# Domain model

Status: Approved by ebIX® Forum

Version: 4.0

Revision: B

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CONTENT

# A. About this document

ebIX® (European forum for energy Business Information eXchange) is developing standardised frameworks designed to facilitate the seamless exchange of electronic business documents and data between various entities within the European electricity and gas sectors. One of the deliverables is the ebIX® domain model, which gives an overall overview of the structure of the European energy market as seen from ebIX® point of view, and in addition encapsulates a high-level understanding of the energy domain. I.e. the overall business areas where the market players are involved and have common message exchanges. and enhancing interoperability within this industry.

## A.1 References

[1] The Harmonised Role Model (for the Electricity Market) by ebIX®, ENTSO-E, and EFET (https://www.ebix.org/artikel/role_model)

## A.2 Main changes since last version

| Old | New | Clarification | Date |
|---|---|---|---|
| **Version 1.0** | | | |
| | 1.0.A | First published version. | 20051118 |
| **Version 4.0** | | | |
| 3.0.A | 4.0.A | Complete recast of version 3.0.A, hence changes are not tracked. | 20231017 |
| 4.0.A | 4.0.B | Since ebIX® is closing down from the end of 2023, the link to the ebIX® secretary has been removed. | 20231128 |

# 1 ebIX® Domain model

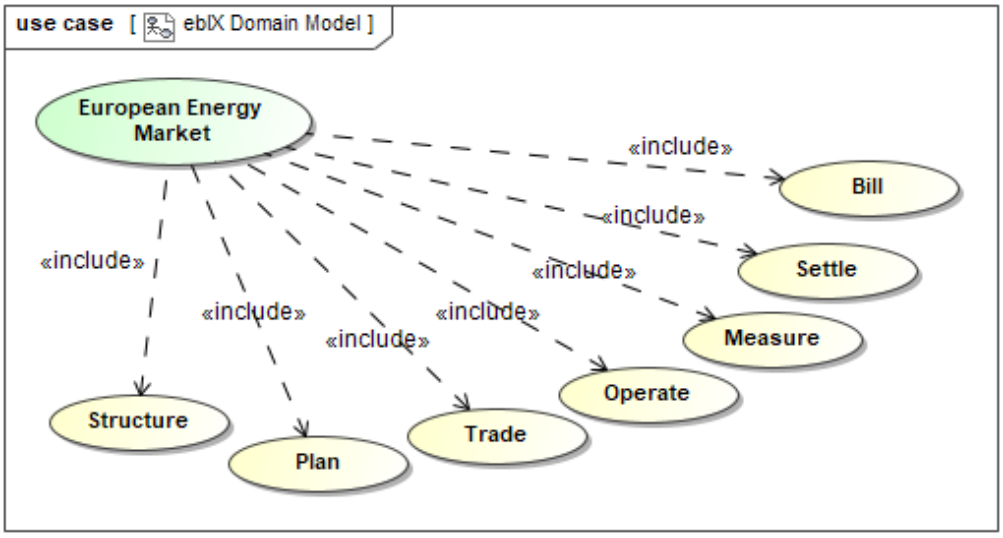


**Figure 1:** ebIX® European energy market domain model

The ebIX® European energy market domain model includes the domains; Structure, Trade, Plan, Operate (production, consumption and transport), Measure (meter reading), Settle (physical and financial, including reconciliation) and Bill.

ebIX® mainly covers modelling of UseCases for the domains Structure, Measure, Bill and partly Settle, while modelling of the Plan and partly the Settle domains is mainly ENTSO-E responsibility.

The main activities within the domain UseCases are:

**Structure**

Includes all processes where the actors define and exchange information (master data) necessary for these and later business processes.

The different parties request creation of, changes to, or decommissioning of energy market business objects, such as Accounting Points, Meters, Contracts etc, or to its attributes. Thereafter the information related to the created, changed or deleted business object or its attributes is exchanged between relevant roles. The alignment of master data between the actors in the energy market should result in all participants having the needed information to fulfil their obligations to the market.

**Plan**

Includes all processes where the actors define and exchange forecasts, such as for consumption, production, capacity, transport, weather, etc., to maintain a stable energy system and minimising business risks.

**Trade**

Includes all processes for buying and selling energy products, as fitting to business needs of the actors. Trade may be bilateral or through a Market Operator (e.g. power exchanges).

**Operate**

Includes all processes for operation of the energy system by the System Operators. It may be in response to energy flows resulting from production, consumption and/or exchange of

energy between areas, or to balance production and consumption of energy in the energy system. The Operate domain includes operations by Flexibility Service Providers, etc.

**Measure**

Includes all processes from the collection, validation, aggregation and distribution of measured energy data up to, but not including, the settling and billing, processes.

**Settle**

Includes all processes for agreeing between different roles (parties) on volumes, availability of Resources, prices for delivered and non-delivered energy products, etc. Settle includes imbalance settlement and reconciliation.

**Bill**

Includes all processes needed for billing the debtors because of usage of energy products.

The main activities mentioned above may vary slightly between countries among others because different legislation in different countries makes the need for country specific data exchanges and because some markets are not available in all countries.

## 2 Example: Linking the ebIX® domains to processes for flexibility services

As renewable energy sources gain prominence and decentralised energy generation gives increasing impact on the energy market, the need for flexible, smart systems to manage the grid has never been more vital. Also when energy is not only generated but also stored and traded locally, the role of the ebIX® domain model in linking various processes for flexibility services emerges as a key enabler.

Flexibility services, both for energy and power, will be a cornerstone of the future energy paradigm and require seamless coordination among a myriad of stakeholders, including prosumers, grid operators, aggregators, and market platforms. The ebIX® domain model plays a role in structuring these complex processes, by providing a comprehensive top-level model facilitating the integration of flexibility services into the traditional structure of the European energy market.

In this example, we show the way the ebIX® domain model maps to the flexibility processes.

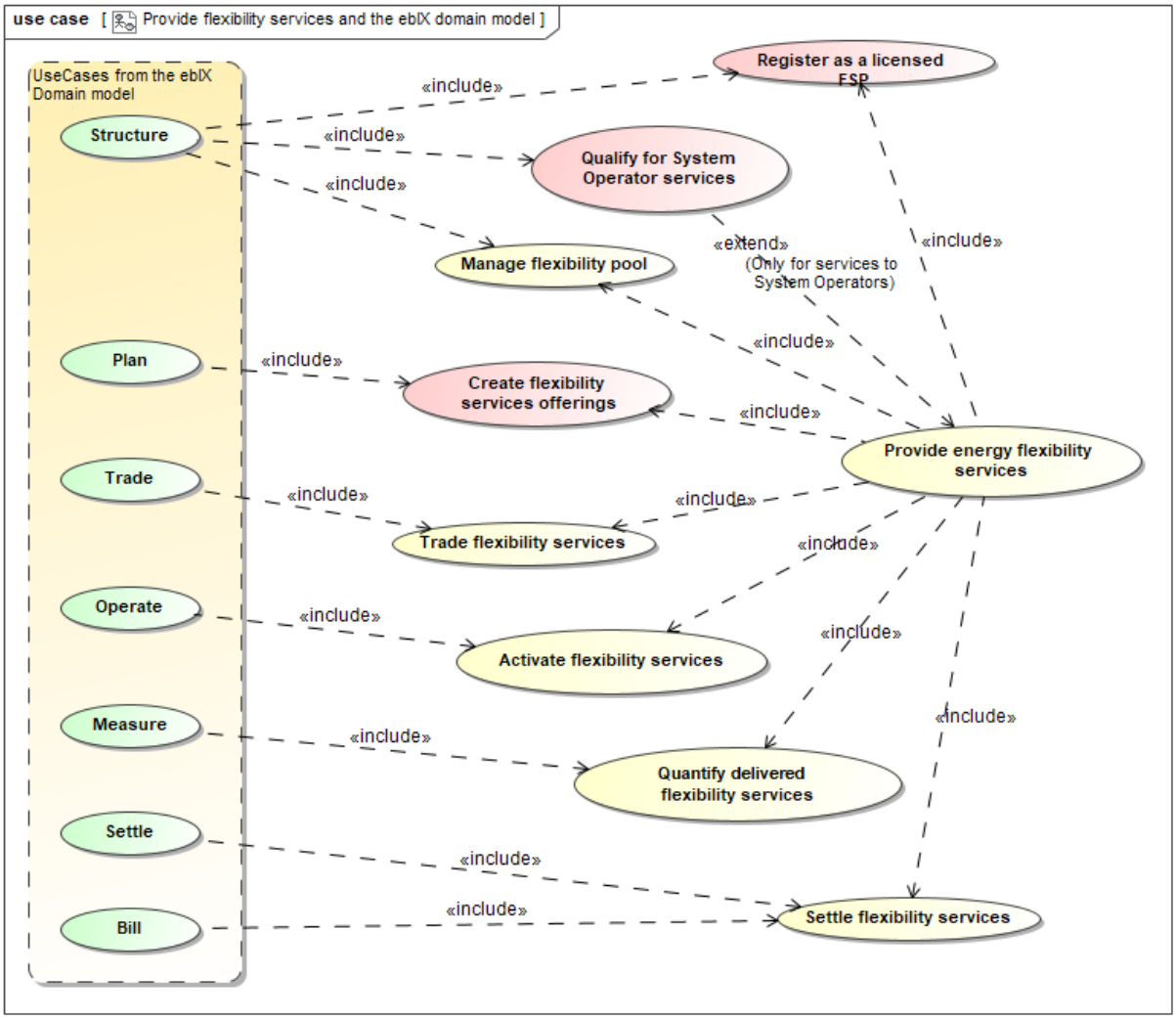


**Figure 2** Linking the ebIX® domains to processes for flexibility services