the business rules, which are documented in Table 22.

| Electricity/ Gas | Validation | Error code |
|---------------------|--|--|
| Electricity/ Gas | Time zone shall be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Metered time interval</i> shall be equal to the next calendar month | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Serial ID</i> and master data for it must be informed beforehand | 60 (The object of the transaction is not recognised)/ 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Product code</i> must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Area 1</i> must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Company 2</i> (if required) must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The <i>Measure unit</i> must be equal to that specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity | The <i>Quantity time intervals</i> must be within <i>Metered time interval</i> | 44 (The value of a data element is out of range) |
| Electricity/ Gas | The <i>Quantity time intervals</i> must have the length specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity/ Gas | The precision (number of decimals) of the <i>Quantity</i> must be less or equal to what is specified in the master data for the <i>Serial ID</i> | 42 (Error in content of a data element) |
| Electricity | The <i>Quantity status code</i> must be 136 | 43 (The content of a coded data element does not correspond to the code list) |

| | | |
|-------------|---|-----------------------------------|
| Electricity | The metered time interval is still open for update for the <i>Serial ID</i> | 50 Error in the message period |
|-------------|---|-----------------------------------|

Table 22: Validation of first dataflow: MSCONS 7

2.7.3. Second dataflow: APERAK

If a time series fulfils all the conditions in Table 22, it must be approved. This is done by sending a positive *APERAK* with *message function* “34” (*Accepted with amendment*), the *error code* “100” (*The object is approved*) and “Godkendt/Approved” as *error description*. The transaction reference shall indicate the *Serial ID*.

In case of verification failure, the time series is rejected by a negative *APERAK* with *message function* “34” (*Accepted with amendment*) and the *error code* value indicated in the validation table. The name of the attribute that is the cause for failure must be stated in both Danish and English in the *error description*. The transaction reference shall indicate the *Serial ID*.

Receipt

On receipt, the *APERAK* is validated according to *EDI-communication (Regulation F)*.

Afterwards, the application is not allowed to reject the transactions in the *APERAK*.

2.7.4. MSCONS 7 - Dependency Matrix for Attributes

| Attributes | |
|-----------------------------|----|
| IG version | R |
| BT combined ID | R |
| Message date | R |
| Message function (9) | R |
| Message id | R |
| Message name | R |
| Message recipient | R |
| Message sender | R |
| Request for acknowledgement | R |
| Time zone | R |
| Metered time interval | R |
| Serial ID | R |
| Product code | R |
| Area 1 | R |
| Company 2 | D* |
| Measure unit | R |
| Quantity time interval | R |
| Quantity | R |
| Quantity status code | R |

Table 23 BT-009: Dependency matrix for attributes: MSCONS 7

* Dependency specified in the product code list

R= Required, D= Dependent

2.7.5. APERAK - Dependency Matrix for Attributes

| Attributes | Electricity/ Gas |
|------------------------|---------------------|
| IG version | R |
| BT combined ID | |
| Message date | |
| Message function | |
| Message recipient | |
| Message sender | |
| Reference to message | |
| Application error code | |
| Error description | |
| Transaction reference | |

Table 24: Dependency matrix for attributes: APERAK

R= Required

2.7.6. Unique Identification

| | |
|----------------------|---|
| BT ID | DK-BT-009 |
| BT name | Reconciliation data transmission |
| BT version | 3 |
| BT combined ID | DK-BT-009-003 |
| BPI | DK-TIS-SHA |
| EDI Messages: | |
| Message ID | MSCONS 7 |
| Message name | Process Data Report, time series |
| Message IG version | 2.4 D |
| DK IG version | 3 |
| Message ID | APERAK |
| Message name | Application error and acknowledgement message |
| Message IG version | 2.4 B |
| DK IG version | 3 |

2.7.7. Examples

2.7.7.1. MSCONS 7 (Reconciliation data transmission)

Electricity example:

```

UNA: +. ? '
UNB+UNOC: 3+5790000610976: 14+5791111333334: 14+031023: 1233+AO
310231233510++DK-TI S-SHA+++DK'
UNH+1+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-009-003'
BGM+7+C03102410+9+AB'
DTM+137: 200310231231: 203'
DTM+163: 200311010000: 203'
DTM+164: 200312010000: 203'
DTM+ZZZ: 1: 805'
NAD+FR+5790000610976: : 9'
NAD+DO+5791111333334: : 9'
UNS+D'
NAD+XX'
LOC+90+776425: : ELT+: : DK: 777+5790000701414: : 9'
LI N+1++9001: : : DK'
MEA+AAZ++KWH'
QTY+136: 20000'
DTM+324: 200311010000200312010000: Z13'
NAD+XX'
LOC+90+776429: : ELT+: : DK: 777+5790000701933: : 9'
LI N+1++9001: : : DK'
MEA+AAZ++KWH'
QTY+136: 10000'
DTM+324: 200311010000200312010000: Z13'
NAD+XX'
LOC+90+776426: : ELT+: : DK: 777+5790000705672: : 9'
LI N+1++9001: : : DK'
MEA+AAZ++KWH'

```

QTY+136: 15000'
DTM+324: 200311010000200312010000: Z13'
NAD+XX'
LOC+90+750430: : ELT+: : DK: 777'
LI N+1++9002: : : DK'
MEA+AAZ++KWH'
QTY+136: 45000'
DTM+324: 200311010000200312010000: Z13'
CNT+1: 90000'
UNT+35+1'
UNZ+1+A0310231233510'

Gas example:

UNA: +. ? '
UNB+UNOC: 3+5790000610976: 14+5791111333334: 14+031023: 1233+AO
310231233510++DK-TI S-SHA+++DK'
UNH+127+MSCONS: D: 96A: ZZ: E2DK02+DK-BT-009-003'
BGM+7+REF6262+9+AB'
DTM+137: 200401151540: 203'
DTM+163: 200402010500: 203'
DTM+164: 200502010500: 203'
DTM+ZZZ: 0: 805'
NAD+FR+5790000610976: : 9'
NAD+DO+5791111333334: : 9'
UNS+D'
NAD+XX'
LOC+90+579221122222312323: : 9'
LI N+1++3014: : : DK'
MEA+AAZ++KWH'
QTY+31: 125125. 34'
DTM+324: 200402010500200502010500: Z13'
NAD+XX'
LOC+90+579331122222312357: : 9'
LI N+1++3013: : : DK'
MEA+AAZ++KWH'
QTY+31: 125125125. 34'
DTM+324: 200402010500200502010500: Z13'
CNT+1: 125250250. 68'
UNT+21+127'
UNZ+1+A0310231233510'

Appendix 1. Terminology in the gas market

As mentioned in section 1, the *Business Transactions* in this document are used in the electricity market and gas market respectively. This document originates from the Ediel documentation in the electricity market. Consequently, the terminology in this document reflects the terminology used in the electricity market. In order to eliminate misunderstandings, Table 25: Mapping of terminology maps the terminology used in this document to the relevant terminology used in the gas market.

| Terminology used in this document | Terminology used in the gas market |
|-----------------------------------|------------------------------------|
| Metering Point Administrator | Distribution Company |
| Balance Supplier | Gas Supplier |
| Metered Data Aggregator | Distribution Company |
| Balance Responsible Party | Shipper |
| System Operator | Transmission System Operator |
| Profiled customer | Ndms customer |
| Metered customer | Dms customer |

Table 25: Mapping of terminology