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Code lists

Customer identification type	AA01=Business ID AA03=Personal identity code AA04=Party's own identification
Customer type	AB01=Company AB02=Consumer
Contact method	AC01=Electronic AC02=Other
Contact information, type	AD01=Telephone AD02=E-mail
Accounting point status	AE01=Connected AE02=Disconnected AE03=Under construction AE04=Removed from use AE05=Deleted
Accounting point address type	AF01=Main address AF02=Additional address
Accounting point type	AG01=Consumption AG02=Production
Invoicing method	AH01=Separate invoicing AH02=Grid invoices both AH03=Supplier invoices both
Invoicing channel	AI01=Paper invoice AI02=Electronic invoicing

	AI03=E-Invoice AI04=E-mail AI05=OmaPosti AI06=Direct debit AI07=Mobile invoice AI08=Other invoicing channel
Sales/supply agreement with the customer	AJ01=Agreement with the customer AJ02=Agreement partially with the customer AJ03=No agreement with the customer
Grid agreement with the customer	AK01=Agreement with the customer AK02=Agreement partially with the customer AK03=No agreement with the customer
Type of contact person	AL01=Trustee AL02=Responsible for agreements AL03=Responsible for invoicing AL04=Responsible for connections AL05=Fault communication
Other invoicing address, type	AM01=E-mail invoice address AM02=Mobile invoice address
Reason for ending agreement	AN01=Moving out AN02=Termination AN03=Dissolving AN04=Meter removal AN05=Delivery ends due to a supplier related reason
Language	Subset of ISO 639-1 standard containing only Finnish, English and Swedish.

Country	See ISO 3166-1 alpha-2
Connection status	AO01=Connection request or connection AO02=Disconnection request or disconnection
Authorization reason/purpose	AP01=Energy reporting (customer agreement at the accounting point) AP02=Invitation to tender (customer agreement at the accounting point) AP03=Competitive bidding for an agreement as a service (customer agreement at the accounting point) AP04=Invitation to Tender (no customer agreement at the accounting point) AP05=Competitive bidding for an agreement as a service (no customer agreement at the accounting point) AP06=Balance responsibility information (customer agreement at the accounting point) AP07=Energy reporting and agreement information AP08=Accounting points
Accounting point sub-type	AQ01=Normal AQ02=Building accounting point AQ03=Production unit's own consumption AQ04=Virtual
Reason for cancelling agreement	AR01=Agreement cancelled by customer AR02=Agreement cancelled by supplier AR03=Agreement cancelled by DSO AR05=Customer dispute by market operator AR06=Agreement cancelled by market operator AR07=Cancellation due to a supplier related reason

Party type	AS01=Supplier AS02=DSO AS03=Third party
Reason for starting agreement	AT01=Switching agreements AT02=Switching suppliers AT03=Moving in
Balance deviation type	AU01=Accounting point AU02=Loss
Production type	AV01=Water power AV02=Wind power onshore AV03=Nuclear power AV04=Gas turbine AV05=Diesel power AV06=Solar power AV07=Wave power AV08=Combined production AV09=Biopower AV10=Other production AV11=Wind power offshore AV12=Energy storage
Organization status	AW01=New AW02=Active AW03=Inactive
Acknowledgement type	BA01=Message accepted BA02=Message rejected BA03=Partially accepted

Message package	BB01=Structural data BB02=Metering data (DH-211 and DH-212) BB03=Invoicing information BB04=Settlement data (DH-500) BB05=Balance deviation data (DH-600) BB06=Metering data (DH-22x)
User group	BE01=Apartments, apartment block BE02=Apartments, small building (terraced, semi-detached and detached house), electrically heated BE03=Apartments, small building (terraced, semi-detached and detached house), not electrically heated BE04=Apartments, holiday home BE05=Residential properties BE06=Agricultural production (NACE A) BE07=Industry (NACE B and C) BE08=Infrastructure or energy and water supply (NACE D, E) BE09=Construction (temporary electricity supply) (NACE F) BE10=Services BE11=Outdoor lighting BE12=Charging points for electric vehicles BE13=Traffic BE14=Other
Customer sub-type	BF01=Normal BF02=Estate of a deceased person

	BF03=Company estate
Storage device type	BH01=Electric battery (stationary) BH02=Electric car battery BH03=Power 2 gas BH04=Pumped hydroelectric energy storage BH05=Compressed air storage BH06=Hydrogen storage BH07=Flywheel BH08=Other storage device
Balance settlement type	BI01=Supplier consumption profiled BI02=Supplier consumption non-profiled BI03=Supplier PU Own Consumption profiled BI04=Supplier PU Own Consumption non-profiled BI05=Supplier small Scale Production by production type BI06=Production Unit production BI07=MGA Losses BI08=MGA Negative Losses BI09=MGA Imbalance (from eSett) BI10=MGA Consumption profiled BI11=MGA Consumption non-profiled BI12=MGA PU Own Consumption profiled BI13=MGA PU Own Consumption non-profiled BI14=MGA Small Scale Production by production type BI15=MGA Small Scale Production total BI16=MGA Production Unit by production type

	BI17=MGA Production Unit total BI18=MGA Exchange Sum BI19=MGA Exchange Sum total BI20=MGA Exchange confirmation (from eSett) BI21=Supplier small scale production total
Invoicing address type	BJ01=Balance information corrections BJ02=Combined invoices BJ03=Connection and disconnection invoices
Party contact person type	BK01=Contract contact person BK02=Invoicing contact person BK03=Meter data contact person BK04=Balance deviation contact person BK05=Debt collection contact person
Reason for deviation	BL01=Metered data correction BL02=Supplier change BL03=Both
Update reason	BM02=Estimated annual consumption update
Reading type	BN01=Metered BN02=Netted BN03=Energy Community
Time division	E10=Estimated annual consumption 2 E11=Estimated annual consumption 1
Metering method	E13=Continuous metering E14=Reading metering E16=Unmetered
Metering grid area type	Z01=Regional

	Z03=Industrial Z04=Distribution Z05=Non-concessional Z06=Production Z07=Transmission (main/central grid)
Price unit identification	MON=eur/month ANN=eur/year KWH=eur/kWh MWH=eur/MWh GWH=eur/GWh D32=eur/TWh KWT=eur/kW MAW=eur/MW KVR=eur/kvar MAR=eur/Mvar EA=eur/pcs HUR=eur/hour NM3=eur/m ³ MQH=eur/m ³ /hour KWT=eur/kW MAW=eur/MW NM3=eur/m ³ ZZ=no code
Production unit type	B14=Nuclear power B16=Solar power B18=Wind power offshore

	B19=Wind power onshore B20=Other production B25=Energy storage B31=Hydro power B37= Thermal power
Metering value status	Z02=Uncertain 99=Estimated Z01=Corrected OK Z04=Partially missing 21=Temporary 56=Estimated, approved for billing

Operator processes

- [Structural changes to a metering grid area](#)
- [Datahub operator correction processes](#)

Structural changes to a metering grid area

- Transferring control of a metering grid area
 - Transfer of grid agreements to a new DSO
 - Transfer of rights to the new DSO
 - Rights to accounting point data
 - Imbalance settlement
 - Calculating balance deviations
 - Process diagram for transferring control of a metering grid area
- Division and merging of metering grid areas
 - Accounting points
 - Exchange points
 - Production units
 - Imbalance settlement
 - Calculating balance deviations
 - Division and merging of MGAs under one DSOs administration
 - Division and merging of MGAs with different DSOs
- Complex changes and reporting

This chapter describes situations in which individual metering points are transferred from one metering grid area to another, or in which the control of a metering grid area is completely transferred from one distribution system operator (DSO) to another. The descriptions are written primarily from Datahub's perspective. This chapter does not deal with situations concerning normal market processes, in which new metering points are added to an existing metering grid area, or metering points are removed from it.

In connection with structural changes to metering grid areas, there is a need to exchange information between market parties about the changes. With regard to the structural changes described in this chapter, it is, however, a question of comparatively rare processes, and these changes also often concern a very large number of accounting points (possibly up to hundreds of thousands). The processes described below are not carried out through market messages, but it is done by using a separate data transfer file. Market parties form the csv-transfer file of the accounting points to be transferred with the help of the Datahub operator. This transfer file is used by the Datahub operator and the DSOs involved to process the needed actions.

It is noteworthy that, when transferring accounting points to the control of another DSO, without exception DSOs must always carry out a separate data conversion outside Datahub amongst themselves, in which data is transferred from the present grid owner to the new one. With regard to the change, it is all in all important for the new DSO to be able to ensure the correspondence between Datahub's data and that of its own data system in connection with the change.

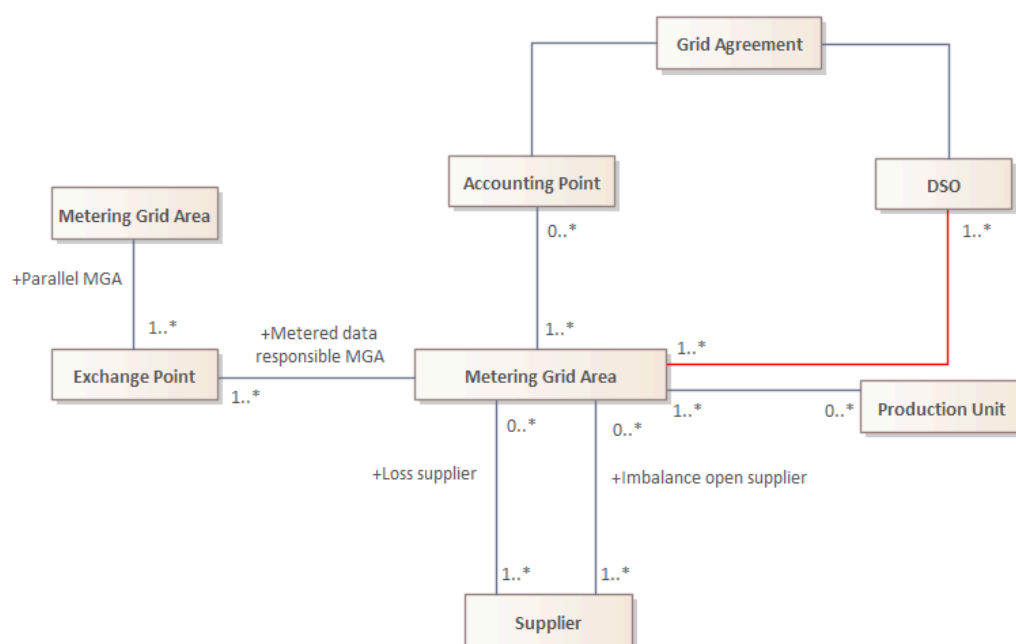
Some of the changes described in this chapter also affect eSett systems. For this reason, the change must also be agreed in advance with eSett before it is carried out. Generally speaking, structural changes to metering grid areas must be agreed with the Datahub organisation well in advance to ensure that the controlled introduction of the change can be carried out.

The processes also entail the transfer of grid agreements to another grid owner. In these changes, grid owners must take into account that the changes will be made in accordance with grid service terms.

These kind of structural changes affect also the suppliers for these accounting points so precise communication is very important.

Transferring control of a metering grid area

This chapter deals with situations in which the control of a metering grid area is completely transferred to a new grid company (which can be one of the existing DSOs). In the Datahub data model, this concerns the relation between the metering grid area and DSO (see figure below).



Transferring the control of the whole MGA

The transfer of control of a metering grid area to another grid company does not in itself affect any other structure in the metering grid area. For example, accounting points belonging to the metering grid area are transferred to the control of the new grid company as they are. Information about which grid owner now controls the metering grid area will be stored in Datahub.

When the control of the metering grid area is transferred from one DSO to another, the following actions must be taken:

- The termination of control of the metering grid area for the present DSO and the start of control for the new DSO from a certain point in time.
- The transfer of grid agreements from the present DSO to the new DSO. The grid agreements are transferred from the present DSO to the new one as they are
- Balance deviation calculation for the metering grid area with regard to the present DSO.

Actions concerning the transfer of metering grid areas from one party to another are always started by the Datahub operator. In the interface provided by Datahub, the DSO does not have the right to directly control which metering grid areas are under the control of the DSO in question.

Transfer of grid agreements to a new DSO

When the operator begins the transfer of a metering grid area, the valid accounting point, agreement and product information for all the accounting points in the metering grid area is reported to the new grid owner for confirmation. This is done by forming a report from Datahub that includes all the accounting points involved in this change. The report has the information of the agreement identifications and products. The new DSO updates its own changed agreement and product information to the same file. Agreement information is also reported to the new DSO with regard to grid agreements that will enter into force in the future.

The Datahub operator uses the same updated file to perform the actual transfer of the accounting points.

The new DSO must ensure that, it has reported its new product data in a separate product data update notification before the actual update. If the new DSO needs to update other agreement details, such as invoicing method, this needs to be done with the agreement update event after the transfer by the Datahub operator is done. Along with the transfer of grid agreements, rights to the corresponding grid agreements are similarly transferred to the new DSO. The exchange points are transferred manually from one metering grid area to another after the transfer of the accounting points is done.

Transfer of rights to the new DSO

When transferring control of a metering grid area to another DSO, the new DSO receives the right to all metering grid area's exchange point-, production unit-, accounting point- and their grid agreement data affected by the transfer. The new DSO also has the right to all this data's change history, which is registered in Datahub. The new DSO thus also has the right to this

change information from an event period when it itself was not responsible for the control of the metering grid area in question. The right of the present DSO to the data is ended up to the day when control of the metering grid area is transferred to another grid company.

The transfer of control of the metering grid area must also be taken into account with regard to information exchange for market processes. Market process-related information exchange is done with the new DSO for all metering grid area data from the time when ownership of the metering grid area is transferred to the new DSO.

Rights to accounting point data

In accordance with the data model, accounting points are not directly connected to the DSO. The right to accounting points and their data always comes through the metering grid area. A change in the ownership of a metering grid area thus also transfers data ownership with regard to accounting points. The new DSO of a metering grid area will have the right to accounting point data throughout the history of the accounting point.

Imbalance settlement

The transfer of control of a metering grid area to another party does not directly affect imbalance settlement calculations, as the metering points are not transferred from one metering grid area to another. A situation in which the metering points are transferred from one metering grid area to another is described separately in chapter [Division and merging of metering grid areas](#). With regard to imbalance settlement, information about a metering grid area's DSO primarily affects what data the party has a right to in Datahub. To this extent, the data also affects what data in Datahub events is transmitted to each DSO. The present DSO has a right to imbalance settlement data (at the message interface or a user interface provided by Datahub) only up to the day when the metering grid area is transferred to the new DSO. The new DSO has a right to all the historical data of the imbalance settlement. This also concerns data on which supplier has at one time or another been the loss supplier of a metering grid area or the imbalance open supplier. When transferring control to a new DSO, Datahub will ensure that the imbalance settlement data is reported to both the new and present grid owners in accordance with their rights.

Changing the party responsible for the metering grid area must also be agreed in advance with eSett.

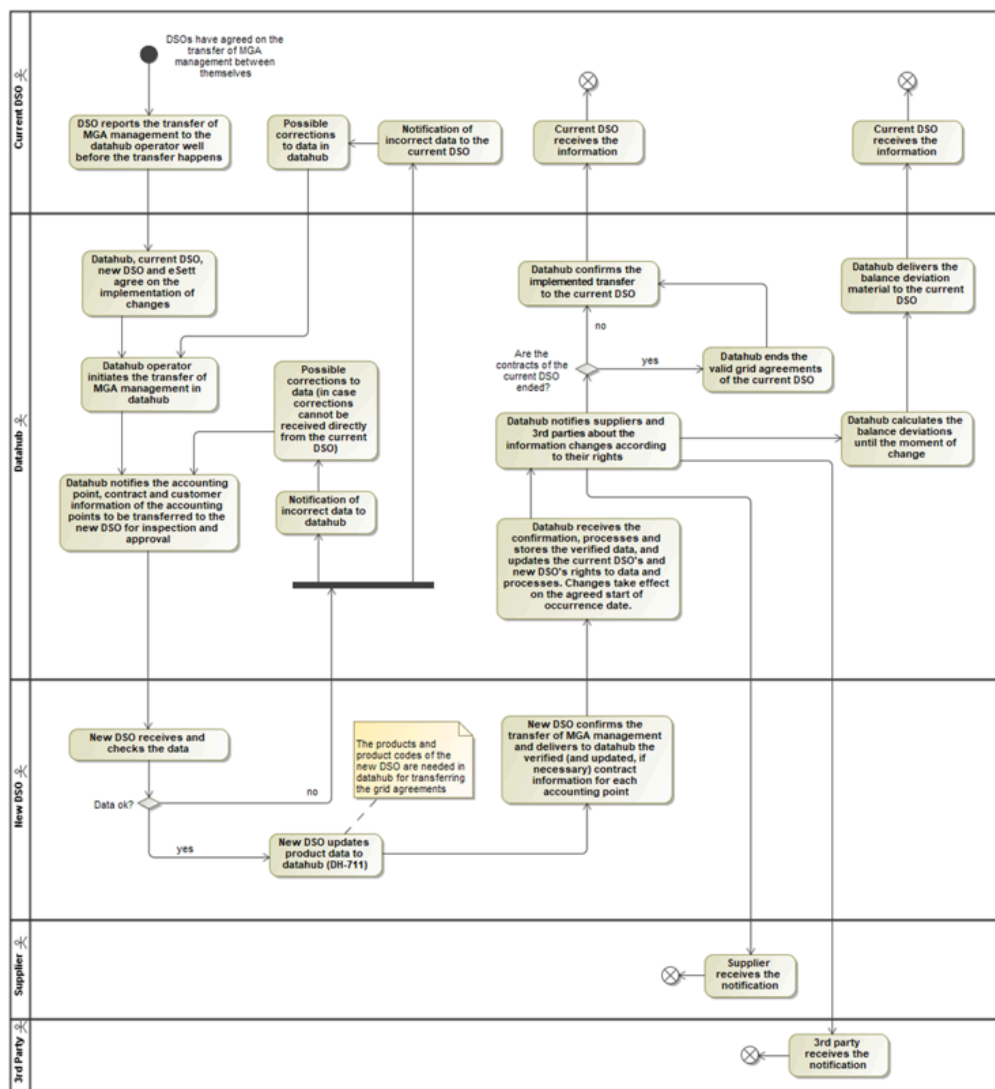
Calculating balance deviations

The calculation of balance deviations must take into account a change in DSO controlling a metering grid area. This is because balance deviation invoicing is the responsibility of the DSO

and has a direct impact on the finances of the grid company. It must be possible to perform the balance deviation calculations for the previous DSO of a metering grid area until the day when responsibility for the metering grid area is transferred to the new party. It must be possible to do this separately from a general calculation performed for the whole market. Because of this, it is ensured that the present DSO will not need to wait months for the processing of balance deviations, for example in cases where the business of the present DSO terminates completely with regard to the company in question. After the transfer of the metering grid area and its separate related balance deviation calculation, the new DSO is responsible for all new balance deviations throughout the history of the metering grid area. Because of this, from Datahub's perspective balance deviations concerning the period of control of the previous grid company, which are not noticed and registered until after the transfer, are always recorded to the new DSO. The grid companies may naturally, however, separately agree amongst themselves on which of the companies is financially responsible for these deviations that are retrospectively identified.

Process diagram for transferring control of a metering grid area

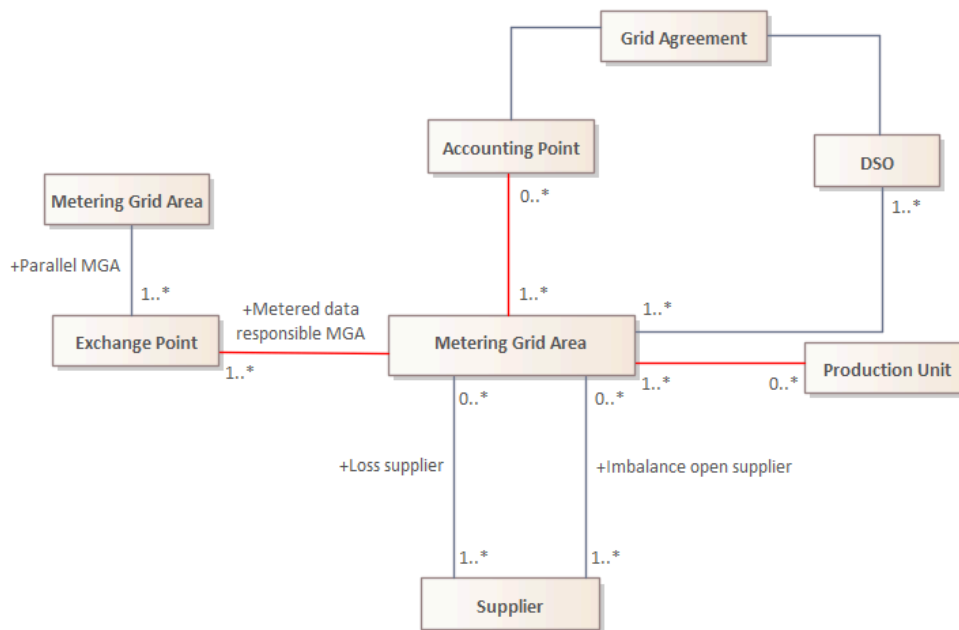
The diagram below describes the phases of transferring the control of a metering grid area to another DSO in Datahub



Process diagram for transferring MGA control

Division and merging of metering grid areas

This chapter deals with situations in which control of a metering grid area remains with the same grid owner, but one or more metering points (accounting points, exchange points or production units) are transferred to another metering grid area. The matters described in this chapter also apply to a situation in which a metering grid area is divided, and the division creates a completely new metering grid area to which metering points are transferred. The metering points may be transferred either to another metering grid area of the same grid company or to a metering grid area under the control of a completely different grid company. In Datahub data model, these changes concern the relation between the metering grid area and the metering points (see figure below). Information about which metering grid area the metering point has belonged to at any given time will be stored in Datahub.



Transferring metering points to another MGA

Insofar as the control of certain accounting points and their grid agreements is transferred to another grid company, the same principles are observed for rights and information exchange as described about them in the previous chapter.

Next, we will review necessary actions separately for each type of metering point.

Accounting points

The transfer of accounting points to another metering grid area must always be agreed well in advance at least a month before the actual transfer date with Datahub personnel. If the accounting points are transferred to the metering grid area of another grid owner, procedures are the same as in a situation where all accounting points in a metering grid area are transferred to the metering grid area of another DSO (see chapter 0). Datahub operator implements the transfer of the accounting points and grid agreements to the new metering grid area with the transfer file as described in the earlier chapter. If an accounting point is transferred from one metering grid area to another belonging to the same grid owner, the transfer is done by using the same principles described earlier.

Exchange points

In Datahub, exchange points are always between two defined metering grid areas. In Datahub it is not possible separately to change either metering grid area to which the exchange point is connected. In practice, when part of a metering grid area is transferred to another metering grid area, new exchange points must be created in Datahub between the two metering grid areas related to the case. In such situations, there is basically no need to terminate the existing

exchange points. If, however, two metering grid areas are merged, in practice the exchange points between these two metering grid areas must be terminated. Control of exchange points is the direct responsibility of DSOs, and DSOs may perform necessary actions to that extent in the user interface provided by Datahub.

Production units

A DSO may create new production units in the user interface provided by Datahub. The processing of production units, however, differs from exchange points so that it is not possible to apply the termination and creation of a production unit in metering grid area changes. With regard to production units, an existing production plant should otherwise have more GSRN codes, and metering data should be divided into several metering time series for the production plant in question. The transfer of a production unit to another metering grid area is always done by the Datahub operator. This action also requires changes in the eSett system and the Datahub operator agrees on the execution of these changes with eSett.

Imbalance settlement

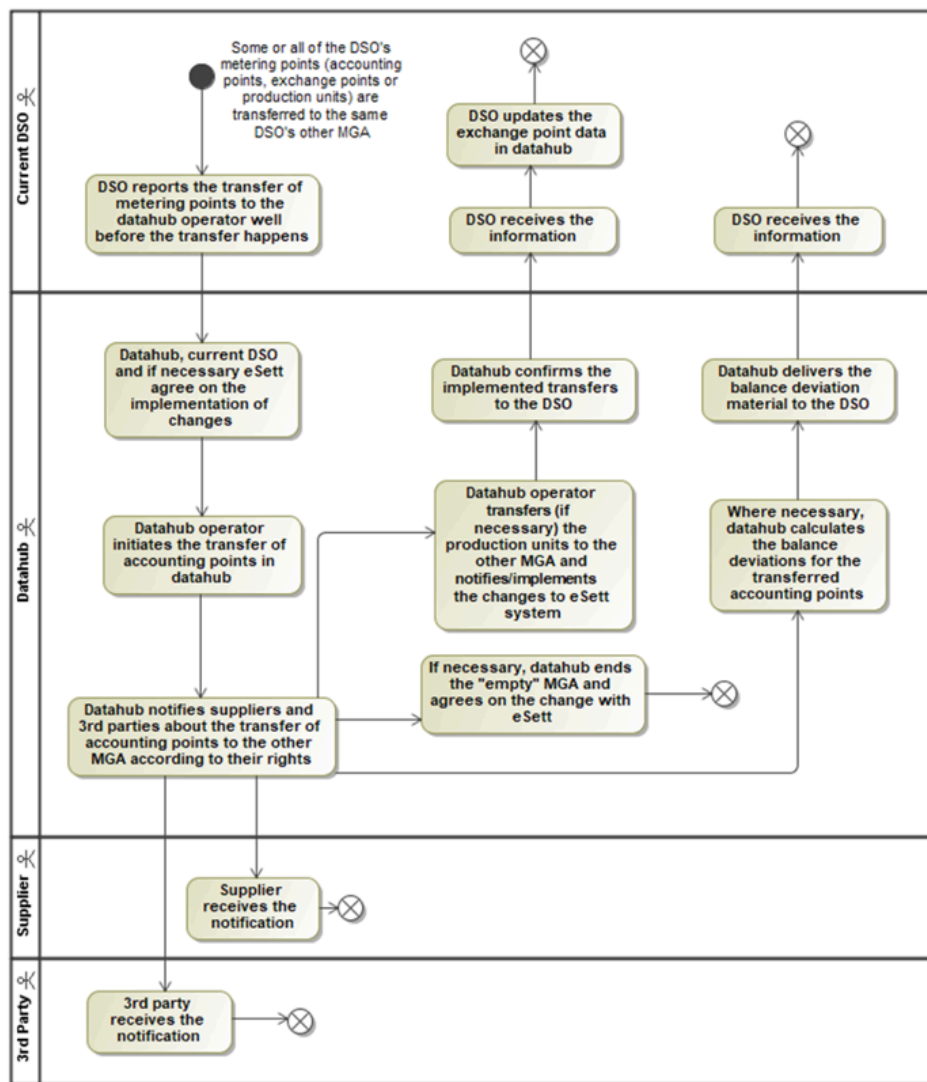
The transfer of metering points from one metering grid area to another affects imbalance settlement calculations. Metering grid area changes do not, however, require separate manual actions in connection with imbalance settlement calculations. Imbalance settlement calculations are specified so that calculation automatically takes into account which metering grid area each metering point is connected to at a given time. Changes in metering grid areas are visible in imbalance settlement calculation results, such as changes in the losses of metering grid areas. In connection with metering grid area changes, it is always advisable to monitor calculation results more closely, as possible errors in processing changes can significantly affect these results. This is also a good way of noticing possible errors.

Calculating balance deviations

Balance deviation calculation must take into account the transfer of an accounting point to another metering grid area in the same way as when changing the DSO in control of a metering grid area (see [Transferring control of a metering grid area](#)). It must be possible to perform balance deviation calculations until the day when the accounting points are transferred to the new party. If necessary, it must be possible to do this separately from a general calculation performed for the whole market.

Division and merging of MGAs under one DSOs administration

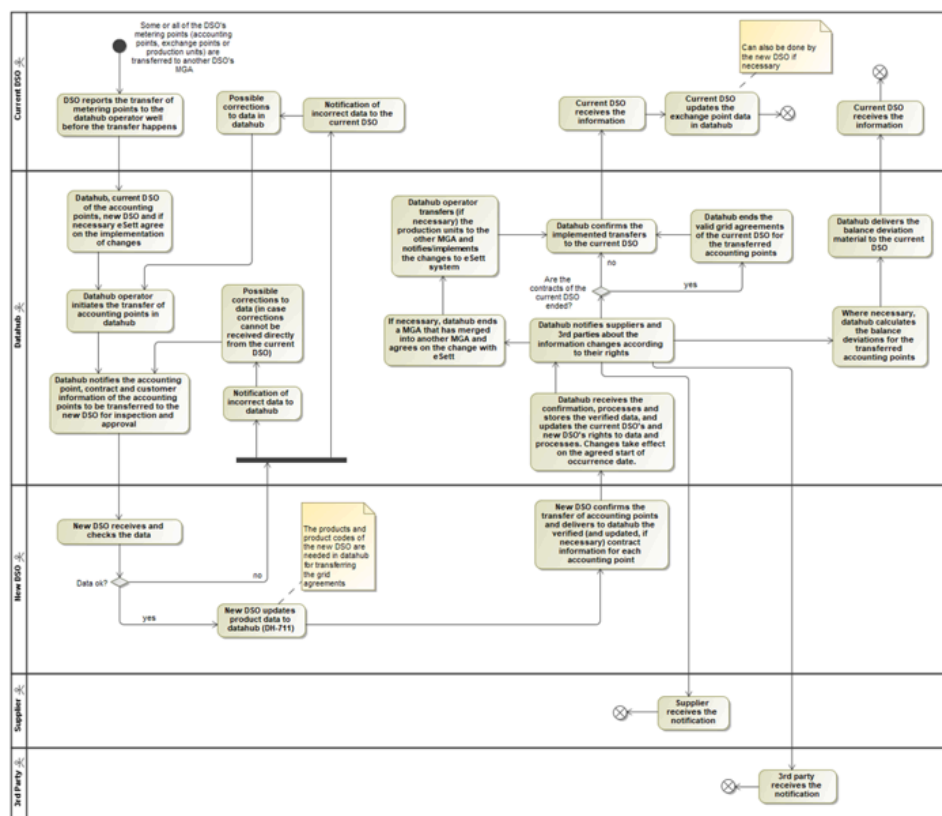
The diagram below describes the phases for handling division and merging of MGAs in Datahub, when MGAs are in controlled by the same DSO.



Process diagram for MGA merge or division when MGAs belong to the same DSO

Division and merging of MGAs with different DSOs

The diagram below describes the phases in Datahub for handling merging of MGAs with two different DSOs, or dividing a MGA into two, when one of the two is transferred to another DSO.



Process diagram for MGA merge or division when MGAs have different DSOs

Complex changes and reporting

It is possible that a change may entail both the division and merging of metering grid areas and the transfer of a whole metering grid area to another party. A situation may therefore occur where, for example, a metering grid area is divided and the existing grid owner ends its operations, and one half of the grid is transferred to a third grid company. In such situations, it is possible to apply the above-mentioned principles and actions separately in two or more stages, so that more complex changes can be processed. This concerns, for example, situations in which more than two metering grid areas are merged.

One of the most important things in this kind of large-scale processes is the communication between all parties involved in this change. The process touches many market parties and so they all need to be aware of this kind of change in good time before the actual change date.

These changes include many manual tasks for both the DSOs involved and the Databus operator. Manual tasks are done before and after processing the transfer file. A detailed runbook of these is to be prepared, including the tasks for parties involved. The change needs to be planned well ahead so that all parties are able to do their part in the transfer and so that it does not cause any extra disturbance for other market parties. In order to avoid any changes to the accounting points in the transfer file the actual change needs to be processed during weekends.

If the updates require changes in the eSett system, Datahub must ensure the agreement and execution of the necessary changes with eSett on behalf of the DSOs. DSOs will be involved in the discussion as their participation in the process is required.

Datahub operator correction processes

[Corrections to agreement processes](#)

[Corrections to customer information](#)

The main rule in Datahub is that the information stored in Datahub always comes from the market parties. However, there are situations where the parties are unable to update their data using normal processes and need support from the market operator. In this case, the operator, using its admin rights to the system, carries out the necessary process, either on behalf of the market party or customer.

Corrections to agreement processes

Concerning agreement processes, the retroactive agreement notifications documentation states that if sales agreement of several different suppliers are valid at the accounting point between the start date of the retroactively reported sales agreement and the time of the notification, the parties cannot agree on a retroactive agreement by themselves. In this case, the market operator will then investigate the situation and proceed with the needed corrections. Depending on the situation, the market operator cancels the pertinent agreements and notifies about the termination of the remaining agreement, if necessary. No notifications will be sent to the market parties about agreement cancellations made by the operator from Datahub. If the market operator terminates the sales agreement under this repair chain, a notification will be sent to that supplier in accordance with the DH-331 process.

Agreement terminations will never be reported retroactively in accordance with the normal process, except when the DSO removes meters. If a market party needs to correct an agreement so it ends retroactively, the party notifies the market operator, who can make this retroactive termination (for example, if an end customer goes bankrupt). Retroactive endings can be made for both sales and grid agreements. Notifications of retroactive agreement endings by the market operator are normally sent to the other market parties and to the party whose agreement has been ended by the operator.

In addition to corrections to agreement information, corrections to balance data are the most frequent type. When investigating corrections, the market operator also confirms the status of the balance information with the market parties and makes the necessary corrections to the balance information on the basis of the information thus received. There will be no notifications of the corrections to the balance information made by the market operator.

The market operator will also handle customer disputes which the DSO has notified it of. Disputing an agreement is described in this section: [The customer disputes a sales agreement](#). If the market operator delivers the customer dispute, Datahub will send a notification to the supplier of the disputed agreement with the reason code AR05 – Agreement dispute by market operator.

Datahub's initial data was imported by data migration. All rules for information stored using ordinary Datahub processes cannot be used for information originating from the data migration. An example of this is agreement cancellations. Cancellation processes have many rules regarding previous agreements. For agreements imported using data migration, no prior information exists in Datahub, meaning that agreements from data migration cannot be cancelled using normal cancellation processes. If the market parties need to cancel an agreement originating from the data migration, they need to notify the market operator, who will then process the cancellation in Datahub. If there is a need to restore a previous agreement that does not exist in Datahub, the market operator will ask the previous supplier to report this agreement to Datahub.

Corrections to customer information

For customer information, parties have the rights to maintain all other information except the customer ID. If the customer ID needs to be corrected, the market party notifies the market operator. The market operator will make the necessary corrections to Datahub, and all parties entitled to this particular customer's information will be notified. The market operator can also correct customer data retroactively upon request when errors are corrected (data protection issues). No notification will be sent to the parties regarding retroactive corrections of customer data.

Market parties may change a customer identifier of the type 'party's own identification' to 'personal identification code' or 'business ID' with the customer information update process. When the customer's personal identification code or business ID already exists in Datahub, Datahub rejects the change request. The market party must then inform the market operator, who can merge a customer identified by the party's own identification with the existing customer information using personal identification code or business id. The agreement information of the customer with the party's own identification is then linked to the customer already existing in Datahub with personal identification code or business ID.

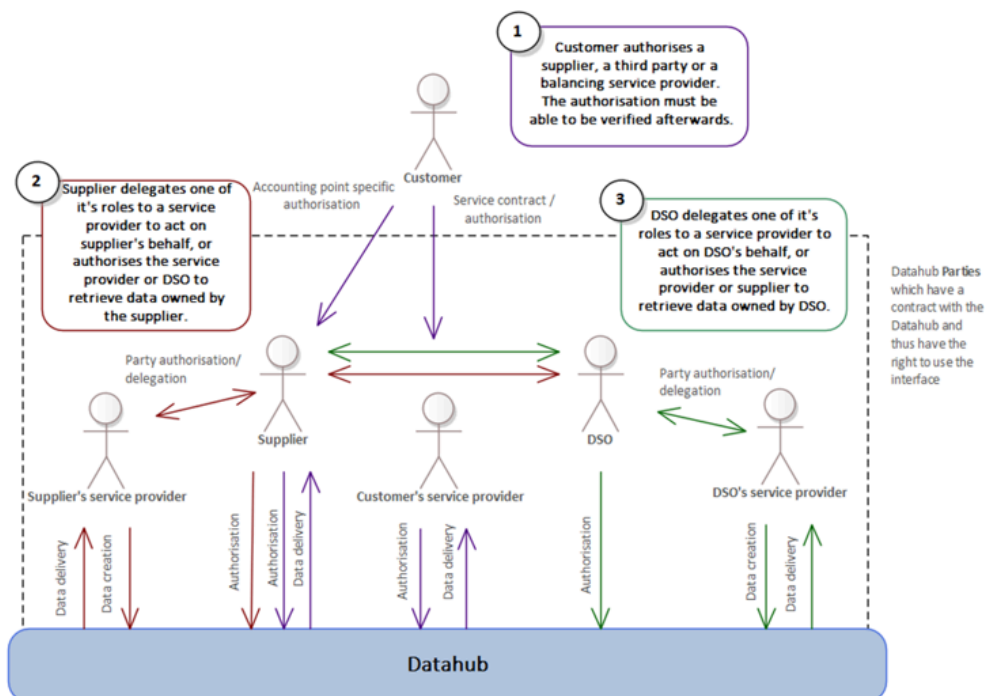
Concerning residential customers, the rule is that the residential customer manages their own authorizations through the Datahub customer portal. If for some reason a residential customer is unable to terminate an authorization they have made in the customer portal, the customer may

ask the market operator to terminate the authorization on their behalf. This authorization is always terminated on behalf of the party who has the authorization from the customer. A notification of the authorization termination is sent to the party whose authorization was terminated.

Delegations and authorizations between parties

Authorizations and delegations between parties serve two different purposes. With a party authorization, a party issues another party access to information that cannot be accessed without the authorization. A delegation, on the other hand, gives permission to act in Datahub on another party's behalf.

These delegations and authorizations are depicted below. Number 2 shows a supplier's delegations and party authorizations. Number 3 shows a DSO's delegations and party authorizations. All of these are managed through the Datahub CMS user interface.



Party authorizations

Party authorizations are required when receiving invoice rows and updating a supplier's product information. A party authorization is issued in the CMS user interface by selecting the party and the function that will be authorized. A party authorization may be issued to several parties at the same time.

No. #	Purpose of party authorization	Authorized Datahub party	Validity of party authorization	Rights provided by the party authorization
2a	Third party or DSO handles the customer billing on behalf of the supplier.	Third party/DSO	Period specified by the supplier sending the invoice rows	Receipt of invoice rows
2b	Third party or DSO needs the supplier's product information, e.g., for billing the customer.	Third party/DSO	Period specified by the supplier	Retrieval of supplier's product information
3a	Third party or supplier handles the customer billing on behalf of the DSO.	Third party/supplier	Period specified by the DSO sending the invoice rows	Receipt of invoice rows
3b	The DSO authorizes a supplier to retrieve exchange point metering.	Supplier	Period specified by the DSO	Retrieval of exchange point metering data

A party authorization does not prevent a party from delegating the same information. For example, a DSO may authorize a supplier to receive invoice rows provided by the DSO. The supplier may, if wanted, have a service provider delegated to this information. The service provider will then receive the invoice rows on behalf of the supplier.

Delegations between parties

[How delegations work](#)

[Inbound delegation](#)

[Outbound delegation](#)

[General rules for delegations](#)

[Delegation information](#)

How delegations work

Delegation between parties mean that the delegating party gives another party, the delegated party, the rights to act on its behalf in Datahub. The delegated party is usually a service provider that would not otherwise have the right to act in Datahub.

Delegations issued by parties to each other allow the service providers for suppliers and DSOs to have a direct connection with Datahub. These service providers must have an agreement with Datahub, after which they receive credentials for the Datahub interfaces.

The following table presents examples of the most common purposes for delegations between parties.

No. #	Purpose of the delegation	Delegated Datahub party	Validity of the delegation	Rights provided by the delegation
2c	A separate billing service provider handles the supplier's billing.	Third party	Period specified by the supplier	Customer information, metering data, agreement information and product data retrieval
3c	A metering data collector for the DSO delivers metering data directly to Datahub.	Third party	Period specified by the DSO	Delivery and retrieval of metering data
3d	A service provider handles the	Third party	Period specified	Retrieval of billing

	management of the DSO's balance errors.		by the DSO	information for balance errors
3e	A separate billing service provider handles the DSO's billing.	Third party	Period specified by the DSO	Customer information, metering data, agreement information and product data retrieval

Parties can issue each other delegations for specific datasets and/or specific events. Events reported to Datahub can be delegated to multiple parties, but notifications sent from Datahub can only be delegated to one party. If a supplier or DSO has outsourced an operation to a service provider, the party uses a delegation to inform Datahub of which party is entitled to which information (for example, customer information and accounting point data and their retrieval) and to initiate which event (for example, metering data delivery). The delegated party receives rights to Datahub information and processes (such as metering data delivery) according to the details of the delegation. The market parties report the necessary delegation requirements to the Datahub operator, which will then update these in Datahub. Market parties can check their delegation information in the Datahub CMS user interface.

If a party has given a delegation to another party to perform an information-request-type event on its behalf, both the delegating and delegated parties can perform the information request as if they were the delegating party. If the reporting of metering data has been delegated to another party, the delegating party can request a copy of the message sent by the delegated party.

A party can delegate the processing of a specific task to any other Datahub party with which it has an agreement. Thus, a delegation can be issued to another supplier, DSO or third party, in which case each party can function in several different roles in Datahub. Delegations between parties cannot be transferred forward to a third party. A delegated party cannot delegate the same information or function it itself has been delegated with to another party. An authorization to customer information received from a customer can also not be delegated to another party. Events related to party information (DH-9XX) and update requests to customer or accounting point information (DH-112, DH-113 and DH-124) cannot be delegated to another party.

A supplier or a DSO can give another party (supplier, DSO or third party) the right to report events to or retrieve notifications from Datahub on their behalf. An inbound delegation gives a

party the right to start a process (e.g., DH-311-1 Notification of a new agreement) on behalf of the delegating party. An outbound delegation means that a message normally received by the delegating party is forwarded to the delegated party instead (e.g., DH-111-2 Forwarding customer information to DSO).

In delegations, the authorization to market data is based on the rights of the delegating party. More precisely, Datahub checks the rights according to the juridical sender indicated in the transaction (see Inbound delegation below).

Inbound and outbound delegations can be applied separately to different parties, regardless of the market event. In other words, the initiating transaction message and the forwarded messages of the same market event can be assigned to different parties (in a process where the notifying party also receives forwarded messages).

Each inbound/outbound delegation between two parties is specified in Datahub via the CMS user interface. Only the Datahub operator can do this. The operator adds a delegation based on a service request created by the delegating party in the Datahub support portal. Delegations are created individually in Datahub at the message level, and the parties can search and view (but not update) delegations via the user interface.

Delegations apply to both synchronous and asynchronous events.

Inbound delegation

An inbound delegation of a market process gives the delegated party the right to send B2B messages to Datahub on behalf of the delegating party. The delegating party can issue this right to several different parties per market event.

In a transaction based on a delegation, the delegated party sends a message to Datahub. In this message, the physical sender field of the message must contain the delegated party's identifier, and the juridical sender field must contain the delegating party's identifier. The process role in the message is set according to the juridical party (e.g., in DH-311 transactions, the process role is 'DDQ', i.e. supplier, and not 'THP', i.e., third party).

In the metering data report event (DH-211), the delegating party can also indicate that it wants a copy (CC) of the forwarded message. In this case, the forwarded message also appears in the delegating party's message queue.

Outbound delegation

An outbound delegation defines which forwarded messages are sent to the delegated party instead of the delegating party.

In delegated outbound messages, the physical recipient field contains the delegated party's identifier, and the juridical recipient field contains the delegating party's identifier. The process role in the message corresponds to the role of the juridical recipient according to the transaction definition.

Unlike inbound delegations, there can only be one delegated party for each outbound message to ensure successful delivery of data. An outbound delegation is only applicable to events that include forwarded messages. Synchronous reply messages are always sent to the physical sender of the message and therefore do not require outbound delegation.

The copy option (CC) of outbound messages is currently not specified for any of the current market transactions and is therefore not applicable for the time being.

In outbound delegation, all messages related to the same process (there can be several notifications) are assigned to one organization.

General rules for delegations

The following principles apply to delegation of processes (market events):

- Inbound or outbound events/messages where the market/process role is 'Third party' cannot be delegated.
- Metering, imbalance settlement, product and invoice row data requests can be delegated, and the retrieved data is always returned to the physical sender who initiated the transaction.

Delegation information

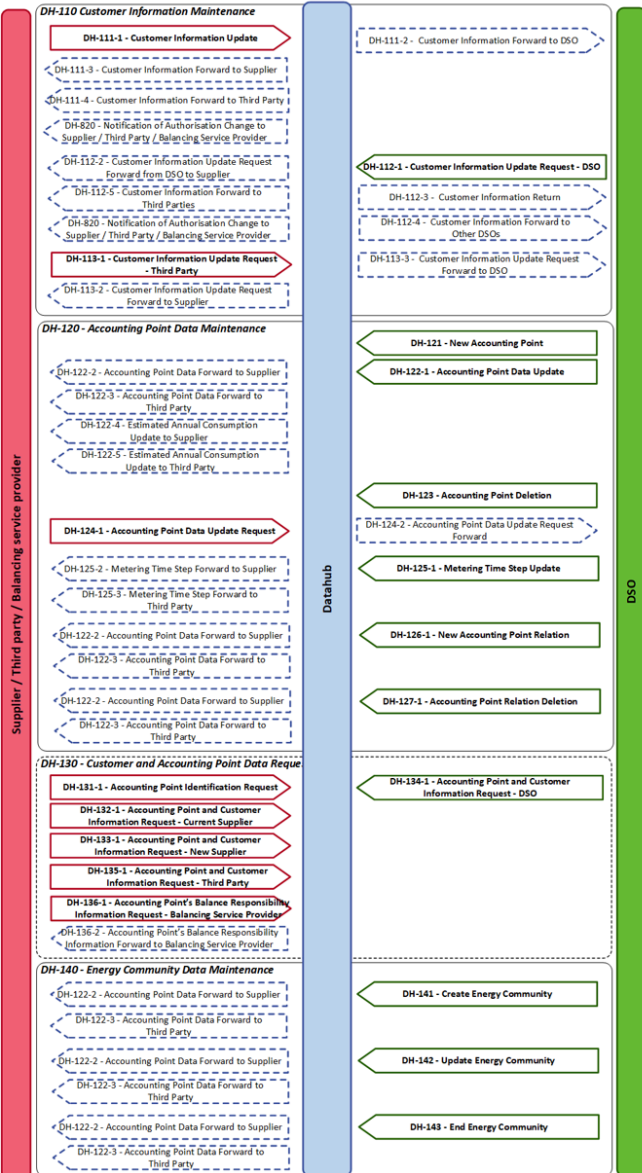
The following information must be given in Datahub for each individual delegation:

- The start date of the delegation
- Delegating party
- Delegated party
- Direction (inbound/outbound)
- Event to be assigned
- Copy to the delegating party
 - Only possible for the DH-211 event
- Delegation description (optional)

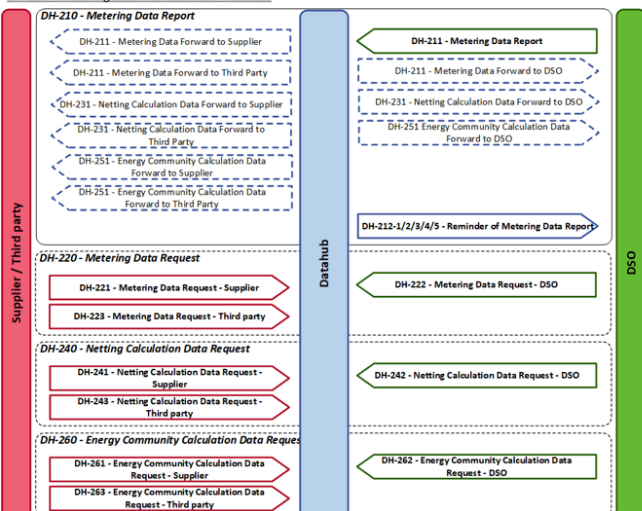
The information listed above must be entered in the service request. [Instructions can be found in the Datahub Services portal.](#)

Process map

DH-100 - Customer, Accounting Point and Energy Community Data Maintenance Processes



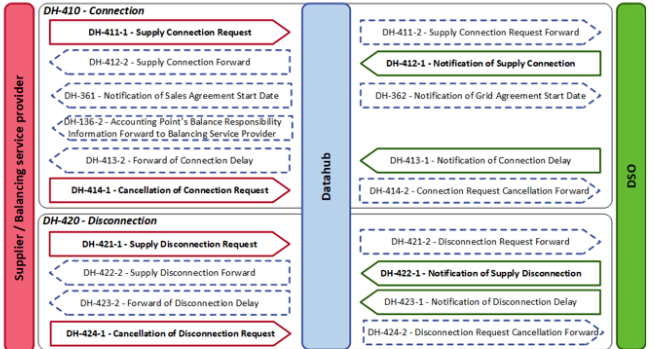
DH-200 - Metering Data Maintenance Processes



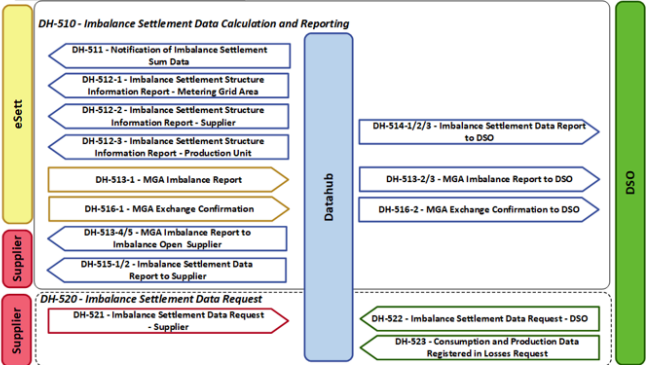
DH-300 - Agreement Processes



DH-400 - Connection and Disconnection Processes



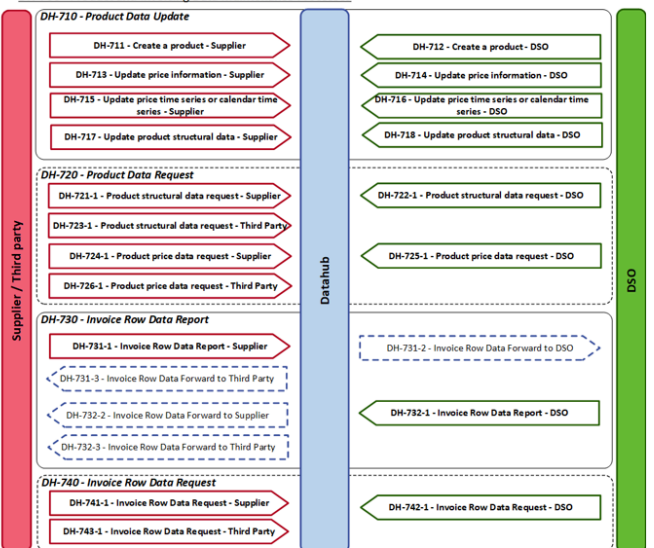
DH-500 - Imbalance Settlement Processes



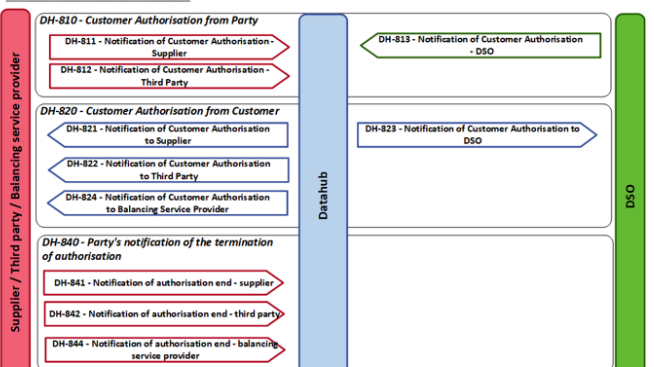
DH-600 - Balance Deviation Correction Processes



DH-700 - Product and Invoicing Data Maintenance Processes



DH-800 - Authorisation Processes



Composite processes

Processes with interdependencies have been unified into composite processes in the Datahub system. Composite processes allow us to create predefined entities in which all processes in a process chain must be executed to complete the chain. Controlled lead times can also be assigned to composite processes. Individual processes related to composite processes may also be events reported only by a specific reason code. The processes in the composite processes always have a connecting factor, the same accounting point ID, agreement ID or customer ID and/or associated message ID.

An example of a composite process is the creation of a new sales agreement when a customer is moving in, and the confirmation of the related grid agreement. When a supplier reports a new sales agreement to Datahub, Datahub determines the reason code for this new agreement. If it is a move-in, Datahub creates an open transaction for the DSO awaiting the confirmation of the grid agreement. When Datahub has received the confirmation, the open transaction can be closed. The time limit for confirming the grid agreement is set to a minimum of two working days from the receipt of the information about the new grid agreement. This open transaction can be seen in the DSO's information. Two working days is set as the lead time of this composite process. The Datahub operator can monitor the DSOs' response to these within the set time limits. There is a specific view in the Datahub UI for these open transactions.

Some events can only be sent to Datahub as part of composite processes. For example, the confirmation of a grid agreement is always a part of this kind of process chain. It can only be reported when the supplier has first reported a new sales agreement. Based on this a new grid agreement is needed, and a new open transaction for the DSO is created.

Composite processes in Datahub are listed in the table below. The process in brackets is a conditional part of the composite process. For example, DH-312 follows DH-311 only when a new grid agreement is required for the accounting point.

Composite process	Name	Initiating party	Continuing party	Processes	Description
DH-112 → DH-111	Customer information update request	DSO	Supplier	DH-112 + DH-111	The update request is forwarded to the supplier.

DH-113 → DH-11	Customer information update request	Third party	Supplier	DH-113 + DH-111	The update request is forwarded to the supplier.
DH-113 → DH-112	Customer information update request	Third party	DSO	DH-113 + DH-112	The update request is forwarded to the DSO, if the customer does not have a valid sales agreement.
DH-113 → DH-112 → DH-111	Customer information update request	Third party	DSO/Supplier	DH-113 + DH-112 + DH-111	The update request is forwarded to the DSO, if the customer does not have a valid sales agreement. The DSO's update is forwarded to the supplier as an update request if a sales agreement has been reported for the customer before the DSO's update.
DH-124 → DH-122	Accounting point data update request	Supplier/ Third party	DSO	DH-124 + DH-122	The update request is always forwarded to the DSO.
DH-311 → DH-312	Supplier starts sales agreement process	Supplier	DSO	DH-311 + (DH-312)	If a new grid agreement is required by the sales agreement, the DSO should confirm the grid agreement.
DH-331 → DH-333	Supplier terminates sales agreement	Supplier	DSO	DH-331 + (DH-333)	<p>If the supplier ends the sales agreement with reason move-out, the grid agreement needs to be terminated as well.</p> <p>If a separate termination is reported for a sales agreement that was terminated due to a new agreement, a separate termination must also be</p>

					<p>reported for the corresponding grid agreement that was terminated due to a new agreement.</p> <p><i>If the grid agreement corresponding to the sales agreement is unconfirmed, the DSO is notified about the termination, but a composite process is not formed. In this case, the DSO must first confirm the grid agreement, after which the DSO can report the termination of the grid agreement as a separate event.</i></p>
DH-333 → DH-331	DSO terminates grid agreement	DSO	Supplier	DH-333 + DH-331	<p>When the grid agreement is terminated, the supplier needs to end the sales agreement accordingly.</p> <p>If a separate termination is reported for a grid agreement that was terminated due to a new agreement, a separate termination must also be reported for the corresponding sales agreement that was terminated due to a new agreement.</p>
DH-341 → DH-342	Supplier cancels sales agreement	Supplier	DSO	DH-341 + (DH-342)	<p>The DSO should cancel the grid agreement that corresponds to the cancelled sales agreement.</p> <p>If the cancellation is reported with reason code 'Cancellation due to a supplier related reason', the grid agreement is not</p>

					<p>cancelled, and no composite process is formed.</p> <p><i>If the grid agreement corresponding to the sales agreement is unconfirmed, the DSO is notified about the cancellation, but Datahub cancels the grid agreement automatically, and no composite process is formed.</i></p> <p><i>If the cancellation is reported with reason code 'Cancellation due to a supplier related reason', the possible unconfirmed grid agreement is not cancelled, and no composite process is formed.</i></p>
DH-341 → DH-343	Refusal of sales agreement restoration	Supplier	(Edeltävä) Supplier	DH-341 + (DH-343)	Refusal of sales agreement restoration is possible only if the cancelled sales agreement caused a previous sales agreement to be restored.
DH-342 → DH-341	DSO cancels grid agreement	DSO	Supplier	DH-342 + (DH-341)	The supplier should cancel the sales agreement if the corresponding grid agreement is cancelled.
DH-351 → DH-352	Supplier cancels sales agreement termination	Supplier	DSO	DH-351 + (DH-352)	If a sales agreement is terminated with reason move-out and this termination is then cancelled, the corresponding grid agreement termination must also be cancelled, if the DSO has already ended the grid agreement.

DH-411 → DH-412	Supply connection request	Supplier	DSO	DH-411 + (DH-413) + DH-412	The supply connection request is forwarded to the DSO. The DSO's notification of connection delay (DH-413) is optional.
DH-421 → DH-422	Supply disconnection request	Supplier	DSO	DH-421 + (DH-423) + DH-422	The supply disconnection request is forwarded to the DSO. The DSO's notification of connection delay (DH-423) is optional.
DH-711 → DH-713	Creating a product	Supplier	Supplier	DH-711 + (DH-713)	A composite process is formed if a price is reported for the product (not a price time series).
DH-712 → DH-714	Creating a product	DSO	DSO	DH-712 + (DH-714)	A composite process is formed if a price is reported for the product (not a price time series).

Message type descriptions

This chapter presents the general message types used for implementing Datahub events. The XML element names are indicative, and they may change when the XML schemas are defined. In the tables, column T refers to the level of data in the XML structure and column P defines the cardinality of the data.

Header

Information field	T	P	Format	Example	XML element	Note
Header information	1	1.1			Header	
Message identification	2	1.1	A36	123e4567-e89b-12d3-a456-426656756520	Identification	
Message type	2	1.1	A3	E58	DocumentType	
Message creation time	2	1.1	Time stamp	2015-06-12T21:00:00+00:00	Creation	
Technical sender of message	2	1.1			PhysicalSenderEnergyParty	
Sender identification	3	1.1	A13	6458237348480	Identification	schemeAgencyIdentifier=9
Juridical sender of message	2	1.1			JuridicalSenderEnergyParty	
Sender identification	3	1.1	A13	6458237348480	Identification	schemeAgencyIdentifier=9
Juridical recipient of message	2	1.1			JuridicalRecipientEnergyParty	
Recipient identification	3	1.1	A13	6458237348480	Identification	schemeAgencyIdentifier=9

Technical recipient of message	2	1.1			PhysicalRecipient EnergyParty	
Recipient identification	3	1.1	A13	6458237348480	Identification	schemeAgencyIdentifier=9
Sender's routing data	2	0..1	A90		SenderRoutingInformation	
Original message identification	2	0..1	A36	223e4567-e89b-12d3-a456-426656756520	OriginalBusinessDocumentReference	
Message number	2	0..1	I6	1	MessageNumber	Order number of the message, if the data is split into multiple messages. When retrieving messages, they are not necessarily in the right order. Starts from one (1).
Total number of messages	2	0..1	I6	35	MessagesTotal	
Registration time	2	0..1	Time stamp	2015-06-12T21:00:00+00:00	RegistrationTimestamp	

Process

Information field	T	P	Format	Example	XML element	Note
Process	1	1..1			ProcessEnergyContext	
Process identification	2	1..1	A10	DH-111-1	EnergyBusinessProcess	Uses Datahub event identifications (e.g. DH-111-1)
Role	2	1..1	A3	<ul style="list-style-type: none"> • DDM • DDQ • DDZ • ESC • MDR • MIA 	EnergyBusinessProcessRole	
Industry	2	1..1	A3	23=Electricity	EnergyIndustryClassification	

E31 Imbalance settlement data

Message name: EnergyTimeSeries

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..n			Transaction	
Time series identification	2	1.1	A36		Identification	Datahub time series name
Reporting period	2	1.1			ObservationPeriodTimeSeriesPeriod	
Time step	3	1.1	A25	<ul style="list-style-type: none"> PT15M PT1H 	ResolutionDuration	Format: PnYnMnDTnHnMnS
Start time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	Start	
End time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	End	
Total series type	2	1.1			ProductIncludedProductCharacteristic	
Product type	3	1.1	A18	8716867000030=Active energy	Identification	
Unit	3	1.1	A6	<ul style="list-style-type: none"> Wh kWh MWh GWh 	UnitType	

Time series characteristics	2	1.1			MPDetailMeasurementMeteringPointCharacteristic	
Type of time series	3	0..1	A3	E17=Consumption E18=Production E20=Connection point	MeteringPointType	
Imbalance settlement method	3	0..1	A3	E01=Profile imbalance settlement E02=Non-profiled imbalance settlement	SettlementMethodType	
Balance settlement type	3	1.1	A4	See the code list for balance settlement type .	BusinessType	listAgencyIdentifier=NFI
Production unit type	3	0..1	A3	B14=Nuclear power B16=Solar power B18= Wind offshore B19=Wind onshore B20=Other production B25=Energy storage	ProductionUnitType	listAgencyIdentifier=NFI

				B31=Hydro power B37=Thermal power		
Balance supplier	2	0.. 1			BalanceSupplier	
Party identification	3	1.1	A13	645823734848 0	Identification	schemeAgencyIdentifier= 9
Area information	2	1.1			MeteringGridAr eaUsedDomain Location	
Metering grid area identification	3	1.1	A90	44Y1001A1001A 46L	Identification	schemeAgencyIdentifier= 305
Input area	2	0.. 1			InAreaUsedDo mainLocation	
Input area identification	3	1.1	A90	44Y1001A1001A 46L	Identification	schemeAgencyIdentifier= 305
Output area	2	0.. 1			OutAreaUsedDo mainLocation	
Output area identification	3	1.1	A90	44Y1001A1001A 46L	Identification	schemeAgencyIdentifier= 305
Time series values	2	1.. n			OBS	
Position	3	1.1	I4	1	SEQ	Position specifies time step order number in relation to start time. For

						example, the first hour of the time period receives the value 1, the second value 2, etc.
Values	3	1..1			EOBS	
<choice 1>						
Value	4	1..1	D8.6	1.123	QTY	In message E31, a schema choice element <xsd:choice> is used. Submit either fields <i>Value</i> and <i>Status</i> or field <i>Value missing</i> , but not both. All values are positive, unless specifically specified otherwise. Value can be negative if balance settlement type is BI18 or BI19.
Status	4	0..1	A3	Z02=Uncertain 99=Estimated Z01=Corrected OK 21=Temporary 56=Estimated, approved for billing	QQ	
</choice 1>						
<choice 2>						
Value missing	4	1..1	A1		QM	In message E31, a schema choice element <xsd:choice> is used. Submit either fields <i>Value</i> and <i>Status</i> or field <i>Value missing</i> , but not both. All values are positive, unless specifically specified otherwise. Value can be negative if balance settlement type is BI18 or BI19.
</choice 2>						

E44 Confirmation of aggregated data

Message name: EnergyTimeSeries

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..n			Transaction	
Time series identification	2	1.1	A90		Identification	Datahub time series name
Reporting period	2	1.1			ObservationPeriodTimeSeriesPeriod	
Time step	3	1.1	A25	<ul style="list-style-type: none"> • PT15M • PT1H • P1D • P1M • P1Y 	ResolutionDuration	Format: PnYnMnDTnHnMnS
Start time	3	1.1	Timestamp	2015-06-12T21:00:00+00:00	Start	
End time	3	1.1	Timestamp	2015-06-12T21:00:00+00:00	End	
Total series type	2	1.1			ProductIncludedProductCharacteristic	
Product type	3	1.1	A18	8716867000030=Active energy	Identification	
Unit	3	1.1	A6	<ul style="list-style-type: none"> • Wh • kWh • MWh • GWh 	UnitType	

Time series characteristics	2	1.1			MPDetailMeasurementMeteringPointCharacteristic	
Type of time series	3	1.1	A3	E20=Connection point	MeteringPointType	
Area information	2	1.1			MeteringGridAreaUsedDomainLocation	
Metering grid area identification	3	1.1	A90	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Input area	2	0.1			InAreaUsedDomainLocation	
Input area identification	3	1.1	A90	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Output area	2	0.1			OutAreaUsedDomainLocation	
Output area identification	3	1.1	A90	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Time series values	2	1..n			ObservationIntervalObservationPeriod	
Position	3	1.1	I4	1	Sequence	
Values	3	1.1			Values	
Value	4	1.1	D8.6	1.123	EnergyQuantity	Can be negative
Delta quantity	4	1.1	D8.6	0.321	DeltaQuantity	Can be negative

E58 Structural data, accounting point

Message name: MasterDataMPEvent

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Start of occurrence	2	1..1	Time stamp	2015-06-12T21:00:00+00:00	StartOfOccurrence	
Original message identification	2	0..1	A36	123e4567-e89b-12d3-a456-426656756520	OriginalBusinessDocumentReference	
Original message sender	2	0..1	A13	6458237348480	OriginalBusinessDocumentSender	schemeAgencyIdentifier=9
Update reason	2	0..1	A4	BM02=Estimated annual consumption update	UpdateReason	listAgencyIdentifier=NFI Only used when DSO updates estimated annual consumption.
Description	2	0..1	A150	Free-form description	Description	
Basic accounting point data	2	1..1			MeteringPointUsedDomainLocation	
Accounting point identification	3	1..1	A90	645823734848458216	Identification	schemeAgencyIdentifier=9

Accounting point status	3	0..1	A4	AE01=Connected AE02=Disconnected AE03=Under construction AE04=Removed from use AE05=Deleted	PhysicalStatusType	listAgencyIdentifier=NFI
Accounting point type	3	0..1	A4	AG01=Consumption AG02=Production	MeteringPointType	listAgencyIdentifier=NFI
Accounting point sub-type	3	0..1	A4	AQ01=Normal AQ02=Building accounting point AQ03=Production unit's own consumption AQ04=Virtual	MeteringPointSubType	listAgencyIdentifier=NFI
Remotely connectable	3	0..1	A1	0=Not remotely connectable 1=Remotely connectable	RemoteConnectable	
Time division	3	0..1	A1	1=One rate metering 2=Two rate metering night/day 3=Two rate metering winter day/other	MeteringTimeDivision	

Meter number	3	0..1	A50	12345	MeterIdentification	
Related accounting point identification	3	0..1	A90	645823734848458216	RelatedMeteringPoint	schemeAgencyIdentifier=9
Community Identification	3	0..1	A50	6430076050014123456	CommunityIdentification	
Community Name	3	0..1	A200	EnergyTogether	CommunityName	
Is netting applied	3	0..1	A1	0=Netting not applied 1=Netting applied	Netting	
Area information	3	1..1			MeteringGridAreaUsed DomainLocation	
Metering grid area identification	4	1..1	A50	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Accounting point address	3	0..8			MeteringPointAddress	
Address type	4	1..1	A4	AF01=Main address AF02=Additional address	Type	listAgencyIdentifier=NFI
Street name	4	0..1	A90	Syyriankatu	StreetName	
Building number	4	0..1	A10	21	BuildingNumber	
Stairwell identification	4	0..1	A10	A	FloorIdentification	

Apartment	4	0..1	A10	13	RoomIdentification	
Postal code	4	0..1	A10	00510	Postcode	
Post office	4	0..1	A50	HELSINKI	CityName	
Country	4	0..1	A2	<ul style="list-style-type: none"> • AX • FI • NO • RU • SE 	CountryCode	schemeAgencyIdentifier=5 ISO 3166 alpha-2
Address specifier	4	0..1	A150	Third from the left when looking from the bridge	AddressFreeForm	
Language	4	0..1	A2	<ul style="list-style-type: none"> • fi • sv 	Language	schemeAgencyIdentifier=5
Coordinates	3	0..1			MPPositionMeteringPointGeographicalCoordinate	
Latitude	4	1..1	A10	61°10,27'N	Latitude	
Longitude	4	1..1	A10	24°33,67'E	Longitude	
Accounting point characteristics	3	0..1			MPDetailMeteringPointCharacteristic	
Remotely readable	4	0..1	A1	1=Remotely readable 0=Not remotely readable	RemoteReadable	
Metering method	4	0..1	A3	E13=Continuous metering E14=Reading metering	MeteringMethod	

				E16=Unmetered		
Metering time step	4	0..1	A25	<ul style="list-style-type: none"> PT15M PT1H 	ResolutionDuration	Format: PnYnMnDTnHnMnS
User group	4	0..1	A4		UserGroup	
Heating depending on electricity	4	0..1	A1	0=Not dependent 1=Dependent	HeatingMethodType	
Fuse size	4	0..1	A10	3x100	FuseSize	
Electric power	4	0..1	D8.2	20000	ContractedConnection Capacity	kW
Tax category	4	0..1	A1	0=No tax 1=Electricity tax category 1 2=Electricity tax category 2	TaxCategory	
Annual consumption estimates	4	0..2			EstimatedMetrics	
Time division	5	1..1	A3	E10=Estimated annual consumption 2 E11=Estimated annual consumption 1	MeterTimeFrame	
Estimated annual consumption	5	1..1	I9	5000	Total	
Controlled load	3	0..n			LoadUnit	

Controlled load identification	4	1..1	A50		Identification	
Controlled load name	4	0..1	A90		Name	
Description	4	0..1	A150		Description	
Timings	4	0..1	A90		Timing	
Control limits	4	0..1	A90		Limits	
Maximum power	4	0..1	D8.2		MaxPower	
Maximum power unit	4	0..1	A5	<ul style="list-style-type: none"> • W • kW • MW • GW 	UnitType	
Storage device	3	0..n			StorageUnit	
Storage device identification	4	1..1	A50		Identification	
Storage device name	4	1..1	A90		Name	
Storage device type	4	1..1	A4	BH01=Electric battery (stationary) BH02=Electric car battery BH03=Power 2 gas BH04=Pumped hydroelectric energy storage	Type	listAgencyIdentifier=NFI

				BH05=Compressed air storage BH06=Hydrogen storage BH07=Flywheel BH08=Other storage device		
Capacity	4	0..1	D8.2		Capacity	
Capacity unit	4	0..1	A5	<ul style="list-style-type: none"> • Wh • kWh • MWh • GWh 	UnitType	
Maximum power	4	0..1	D8.2		MaxCapacity	
Maximum power unit	4	0..1	A5	<ul style="list-style-type: none"> • W • kW • MW • GW 	MaxCapacityUnitType	
Production device	3	0..n			ProductionUnit	
Production device identification	4	1..1	A50		Identification	
Production device name	4	1..1	A90		Name	
Production type	4	1..1	A10		Type	
Maximum power	4	0..1	D8.2		MaxCapacity	

Maximum power unit	4	0.1	A5	<ul style="list-style-type: none">• W• kW• MW• GW	UnitType	
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E66 Metering data

Message name: EnergyTimeSeries

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..n			Transaction	
Unique transaction ID	2	1..1	A36		UniqueIdentification	Timeseries UUID identification
Metering time series identification	2	0..1	A90	FI_HKE001_12345	Identification	Time series ID used by the metering responsible party. Datahub does not set a naming rule for the ID.
Invoice relevant	2	0..1	A1	0=Not invoice relevant 1=Is invoice relevant	InvoiceRelevant	
Reporting period	2	1..1			ObservationPeriodTimeSeriesPeriod	
Time step	3	0..1	A25	<ul style="list-style-type: none"> • PT15M • PT1H • P1D • P1M • P1Y 	ResolutionDuration	Format: PnYnMnDTnHnMnS
Start time	3	1..1	Time stamp	2015-06-12T21:00:00+00:00	Start	
End time	3	1..1	Time stamp	2015-06-12T21:00:00+00:00	End	

Metering type	2	1..1			ProductIncluded ProductCharacteristic	
Metering time series type	3	1..1	A18	8716867000030=Active energy 8716867000139=Reactive energy, input 8716867000146=Reactive energy, output 8716867000047=Reactive energy (Connection points)	Identification	
Unit	3	1..1	A6	<ul style="list-style-type: none"> • Wh • kWh • MWh • GWh • varh • kvarh • Mvarh • Gvarh 	UnitType	
Metering characteristics	2	1..1			MPDetailMeasurementMeteringPointCharacteristic	
Metering point type	3	1..1	A3	F01=Accounting Point E18=Production E20=Connection point	MeteringPointType	

Metering point	2	1..1			MeteringPointUsedDomainLocation	
Metering point identification	3	1..1	A90	707057500022939815	Identification	schemeAgencyIdentifier=9
Area information	2	0..1			MeteringGridAreaUsedDomainLocation	
Metering grid area identification	3	1..1	A90	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Input area	2	0..1			InAreaUsedDomainLocation	
Metering grid area identification	3	1..1	A90	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Output area	2	0..1			OutAreaUsedDomainLocation	
Metering grid area identification	3	1..1	A90	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Time series values	2	1..n			OBS	
Position	3	1..1	I4	1	SEQ	Position specifies time step order number in relation to start time. For example, the first

						hour of the time period receives the value 1, the second value 2, etc.
Values	3	1..1			EOBS	
<choice 1>						
Value	4	1..1	D8.6	1.123	QTY	In message E66, a schema choice element <xsd:choice> is used. Submit either fields <i>Value</i> and <i>Status</i> or field <i>Value missing</i> , but not both.
Status	4	0..1	A3	Z02=Uncertain 99=Estimated Z01=Corrected OK Z04=Partially missing 21=Temporary 56=Estimated, approved for billing	QQ	
</choice 1>						
<choice 2>						
Value missing	4	1..1	A1	1=true	QM	In message E66, a schema choice element <xsd:choice> is used. Submit either fields <i>Value</i> and <i>Status</i> or field <i>Value missing</i> , but not both.
</choice 2>						

F01 Structural data, customer

Message name: MasterDataCustomerEvent

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Start of Occurrence	2	1..1	Time stamp	2015-06-12T21:00:00+00:00	StartOfOccurrence	
Original message identification	2	0..1	A36	123e4567-e89b-12d3-a456-426656756520	OriginalBusinessDocumentReference	
Description	2	0..1	A150	Free-form description	Description	
Basic customer information	2	1..1			ConsumerInvolvedCustomerParty	
Customer identification	3	1..1	A50	010191-090U	Identification	schemeAgencyIdentifier=260
Customer identification type	3	1..1	A4	AA01=Business ID AA03=Personal ID AA04=Party's own ID	IdentificationType	listAgencyIdentifier=NFI
Customer type	3	1..1	A4	AB01=Company AB02=Consumer	CustomerType	listAgencyIdentifier=NFI
Customer sub-type	3	0..1	A4	BF01=Normal BF02=Estate of a deceased person	CustomerSubType	listAgencyIdentifier=NFI

				BF03=Company estate		
Party's own customer identification	3	0..1	A50	HKE_12345	AlternateIdentificati on	
Information restriction	3	0..1	A1	0=Not Private 1=Private	InformationRestricti on	
Language	3	0..1	A2	<ul style="list-style-type: none"> • fi • en • sv 	Language	schemeAgencyI dentifier=5
Company name	3	0..1	A200	Oy Datahub Ab	Name	
Given name	3	0..1	A50	Esa	GivenName	
Middle names	3	0..1	A50	Mikko Ylermi	MiddleName	
Family name	3	0..1	A50	Jaatikainen	FamilyName	
Date of birth	3	0..1	Date	1991-01-01	DateOfBirth	YYYY-MM-DD
Additional identification	3	0..1	A50		AdditionalCode	
Contact information	3	0..2			Communication	
Contact information type	4	0..1	A4	AD01=Telephone AD02=E-mail	CommunicationCha nnel	listAgencyIdentif ier=NFI
Telephone number/ Email address	4	0..1	A90		CompleteNumber	
Postal address	3	0..1			ConsumerInvolved CustomerAddress	

c/o	4	0..1	A150	Oy Datahub Ab	CareOf	
Street name	4	0..1	A90	Syyriankatu	StreetName	
Building number	4	0..1	A10	21	BuildingNumber	
Stairwell identification	4	0..1	A10	A	FloorIdentification	
Apartment	4	0..1	A10	13	RoomIdentification	
Postal code	4	0..1	A10	00510	Postcode	
PO Box	4	0..1	A15	PL 15	Pobox	
Post office	4	0..1	A50	HELSINKI	CityName	
Country	4	0..1	A2	FI	CountryCode	schemeAgencyIdentifier=5 ISO 3166 alpha-2

F02 Accounting point identification request

Message name: RequestMPList

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Address specifier	2	0..1	A150	Third from the left looking from the bridge	AddressFreeForm	
Street name	2	0..1	A90	Syyriankatu	StreetName	
Building number	2	0..1	A10	21	BuildingNumber	
Stairwell identification	2	0..1	A10	A	FloorIdentification	
Apartment	2	0..1	A10	13	RoomIdentification	
Postal code	2	0..1	A10	00510	Postcode	
Post office	2	0..1	A50	HELSINKI	CityName	
Meter number	2	0..1	A50	12345	MeterIdentification	
Accounting point identification	3	0..1	A90	645823734848458216	Identification	schemeAgencyIdentifier=9
Accounting point type	2	0..1	A4	AG01=Consumption AG02=Production	MeteringPointType	listAgencyIdentifier=NFI
Accounting point sub-type	2	0..1	A4	AQ01=Normal AQ02=Building accounting point	MeteringPointSubType	listAgencyIdentifier=NFI

				AQ03=Production unit's own consumption AQ04=Virtual		
Related accounting point identification	2	0..1	A90	64582373484845821 6	RelatedMeterin gPoint	schemeAgencyIde ntifier=9

F03 Accounting point data request

Message name: RequestMPInfo

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Start of occurrence	2	0..1	Time stamp	2015-06-12T21:00:00+00:00	StartOfOccurrence	
Accounting point identification	2	1..1	A90	645823734848458216	IdentificationMP	schemeAgencyIdentifier=9
Customer information	2	0..n			MPCustomer	
Customer identification	3	1..1	A50	010191-090U	Identification	schemeAgencyIdentifier=260

F04 Structural data, agreement

Message name: MasterDataContractEvent

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Start of occurrence	2	0..1	Time stamp	2015-06-12T21:00:00+00:00	StartOfOccurrence	
End of occurrence	2	0..1	Time stamp	2015-06-12T21:00:00+00:00	EndOfOccurrence	
Original message identification	2	0..1	A36	123e4567-e89b-12d3-a456-426656756520	OriginalBusinessDocumentReference	
Original message sender	2	0..1	A13	6458237348480	OriginalBusinessDocumentSender	schemeAgencyIdentifier=9
Description	2	0..1	A150	Free-form description	Description	
Requires new grid agreement	2	0..1	A1	0=Does not require 1=Requires	TransferContractNeeded	
Reason for agreement start	2	0..1	A4	AT01=Switching agreements AT02=Switching suppliers AT03=Moving in	ContractReason	listAgencyIdentifier=NFI
Grid agreement acceptance	2	0..1	A1	0=Not accepted 1=Accepted	ContractConfirm	

Accounting point data	2	1.1			MeteringPointOfContract	
Accounting point identification	3	1.1	A90	645823734848458216	Identification	schemeAgencyIdentifier=9
Area information	2	1.1			MeteringGridAreaUsedDomainLocation	
Metering grid area identification	3	1.1	A50	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Agreement information	2	0.1			MasterDataContract	
Contact method	3	1.1	A4	AC01=Electronic AC02=Other	ContactType	listAgencyIdentifier=NFI
Agreement identification	3	1.1	A50	MS21444412	Identification	
Agreement type	3	1.1	A3	11=Grid agreement 12=Sales agreement	ContractType	
Delivery agreement	3	0.1	A1	0=Not delivery agreement 1=Delivery agreement	DeliveryContract	
Fixed-term agreement	3	0.1	A1	0=Continuing agreement 1=Fixed-term agreement	TimeLimited	
Fixed-term start date	3	0.1	Time stamp	2015-06-12T21:00:00+00:00	FixedContractStart	

Fixed-term end date	3	0..1	Time stamp	2015-06-12T21:00:00+00:00	FixedContractEnd	
Invoicing method	3	1..1	A4	AH01=Separate invoicing AH02=Grid invoices both AH03=Supplier invoices both	InvoicingMethod	listAgencyIdentifier=NFI
Special termination clause	3	0..1	A1	0=Not exceptional 1=Exceptional termination condition	NoticeBasis	
Special termination period	3	0..1	I4	30	NoticeDays	
Notice period	3	0..1			NoticePeriod	
Termination period start date	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	NoticeStart	
Termination period end date	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	NoticeEnd	
Interruption Critical	3	1..1	A1	0=Not critical 1=Interruption critical	Priority	
Invoicing channel	3	1..1	A4	AI01=Paper invoice AI02=Electronic invoicing AI03=E-Invoice	InvoicingChannel	listAgencyIdentifier=NFI

				AI04=E-mail AI05=OmaPosti AI06=Direct debit AI07=Mobile invoice AI08=Other invoicing channel		
Tax category	3	0..1	A1	0=No tax 1=Electricity tax category 1 2=Electricity tax category 2	TaxCategory	
Product data	3	0..n			ProductData	
Product code	4	1..1	A50		ProductCode	
Customer note	3	0..1	A90		CustomerNote	
Contact person	3	0..n			Contact	
Contact person type	4	1..1	A4	AL01=Trustee AL02=Responsible for agreements AL03=Responsible for invoicing AL04=Responsible for connections AL05=Fault communication	ContactType	listAgencyIdentifier=NFI

Given name	4	0..1	A50	Esa	GivenName	
Family name	4	0..1	A50	Jaatikainen	FamilyName	
Other Name	4	0..1	A90	Tampere social office	Name	
Contact information	4	0..2			ContractCommunication	
Contact information type	5	1..1	A4	AD01=Telephone AD02=E-mail	CommunicationChannel	listAgencyIdentifier=NFI
Telephone number/ Email address	5	1..1	A90	name.familyname@domain.com	CompleteNumber	
Postal invoicing address	3	0..1			InvoicingAddress	
c/o	4	0..1	A150	Oy Datahub Ab	CareOf	
Street name	4	0..1	A90	Syyriankatu	StreetName	
Building number	4	0..1	A10	21	BuildingNumber	
Stairwell identification	4	0..1	A10	A	FloorIdentification	
Apartment	4	0..1	A10	13	RoomIdentification	
Postal code	4	1..1	A10	00510	Postcode	
PO Box	4	0..1	A15	PL 15	Pobox	
Post office	4	1..1	A50	HELSINKI	CityName	
Country	4	1..1	A2	FI	CountryCode	schemeAgencyIdentifier=5

						ISO 3166 alpha-2
Electronic invoicing address	3	0..1			ElectronicInvoiceAddressDetails	
Buyer reference	4	0..1	A50		ElectronicInvoiceTargetId	
Electronic invoicing address	4	1..1	A50		ElectronicInvoiceAddress	
Operator identification	4	1..1	A50		ElectronicInvoiceRouter	
Other invoicing address	3	0..1			OtherInvoicingAddresses	
Type	4	1..1	A4	AM01=E-mail invoicing address AM02=Mobile invoicing address	AddressType	listAgencyIdentifier=NFI
Electronic address	4	1..1	A90	name.familyname@domain.com	Address	
Supplier information	3	0..1			SupplierOfContract	
Party identification	4	1..1	A13	6458237348480	Identification	schemeAgencyIdentifier=9
Basic customer information	3	0..n			ConsumerInvolvedCustomerParty	
Customer identification	4	1..1	A50	010191-090U	Identification	schemeAgencyIdentifier=260
Customer identification	4	1..1	A4	AA01=Business ID AA03=Personal ID	IdentificationType	listAgencyIdentifier=NFI

type				AA04=Party's own ID		
Customer type	4	1.1	A4	AB01=Company AB02=Consumer	CustomerType	listAgencyIdentifier=NFI
Customer sub-type	4	1.1	A4	BF01=Normal BF02=Estate of a deceased person BF03=Company estate	CustomerSubType	listAgencyIdentifier=NFI
Information restriction	4	1.1	A1	0=Not private 1=Private	InformationRestriction	
Language	4	1.1	A2	<ul style="list-style-type: none"> • fi • en • sv 	Language	schemeAgencyIdentifier=5
Company name	4	0..1	A200	Oy Datahub Ab	Name	
Given name	4	0..1	A50	Esa	GivenName	
Middle names	4	0..1	A50	Mikko Ylermi	MiddleName	
Family name	4	0..1	A50	Jaatikainen	FamilyName	
Date of birth	4	0..1	Date	1991-01-01	DateOfBirth	YYYY-MM-DD
Additional identification	4	0..1	A50		AdditionalCode	
Contact information	4	0..2			CustomerCommunication	
Contact information type	5	1.1	A4	AD01=Telephone AD02=E-mail	CommunicationChannel	listAgencyIdentifier=NFI

Telephone number/ Email address	5	1.1	A90	+358303955000	CompleteNumber	
Postal address	4	1.1			ConsumerInvolvedCustomerAddresses	
c/o	5	0..1	A150	Oy Datahub Ab	CareOf	
Street name	5	0..1	A90	Syyriankatu	StreetName	
Building number	5	0..1	A10	21	BuildingNumber	
Stairwell identification	5	0..1	A10	A	FloorIdentification	
Apartment	5	0..1	A10	13	RoomIdentification	
Postal code	5	1.1	A10	00510	Postcode	
PO Box	5	0..1	A15	PL 15	Pobox	
Post office	5	1.1	A50	HELSINKI	CityName	
Country	5	1.1	A2	FI	CountryCode	schemeAgencyIdentifier=5 ISO 3166 alpha-2

F05 Accounting point without supplier

Message name: NotifyMPInfo

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..n			Transaction	
Accounting point identification	2	1.1	A90	645823734848458216	Identification	schemeAgencyIdentifier=9
Area information	2	1.1			MeteringGridAreaUsedDomainLocation	
Metering grid area identification	3	1.1	A50	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Time without an agreement	2	1.1			Period	
Start time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	PeriodStart	
End time	3	0..1	Time stamp	2015-06-12T21:00:00+00:00	PeriodStop	

F06 Structural data, agreement ending

Message name: MasterDataContractEvent

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
End of occurrence	2	1..1	Time stamp	2015-06-12T21:00:00+00:00	EndOfOccurrence	
Original message identification	2	0..1	A36	123e4567-e89b-12d3-a456-426656756520	OriginalBusinessDocumentReference	
Original message sender	2	0..1	A13	6458237348480	OriginalBusinessDocumentSender	schemeAgencyIdentifier=9
Description	2	0..1	A150	Free-form description	Description	
Reason for agreement end	2	1..1	A4	AN01=Moving out AN02=Termination AN03=Dissolving AN04=Meter removal AN05=Delivery ends due to a supplier related reason	Reason	listAgencyIdentifier=NFI
Agreement information	2	0..1			MasterDataContract	
Agreement identification	3	0..1	A50	MS21444412	Identification	

Agreement type	3	0..1	A3	11=Grid agreement 12=Sales agreement	ContractType	
Postal invoicing address	3	0..1			InvoicingAddress	
c/o	4	0..1	A150	Oy Datahub Ab	CareOf	
Street name	4	0..1	A90	Syyriankatu	StreetName	
Building number	4	0..1	A10	21	BuildingNumber	
Stairwell identification	4	0..1	A10	A	FloorIdentification	
Apartment	4	0..1	A10	13	RoomIdentification	
Postal code	4	1..1	A10	00510	Postcode	
PO Box	4	0..1	A15	PL 15	Pobox	
Post office	4	1..1	A50	HELSINKI	CityName	
Country	4	1..1	A2	FI	CountryCode	schemeAgencyIdentifier=5 ISO 3166 alpha-2
Accounting point data	3	1..1			MeteringPointOfContract	
Accounting point identification	4	1..1	A90	645823734848458216	Identification	schemeAgencyIdentifier=9
Area information	3	1..1			MeteringGridAreaUsedDomainLocation	
Metering grid area identification	4	1..1	A50	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305

Basic customer information	3	0..n			ConsumerInvolved CustomerParty	
Customer identification	4	0..1	A50	010191-090U	Identification	schemeAgencyIdentifier=260
Customer identification type	4	1..1	A4	AA01=Business ID AA03=Personal ID AA04=Party's own ID	IdentificationType	listAgencyIdentifier=NFI
Customer type	4	1..1	A4	AB01=Company AB02=Consumer	CustomerType	listAgencyIdentifier=NFI
Company name	4	0..1	A200	Oy Datahub Ab	Name	
Given name	4	0..1	A50	Esa	GivenName	
Middle names	4	0..1	A50	Mikko Ylermi	MiddleName	
Family name	4	0..1	A50	Jaatikainen	FamilyName	
Date of birth	4	0..1	Date	1991-01-01	DateOfBirth	YYYY-MM-DD

F07 Metering data reminder

Message name: RequestMeasuredData

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..n			Transaction	
Metering point identification	2	1.1	A90	645823734848458216	MeteringPoint	schemeAgencyIdentifier=9
Metering grid area identification	2	1.1	A50	44Y1001A1001A46L	MeteringArea	schemeAgencyIdentifier=305
Input area	2	0..1			InAreaUsedDomainLocation	
Metering grid area identification	3	1.1	A90	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Output area	2	0..1			OutAreaUsedDomainLocation	
Metering grid area identification	3	1.1	A90	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Request period	2	1.1			RequestPeriod	
Start time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	Start	

End time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	End	
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F08 Metering data request

Message name: RequestMeasuredDataInfo

Information field	T	P	Format	Example	XML element	Note
Payload	1	1.1			Transaction	
Request period	2	1.1			RequestPeriod	
Start time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	Start	
End time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	End	
Time step	2	0..1	A25	<ul style="list-style-type: none"> • PT15M • PT1H • P1D • P1M • P1Y 	ResolutionDuration	Format: PnYnMnDTnHnMnS
Invoice relevant	2	0..1	A1	0=Not invoice relevant 1=Is invoice relevant	InvoiceRelevant	The "Invoice relevant" element must be used together with the "Metering point type" element with value "F01".
Metering point	2	1.1			MeteringPoint	
Metering point type	3	0..n	A4	F01=Accounting point E18=Production	MeteringPointType	listAgencyIdentifier=NFI

				E20=Connection point		
Accounting point type	3	0..n	A4	AG01=Consumption AG02=Production	AccountingPointType	listAgencyIdentifier=NFI
Metering point identification	3	0..n	A90	707057500022939815	Identification	schemeAgencyIdentifier=9 Metering point identification may be: <ul style="list-style-type: none"> • accounting point ID or small-scale production accounting point ID • exchange point ID • production unit ID
Metering grid area identification	3	0..n	A50	44Y1001A1001A46L	MeteringArea	schemeAgencyIdentifier=305
Product	2	0..n			Product	
Product identification	3	1.1	A50	8716867000030= Active energy 8716867000047= Reactive energy	ProductIdentification	
Unit type	3	1.1	A6	<ul style="list-style-type: none"> • kWh • MWh • kvarh • Mvarh 	UnitType	

Response event: A [metering_data](#) event is used as a response event.

F09 Connection – disconnection

Message name: RequestPowerSwitch

F09 message type is used for both requesting a connection/disconnection and for the DSO reporting a connection/disconnection has happened. One can determine the purpose of the message based on the process identification (see [Process](#)).

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Moment of connection/disconnection	2	0..1	Time stamp	2015-06-12T21:00:00+00:00	StartOfOccurrence	
Original message identification	2	0..1	A36	123e4567-e89b-12d3-a456-426656756520	OriginalBusinessDocumentReference	
Original message sender	2	0..1	A13	6458237348480	OriginalBusinessDocumentSender	schemeAgencyIdentifier=9
Accounting point identification	2	1..1	A90	645823734848458216	MeteringPoint	schemeAgencyIdentifier=9
Connection status	2	1..1	A4	AO01=Connection request AO02=Disconnection request	ConnectionStatus	listAgencyIdentifier=NFI
Description	2	0..1	A150	Free-form description	Description	Description is not used in requests.

Contact person	2	0..n			Contact	Only used in connection request.
Contact person type	3	1..1	A4	AL04=Responsible for connections	ContactType	listAgencyIdentifier=NFI
Given name	3	1..1	A50	Esa	GivenName	
Family name	3	1..1	A50	Jaatikainen	FamilyName	
Other name	3	0..1	A90		Name	
Contact information	3	1..1			Communication	
Contact information type	4	1..1	A4	AD01=Telephone	CommunicationChannel	listAgencyIdentifier=NFI
Telephone number/ Email address	4	1..1	A90	+358303955000	CompleteNumber	

F10 Imbalance settlement data request

Message name: RequestSettlementDataInfo

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Metering grid area identification	2	0..1	A50	44Y1001A1001A46L	MeteringArea	schemeAgencyIdentifier=305
Supplier identification	2	0..1	A13	6458237348480	Supplier	schemeAgencyIdentifier=9 If no supplier identification is given, the total sum of the metering grid area is returned.
Balance settlement type	2	0..1	A4	BI01	BusinessType	listAgencyIdentifier=NFI If no settlement business type is given, all settlement time series are returned. See the balance settlement type code list .
Data corrected outside the balance window	2	0..1	A1	0=not requesting data corrected outside the balance window	DataCorrectedOutsideBalanceWindow	

				(i.e. requesting official data) 1=requesting data corrected outside the balance window		
Request period	2	1.1			RequestPeriod	
Start time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	Start	
End time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	End	

F11 Structural data, product

Message name: MasterDataProductEvent

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Product code	2	1..1	A50	General	ProductIdentification	
Product description	2	0..1	A300		ProductDescription	
Product status	2	0..1	A1	0=Terminated 1=Confirmed	ProductStatus	Only used in the return message.
Product validity period	2	1..1			ValidityTime	
Product start time	3	1..1	Time stamp		Start	
Product end time	3	0..1	Time stamp		End	
Product names	2	1..3			ProductNames	
Language	3	1..1	A2	<ul style="list-style-type: none"> • fi • en • sv 	Language	schemeAgencyIdentifier=5
Product name	3	1..1	A90	Night electricity	ProductName	
Product components	2	1..n			ProductComponents	

Product component code	3	1.1	A50	ENERGY	ProductComponent Identification	
Price unit identification	3	0..1	A3		PriceUnitCode	
Price information type	3	1.1	A4	BG01=Price BG02=Price time series	PriceInformationType	
Tax rate	3	1.1	D8.6	19,4	TaxRate	VAT
Product component data	3	1..3			ProductComponent Information	
Language	4	1.1	A2	<ul style="list-style-type: none"> • fi • en • sv 	Language	schemeAgencyIdentifier=5
Product component name	4	1.1	A90	Energy payment	ProductComponent Name	
Price unit	4	1.1	A14	EUR/kWh	PriceUnit	

F12 Product information request, structural information

Message name: RequestProductDataInfo

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Party identification	2	1..1	A13	6458237348480	PartyIdentification	schemeAgencyIdentifier=9
Market role of the product owner	2	1..1	A3	DSO	EnergyBusinessProcessRole	
Product code	2	0..1	A50	General	ProductIdentification	
Active products	2	0..1	A1	0=Confirmed and terminated products 1=Confirmed products	OnlyActiveProducts	Default value is active products.

The [Structural data, product](#) event is used as response event.

F13 Invoice row data

Message name: InvoicingDataInfo

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..n			Transaction	
Unique transaction ID	2	1..1	A36	d81eb7d6-a7f7-4cd1-a701-15ae5b6a330f	TransactionIdentification	UUID
Accounting point identification	2	1..1	A90	645823734848458216	MeteringPoint	schemeAgencyIdentifier=9
Invoicing author agreement identification	2	1..1	A50	MS21444412	AuthorContract	
Invoicing recipient agreement identification	2	0..1	A50		RecipientContract	
Invoicing author party identification	2	1..1	A13	6458237348480	AuthorPartyIdentification	schemeAgencyIdentifier=9
Invoicing recipient party identification	2	1..1	A13	5438683756798	RecipientPartyIdentification	schemeAgencyIdentifier=9
Invoicing period	2	1..1			InvoicingPeriod	

Invoice number	3	1.1	A90		InvoiceIdentification	
Invoice creation date	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	InvoiceCreationDate	
Start time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	Start	
End time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	End	
Invoice rows	2	1..n			InvoicingRow	
Row identification	3	0..1	A90	e81eb7d6-a7f7-4cd1-a701-15ae5b6a330f	RowIdentification	
Product code	3	1.1	A50	GENERAL	ProductIdentification	
Product component code	3	1.1	A50	ENERGY	ProductComponentIdentification	
Price	3	1.1	D8.6	0.0489	Price	Can be negative
Price unit	3	1.1	A14	c/kWh, EUR/kWh	PriceUnit	
Price unit identification	3	0..1	A3	KWH	PriceUnitCode	
Currency	3	1.1	A10	EUR	Currency	
Price taxation	3	1.1	A1	0=Tax not included 1=Tax included	TaxIncluded	
Quantity	3	1.1	D8.6	100	Volume	Can be negative
Quantity unit	3	1.1	A14	kWh	VolumeUnit	

Quantity unit identification	3	0..1	A3	KWH	VolumeUnitCode	
Invoice row total	3	1..1	D8.2	4.89	Amount	Can be negative
Description	3	0..1	A150		Description	
VAT percentage	3	1..1	D8.2	24.00	Tax	
Invoice row start time	3	1..1	Time stamp	2015-06-12T21:00:00+00:00	Start	
Invoice row end time	3	1..1	Time stamp	2015-06-12T21:00:00+00:00	End	

F14 Invoice row data request

Message name: RequestInvoicingDataInfo

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Invoicing period	2	1..1			InvoicingPeriod	
Start time	3	1..1	Time stamp	2015-06-12T21:00:00+00:00	Start	
End time	3	1..1	Time stamp	2015-06-12T21:00:00+00:00	End	
Accounting point identification	2	1..1	A90	645823734848458216	MeteringPoint	schemeAgencyIdentifier=9
Invoicing author agreement identification	2	0..1	A50	MS21444412	AuthorContract	
Invoicing recipient agreement identification	2	0..1	A50		RecipientContract	
Invoicing author agreement identification	2	0..1	A13	6458237348480	AuthorPartyIdentification	schemeAgencyIdentifier=9
Invoicing recipient party identification	2	0..1	A13	5438683756798	RecipientPartyIdentification	schemeAgencyIdentifier=9

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The [invoice row data](#) event is used as response event.

F15 Authorization information

Message name: AuthorizationEvent

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Authorization period	2	1..1			Authorization Period	
Authorization start time	3	1..1	Time stamp	2015-06-12T21:00:00+00:00	Start	
Authorization end time	3	0..1	Time stamp	2015-06-12T21:00:00+00:00	End	
Authorization reason	2	1..1	A4	<p>AP01=Energy reporting (customer agreement at the accounting point)</p> <p>AP02=Invitation to tender (customer agreement at the accounting point)</p> <p>AP03=Competitive bidding for an agreement as a service (customer agreement at the accounting point)</p> <p>AP04=Invitation to Tender (no customer agreement at the accounting point)</p> <p>AP05=Competitive bidding for an agreement as a service (no</p>	Reason	listAgencyIdentifier=NFI

				customer agreement at the accounting point) AP06= Balance responsibility information (customer agreement at the accounting point) AP07= Energy reporting and agreement information AP08=Accounting points		
Description	2	0..1	A150	Free-form description	Description	
Party identification	2	1..1	A13	6458237348480	PartyIdentification	schemeAgencyIdentifier=9
Accounting point identification	2	0..1	A90	645823734848458216	MeteringPoint	schemeAgencyIdentifier=9
Customer information	2	1..n			CustomerList	
Customer identification	3	1..1	A50	010191-090U	Identification	schemeAgencyIdentifier=260

F16 Party information

Sanoman nimi: PartyInfo

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..n			Transaction	
Party's basic information	2	1.1			AuthorizationPeriod	
Start of occurrence	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	Start	
Party identification	3	1.1	A13	6458237348480	PartyIdentification	schemeAgencyIdentifier=9
Party type	3	1.1	A4	AS01=Supplier AS02=DSO AS03=Third party	PartyType	listAgencyIdentifier=NFI
Organization status	3	1.1	A4	AW01=New AW02=Active AW03=Inactive	OrganizationStatus	listAgencyIdentifier=NFI
Business ID	3	1.1	A16	12345678	PartyId	
Party name	3	1.1	A200	Oy Datahub AB	PartyName	
Invoicing channel	3	1.1	A4	AI01=Paper invoice AI02=Electronic invoicing	InvoicingChannel	listAgencyIdentifier=NFI
Country	3	1.1	A2	<ul style="list-style-type: none"> • DK • EE • FI 	CountryCode	schemeAgencyIdentifier=5

				<ul style="list-style-type: none"> • NO • SE 		
Combined invoicing	3	0..1	A1	0=No combined invoicing 1=Combined invoicing	ConsolidateInvoicing	
Contact person	3	0..n			Contact	
Contact person type	4	1..1	A4	BK01=Contract contact person BK02=Invoicing contact person BK03=Meter data contact person BK04=Balance deviation contact person BK05=Debt collection contact person	ContactType	listAgencyIdentifier=NFI
Given name	4	0..1	A50	Esa	GivenName	
Family name	4	0..1	A50	Jaatikainen	FamilyName	
Other Name	4	0..1	A90		Name	
Contact information	4	1..2			Communication	
Contact information type	5	1..1	A4	AD01=Telephone AD02=E-mail	CommunicationChannel	listAgencyIdentifier=NFI

Telephone number/ Email address	5	1.1	A90	name.familyname@domain.fi	CompleteNumber	
Postal invoicing address	3	0..n			InvoicingAddress	
Invoicing address type	4	1.1	A4	BJ01=Balance information corrections BJ02=Combined invoices BJ03=Connection and disconnection invoices	InvoicingAddressType	listAgencyIdentifier=NFI
c/o	4	0..1	A150	Oy Datahub Ab	CareOf	
Street name	4	0..1	A90	Syyriankatu	StreetName	
Building number	4	0..1	A10	21	BuildingNumber	
Stairwell identification	4	0..1	A10	A	FloorIdentification	
Apartment	4	0..1	A10	13	RoomIdentification	
Postal code	4	1.1	A10	00510	Postcode	
PO Box	4	0..1	A15	PL 15	Pobox	
Post office	4	1.1	A50	HELSINKI	CityName	
Country	4	1.1	A2	<ul style="list-style-type: none"> • DK • EE • FI • NO 	CountryCode	schemeAgencyIdentifier=5

				• SE		
Electronic invoicing address	3	0..1			ElectronicInvoicingAddress	
Buyer reference	4	0..1	A50		Target	
Electronic invoicing address	4	1..1	A50		ElectronicInvoicingAddress	
Operator identification	4	1..1	A50		MediatorIdentification	
Bank contact information	3	0..1			BankInfo	
IBAN	4	1..1	A50		IBAN	
Bank name	4	1..1	A50		BankName	
SWIFT	4	1..1	A50		SWIFT	
Postal address	3	1..1			ConsumerInvolvedCustomerAddress	
c/o	4	0..1	A150	Oy Datahub Ab	CareOf	
Street name	4	0..1	A90	Syyriankatu	StreetName	
Building number	4	0..1	A10	21	BuildingNumber	
Stairwell identification	4	0..1	A10	A	FloorIdentification	
Apartment	4	0..1	A10	13	RoomIdentification	
Postal code	4	1..1	A10	00510	Postcode	

PO Box	4	0..1	A15	PL 15	Pobox	
Post office	4	1..1	A50	HELSINKI	CityName	
Country	4	1..1	A2	<ul style="list-style-type: none"> • DK • EE • FI • NO • SE 	CountryCode	schemeAgencyIdentifier=5

F17 Party information request

Message name: PartyInfoRequest

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Party information	2	0..n			PartyInfo	
Party identification	3	1..1	A13	6458237348480	PartyIdentification	schemeAgencyIdentifier=9
Party type	2	0..1	A4	AS01=Supplier AS02=DSO AS03=Third party	PartyType	listAgencyIdentifier=NFI

F18 Structural data, agreement cancellation

Message name: MasterDataContractEvent

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Start of occurrence	2	1..1	Time stamp	2015-06-12T21:00:00+00:00	StartOfOccurrence	
Original message identification	2	0..1	A36	123e4567-e89b-12d3-a456-426656756520	OriginalBusinessDocumentReference	
Original message sender	2	0..1	A13	6458237348480	OriginalBusinessDocumentSender	schemeAgencyIdentifier=9
Reason for cancellation	2	1..1	A4	<p>AR01=Agreement cancelled by the customer</p> <p>AR02=Agreement cancelled by the supplier</p> <p>AR03=Agreement cancelled by the DSO</p> <p>AR05=Customer dispute by market operator</p> <p>AR06=Agreement cancelled by the market operator</p> <p>AR07=Cancellation due to a supplier</p>	ReasonForCancellation	listAgencyIdentifier=NFI

				related reason		
Description	2	0..1	A150	Free-form description	Description	
Agreement information	2	0..1			MasterDataContract	
Agreement identification	3	1..1	A50	MS21444412	Identification	
Recreate agreement information	2	0..1			RecreateAgreementInformation	
First allowed start time	3	1..1	Time stamp	2015-06-12T21:00:00+00:00	Start	
Accounting point data	2	1..1			MeteringPointOfContract	
Accounting point identification	3	1..1	A90	645823734848458216	Identification	schemeAgencyIdentifier=9

F19 Balance deviation data

Message name: BalanceCorrectionData

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Time series identification	2	1..1	A36		Identification	
Area information	2	1..1			MeteringGridAreaUsedDomainLocation	
Metering grid area identification	3	1..1	A90	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Supplier	2	1..1			BalanceSupplierInvolvedEnergyParty	
Party identification	3	1..1	A13	6458237348480	Identification	schemeAgencyIdentifier=9
Balance Calculation time	2	1..1	Time stamp	2015-06-12T21:00:00+00:00	BalanceCalculationDate	
Deviation type	2	1..1	A4	AU01=Accounting point AU02=Loss	DeviationType	listAgencyIdentifier=NFI
Reporting period	2	1..1			ObservationPeriod	
Start time	3	1..1	Time stamp	2015-06-12T21:00:00+00	Start	

				:00		
End time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	End	
Total sums	2	0..n			TotalSums	
Correction total	3	1.1	D8.2	4000.80	TotalAmount	Can be negative
Total corrected energy	3	1.1	D8.6		Energy	Can be negative
Balance deviations	2	0..n			BalanceCorrectionDetails	
Accounting point identification	3	0.1	A90	645823734848458216	MeteringPoint	schemeAgencyIdentifier=9
Accounting point type	3	1.1	A4	AG01=Consumption AG02=Production	MeteringPointType	listAgencyIdentifier=NFI
Metering Method	3	0.1	A3	E13=Continuous metering E14=Reading metering E16=Unmetered	MeteringMethod	
Values	3	1..n			Values	
Date and time	4	1.1	Time stamp	2015-06-12T21:00:00+00:00	DT	

Energy entered in balance	4	0.1	D8.6		OldQty	
Metered energy	4	0.1	D8.6		NewQty	
Balance deviation	4	1.1	D8.6		DeltaQty	Can be negative
SPOT price	4	1.1	D6.2	25.00	Price	Can be negative
Metering time step	4	1.1	A25	PT1H PT15M	RD	
Reason for deviation	4	0.1	A4	BL01 = Metered data correction BL02 = Supplier change BL03 = Both	RS	

F20 Accounting point list

Message name: ResponseMPList

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Basic accounting point data	2	1..n			MeteringPointList	
Accounting point identification	3	1..1	A90	645823734848458216	Identification	schemeAgencyIdentifier=9
Accounting point status	3	1..1	A4	AE01=Connected AE02=Disconnected AE03=Under construction AE04=Removed from use AE05=Deleted	PhysicalStatusType	listAgencyIdentifier=NFI
Remotely connectable	3	1..1	A1	0=Not remotely connectable 1=Remotely connectable	RemoteConnectable	
Accounting point type	3	1..1	A4	AG01=Consumption AG02=Production	MeteringPointType	listAgencyIdentifier=NFI
Accounting point sub-type	3	1..1	A4	AQ01=Normal AQ02=Building accounting point	MeteringPointSubType	listAgencyIdentifier=NFI

				AQ03=Production unit's own consumption AQ04=Virtual		
Time division	3	1.1	A1	1=One rate metering 2=Two rate metering night/day 3=Two rate metering winter day/other	MeteringTimeDivision	
Meter number	3	0.1	A50	12345	MeterIdentification	
Related accounting point identification	3	0.1	A90	645823734848458216	RelatedMeteringPoint	schemeAgencyIdentifier=9
Community Identification	3	0.1	A50	6430076050014123456	CommunityIdentification	
Community Name	3	0.1	A200	EnergyTogether	CommunityName	
Is netting applied	3	0.1	A1	0=Netting not applied 1=Netting applied	Netting	
Area information	3	1.1			MeteringGridAreaUsedDomainLocation	
Metering grid area name	4	1.1	A50		Name	
Metering grid area identification	4	1.1	A50	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305

Metering grid area type	4	1.1	A3	Z01=Regional Z03=Industrial Z04=Distribution Z05=Non-concessional Z06=Production Z07=Transmission (main grid)	Type	
Accounting point address	3	1.8			MeteringPointAddress	
Address type	4	1.1	A4	AF01=Main address AF02=Additional address	Type	listAgencyIdentifier=NFI
Street name	4	1.1	A90	Syyriankatu	StreetName	
Building number	4	0.1	A10	21	BuildingNumber	
Stairwell identification	4	0.1	A10	A	FloorIdentification	
Apartment	4	0.1	A10	13	RoomIdentification	
Postal code	4	1.1	A10	00510	Postcode	
Post office	4	1.1	A50	HELSINKI	CityName	
Country	4	1.1	A2	<ul style="list-style-type: none"> • AX • FI • NO • RU • SE 	CountryCode	schemeAgencyIdentifier=5 ISO 3166 alpha-2
Address specifier	4	0.1	A150	Third from the left looking from the	AddressFreeForm	

				bridge		
Language	4	1.1	A2	<ul style="list-style-type: none"> • fi • sv 	Language	schemeAgencyIdentifier=5
Coordinates	3	0.1			MPPositionMeteringPointGeographicalCoordinate	
Latitude	4	1.1	A10	61°10,27'N	Latitude	
Longitude	4	1.1	A10	24°33,67'E	Longitude	

F21 Accounting point data

Message name: ResponseMPInfo

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Start of occurrence	2	1..1	Time stamp	2015-06-12T21:00:00+00:00	StartOfOccurrence	
Basic accounting point data	2	1..1			MeteringPointUsedDomainLocation	
Accounting point identification	3	1..1	A90	645823734848458216	Identification	SchemeAgencyIdentifier=9
Accounting point status	3	1..1	A4	AE01=Connected AE02=Disconnected AE03=Under construction AE04=Removed from use AE05=Deleted	PhysicalStatusType	listAgencyIdentifier=NFI
Accounting point type	3	1..1	A4	AG01=Consumption AG02=Production	MeteringPointType	listAgencyIdentifier=NFI
Accounting point sub-type	3	1..1	A4	AQ01=Normal AQ02=Building accounting point	MeteringPointSubType	listAgencyIdentifier=NFI

				AQ03=Production unit's own consumption AQ04=Virtual		
Remotely connectable	3	1..1	A1	0=Not remotely connectable 1=Remotely connectable	RemoteConnectable	
Time division	3	1..1	A1	1=One rate metering 2=Two rate metering night/day 3=Two rate metering winter day/other	MeteringTimeDivision	
Meter number	3	0..1	A50	12345	MeterIdentification	
Related accounting point identification	3	0..1	A90	645823734848458216	RelatedMeteringPoint	SchemeAgencyIdentifier=9
Community Identification	3	0..1	A50	6430076050014123456	CommunityIdentification	
Community Name	3	0..1	A200	EnergyTogether	CommunityName	
Is netting applied	3	0..1	A1	0=Netting not applied 1=Netting applied	Netting	
Area information	3	1..1			MeteringGridAreaUsedDomainLocation	

					ion	
Metering grid area identification	4	1..1	A50	44Y1001A1001A46L	Identification	SchemeAgencyIdentifier=305
Accounting point address	3	1..8			MeteringPointAddress	
Address type	4	1..1	A4	AF01=Main address AF02=Additional address	Type	listAgencyIdentifier=NFI
Street name	4	1..1	A90	Syyriankatu	StreetName	
Building number	4	0..1	A10	21	BuildingNumber	
Stairwell identification	4	0..1	A10	A	FloorIdentification	
Apartment	4	0..1	A10	13	RoomIdentification	
Postal code	4	1..1	A10	00510	Postcode	
Post office	4	1..1	A50	HELSINKI	CityName	
Country	4	1..1	A2	<ul style="list-style-type: none"> • AX • FI • NO • RU • SE 	CountryCode	SchemeAgencyIdentifier=5
Address specifier	4	0..1	A150	Third from the left looking from the bridge	AddressFreeForm	
Language	4	1..1	A2	<ul style="list-style-type: none"> • fi • sv 	Language	schemeAgencyIdentifier=5

Coordinates	3	0..1			MPPositionMeteringPointGeographicalCoordinate	
Latitude	4	1..1	A10	61°10,27'N	Latitude	
Longitude	4	1..1	A10	24°33,67'E	Longitude	
Accounting point characteristics	3	0..1			MPDetailMeteringPointCharacteristic	
Remotely readable	4	0..1	A1	1=Remotely readable 0=Not remotely readable	RemoteReadable	
Metering method	4	0..1	A3	E13=Continuous metering E14=Reading metering E16=Unmetered	MeteringMethod	
Metering time step	4	0..1	A25	PT1H	ResolutionDuration	Format: PnYnMnDTnHnMnS
User group	4	0..1	A4		UserGroup	
Heating depending on electricity	4	0..1	A1	0=Not dependent 1=Dependent	HeatingMethodType	
Fuse size	4	0..1	A10	3x100	FuseSize	
Electric power	4	0..1	D8.2	20000	ContractedConnectionCapacity	kW

Reactive energy time series available	4	0..1	A1	0=Not delivered 1=Delivered	ReactiveEnergy	
Annual consumption estimates	4	0..2			EstimatedMetrics	
Time division	5	1.1	A3	E10=Estimated annual consumption 2 E11=Estimated annual consumption 1	MeterTimeFrame	
Estimated annual consumption	5	1.1	I9	5000	Total	
Controlled load	3	0..n			LoadUnit	
Controlled load identification	4	1.1	A50		Identification	
Controlled load name	4	0..1	A90		Name	
Description	4	0..1	A150		Description	
Timings	4	0..1	A90		Timing	
Control limits	4	0..1	A90		Limits	
Maximum power	4	0..1	D8.2		MaxPower	
Maximum power unit	4	0..1	A5	<ul style="list-style-type: none"> • W • kW 	UnitType	

				<ul style="list-style-type: none"> • MW • GW 		
Storage device	3	0..n			StorageUnit	
Storage device identification	4	1..1	A50		Identification	
Storage device name	4	1..1	A90		Name	
Storage device type	4	1..1	A4	BH01=Electric battery (stationary) BH02=Electric car battery BH03=Power 2 gas BH04=Pumped hydroelectric energy storage BH05=Compressed air storage BH06=Hydrogen storage BH07=Flywheel BH08=Other storage device	Type	listAgencyIdentifier=NFI
Capacity	4	0..1	D8.2		Capacity	
Capacity unit	4	0..1	A5	<ul style="list-style-type: none"> • Wh • kWh • MWh • GWh 	UnitType	

Maximum power	4	0..1	D8.2		MaxCapacity	
Maximum power unit	4	0..1	A5	<ul style="list-style-type: none"> • W • kW • MW • GW 	MaxCapacityUnitType	
Production device	3	0..n			ProductionUnit	
Production device identification	4	1..1	A50		Identification	
Production device name	4	1..1	A90		Name	
Production type	4	1..1	A10		Type	
Maximum power	4	0..1	D8.2		MaxCapacity	
Maximum power unit	4	0..1	A5	<ul style="list-style-type: none"> • W • kW • MW • GW 	UnitType	
Grid agreement information	3	0..1			TransferContract	
Customer note	4	0..1	A90		CustomerNote	
Contact method	4	0..1	A4	AC01=Electronic AC02=Other	ContactType	listAgencyIdentifier=NFI
Interruption critical	4	0..1	A1	0=Not critical 1=Interruption critical	Priority	

Invoicing channel	4	0..1	A4	AI01=Paper invoice AI02=Electronic invoicing AI03=E-Invoice AI04=E-mail AI05=OmaPosti AI06=Direct debit AI07=Mobile invoice AI08=Other invoicing channel	InvoicingChannel	listAgencyIdentifier=NFI
Invoicing method	4	0..1	A4	AH01=Separate invoicing AH02=Grid invoices both AH03=Supplier invoices both	InvoicingMethod	listAgencyIdentifier=NFI
Reason for agreement start	4	0..1	A4	AT01=Switching agreements AT02=Switching suppliers AT03=Moving in	ContractReason	listAgencyIdentifier=NFI
Agreement start date	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	ContractStart	
Reason for agreement end	4	0..1	A4	AN01=Moving out AN02=Termination	Reason	listAgencyIdentifier=NFI

				AN03=Dissolving AN04=Meter removal AN05=Delivery ends due to a supplier related reason		
Agreement end date	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	EndOfOccurrence	
Agreement type	4	0..1	A3	11=Grid agreement 12=Sales agreement	ContractType	
Agreement identification	4	0..1	A50	MS21444412	Identification	
Delivery agreement	4	0..1	A1	0=Not delivery agreement 1=Delivery agreement	DeliveryContract	
Tax category	4	0..1	A1	0=No tax 1=Electricity tax category 1 2=Electricity tax category 2	TaxCategory	
Grid product data	4	1..n			GridProductData	
Product code	5	1..1	A50	YAE	TransferContractCode	
Sales agreement	3	0..1			MasterDataContract	

information						
Customer note	4	0..1	A90		CustomerNote	
Contact method	4	0..1	A4	AC01=Electronic AC02=Other	ContactType	listAgencyIdentifier=NFI
Interruption critical	4	0..1	A1	0=Not critical 1=Interruption critical	Priority	
Invoicing channel	4	0..1	A4	AI01=Paper invoice AI02=Electronic invoicing AI03=E-Invoice AI04=E-mail AI05=OmaPosti AI06=Direct debit AI07=Mobile invoice AI08=Other invoicing channel	InvoicingChannel	listAgencyIdentifier=NFI
Invoicing method	4	0..1	A4	AH01=Separate invoicing AH02=Grid invoices both AH03=Supplier invoices both	InvoicingMethod	listAgencyIdentifier=NFI
Fixed-term agreement	4	0..1	A1	0=Continuing agreement	TimeLimited	

				1=Fixed-term agreement		
Fixed-term start date	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	FixedContractStart	
Fixed-term end date	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	FixedContractEnd	
Special termination period	4	0..1	I4	30	NoticeDays	
Special termination clause	4	0..1	A1	0=Not exceptional 1=Exceptional termination condition	NoticeBasis	
Reason for agreement start	4	0..1	A4	AT01=Switching agreements AT02=Switching suppliers AT03=Moving in	ContractReason	listAgencyIdentifier=NFI
Agreement start date	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	ContractStart	
Reason for agreement end	4	0..1	A4	AN01=Moving out AN02=Termination AN03=Dissolving AN04=Meter removal	Reason	listAgencyIdentifier=NFI
Agreement end date	4	0..1	Time stamp		EndOfOccurrence	

Agreement type	4	0..1	A3	11=Grid agreement 12=Sales agreement	ContractType	
Agreement identification	4	0..1	A50	MS21444412	Identification	
Delivery agreement	4	0..1	A1	0=Not delivery agreement 1=Delivery agreement	DeliveryContract	
Notice period	4	0..1			NoticePeriod	
Termination period start date	5	0..1	Time stamp	2015-06-12T21:00:00+00:00	NoticeStart	
Termination period end date	5	0..1	Time stamp	2015-07-12T21:00:00+00:00	NoticeEnd	
Sales product	4	0..n			SalesProduct	
Product code	5	1..1	A50		ProductCode	
Supplier information	4	0..1			BalanceSupplierInvolvedEnergyParty	
Party identification	5	0..1	A13	6458237348480	Identification	SchemeAgencyIdentifier=9
Agreement situation	3	0..1			ContractSituation	
Starting sales agreement	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	NextContractStart	Start date of the following agreement event

Sales agreement with the customer	4	1..1	A4	AJ01=Agreement with the customer AJ02=Agreement partially with the customer AJ03=No agreement with the customer	EnergyContractBy Customer	listAgencyIdentifier=NFI
Fixed-term agreement	4	1..1	A1	0=Continuing agreement 1=Fixed-term agreement	TimeLimited	
Fixed-term end date	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	FixedContractEnd	
Valid sales agreement ends	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	NextContractEnd	
Special termination clause	4	1..1	A1	0=Not exceptional 1=Exceptional termination condition	NoticeBasis	
Special termination period	4	0..1	I4	30	NoticeDays	
Notice period	4	0..1			ContractSituation NoticePeriod	
Termination period start date	5	0..1	Time stamp	2015-06-12T21:00:00+00:00	NoticeStart	

Termination period end date	5	0..1	Time stamp	2015-07-12T21:00:00+00:00	NoticeEnd	
Grid agreement with the customer	4	1..1	A4	AK01=Agreement with the customer AK02=Agreement partially with the customer AK03=No agreement with the customer	TransferContractByCustomer	listAgencyIdentifier=NFI
Basic customer information	2	0..n			ConsumerInvolvedCustomerParty	If the accounting point has no agreement, there is no customer.
Customer sub-type	3	1..1	A4	BF01=Normal BF02=Estate of a deceased person BF03=Company estate	CustomerSubType	listAgencyIdentifier=NFI
Customer identification	3	1..1	A50	010191-090U	Identification	SchemeAgencyIdentifier=260
Customer identification type	3	1..1	A4	AA01=Business ID AA03=Personal ID AA04=Party's own ID	IdentificationType	listAgencyIdentifier=NFI
Customer type	3	1..1	A4	AB01=Company AB02=Consumer	CustomerType	listAgencyIdentifier=NFI

Information restriction	3	1.1	A1	0=Not Private 1=Private	InformationRestriction	
Language	3	1.1	A2	<ul style="list-style-type: none"> • fi • en • sv 	Language	schemeAgencyIdentifier=5
Additional identification	3	0..1	A50		AdditionalCode	
Company name	3	0..1	A200	Oy Datahub Ab	Name	
Given name	3	0..1	A50	Esa	GivenName	
Middle names	3	0..1	A50	Mikko Ylermi	MiddleName	
Family name	3	0..1	A50	Jaatikainen	FamilyName	
Date of birth	3	0..1	Date	1991-01-01	DateOfBirth	YYYY-MM-DD
Contact information	3	0..2			Communication	
Contact information type	4	0..1	A4	AD01=Telephone AD02=E-mail	CommunicationChannel	listAgencyIdentifier=NFI
Telephone number/Email address	4	0..1	A90		CompleteNumber	
Postal address	3	1.1			ConsumerInvolvedCustomerAddresses	
c/o	4	0..1	A150	Oy Datahub Ab	CareOf	

Street name	4	0..1	A90	Syyriankatu	StreetName	
Building number	4	0..1	A10	21	BuildingNumber	
Stairwell identification	4	0..1	A10	A	FloorIdentification	
Apartment	4	0..1	A10	13	RoomIdentification	
Postal code	4	1..1	A10	00510	Postcode	
PO Box	4	0..1	A15	PL 15	Pobox	
Post office	4	1..1	A50	HELSINKI	CityName	
Country	4	1..1	A2	FI	CountryCode	schemeAgencyIdentifier=5 ISO 3166 alpha-2

F22 Price information, product

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Party identification	2	1..1	A13	6458237348480	ProductOwner	schemeAgencyIdentifier=9
Product code	2	1..1	A50	General	ProductIdentification	
Product component code	2	1..1	A50	ENERGY	ProductComponentIdentification	
Price	2	1..1	D8.6		Price	Can be negative
Price with tax	2	1..1	D8.6		PriceWithTax	Can be negative
Price validity period	2	1..1			PriceValidityTime	
Price start time	3	1..1	Time stamp	2015-06-12T21:00:00+00:00	Start	
Price end time	3	0..1	Time stamp	2015-06-12T21:00:00+00:00	End	Only used in the return message

F23 Calendar and price time series, product

Information field	T	P	Format	Example	XML element	Note
Payload	1	1.1			Transaction	
Party identification	2	1.1	A13	6458237348480	ProductOwner	schemeAgencyIdentifier=9
Product code	2	1.1	A50	General	ProductIdentification	
Product component code	2	1.1	A50	ENERGY	ProductComponentIdentification	
Start time	2	1.1	Time stamp	2015-06-12T21:00:00+00:00	Start	
End time	2	1.1	Time stamp	2015-06-12T21:00:00+00:00	End	
Calendar time series	2	0..1			CalendarTimeSeries	
Reporting period	3	1.1			ReportingPeriod	
Time step	4	1.1	A25	<ul style="list-style-type: none"> • PT15M • PT1H • P1D • P1M • P1Y 	ResolutionDuration	Format: PnYnMnDTnHnMnS
Time series values	3	1..n			CalendarTimeSeriesValues	
Position	4	1.1	I8	1	Sequence	
Value	4	1.1	I1	0=Not applicable to	Value	

				hour in question 1=Applicable to hour in question		
Price time series	2	0..1			PriceTimeSeries	
Reporting period	3	1.1			PriceReportingPeriod	
Time step	4	1.1	A25	<ul style="list-style-type: none"> • PT15M • PT1H • P1D • P1M • P1Y 	ResolutionDuration	Format: PnYnMnDTnHnMnS
Time series values	3	1..n			PriceTimeSeriesValues	
Position	4	1.1	I8	1	Sequence	
Price	4	1.1	D8.6	1.123	Price	Can be negative
Price with tax	4	1.1	D8.6		PriceWithTax	Can be negative

F24 Product information request, price information

Information field	T	P	Format	Example	XML element	Note
Payload	1	1.1			Transaction	
Party identification	2	1.1	A13	6458237348480	PartyIdentification	schemeAgencyIdentifier=9
Market Role of the product owner	2	1.1	A3	DDM	EnergyBusinessProcessRole	
Product code	2	1.1	A50	General	ProductIdentification	
Product component code	2	1.1	A50	ENERGY	ProductComponentIdentification	
Start time	2	0..1	Time stamp	2015-06-12T21:00:00+00:00	Start	
End time	2	0..1	Time stamp	2015-06-12T21:00:00+00:00	End	

F25 Metering grid area imbalance

Message name: EnergyTimeSeries

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..n			Transaction	
Time series identification	2	1.1	A90		Identification	eSett time series ID
Party identification	2	1.1	A13	6458237348480	PartyIdentification	schemeAgencyIdentifier=9
Business type	2	1.1	A4	BI09	Businesstype	ListAgencyIdentifier=NFI See the balance settlement type code list .
Total series type	2	1.1			ProductIncludedProductCharacteristic	
Product type	3	1.1	A18	8716867000030=Active energy	Identification	
Unit	3	1.1	A6	<ul style="list-style-type: none"> Wh kWh MWh GWh 	UnitType	
Area information	2	1.1			MeteringGridAreaUsedDomainLocation	
Metering grid area identification	3	1.1	A90	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305

Reporting period	2	1.1			ObservationPeriodTimeSeriesPeriod	
Time step	3	1.1	A25	<ul style="list-style-type: none"> • PT15M • PT1H • P1D • P1M • P1Y 	ResolutionDuration	Format: PnYnMnDTnHnMnS
Start time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	Start	
End time	3	1.1	Time stamp	2015-06-12T21:00:00+00:00	End	
Time series values	2	1..n			ObservationInterval ObservationPeriod	
Position	3	1.1	I4	1	SEQ	
Values	3	1.1			EOBS	
In quantity	4	1.1	D8.6	1.123	InQTY	
Out quantity	4	1.1	D8.6	0.321	OutQTY	

F26 Structural data, energy community

Message name: MasterDataECEvent

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Community Identification	2	1..1	A50	6430076050014123456	CommunityIdentification	
Community Name	2	0..1	A200	EnergyTogether	CommunityName	
Start of Occurrence	2	0..1	Time stamp	2021-06-12T21:00:00+00:00	StartOfOccurrence	Used in DH-141 and DH-142
End of Occurrence	2	0..1	Time stamp	2021-06-12T21:00:00+00:00	EndOfOccurrence	Used in DH-143
Surplus method	2	1..1	A3	SMA= Surplus method A SMB= Surplus method B	SurplusMethod	
Consumption accounting points	2	1..n			ConsAccountingPoints	
Accounting Point Identification	3	1..1	A90	6430076050014123456	AccountingPointIdentification	
Percentage	3	1..1	D2.2	20.78	Percentage	
Small-scale production accounting points	2	0..n			SSProdAccountingPoints	
Accounting Point Identification	3	1..1	A90	6430076050014123456	AccountingPointIdentification	

Is Surplus	3	1.1	A1	0=Not surplus accounting point 1=Is surplus accounting point	IsSurplus	
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F27 Structural data, agreement start of occurrence change with connection

Message name: MasterDataContractEvent

Information field	T	P	Format	Example	XML-element	Note
Payload	1	1..1			Transaction	
Start of occurrence	2	1..1	Time stamp	2015-06-12T21:00:00+00:00	StartOfOccurrence	
Original message identification	2	1..1	A36	123e4567-e89b-12d3-a456-426656756520	OriginalBusinessDocumentReference	
Original message sender	2	1..1	A13	6458237348480	OriginalBusinessDocumentSender	schemeAgencyIdentifier=9
Accounting point data	2	1..1			MeteringPointOfContract	
Accounting point identification	3	1..1	A90	645823734848458216	Identification	schemeAgencyIdentifier=9
Area information	2	1..1			MeteringGridAreaUsedDomainLocation	
Metering grid area identification	3	1..1	A50	44Y1001A1001A46L	Identification	schemeAgencyIdentifier=305
Agreement information	2	1..1			MasterDataContract	

Agreement identification	3	1.. 1	A50	MS21444412	Identification	
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F28 Accounting point's balance responsibility information

Message name: ResponseMPBRPInfo

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..1			Transaction	
Start of occurrence	2	1..1	Time stamp	2015-06-12T21:00:00+00:00	StartOfOccurrence	
Basic customer information	2	1..1			ConsumerInvolvedCustomerParty	
Customer identification	3	1..1	A50	010191-090U	Identification	schemeAgencyIdentifier=260
Basic accounting point data	2	1..1			MeteringPointUsedDomainLocation	
Accounting point identification	3	1..1	A90	645823734848458216	Identification	SchemeAgencyIdentifier=9
Accounting point type	3	1..1	A4	AG01=Consumption AG02=Production	MeteringPointType	ListAgencyIdentifier=NFI
Area information	3	1..n			MeteringGridAreaUsedDomainLocation	
Metering grid area identification	4	1..1	A50	44Y1001A1001A46L	Identification	SchemeAgencyIdentifier=305
Metering grid area name	4	1..1	A200		Name	

Area information start date	4	1..1	Time stamp	2015-06-12T21:00:00+00:00	GridAreaStart	
Area information end date	4	0..1	Time stamp	2015-06-12T21:00:00+00:00	GridAreaEnd	
Supplier information	3	1..n			SupplierOfContract	
Supplier identification	4	1..1	A13	6458237348480	SupplierIdentification	schemeAgencyIdentifier=9
Supplier name	4	1..1	A200	Oy Datahub AB	SupplierName	
Balance responsible information	4	1..n			BalanceResponsibleInformation	
Balance responsible identification	5	1..1	A13	6458237348480	BalanceResponsibleIdentification	schemeAgencyIdentifier=9
Balance responsible name	5	0..1	A200		BalanceResponsibleName	Balance responsible name is currently not available in Datahub. The field is included in the F28 message for future use.
Balance responsibility start date	5	1..1	Time stamp	2015-06-12T21:00:00+00:00	BalanceResponsibilityStart	
Balance responsibility end date	5	0..1	Time stamp	2015-06-12T21:00:00+00:00	BalanceResponsibilityEnd	

F29 Authorization information, authorization termination

Message name: AuthorizationEnding

Information field	T	P	Format	Example	XML element	Note
Payload	1	1..n			Transaction	
Transaction identification	2	1..1	A90	d81eb7d6-a7f7-4cd1-a701-15ae5b6a330f	TransactionId entification	
Authorization end time	2	1..1	Time stamp	2015-06-12T21:00:00+00:00	EndOfOccurrence	
Authorization reason list	2	0..n			Authorization Reasons	
Authorization reason	3	1..n	A4	<p>AP01=Energy reporting (customer agreement at the accounting point)</p> <p>AP02=Invitation to tender (customer agreement at the accounting point)</p> <p>AP03=Competitive bidding for an agreement as a service (customer agreement at the accounting point)</p> <p>AP04=Invitation to tender (no customer agreement at the accounting point)</p> <p>AP05=Competitive bidding for an agreement as a service</p>	Reason	listAgencyIdentifier=NFI

				(no customer agreement at the accounting point) AP06= Balance responsibility information (customer agreement at the accounting point) AP07= Energy reporting and agreement information AP08=Accounting points		
Description	2	0..1	A150	Free-form description	Description	
Party identification	2	1..1	A13	6458237348480	PartyIdentification	schemeAgencyIdentifier=9
Accounting point identification	2	0..1	A90	645823734848458216	MeteringPoint	schemeAgencyIdentifier=9
Customer identification	2	1..1	A50	010191-090U	Identification	schemeAgencyIdentifier=260

ACK Acknowledgement event

Message name: Acknowledgement

Information field	T	P	Format	Example	XML element	Note
Acknowledgement event	1	1..1			Acknowledgement	
Acknowledgement type	2	1..1	A4	BA01=Message accepted BA02=Message rejected BA03=Partially accepted	ReasonCode	listAgencyIdentifier=NFI
Acknowledgement of event level	2	0..n			EventReason	
Event acknowledgement code	3	1..1	A20		EventReasonCode	
Event acknowledgement text	3	1..1	A300		EventReasonText	
Event details	3	0..n	A90		EventDetails	
Series data	2	0..n			SeriesDetail	Time series-level acknowledgement data used only in the forwarding of metering data.
Sender's series ID	3	0..1	A90	FI_HKE001_12345	SendersSeriesIdentification	Eg., Time series ID or Accounting point ID

Series UID	3	1..1	A90	123e4567-e89b-12d3-a456-426656756520	SeriesUniqueIdentification	
Acknowledgement of series	3	1..n			SeriesReason	
Series acknowledgement type	4	1..1	A20	999	SeriesReasonCode	
Series acknowledgement text	4	1..1	A300	General error	SeriesReasonText	
Series details	4	0..n	A90		SeriesDetails	

Peek request event

Information field	T	P	Format	Example	XML element	Note
Request event	1	1..1			PeekMessage	
Message package	2	1..1	A4	BB01=Structural data (DH-100, DH-300, DH-400, DH-710, DH-720, DH-800 and DH-900) BB02=Metering data (DH-211 and DH-212) BB03=Invoicing information (DH-730 and DH-740) BB04=Settlement Data (DH-500) BB05=Balance Deviation Data (DH-600) BB06=Metering Data (DH-22x)	Package	listAgencyIdentifier=NFI

Events, messages and roles

This table presents a summary of market process events, the messages used in them, and the market and process roles. The message type refers to [general types of messages](#) that can be utilized in one or more market processes. Process-specific data contents, data field levels and requirements, as well as process-specific comments, are presented in the description of each [process](#).

Event	Message type	Message type description	Sender	Sender process role	Sender process role code	Recipient	Recipient process role	Recipient process role code
DH-111-1	F01	Structural data, customer	Balance Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-111-2	F01	Structural data, customer	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-111-3	F01	Structural data, customer	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-111-4	F01	Structural data, customer	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-112-1	F01	Structural data, customer	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-112-2	F01	Structural data, customer	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ

DH-112-3	F01	Structural data, customer	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-112-4	F01	Structural data, customer	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-112-5	F01	Structural data, customer	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-113-1	F01	Structural data, customer	Third party	Energy Service Company	ESC	Datahub	Datahub	MIA
DH-113-2	F01	Structural data, customer	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-113-3	F01	Structural data, customer	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-114-2	F01	Structural data, customer	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-114-3	F01	Structural data, customer	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-114-4	F01	Structural data, customer	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-116-2	F01	Structural data, customer	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-116-3	F01	Structural data, customer	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ

		customer						
DH-121	E58	Structural data, accounting point	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-122-1	E58	Structural data, accounting point	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-122-2	E58	Structural data, accounting point	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-122-3	E58	Structural data, accounting point	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-122-4	E58	Structural data, accounting point	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-122-5	E58	Structural data, accounting point	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-123	E58	Structural data, accounting point	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-124-1	E58	Structural data, accounting point	Supplier, Third party	Balance Supplier, Energy	DDQ, ESC	Datahub	Datahub	MIA

				Service Company				
DH-124-2	E58	Structural data, accounting point	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-125-1	E58	Metering time step update	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-125-2	E58	Metering time step update	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-125-3	E58	Metering time step update	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-126-1	E58	New accounting point relation	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-127-1	E58	Accounting point relation deletion	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-131-1	F02	Accounting point identification request	Supplier, Third party	Balance Supplier, Energy Service Company	DDQ, ESC	Datahub	Datahub	MIA
DH-131-2	F20	Accounting point list	Datahub	Datahub	MIA	Supplier, Third party	Balance Supplier, Energy Service Company	DDQ, ESC

DH-132-1	F03	Accounting point data request	Current supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-132-2	F21	Accounting point data	Datahub	Datahub	MIA	Current supplier	Balance Supplier	DDQ
DH-133-1	F03	Accounting point data request	Potential supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-133-2	F21	Accounting point data	Datahub	Datahub	MIA	Potential supplier	Balance Supplier	DDQ
DH-134-1	F03	Accounting point data request	DSO	Grid Access Provider, Metering Point Administrator	DDM, DDZ	Datahub	Datahub	MIA
DH-134-2	F21	Accounting point data	Datahub	Datahub	MIA	DSO	Grid Access Provider, Metering Point Administrator	DDM, DDZ
DH-135-1	F03	Accounting point data request	Third party	Energy Service Company	ESC	Datahub	Datahub	MIA
DH-135-2	F21	Accounting point data	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-136-1	F03	Accounting point's balance responsibility	Balancing Service Provider	Balancing Service Provider	DGG	Datahub	Datahub	MIA

		information request						
DH-136-2	F28	Accounting point's balance responsibility information	Datahub	Datahub	MIA	Balancing Service Provider	Balancing Service Provider	DGG
DH-137-1	F02	Accounting point identification request	Supplier, Third party	Balance Supplier, Energy Service Company	DDQ, ESC	Datahub	Datahub	MIA
DH-137-2	F20	Accounting point list	Datahub	Datahub	MIA	Supplier, Third party	Supplier, Energy Service Company	DDQ, ESC
DH-141	F26	Create energy community	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-142	F26	Update energy community	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-143	F26	Terminate energy community	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-211	E66	Metering data	Metered Data Responsible	Metered Data Responsible	MDR	Datahub	Datahub	MIA
DH-211	E66	Metering data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ

DH-211	E66	Metering_data	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-211	E66	Metering_data	Datahub	Datahub	MIA	Metered Data Responsible	Metered Data Responsible	MDR
DH-212-1 DH-212-2 DH-212-3 DH-212-4 DH-212-5	F07	Metering_data_reminder	Datahub	Datahub	MIA	Metered Data Responsible	Metered data responsible	MDR
DH-221	F08	Metering_data_request	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-222	F08	Metering_data_request	Metered Data Responsible	Metered Data Responsible	MDR	Datahub	Datahub	MIA
DH-223	F08	Metering_data_request	Third party	Energy Service Company	ESC	Datahub	Datahub	MIA
DH-221	E66	Metering_data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ

DH-222	E66	Metering_data	Datahub	Datahub	MIA	Metered Data Responsible	Metered Data Responsible	MDR
DH-223	E66	Metering_data	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-231	E66	Metering_data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-231	E66	Metering_data	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-231	E66	Metering_data	Datahub	Datahub	MIA	Metered Data Responsible	Metered Data Responsible	MDR
DH-241	F08	Metering_data request	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-241	E66	Metering_data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-242	F08	Metering_data request	Metered Data Responsible	Metered Data Responsible	MDR	Datahub	Datahub	MIA
DH-243	F08	Metering_data request	Third party	Energy Service Company	ESC	Datahub	Datahub	MIA
DH-242	E66	Metering_data	Datahub	Datahub	MIA	Metered Data Responsible	Metered Data Responsible	MDR

DH-243	E66	Metering_data	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-251	E66	Metering_data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-251	E66	Metering_data	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-251	E66	Metering_data	Datahub	Datahub	MIA	Metered Data Responsible	Metered Data Responsible	MDR
DH-261	F08	Metering_data request	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-262	F08	Metering_data request	Metered Data Responsible	Metered Data Responsible	MDR	Datahub	Datahub	MIA
DH-263	F08	Metering_data request	Third party	Energy Service Company	ESC	Datahub	Datahub	MIA
DH-261	E66	Metering_data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-262	E66	Metering_data	Datahub	Datahub	MIA	Metered Data Responsible	Metered Data Responsible	MDR
DH-263	E66	Metering_data	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-311-1	F04	Structural data,	New supplier,	Supplier	DDQ	Datahub	Datahub	MIA

		agreement	Current supplier					
DH-311-2	F04	Structural data, agreement	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-311-3	F06	Structural data, agreement ending	Datahub	Datahub	MIA	Current supplier	Balance Supplier	DDQ
DH-311-4	F06	Structural data, agreement ending	Datahub	Datahub	MIA	Related accounting point supplier	Balance Supplier	DDQ
DH-311-5	F18	Structural data, agreement cancellation	Datahub	Datahub	MIA	Future supplier	Balance Supplier	DDQ
DH-311-6	F01	Structural data, customer	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-311-7	F01	Structural data, customer	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-311-8	F01	Structural data, customer	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-311-9	F18	Structural data, agreement cancellation	Datahub	Datahub	MIA	Future DSO	Grid Access Provider	DDM
DH-311-10	F06	Structural data,	Datahub	Datahub	MIA	Third party	Energy Service	ESC

		agreement ending					Company	
DH-312-1	F04	Structural data, agreement	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-312-2	F04	Structural data, agreement	Datahub	Datahub	MIA	New supplier, Current supplier	Balance Supplier	DDQ
DH-321-1	F04	Structural data, agreement	Current supplier	Supplier	DDQ	Datahub	Datahub	MIA
DH-321-2	F04	Structural data, agreement	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-322-1	F04	Structural data, agreement	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-322-2	F04	Structural data, agreement	Datahub	Datahub	MIA	Current supplier	Balance Supplier	DDQ
DH-323	F05	Accounting point without supplier	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-331-1	F06	Structural data, agreement ending	Current supplier	Supplier	DDQ	Datahub	Datahub	MIA
DH-331-2	F06	Structural data,	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM

		agreement ending						
DH-331-3	F06	Structural data, agreement ending	Datahub	Datahub	MIA	Related accounting point supplier	Balance Supplier	DDQ
DH-331-4	F06	Structural data, agreement ending	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-331-5	F18	Structural data, agreement cancellation	Datahub	Datahub	MIA	Future supplier	Supplier	DDQ
DH-331-6	F06	Structural data, agreement ending	Datahub	Datahub	MIA	Current supplier	Balance Supplier	DDQ
DH-332-1	F06	Structural data, agreement ending	New supplier	Supplier	DDQ	Datahub	Balance Supplier	MIA
DH-332-2	F06	Structural data, agreement ending	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-333-1	F06	Structural data, agreement ending	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-333-2	F06	Structural data,	Datahub	Datahub	MIA	Current supplier	Balance Supplier	DDQ

		agreement ending				, Future supplier		
DH-333-3	F06	Structural data, agreement ending	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-341-1	F18	Structural data, agreement cancellation	Current supplier, New supplier	Supplier	DDQ	Datahub	Datahub	MIA
DH-341-2	F18	Structural data, agreement cancellation	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-341-3	F18	Structural data, agreement cancellation	Datahub	Datahub	MIA	Previous supplier, Current supplier	Balance Supplier	DDQ
DH-341-4	F18	Structural data, agreement cancellation	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-341-6	F18	Structural data, agreement cancellation	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-342-1	F18	Structural data, agreement cancellation	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA

DH-342-2	F18	Structural data, agreement cancellation	Datahub	Datahub	MIA	Current supplier , New supplier	Balance Supplier	DDQ
DH-342-3	F18	Structural data, agreement cancellation	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-343-1	F06	Structural data, agreement ending	Current supplier	Supplier	DDQ	Datahub	Datahub	MIA
DH-343-2	F06	Structural data, agreement ending	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-344-1	F06	Structural data, agreement ending	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-344-2	F06	Structural data, agreement ending	Datahub	Datahub	MIA	New supplier	Balance Supplier	DDQ
DH-351-1	F06	Structural data, agreement ending	Current supplier	Supplier	DDQ	Datahub	Datahub	MIA
DH-351-2	F06	Structural data, agreement ending	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM

DH-351-3	F06	Structural data, agreement ending	Datahub	Datahub	MIA	Supplier of related accounting point	Balance Supplier	DDQ
DH-351-4	F06	Structural data, agreement ending	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-351-5	F18	Structural data, agreement cancellation	Datahub	Datahub	MIA	Future supplier	Balance Supplier	DDQ
DH-352-1	F06	Structural data, agreement ending	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-352-2	F06	Structural data, agreement ending	Datahub	Datahub	MIA	Current supplier	Balance Supplier	DDQ
DH-352-3	F06	Structural data, agreement ending	Datahub	Datahub	MIA	Future supplier	Balance Supplier	DDQ
DH-361	F27	Structural data, agreement start of occurrence change with connection	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ

DH-362	F27	Structural data, agreement start of occurrence change with connection	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-411-1	F09	Connection - disconnecti on	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-411-2	F09	Connection - disconnecti on	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-412-1	F09	Connection - disconnecti on	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-412-2	F09	Connection - disconnecti on	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-413-1	F09	Connection - disconnecti on	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-413-2	F09	Connection - disconnecti on	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-414-1	F09	Connection -	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA

		disconnecti on						
DH-414-2	F09	Connection - disconnecti on	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-421-1	F09	Connection - disconnecti on	Supplier	Balance Supplier	DDQ	Datahu b	Datahub	MIA
DH-421-2	F09	Connection - disconnecti on	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-422-1	F09	Connection - disconnecti on	DSO	Grid Access Provider	DDM	Datahu b	Datahub	MIA
DH-422-2	F09	Connection - disconnecti on	Datahub	Datahub	MIA	Supplie r	Balance Supplier	DDQ
DH-423-1	F09	Connection - disconnecti on	DSO	Grid Access Provider	DDM	Datahu b	Datahub	MIA
DH-423-2	F09	Connection - disconnecti on	Datahub	Datahub	MIA	Supplie r	Balance Supplier	DDQ
DH-424-1	F09	Connection - -	Supplier	Balance Supplier	DDQ	Datahu b	Datahub	MIA

		disconnecti on						
DH-424-2	F09	Connection - disconnecti on	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-513-2	F25	Metering_ grid area imbalance	Datahub	Datahub	MIA	DSO	Metered Data Responsible	DDM
DH-513-3	F25	Metering_ grid area imbalance	Datahub	Datahub	MIA	DSO	Metered Data Responsible	DDM
DH-513-4	F25	Metering_ grid area imbalance	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-513-5	F25	Metering_ grid area imbalance	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-514-1	E31	Imbalance settlement data	Datahub	Datahub	MIA	DSO	Metered Data Responsible	MDR
DH-514-2	E66	Metering_ data	Datahub	Datahub	MIA	DSO	Metered Data Responsible	MDR
DH-514-3	E31	Imbalance settlement data	Datahub	Datahub	MIA	DSO	Metered Data Responsible	MDR
DH-515-1	E31	Imbalance settlement data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-515-2	E66	Metering_ data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ

DH-516-2	E44	Confirmation of aggregated data	Datahub	Datahub	MIA	DSO	Metered Data Responsible	DDM
DH-521	F10	Imbalance settlement data request	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-521	E31 / E66 / F25	Imbalance settlement data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-522	F10	Imbalance settlement data request	DSO	Metered Data Responsible	DDM	Datahub	Datahub	MIA
DH-522	E31 / E44 / E66 / F25	Imbalance settlement data	Datahub	Datahub	MIA	DSO	Metered Data Responsible	DDM
DH-523	F08	Metering data request	DSO	Metered Data Responsible	MDR	Datahub	Datahub	MIA
DH-523	E66	Metering data	Datahub	Datahub	MIA	DSO	Metered Data Responsible	MDR
DH-611	F19	Balance deviation data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-612	F19	Balance deviation data	Datahub	Datahub	MIA	DSO	Metered Data Responsible	MDR

DH-711	F11	Structural data, product	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-712	F11	Structural data, product	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-713	F22	Price information, product	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-714	F22	Price information, product	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-715	F23	Calendar and price time series, product	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-716	F23	Calendar and price time series, product	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-717	F11	Structural data, product	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-718	F11	Structural data, product	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-721-1	F12	Product information request, structural information	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-721-2	F11	Structural data,	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ

		product						
DH-722-1	F12	Product information request, structural information	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-722-2	F11	Structural data, product	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-723-1	F12	Product information request, structural information	Third party	Energy Service Company	ESC	Datahub	Datahub	MIA
DH-723-2	F11	Structural data, product	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-724-1	F24	Product information request, price information	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-724-2	F22	Price information, product	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-724-3	F23	Calendar and price time series, product	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-725-1	F24	Product information request,	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA

		price information						
DH-725-2	F22	Price information, product	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-725-3	F23	Calendar and price time series, product	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-726-1	F24	Product information request, price	Third party	Energy Service Company	ESC	Datahub	Datahub	MIA
DH-726-2	F22	Price information, product	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-726-3	F23	Calendar and price time series, product	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-731-1	F13	Invoice row data	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-731-2	F13	Invoice row data	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-731-3	F13	Invoice row data	Datahub	Datahub	MIA	Third party	Billing Agent	Z08
DH-732-1	F13	Invoice row data	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-732-2	F13	Invoice row data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-732-3	F13	Invoice row data	Datahub	Datahub	MIA	Third party	Billing Agent	Z08

DH-741-1	F14	Invoice row data request	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-741-2	F13	Invoice row data	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-742-1	F14	Invoice row data request	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-742-2	F13	Invoice row data	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-743-1	F14	Invoice row data request	Third party	Billing Agent	Z08	Datahub	Datahub	MIA
DH-743-2	F13	Invoice row data	Datahub	Datahub	MIA	Third party	Billing Agent	Z08
DH-811	F15	Authorization information	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-812	F15	Authorization information	Third party	Energy Service Company	ESC	Datahub	Datahub	MIA
DH-813	F15	Authorization information	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-821	F15	Authorization information	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-822	F15	Authorization information	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-823	F15	Authorization information	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM

DH-824	F15	Authorization information	Datahub	Datahub	MIA	Balancing Service Provider	Balancing Service Provider	DGG
DH-841	F29	Authorization information, authorization ending	Supplier	Balance Supplier	DDQ	Datahub	Datahub	MIA
DH-842	F29	Authorization information, authorization ending	Third party	Energy Service Company	ESC	Datahub	Datahub	MIA
DH-844	F29	Authorization information, authorization ending	Balancing Service Provider	Balancing Service Provider	DGG	Datahub	Datahub	MIA
DH-911	F16	Party information	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ
DH-912	F16	Party information	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-913	F16	Party information	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC
DH-921-1	F17	Party information request	Supplier	Supplier	DDQ	Datahub	Datahub	MIA
DH-921-2	F16	Party information	Datahub	Datahub	MIA	Supplier	Balance Supplier	DDQ

DH-922-1	F17	Party information request	DSO	Grid Access Provider	DDM	Datahub	Datahub	MIA
DH-922-2	F16	Party information	Datahub	Datahub	MIA	DSO	Grid Access Provider	DDM
DH-923-1	F17	Party information request	Third party	Energy Service Company	ESC, Z08	Datahub	Datahub	MIA
DH-923-2	F16	Party information	Datahub	Datahub	MIA	Third party	Energy Service Company	ESC, Z08

Validation rules

Validation rules and error codes for DH processes are described on the process pages (e.g., DH-121). More detailed information on validation rules can be found in the separate documents linked below.

- Rules for DH processes (excluding metering & imbalance settlement data): [Datahub Validation Rules](#)
- Rules for metering & imbalance settlement data: [Datahub Validation Rules - DH-200 & DH-520](#)

The rules for DH processes can be found in the first document as follows:

DH process	Column
DH-111	Customer Transactions / CUS.UPS.REQ
DH-112	Customer Transactions / CUS.UPD.REQ
DH-113	Customer Transactions / CUS.UPT.REQ
DH-114	Customer Transactions / CUS.UPM.REQ
DH-116	Customer Transactions / CUS.UPM.MRG.REQ
DH-121	Accounting Point Transactions / ACP.CRE.REQ
DH-122	Accounting Point Transactions / ACP.UPD.REQ
	Accounting Point Transactions / ACP.UPD.EAC.REQ (EAC update)
DH-123	Accounting Point Transactions / ACP.DEL.REQ
DH-124	Accounting Point Transactions / ACP.UPS.REQ
DH-125	Accounting Point Transactions / ACP.UPD.MTS.REQ
DH-126	Accounting Point Transactions / ACP.CRE.REL
DH-127	Accounting Point Transactions / ACP.END.REL
DH-131	Accounting Point Transactions / ACP.LSI.REQ
DH-132	Accounting Point Transactions / ACP.RTC.REQ

DH-133	Accounting Point Transactions / ACP.RTW.REQ
DH-134	Accounting Point Transactions / ACP.RTD.REQ
DH-135	Accounting Point Transactions / ACP.RTT.REQ
DH-136	Accounting Point Transactions / ACP.BSP.REQ
DH-137	Accounting Point Transactions / ACP.CUS.LSI
DH-141	Community Transactions / ECY.CRE
DH-142	Community Transactions / ECY.UPD
DH-143	Community Transactions / ECY.END
DH-311	Agreement Transactions / AGR.CRE.SLS.REQ
DH-312	Agreement Transactions / AGR.CNF.GRD.REQ
DH-321	Agreement Transactions / AGR.UPD.SLS.REQ
DH-322	Agreement Transactions / AGR.UPD.GRD.REQ
DH-331	Agreement Transactions / AGR.END.SLS.REQ
DH-332	Agreement Transactions / AGR.MVO.REQ
DH-333	Agreement Transactions / AGR.END.GRD.REQ
DH-341	Agreement Transactions / AGR.RFS.SLS.REQ
DH-342	Agreement Transactions / AGR.CAN.GRD.REQ
DH-343	Agreement Transactions / AGR.RFS.SLS.REQ
DH-344	Agreement Transactions / AGR.RFS.GRD.REQ
DH-351	Agreement Transactions / AGR.CNE.SLS.REQ
DH-352	Agreement Transactions / AGR.CNE.GRD.REQ
DH-411	Accounting Point Transactions / ACP.CNS.REQ
DH-412	Accounting Point Transactions / ACP.CND.REQ
DH-413	Accounting Point Transactions / ACP.CDD.REQ
DH-414	Accounting Point Transactions / ACP.CAC.REQ

DH-421	Accounting Point Transactions / ACP.DCS.REQ
DH-422	Accounting Point Transactions / ACP.DCD.REQ
DH-423	Accounting Point Transactions / ACP.DDD.REQ
DH-424	Accounting Point Transactions / ACP.CAD.REQ
DH-711	Product Transactions / PRD.CRS.REQ
DH-712	Product Transactions / PRD.CRD.REQ
DH-713	Product Transactions / PRC.UPS.REQ
DH-714	Product Transactions / PRC.UPD.REQ
DH-715	Product Transactions / TSV.UPS.REQ
DH-716	Product Transactions / TSV.UPD.REQ
DH-717	Product Transactions / PRD.UPS.REQ
DH-718	Product Transactions / PRD.UPD.REQ
DH-721	Product Transactions / PRD.LSS.REQ
DH-722	Product Transactions / PRD.LSD.REQ
DH-723	Product Transactions / PRD.LSP.REQ
DH-724	Product Transactions / TSV.RTS.REQ
DH-725	Product Transactions / TSV.RTD.REQ
DH-726	Product Transactions / TSV.RTT.REQ
DH-731	Invoice Row Transactions / IVR.CRS.REQ
DH-732	Invoice Row Transactions / IVR.CRD.REQ
DH-741	Invoice Row Transactions / IVR.RTS.REQ
DH-742	Invoice Row Transactions / IVR.RTD.REQ
DH-743	Invoice Row Transactions / IVR.RTT.REQ
DH-811	Authorisation Transactions / AGR.CRS.AUT.REQ
DH-812	Authorisation Transactions / AGR.CRT.AUT.REQ

DH-813	Authorisation Transactions / AGR.CRD.AUT.REQ
DH-841	Authorisation Transactions / AGR.ENS.AUT.REQ
DH-842	Authorisation Transactions / AGR.ENT.AUT.REQ
DH-844	Authorisation Transactions / AGR.ENB.AUT.REQ
DH-921	Organisation Transactions / ORG.LSS.REQ
DH-922	Organisation Transactions / ORG.LSD.REQ
DH-923	Organisation Transactions / ORG.LSP.REQ