



Business Requirements for Measure for Billing

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A. About this document

This document is a Business Requirements Specification (BRS) for the process to exchange measured and validated data for billing energy and grid cost, both for electricity and for gas, as part of the overall exchange of measured data in the European energy market.

In this BRS we use business terms for the actors, and we map them to the terms used in the Harmonised Role Model from ENTSO-E, ebIX® and EFET [2]. A party acts in the capacity of a certain role.

As a general introduction ebIX® has published a separate document “Introduction to ebIX® Business Requirements and Business Information Models” [3]. The introduction also includes the generic model elements that are not specific for a business process.

In line with UN/CEFACT Modelling Methodology version 2 (UMM-2) ebIX® defines the business requirements as the first step in modelling energy market processes. This document specifies an UMM Business Requirements View, which consist of the three sub views: Business Domain View, Business Partner View and Business Entity View.

The Business Information Model is in turn the basis for the creation of XML schema’s and is the basis for the specification of web services. The Business Information Model and the syntax specific structures are specified by the “ebIX® Technical Committee” (ETC).

Since the ebIX® model is open for national customisation, some attributes are added as optional for usage for regional/national customisation. If used, these attributes must be specified nationally.

A.1 References

A.1.1 Standards

- [1] UML Profile for UN/CEFACT’s Modelling Methodology (UMM), Base Module, 2.0.
([UN/CEFACT Modelling Methodology \(UMM\)](#))
- [2] The Harmonized Role Model (for the Electricity Market) by ebIX®, ENTSO-E, and EFET
(https://www.ebix.org/artikel/role_model)

A.1.2 ebIX® Documents

- [3] Introduction to ebIX® Business Requirements and Business Information Models
(<https://www.ebix.org/artikel/documents>)
- [4] Recommended Identification Schemes for the European Energy Market
(<https://www.ebix.org/artikel/documents>)
- [5] ebIX® code lists (<https://www.ebi.x.org/artikel/documents>)
- [6] ebIX® BRS for Validated measured data and other measure BRSs
(<https://www.ebix.org/artikel/documents>)

A.2 Main changes since last version

| Old | New | Clarification | Date |
|--------------------|-------|---|----------|
| Version 3.0 | | | |
| 2.1.A | 3.0.A | Recast of BRS – changes not tracked | 20210907 |
| Version 3.1 | | | |
| 3.0.A | 3.1.A | Addition of the UseCase “Publish calorific values”, to be used in the gas sector. | 20211209 |
| 3.1.A | 3.1.B | <ul style="list-style-type: none"> • Update of layout to be in line with other ebIX® BRSs. • Hiding attributes from the root class in Appendix A, to make the class diagrams more readable. • “Exchange UseCases and documents” has been renamed to “Notify...”. | 20230815 |
| 3.1.B | 3.1.C | <ul style="list-style-type: none"> • Since ebIX® is closing down from the end of 2023, the link to the ebIX® secretary has been removed. | 20231218 |

1 Business Requirements View: Measure for Billing

1.1 Overview

This BRS regards customer related validated measured data for billing of Accounting Points and for billing related to Exchange Points between grids (Metering Grid Areas). Customer privacy protection is supposed to be based on GPDR.

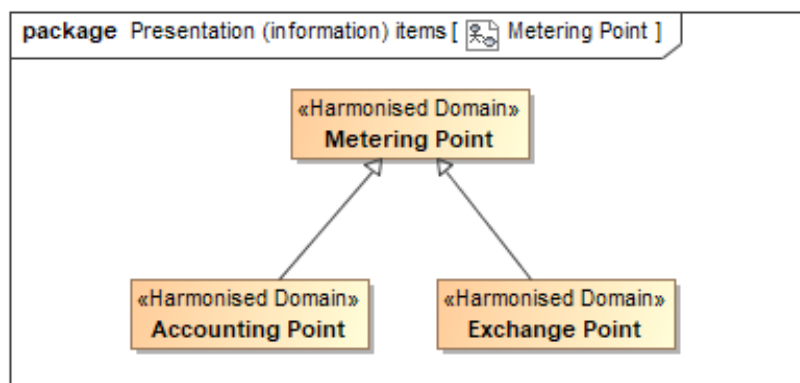
The basis for this BRS is validated measured data that have been exchanged from a Validator (harmonised role: Metered Data Responsible) to the Metered Data Administrator, who is responsible for distribution of the validated measured data to all entitled parties. Normally, validated measured data for billing for Accounting Points are always sent to the Energy Supplier and in addition, depending on national rules, to the Grid Company and Billing Calculator. Also, validated measured data for billing for Exchange Points may be sent to the Grid Companies connected to the Exchange Point.

If applicable, validated measured data for billing of an Accounting Point will also be sent to Consented Parties.

Part of the billing of gas volumes includes the calorific value of the gas for the Accounting Point to be billed. For this reason, the publication of the calorific values is included in this BRS.

1.2 Basic assumptions

- Exchange of single meter reads, such as opening reads after change of supplier, etc., are documented in BRS for Determine Meter Read.
- Accounting Point and Exchange Point are specialisations of a Metering Point. In this BRS, Accounting Point and Exchange Point are used when applicable. Metering Point is used if the “point” can be either an Accounting Point or an Exchange Point.



- The characteristics of a Metering Point (Accounting Point or Exchange Point) are exchanged as master data; hence these are not part of the measured data documents.
- The conventions for how to use Flow Direction are:

- The direction is seen from the grid point of view. A flow from the Accounting Point or Exchange Point into the grid is defined as production and a flow from the grid into the Accounting Point or Exchange Point is defined as consumption.
- An Accounting Point relates to only one grid and this relation is defined in master data.
- Exchange Points are linked to multiple grids, hence the “reporting grid” (the point of view) must be defined in the information exchange.
- The calorific values are established as a weighted average per period (e.g., month) of the measured calorific values for a Calorific Value Area or an Aggregated Reception Station. This value is in this BRS called “established calorific value”.
- The establishment of the calorific value may be an iterative process, where a new weighted calorific value is established every day in a month, until the month is complete.

2 Business Domain View: Measure for Billing (Business Process UseCase)

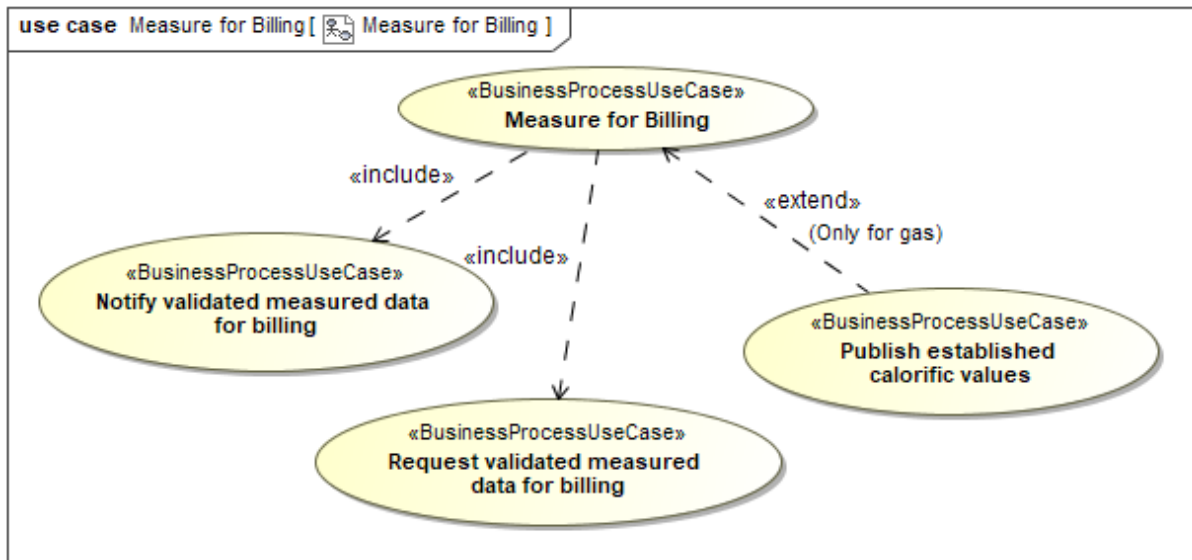


Figure 1 Business Process UseCase: Measure for Billing

2.1 Description

| UseCase description: Measure for Billing | |
|--|---|
| definition | <p>This is the process where validated measured data for a Metering Point for the process of billing (energy and/or grid cost) is provided to the Energy Supplier, Grid Company and Billing Calculator, and if applicable to the Consented Party.</p> <p>In addition information about calorific values are established, published (and distributed) for billing gas volumes for an Accounting Point.</p> |
| beginsWhen | This process is scheduled or requested. |
| preCondition | <p>Validated measured data for billing the Metering Point are available.</p> <p>The gas Accounting Point is linked to a Calorific Value Area and/or an Aggregated Reception Station.</p> |
| endsWhen | <p>The validated measured data for billing the Metering Point have been sent to the recipient(s).</p> <p>And in the gas sector, also established calorific value for the Accounting Point have been received by the recipients.</p> |
| postCondition | <p>Energy Supplier and/or the Grid Company and/or Billing Calculator can use the validated measured data for billing for the Metering Point, including the use of the applicable established calorific value for gas.</p> <p>If applicable the Consented Party has received the validated measured data for billing for the Metering Point.</p> |



| | |
|------------|--|
| Exceptions | For requests, validated measured data for billing for the Metering Point may be unavailable. |
| actions | Not applicable at this level. |

2.2 Notify Validated measured data for billing for a Metering Point (Business Process UseCase)

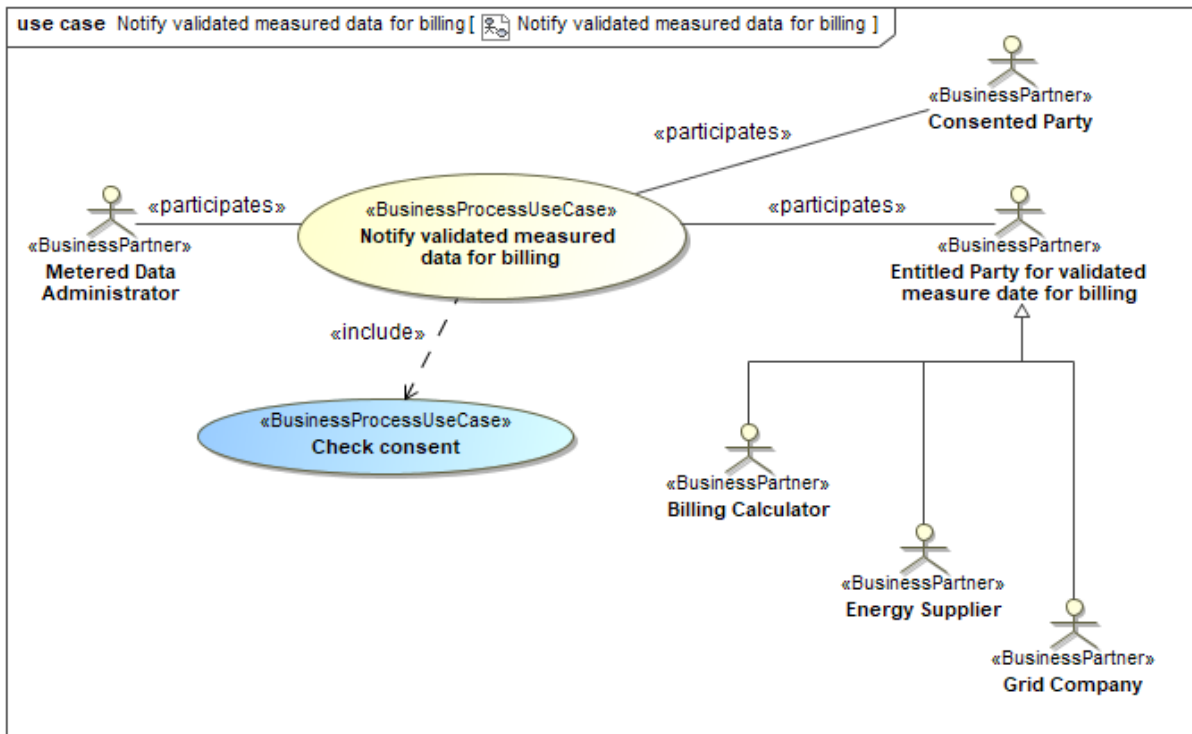


Figure 2 Business Process UseCase: Notify validated measured data for billing for a Metering Point

2.2.1 Description

| UseCase description: Notify validated measured data for billing for a Metering Point | |
|--|---|
| definition | In this process the Metered Data Administrator sends validated measured data for billing for the Metering Point to the Energy Supplier, the Grid Company and the Billing Calculator. In addition the validated measured data for billing for the Metering Point may be sent to Consented Parties after checking their consent. |
| beginsWhen | When the Metered data administrator has received new validated measured data for billing for the Metering Point or is scheduled to. |
| preCondition | The Metered Data Administrator has available validated measured data for billing for the Metering Point. The Metered Data Administrator knows the Energy Supplier, Grid Company and Billing Calculator. |
| endsWhen | When the Energy Supplier, the Grid Company, the Billing Calculator and if present the Consented Parties have received the validated measured data for billing for the Metering Point. |

| | |
|---------------|--|
| postCondition | Validated measured data for billing for the Metering Point are available at the Energy Supplier, the Grid Company, the Billing Calculator and if present the Consented Parties. |
| exceptions | The validated measured data for billing for the Metering Point may also be notified directly to the Customer. By lack of (national) rules, this is not modelled. If the consent check fails, no data is sent to the relevant Consented Party. |
| actions | See 2.2.2 |

2.2.2 Business Process

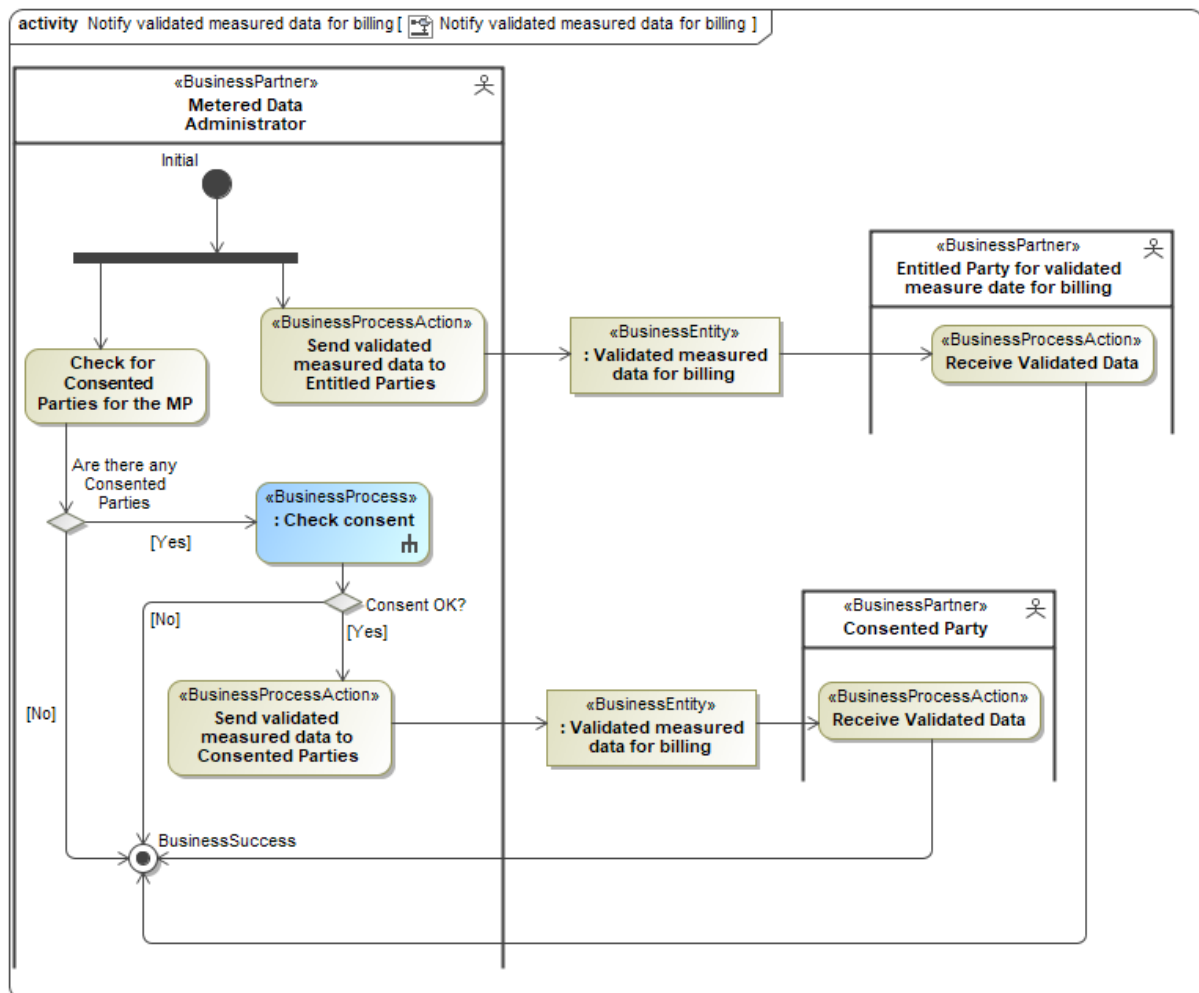


Figure 3 Business Process: Notify validated measured data for billing

2.3 Request validated measured data for billing for a Metering Point (Business Process UseCase)

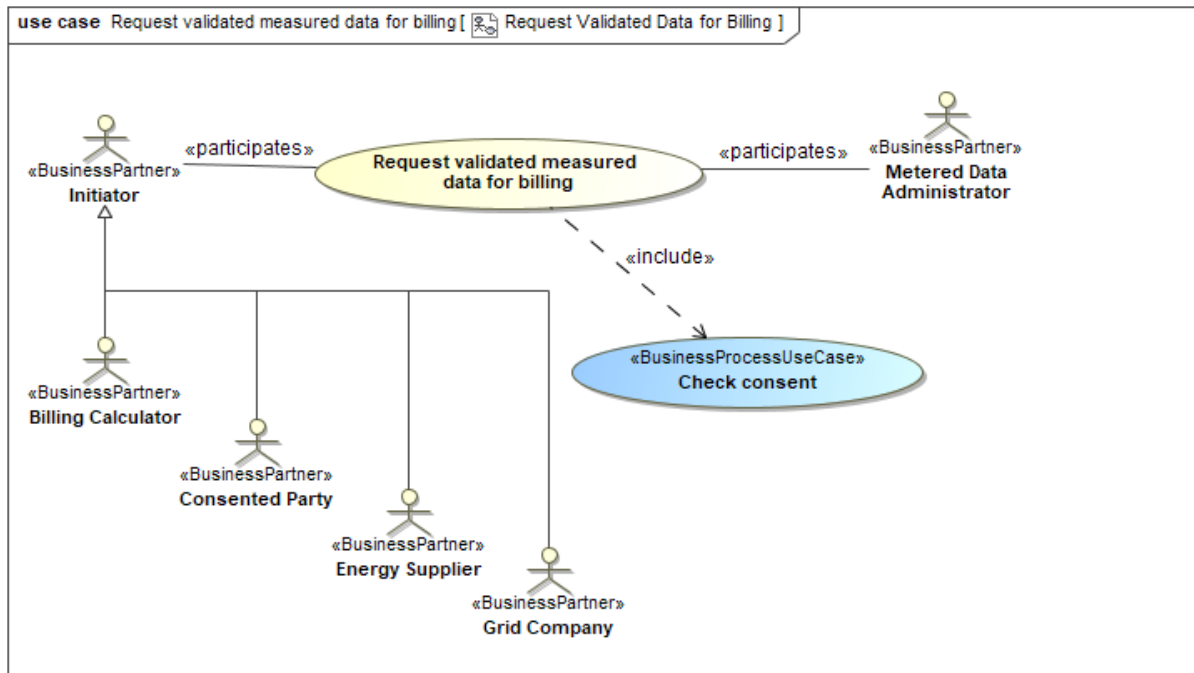


Figure 4 Business Process UseCase: Request validated measured data for billing for a Metering Point

2.3.1 Description

| | |
|---|--|
| UseCase description: Request validated measured data for billing for a Metering Point | |
| definition | <p>The Initiator (Energy Supplier, Grid Company, Billing Calculator or Consented Party) requests validated measured data for billing for a Metering Point from the Metered Data Administrator.</p> <p>If the request is from a Consented Party, the consent must be checked by the Metered Data Administrator.</p> |
| beginsWhen | The Initiator has a need for the validated measured data for billing for the Metering Point. |
| preCondition | <p>The Initiator is authorised or consented to request the validated measured data for the Metering Point.</p> <p>The Metered Data Administrator knows to which data the Initiator is entitled.</p> |
| endsWhen | The Metered Data Administrator has sent the validated measured data for billing for the Metering Point to the Initiator. |
| postCondition | The Initiator has the requested validated measured data for billing for the Metering Point. |
| exceptions | The request has been rejected (no data available). |

| | |
|---------|-----------|
| actions | See 2.3.2 |
|---------|-----------|

2.3.2 Business Process

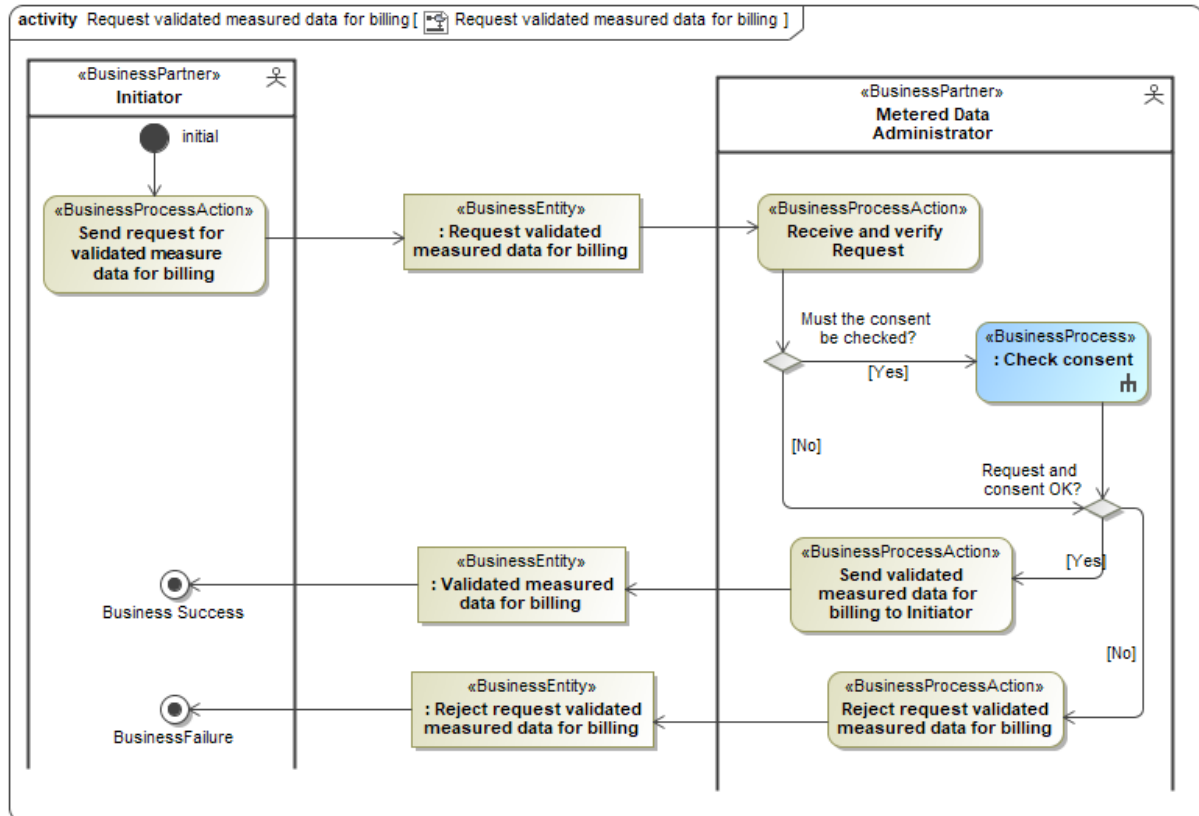


Figure 5 Business Process: Request validated measured data for billing for a Metering Point

2.4 Publish established calorific values (Business Process UseCase)

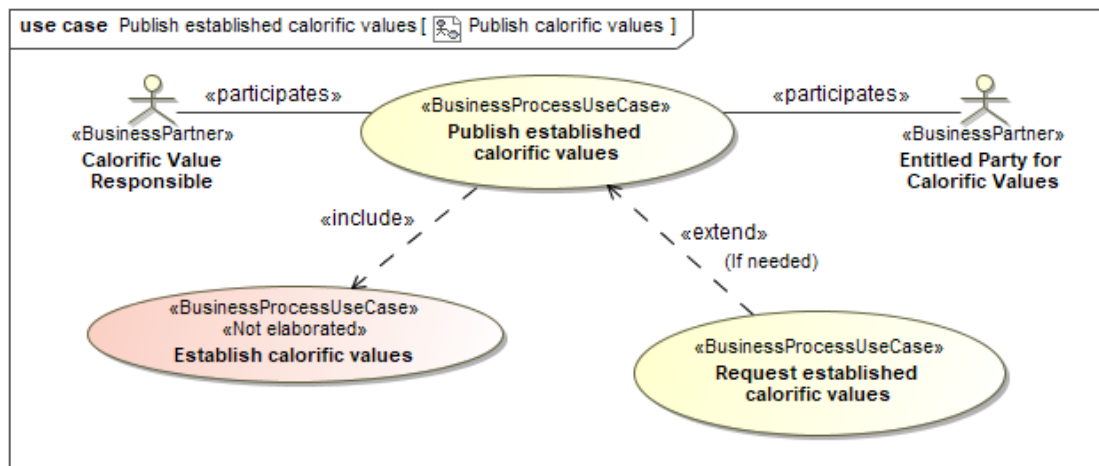


Figure 6 Business Process UseCase: Publish established calorific value

2.4.1 Description

| | |
|---|--|
| UseCase description: Publish established calorific values | |
| definition | The Calorific Value Responsible publishes established calorific values to Entitled Parties, e.g. the Grid Companies, Energy Suppliers and other interested business partners, for the use in billing of gas volumes. If needed, Entitled Party for Calorific Values may request established calorific values. |
| beginsWhen | The Calorific Value Responsible <ul style="list-style-type: none"> • has the values available, or; • when the (national) time schedule prescribes him to, or; • is requested. |
| preCondition | The Calorific Value Responsible has available: <ul style="list-style-type: none"> • established calorific values; • master data for the exchange of data. |
| endsWhen | Entitled Parties have received the established calorific values. |
| postCondition | The Entitled Parties have the established calorific values. |
| exceptions | Dependent on national rules, the established calorific values may be distributed as documents instead of (only) published on web. Dependent on national rules, calorific values can in addition be sent as forecasts before the final values are calculated. |
| actions | See 2.4.2 |

2.4.2 Business Process

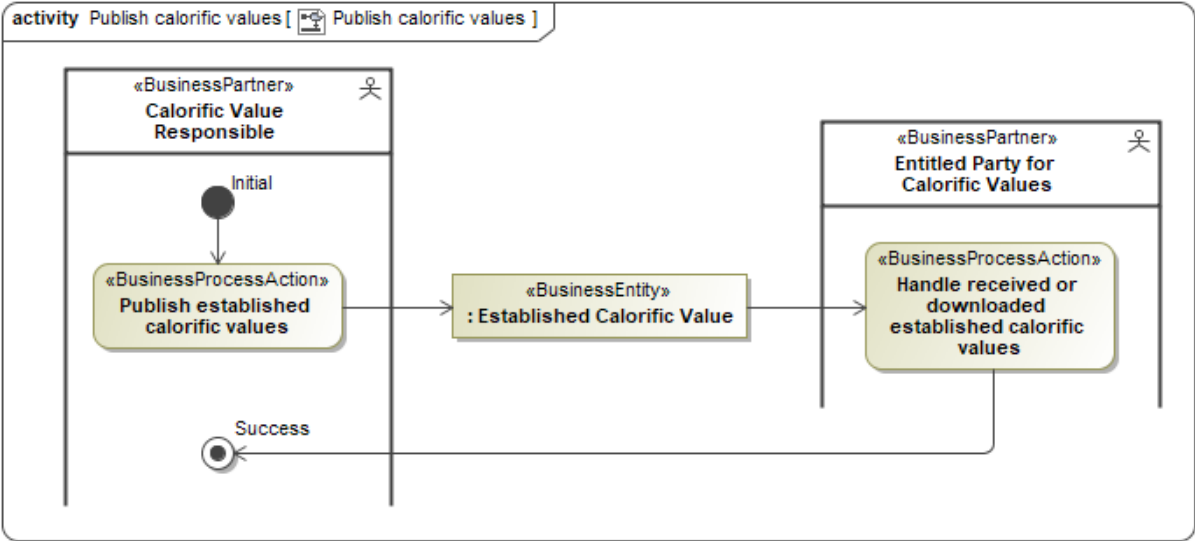


Figure 7 Business Process: Publish established calorific values

2.4.3 Establish calorific values (Business Process UseCase)

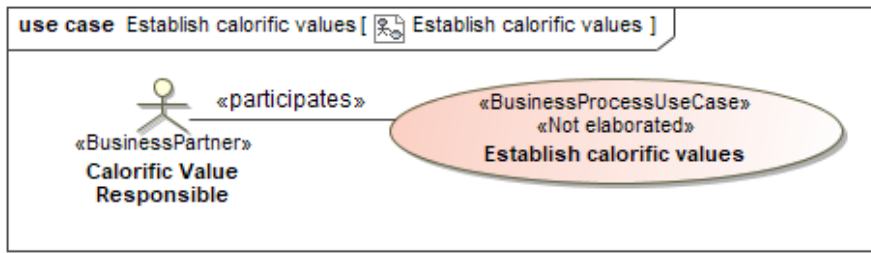


Figure 8 Business Process UseCase: Establish calorific values

2.4.3.1 Description

| | |
|---|--|
| UseCase description: Establish calorific values | |
| definition | In this process the Calorific Value Responsible (which often is the TSO or DSO) establishes the weighted calorific values per period for Calorific Value Areas, Aggregated Reception Station or individual Accounting Points based on measured calorific values he gets. |
| beginsWhen | The Calorific Value Responsible is scheduled to. |
| preCondition | Measured calorific values for establishing the weighted calorific values are made available to the Calorific Value Responsible for calculation. Based on national rules. Also, the procedure for establishing the calorific values follows national rules. |
| endsWhen | The calorific values have been established. |
| postCondition | The established calorific values are ready for publication. |
| exceptions | None |
| actions | This is an internal process. |

2.4.4 Request established calorific value (Business Process UseCase)

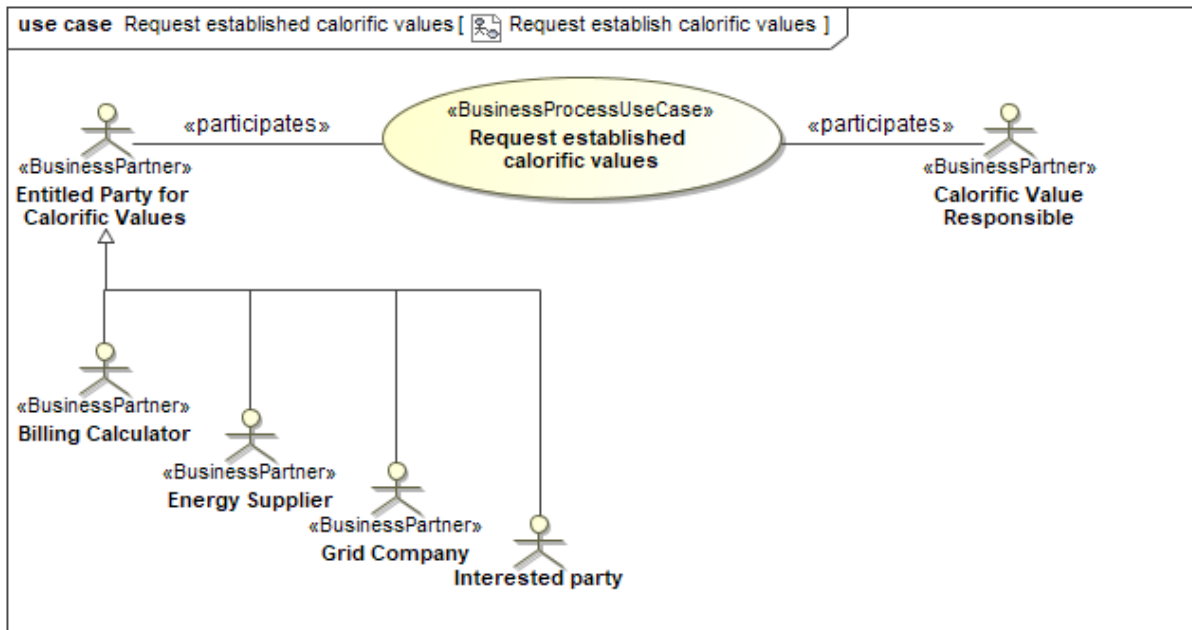


Figure 9 Business Process UseCase: Request established calorific value

2.4.4.1 Description

| | |
|--|--|
| UseCase description: Request established calorific value | |
| definition | In this process the Entitled Party for Calorific Values (Billing Calculator, Energy Supplier, Grid Company and Interested Party) requests an established calorific value from the Calorific Value Responsible (which often is the TSO or DSO). |
| beginsWhen | When an Entitled Party for Calorific Values needs an established calorific value. |
| preCondition | The Calorific Value Responsible has established the calorific values for the period in question. |
| endsWhen | The Entitled Party for Calorific Values has received the requested established calorific value. |
| postCondition | The Entitled Party for Calorific Values can use the received established calorific value. |
| exceptions | None |
| actions | See 2.4.4.2. |

2.4.4.2 Business Process

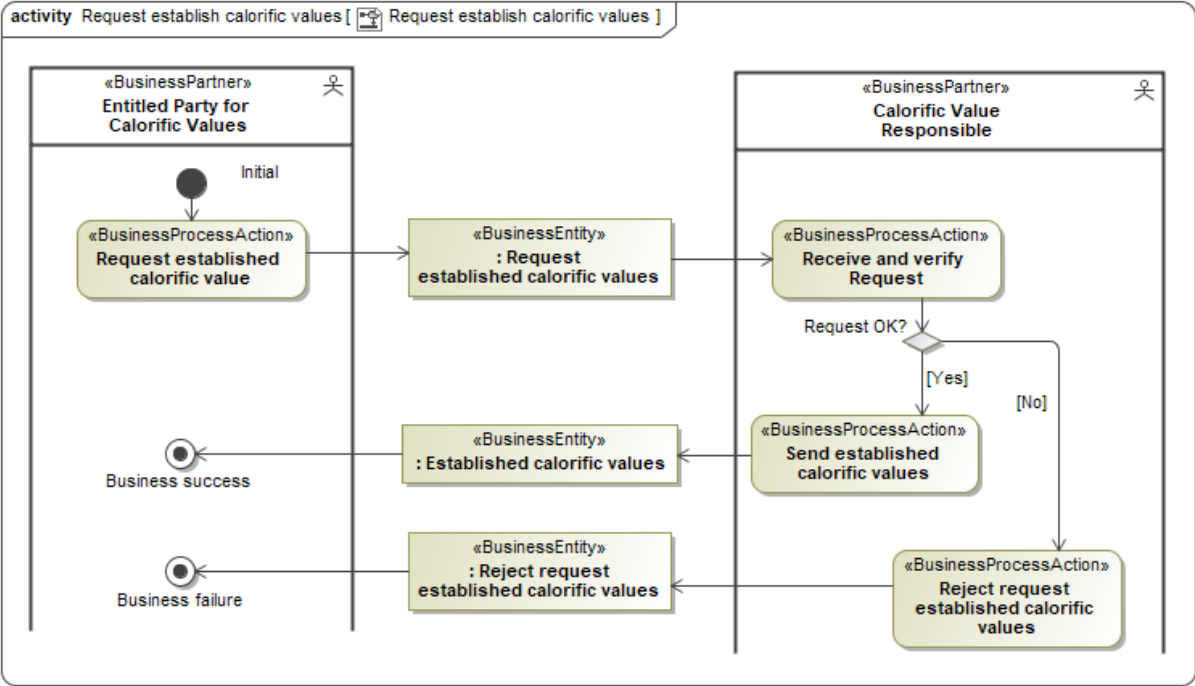


Figure 10 Business Process: Request established calorific value

3 Business Partner View: Validated measured data for billing

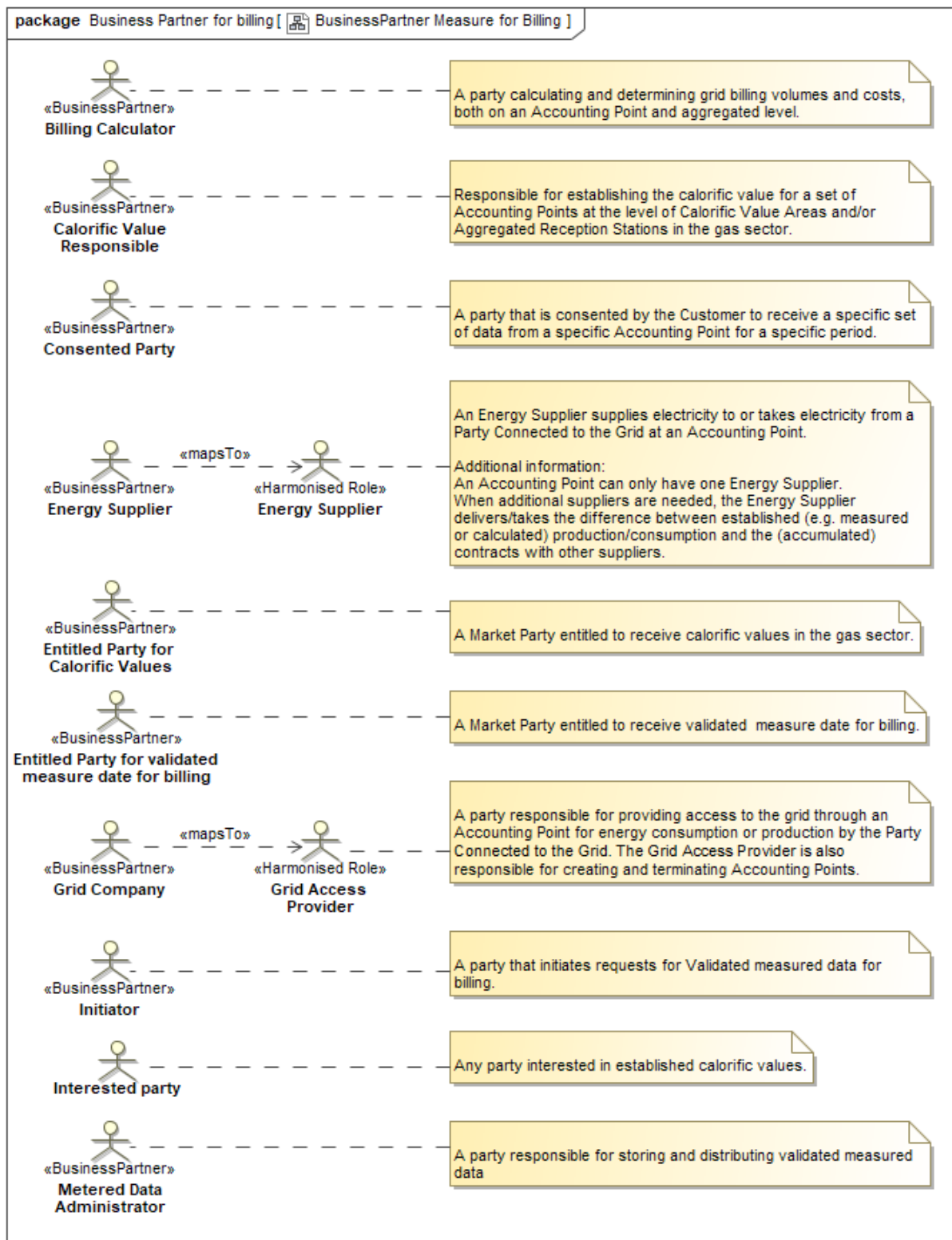


Figure 11 Business Partners: Validated measured data for billing

4 Business Entity View

A general introduction to the Business Entity View can be found in the Introduction to ebIX® Business Requirements and Business Information Models , [3].

4.1 Validated measured data for billing (Class Diagram)

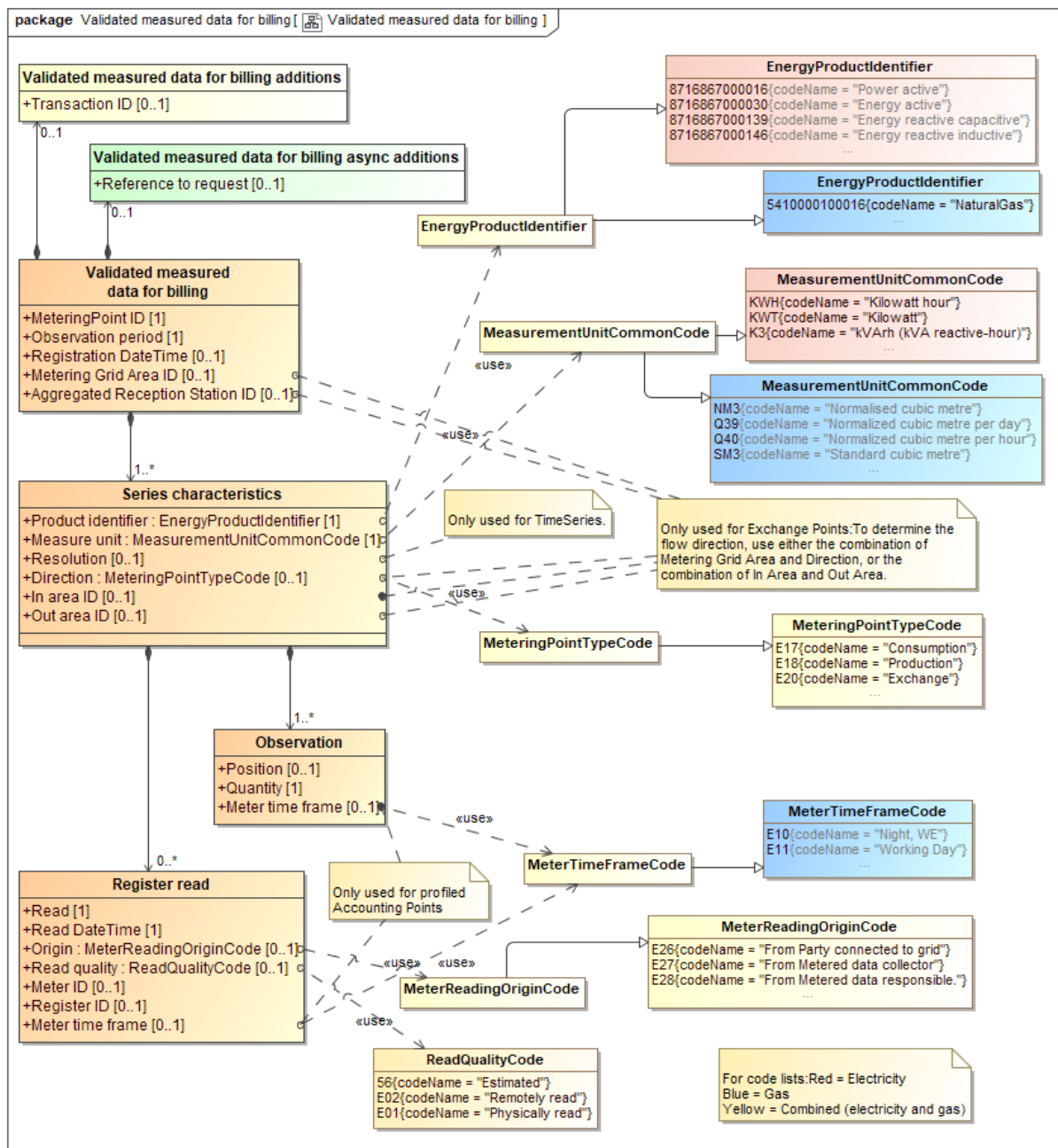


Figure 12 Class diagram: Validated measured data for billing

Remarks for billing energy:

- This specification may be used in case of billing energy based on detail period pricing (as for instance in case of pricing based on prices from a Market Operator such as exchange prices). But it may also be used for periodic volumes derived from meter reading (e.g. periodic billing household customer).
- In the class “Validated measured data for billing”, the Registration date/time reflects the moment of validation and registration of the timeseries into the database of the Metered

Data Responsible after validation; this information can be used for “versioning” of the measured data.

- In the class Register read, the Read DateTime reflects the moment of registration of the meter read from the register as added to this by the Metered Data Collector or as defined by national rules; this information is used as a timestamp for data collection.
- In some countries the Energy Supplier may also charge for power (i.e. Estonia). When this proves to be the case in several countries, these products will be added to the list of products measured.

4.1.1 Element definitions: Validated measured data for billing

| Attribute | Sector ¹ | Definition |
|-------------------------------------|---------------------|--|
| Validated measured data for billing | | The information set sent by a Metered Data Administrator, responsible for the distribution of validated measured data for billing for a Metering Point, in order to enable the billing of energy or grid cost for this Metering Point. The validated measured data for billing may also be sent to a Consented Party consented to these validated measured data for billing. |
| Metering Point ID | | The unique identification of the Metering Point to which the validated measured data for billing are attributed. |
| Observation period | | The specific period of time the validated measured data for billing have been measured, calculated or estimated for. |
| Registration DateTime | | The date and time of the validation and registration of this set of validated measured data for billing. |
| Metering Grid Area ID | | The unique identification of the Metering Grid Area, linked to the Exchange Point, where these measurements are validated for. |
| Aggregated Reception Station ID | Gas | The unique identification of the Aggregated Reception Station, linked to the Exchange Point, where these measurements are validated for. |
| Series characteristics | | The characteristics of this set of validated measured data, i.e., the product and flow direction. |
| Product identifier | | A code specifying the energy product for the reads and/or the quantities in this set of validated measured data. |
| Measure unit | | The unit of measure used for the quantities in this set of validated measured data. |

¹ It is assumed that Accounting Points are uniquely dedicated to either electricity or to gas.

| | | |
|-------------------|--|--|
| Resolution | | <p>The resolution is the time between two observations, leading to the number of observations in this timeseries (calculated from the Observation Period divided by the Resolution).</p> <p>The Observation Period must contain a whole number of observations as derived from the resolution.</p> <p>The resolution is expressed in compliance with ISO 8601 in the following format:</p> <p style="text-align: center;">PnYnMnDTnHnMnS.</p> <p>For example PT15M for 15 minutes resolution.</p> |
| Direction | | <p>A code specifying the direction of the flow of the energy measured in this Observation period.</p> <p>A flow from the Exchange Point into the Metering Grid Area is defined as production and a flow from the Metering Grid Area into the Exchange Point is defined as consumption.</p> |
| In area ID | | The unique ID of the Metering Grid Area into where the energy flow is from the Exchange Point. |
| Out area ID | | The unique ID of the Metering Grid Area from where the energy flow is into the Exchange Point. |
| Register read | | A read from the register of the Meter of this Metering point and characteristics of the read. This read is at the basis of the validated measured data for billing in the Observation. |
| Read ² | | The value as read from or calculated for the register, for this Observation period. |
| Read DateTime | | The timestamp of the moment in time when the value was registered in the Register of the Meter or the value was calculated for. |
| Origin | | A code specifying the role of the party delivering the Read. |
| Read quality | | The quality of this read, such as estimated, remotely read or physically read. |
| Meter ID | | The unique identification of the Meter, linked to the Exchange Point, which contains this register that has been read. |

² If the Register read was missing from the “collected data”, a replacement value shall be sent, where Origin shall be “E28 From Metered Data Responsible” and Read Quality shall be “56 Estimated”.

| | | |
|---|-------|--|
| Register ID | | The unique identification of the Register within the Meter, where this data has been read from or is estimated for. |
| Meter time frame | Elec. | A code specifying the Meter Time Frame for the quantity in question. |
| Observation | | One validated measured value within a timeseries. |
| Position | | The ordinal position of this Observation in this Observation Period for this set of validated measured data. |
| Quantity | | The validated quantity of energy for this Observation. |
| Meter time frame | | A code specifying the Meter Time Frame for the quantity in question. |
| Validated measured data for billing additions | | Additional information, related to validated measured data for billing, the use of which may be agreed on a national level. This is however not used when specifying the payload in the ebIX® model. |
| Transaction ID | | The unique identification of this set of information as given by the Metered Data Administrator. |
| Validated measured data for billing async additions | | Additional information, related to these validated measured data for billing, needed when using asynchronous communication. This is however not used when specifying the payload in the ebIX® model but is used when specifying the document in the ebIX® model. |
| Reference to request | | Information about the request for this set of validated measured data for billing, which uniquely identifies it. |

4.2 Request validated measured data for billing (Class Diagram)

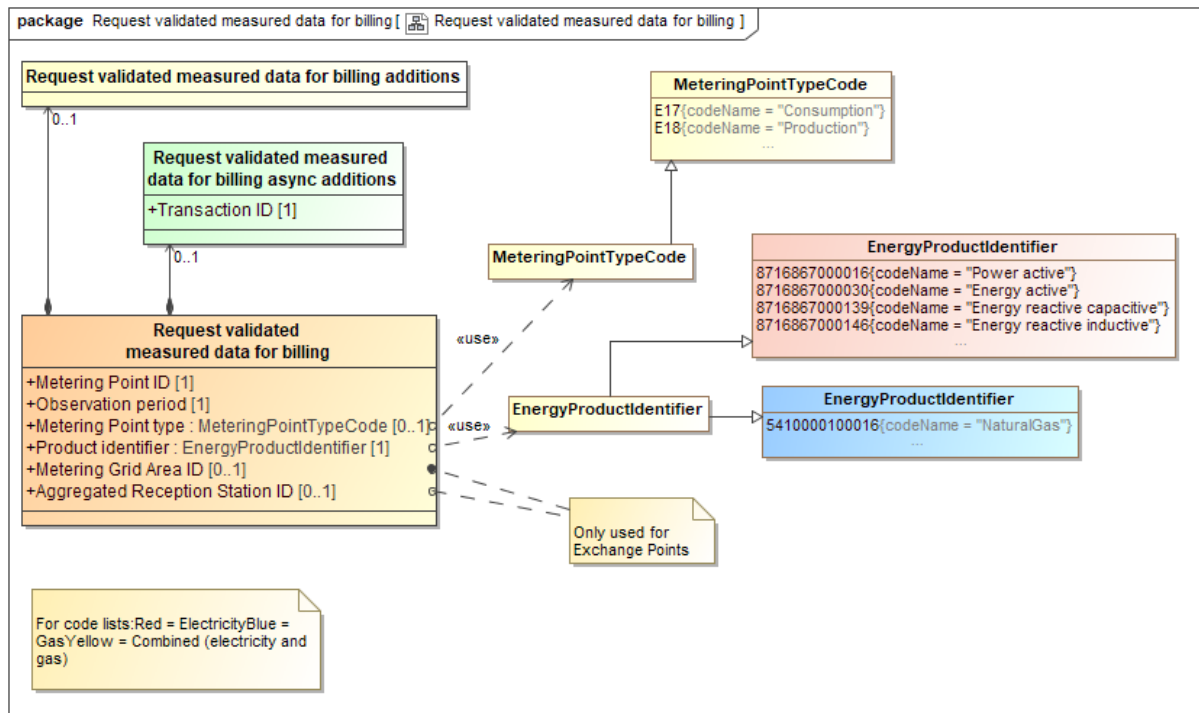


Figure 13 Class diagram: Request validated measured data for billing

4.2.1 Element definitions: Request validated measured data for billing

| Attribute | Sector ³ | Definition |
|---|---------------------|--|
| Request validated measured data for billing | | The information set to be sent when requesting validated measured data for billing at a Metering Point. |
| Metering Point ID | | The unique identification of the Metering Point from which the validated measured data for billing are requested. |
| Observation period | | A specific period of time describing the duration of the requested set of validated measured data. |
| Metering Point type | | A code specifying the direction of the active energy flow in this Metering Point, such as consumption or production. This type can also indicate that the request regards an Exchange Point. |
| Product identifier | | A code specifying the energy product for the quantity in this time series. |
| Metering Grid Area ID | | The unique identification of the Metering Grid Area, linked to the Exchange Point, where these measurements are validated for. |

³ It is assumed that Accounting Points are uniquely dedicated to either electricity or to gas.

| | | |
|---|--|--|
| Aggregated Reception Station ID | | The unique identification of the Aggregated Reception Station, linked to the Exchange Point, where these measurements are validated for. |
| Request validated measured data for billing additions | | Additional information related to Request validated measured data for billing, the use of which may be agreed on a national level. This is however not used when specifying the payload in the ebIX® model. |
| none | | |
| Request validated measured data for billing async additions | | Additional information, related to Request validated measured data for billing, needed when using asynchronous communication. This is however not used when specifying the payload in the ebIX® model but is used when specifying the document in the ebIX® model. |
| Transaction ID | | The unique identification of this set of information as given by the Initiator. |

4.3 Reject request validated measured data for billing (Class Diagram)

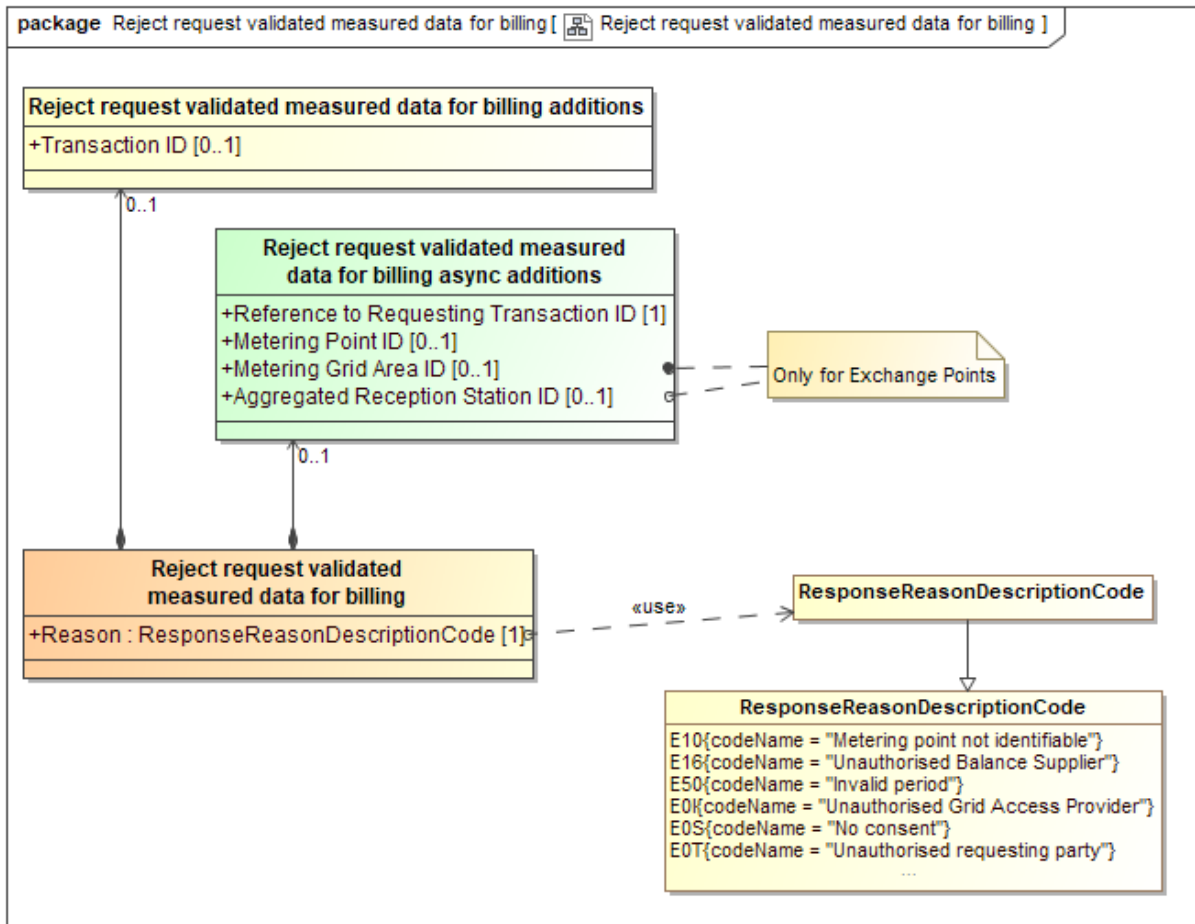


Figure 14 Class diagram: Reject request validated measured data for billing

4.3.1 Element definitions: Reject request validated measured data for billing

| Attribute | Sector ⁴ | Definition |
|---|---------------------|---|
| «Business entity» Reject request validated measured data for billing | | The information set to be sent when rejecting a request for validated measured data for billing. |
| Reason | | A code specifying the reason for the rejection of the request for validated measured data for billing. |
| Reject request validated measured data for billing additions | | Additional information related to the request for validated measured data for billing the use of which may be agreed on a national level. This is however not used when specifying the payload in the ebIX® model. |
| Transaction ID | | The unique identification of this rejection of request for validated measured data for billing. |
| Reject request validated measured data for billing async additions | | Additional information, related to the rejection of the request for validated measured data for billing, needed when using asynchronous communication. This is however not used when specifying the payload in the ebIX® model but is used when specifying the document in the ebIX® model. |
| Reference to Requesting Transaction ID | | The unique identification of the rejected request for validated measured data for billing as given by the Energy Supplier, Grid Company or Consented Party when acting as the requesting business partner. |
| Metering Point ID | | The unique identification of the Metering Point (Accounting Point or Exchange Point) from which the validated measured data for billing are requested. |
| Metering Grid Area ID | | The unique identification of the Metering Grid Area, linked to the Exchange Point, where these measurements are validated for. |
| Aggregated Reception Station ID | | The unique identification of the Aggregated Reception Station, linked to the Exchange Point, where these measurements are validated for. |

⁴ It is assumed that Accounting Points are uniquely dedicated to either electricity or to gas.

4.4 Established Calorific Value (Class Diagram)

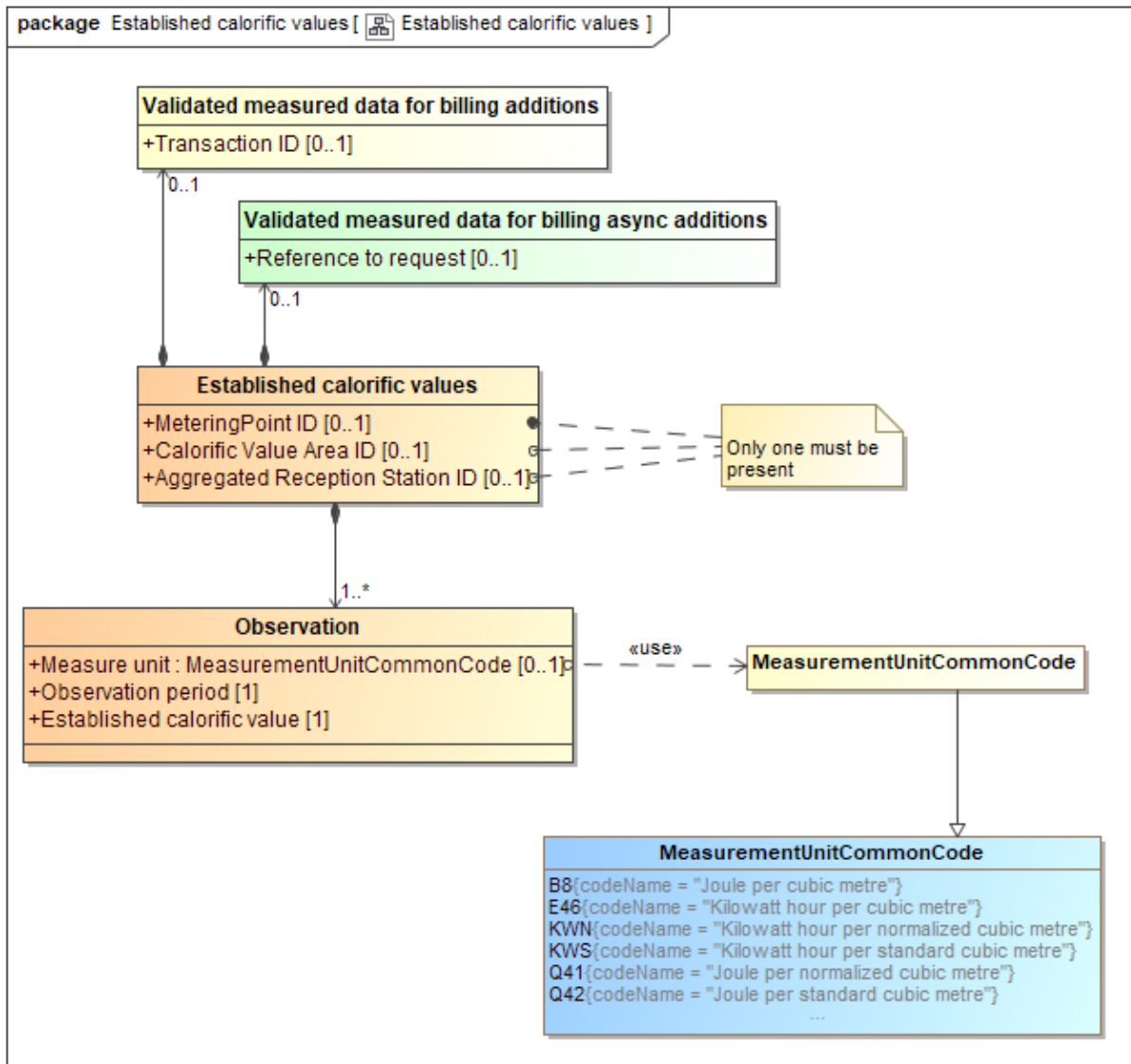


Figure 15 Class diagram: Established Calorific Value

4.4.1 Element definitions: Established Calorific Value

| Attribute | Sector ⁵ | Definition |
|--|---------------------|---|
| <p>«Business entity» Established Calorific Value</p> | | <p>The information set containing an established calorific value, published or sent by a Calorific Value Responsible to an Entitled Party to facilitate the financial settlements. The information set may be published directly, sent directly to the final recipient or sent through another Calorific Value Responsible.</p> |

⁵ It is assumed that Accounting Points are uniquely dedicated to either electricity or to gas.

| | | |
|---|--|---|
| Metering Point ID | | The unique identification of the Metering Point, where this established calorific value is valid. |
| Calorific Value Area ID | | The unique identification of the Calorific Value Area, linked to the Exchange Point, where this established calorific value is valid. |
| Aggregated Reception Station ID | | The unique identification of the Aggregated Reception Station, linked to the Exchange Point, where this established calorific value is valid. |
| Observation | | One validated measured value within a timeseries. |
| Observation period | | The specific period of time the established calorific value has been calculated for. |
| Measure unit | | The unit of measure used for the established calorific value. |
| Established Calorific value | | The established calorific value for this observation period. |
| Established Calorific Value - additions | | Additional information, related to exchange of established calorific value, the use of which may be agreed on a national level. This is however not used when specifying the payload in the ebIX® model. |
| Transaction ID | | The unique identification of this set of information as given by the Calorific Value Responsible. |
| Established Calorific Value - async additions | | Additional information, related to this established calorific value, needed when using asynchronous communication. This is however not used when specifying the payload in the ebIX® model but is used when specifying the document in the ebIX® model. |
| Reference to Request | | Information about the request for this set of validated measure data, which uniquely identifies it. |

4.5 Request established calorific value (Class Diagram)

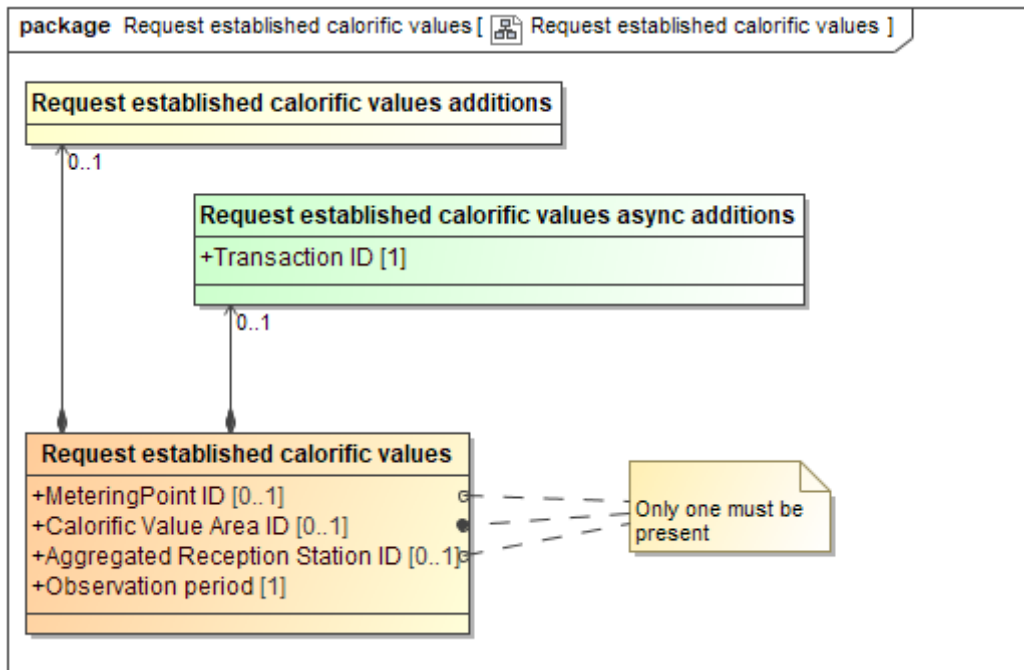


Figure 16 Class diagram: Request established calorific value

4.5.1 Element definitions: Request established calorific value

| Attribute | Sector ⁶ | Definition |
|-------------------------------------|---------------------|--|
| Request established calorific value | | The information set to be sent when requesting established calorific value at a Metering Point, a Calorific value area or an Aggregated Reception Station. |
| Metering Point ID | | The unique identification of the Metering Point (Accounting Point or Exchange Point) from which the established calorific value is requested. |
| Calorific Value Area ID | | The unique identification of the Calorific Value Area for which this established calorific value is requested. |
| Aggregated Reception Station ID | | The unique identification of the Aggregated Reception Station for which this established calorific value is requested. |
| Observation period | | A specific period of time describing the duration of the requested set of established calorific value. |

⁶ It is assumed that Accounting Points are uniquely dedicated to either electricity or to gas.



| | | |
|---|--|--|
| Request established calorific value additions | | Additional information related to Request established calorific value, the use of which may be agreed on a national level. This is however not used when specifying the payload in the ebIX® model. |
| none | | |
| Request established calorific value async additions | | Additional information, related to Request established calorific value, needed when using asynchronous communication. This is however not used when specifying the payload in the ebIX® model but is used when specifying the document in the ebIX® model. |
| Transaction ID | | The unique identification of this set of information as given by the Initiator. |

4.6 Reject request established calorific value (Class Diagram)

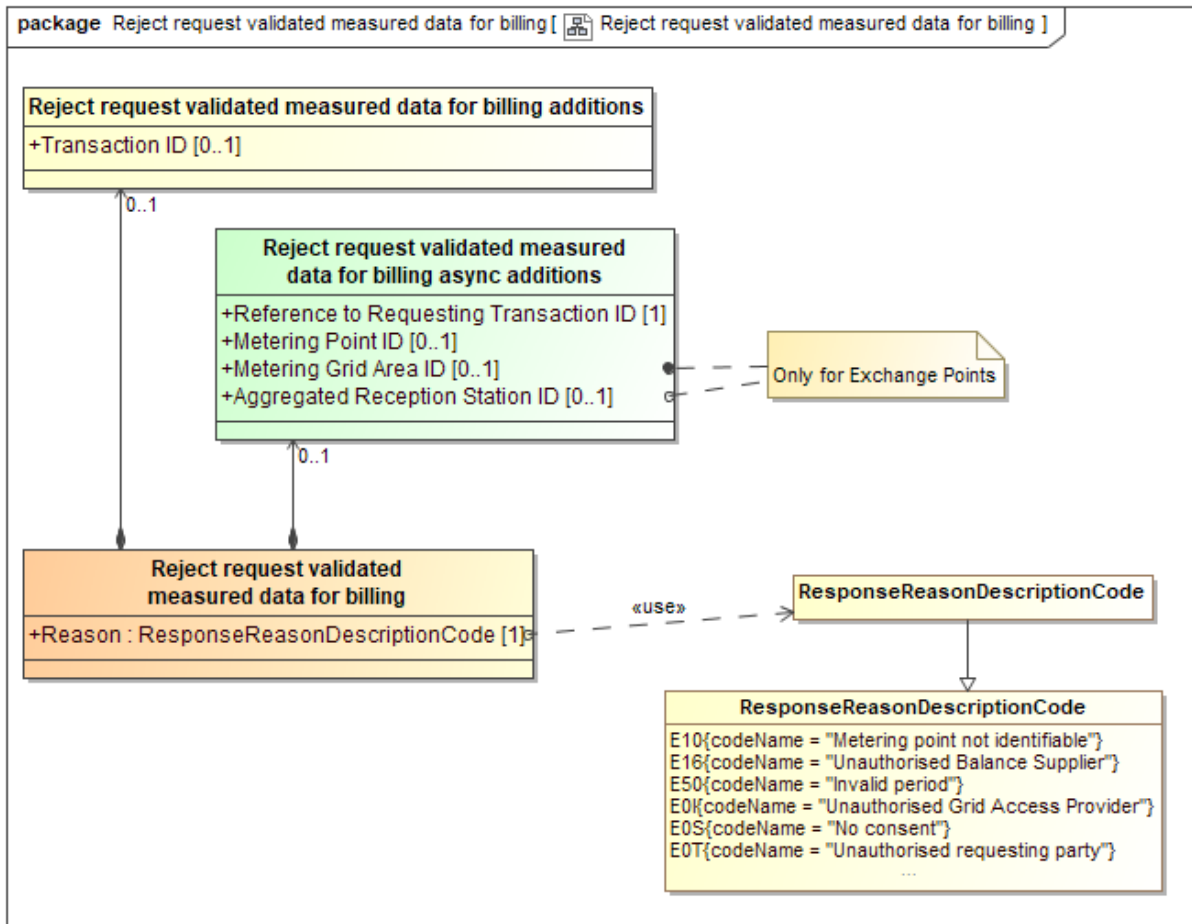


Figure 17 Class diagram: Reject request established calorific value

4.6.1 Element definitions: Reject request established calorific value

| Attribute | Sector ⁷ | Definition |
|---|---------------------|--|
| «Business entity» Reject request established calorific value | | The information set to be sent when rejecting a request for established calorific value. |
| Reason | | A code specifying the reason for the rejection of the request for established calorific value. |
| Reject request established calorific value additions | | Additional information related to the rejection of the request for established calorific value, the use of which may be agreed on a national level. This is however not used when specifying the payload in the ebIX® model. |

⁷ It is assumed that Accounting Points are uniquely dedicated to either electricity or to gas.

| | | |
|--|--|---|
| Transaction ID | | The unique identification of this set of information as given by the Initiator. |
| Reject request established calorific value async additions | | Additional information, related to the rejection of the request for established calorific value, needed when using asynchronous communication. This is however not used when specifying the payload in the ebIX® model but is used when specifying the document in the ebIX® model. |
| Reference to Requesting Transaction ID | | The unique identification of the rejected request for established calorific value as given by the Entitled Party, when acting as the requesting business partner. |
| Metering Point ID | | The unique identification of the Metering Point (Accounting Point or Exchange Point) from which the established calorific value is requested. |
| Calorific Value Area ID | | The unique identification of the Calorific Value Area for which this established calorific value is requested. |
| Aggregated Reception Station ID | | The unique identification of the Aggregated Reception Station, linked to the Exchange Point, where these measurements are validated for. |

Appendix A. Header and Context information for the class diagrams

A.1. Header and Context Information attributes definitions

| Class/attribute | Sector ⁸ | Description |
|---------------------------------|---------------------|---|
| Header and Context Information | | The set of information specifying the information to be added to this payload to enable the exchange as a document. |
| Document Type | | A code representing the document type used for the exchange of this set of information. |
| Business Reason | | A code representing the business reason for the exchange of this set of information. |
| Ancillary Business Process Role | | A code representing the market role taking part in this exchange together with the Responsible Role, responsible for the process/this exchange. |

A.2. Validated measured data for billing

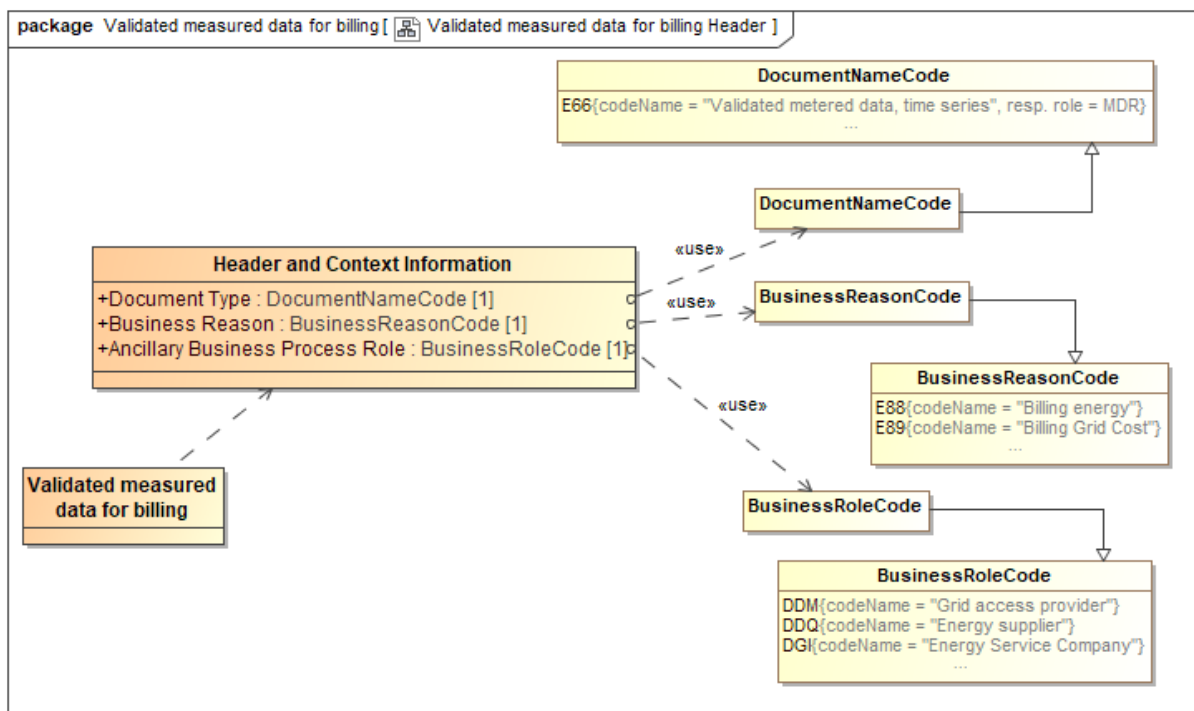


Figure 18 Class diagram: Header and Context Information: Validated measured data for billing

⁸ It is assumed that Metering Points are uniquely dedicated to either electricity or to gas.

A.3. Request validated measured data for billing

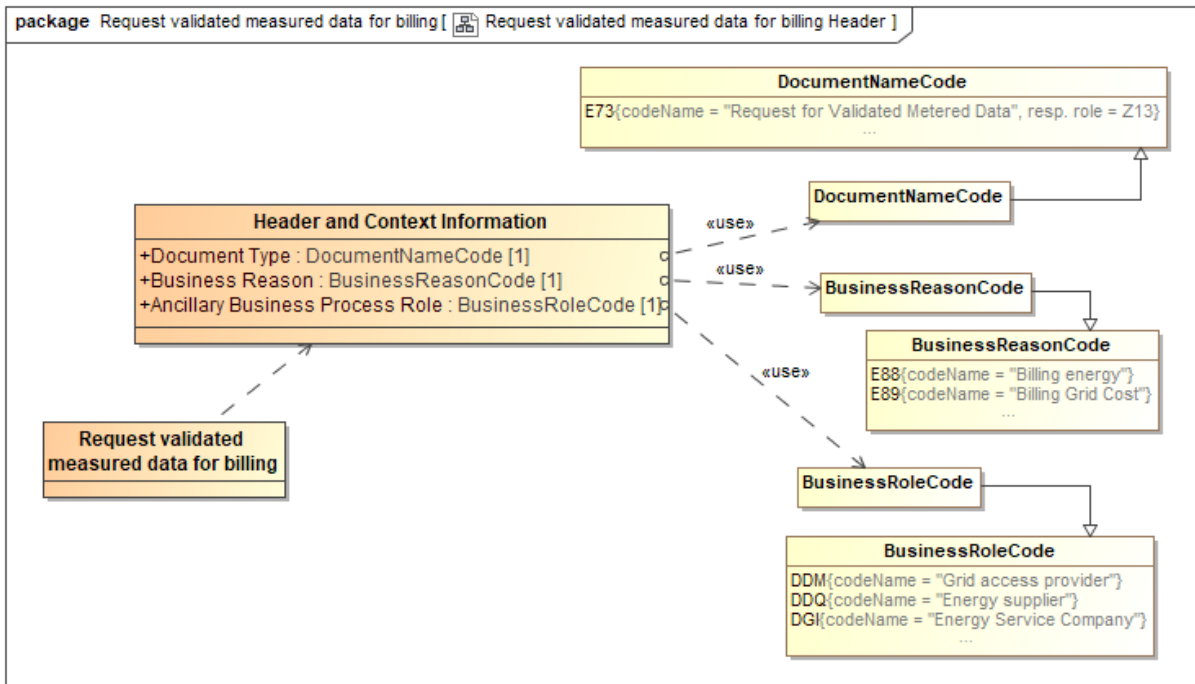


Figure 19 Class diagram: Header and Context Information: Request validated measured data for billing

A.4. Reject request validated measured data for billing

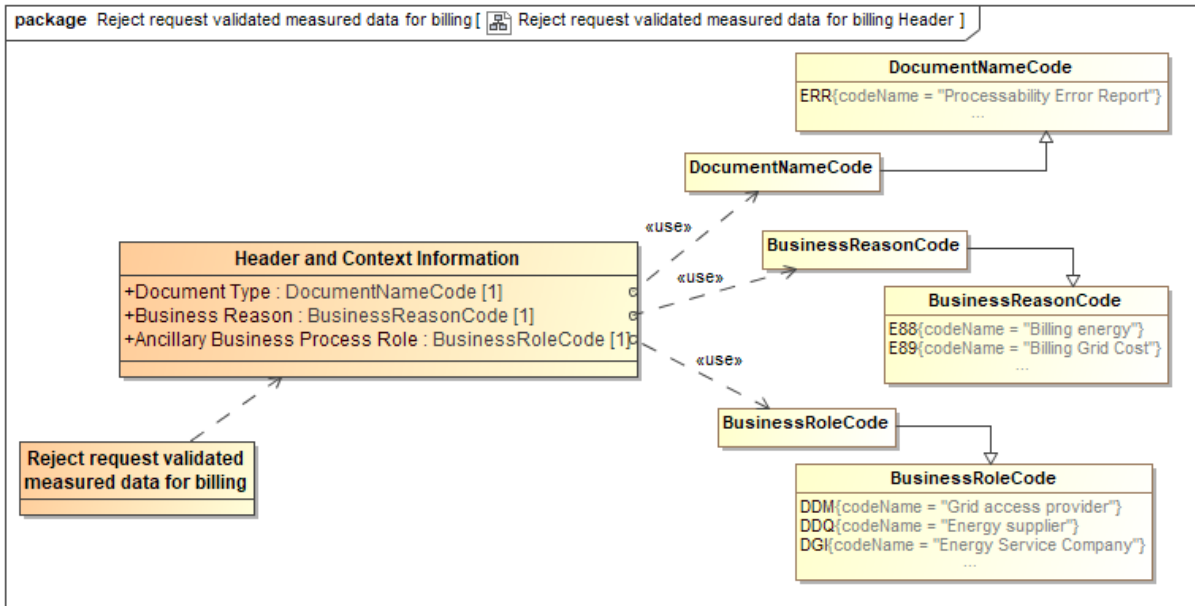


Figure 20 Class diagram: Header and Context Information: Reject request validated measured data for billing

A.5. Established Calorific Value

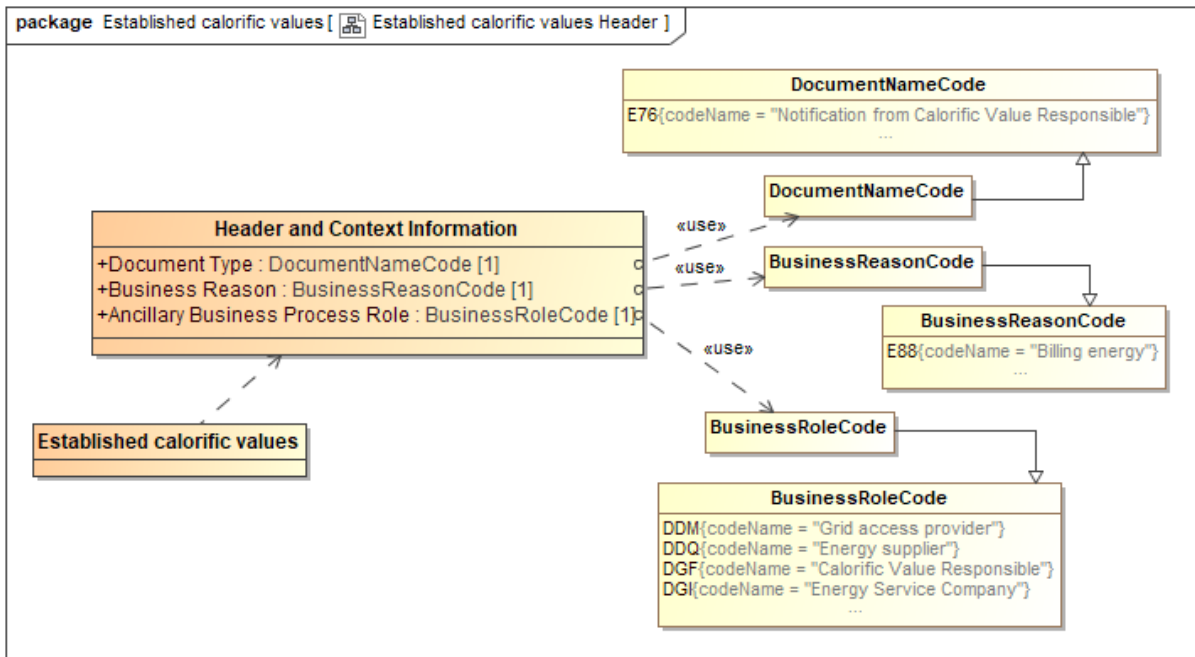


Figure 21 Class diagram: Header and Context Information: Established Calorific Value

A.6. Request established Calorific Value

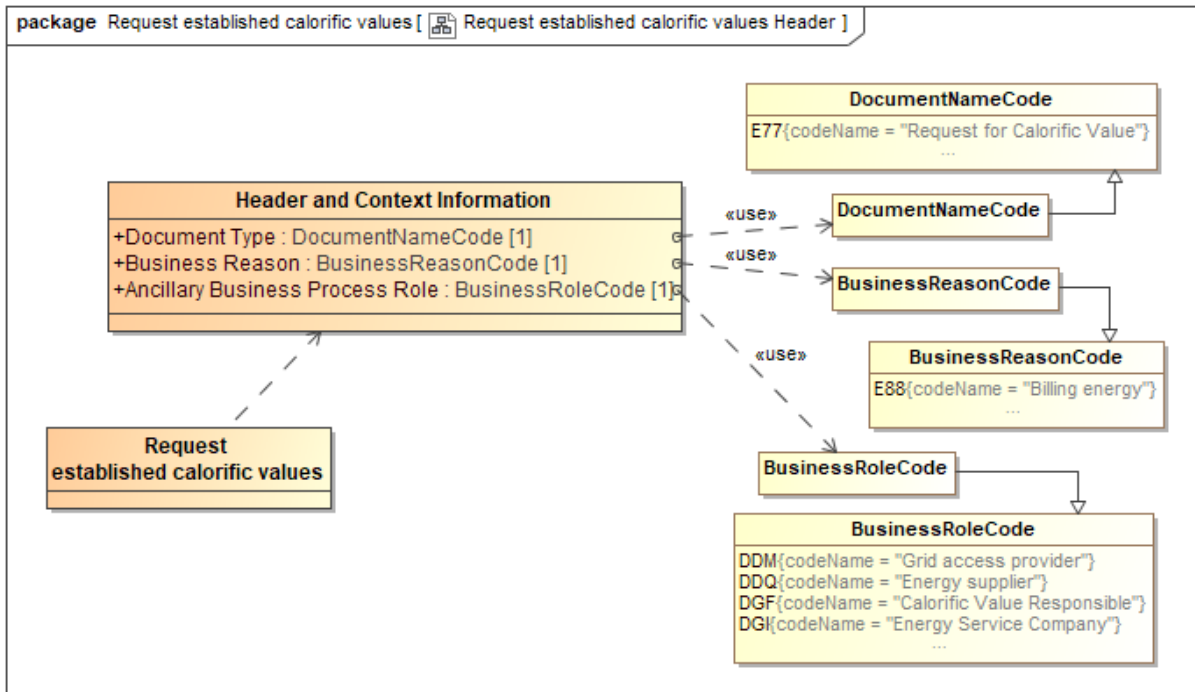


Figure 22 Class diagram: Header and Context Information: Request established Calorific Value

A.7. Reject request established Calorific Value

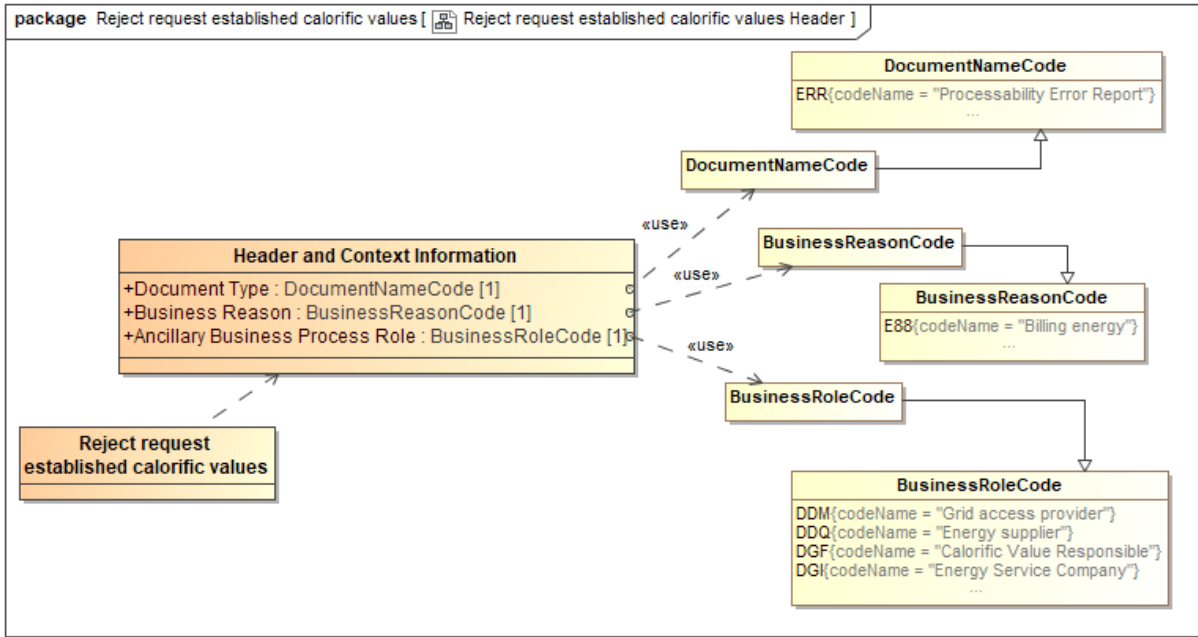


Figure 23 Class diagram: Header and Context Information: Reject request established Calorific Value