ENERGINET/DK

Regulation F: EDI communication

Appendix report 3:

The Danish role model

January 2007

Rev. 1

In case of any discrepancy between the Danish text and the English translation, the Danish text shall prevail

memorandum

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1. The Danish role model

The purpose of this appendix report is, via the model on page 12, to help all stakeholders in the electricity market gain an improved and more precise understanding of the roles and relationships of a player. This will, for instance, contribute to reducing the number of misunderstandings that may arise in relation to the defined roles and in relation to the allocation of responsibilities in the market. When defining new players and roles in the future, Energinet.dk can immediately include them in the model along with their relationships with the rest of the market.

The model visualises the players and areas of the Danish role model. The players are connected to the areas by virtue of the roles they assume. Moreover, the players are interconnected by virtue of their mutual relationships as can be seen from the communication flow. In the interests of clarity, more roles have been combined into one player, and not all relationships appear from the model.

The Danish role model is based on the ebIX, EFET and ETSO methodologies, which describes the European role model. The Danish terminology is determined on the basis of the terms used within these three frameworks. This is followed by a diagram illustrating the Danish role model. It is therefore possible to relate the Danish terms to the European model. It is Energinet.dk's ambition that the model should always reflect the latest version of the ebIX, EFET and ETSO role models.

In connection with the maintenance of the role model, there will be situations when roles approved by, for instance, ebIX are included although they are not included in the official European model.

The role model is divided into the following sections:
- Translation of the international roles from English into Danish
- Definitions of the Danish players based on the translated roles
- Description of current domains
- Illustration of relationships between the Danish players and domains

2. ETSO roles

The table below lists and defines the identified ETSO roles. The table comprises two columns:

- **ETSO/ebIX role:** Refers to the English terms defined by ETSO and ebIX. In some cases a Danish player covers two or more ETSO and ebIX roles.
- **Description:** A description of the role and, if relevant, responsibility.

ETSO/ebIX role	Description
Balance responsible party	Buys and sells electricity in the wholesale market and settles with the "imbalance settlement responsible". The role as balance responsible party is a collective term for the balance responsibility found in the market (production, trade and consumption responsible parties). It is not a role in itself.
Production responsible party	Responsible for any imbalance between electricity sold and produced for all associated metering points. May have a contract with a balance supplier to buy electricity from a "party connected to grid".
Trade responsible party	Buys and sells electricity. Must ensure balance before the notification and schedule phase ends.
Consumption responsible party	Responsible for any imbalance between electricity bought and consumed for all associated metering points. May have a contract with a balance supplier to supply electricity to a consumer.
Balance supplier	A player supplying/buying electricity to/from a consumer/producer. Has a contract with a balance responsible party.
System operator	Has overall responsibility for creating balance in the market and for handling transmission grid operation and ensuring stable electricity supply.
Transmission capacity allocator	Manages the allocation of transmission capacity between the defined areas where the balance responsible parties operate. Transmission capacity between market balance areas is allocated separately.
Market operator	The market operator determines the market energy price for a market balance area after applying the technical possibilities and constraints given by the responsible system operator. Trading notifications from balance responsible parties are also included in the price determination.
Metering point administrator	Responsible for the relationship with players connected to the meters. Is also responsible

ETSO/ebIX role	Description
	for creating and terminating metering points and for the contractual relationship to the "party connected to grid".
Metered data aggregator	Responsible for qualifying metered data from the metered data responsible.
Metered data responsible	Responsible for keeping and validating metered data based on collected data from the metered data collector. The meter reading data are forwarded to the balance supplier, who uses the data for billing electricity.
Metered data collector	Responsible for reading meters.
Grid operator	A player that operates one or more physical electricity grids.
Grid access provider	Responsible for providing access to the grid for a "party connected to grid" and for securing power supply. Applies to both producers and consumers.
Meter operator	Responsible for installing, maintaining, testing and decommissioning meters.
Party connected to grid	"Party connected to grid" is a general term for all players connected to the grid. It is not a role in itself. In practice, it is the producer and the consumer.
Producer	A producer that owns one or more electricity producing facilities.
Consumer	A consumer of electricity.
Settlement responsible	A player responsible for settling the difference between contractual obligations and actual production/consumption.
Imbalance settlement responsible	Responsible for settling the difference between contractual obligations and actual consumption/production for the balance responsible parties in a market balance area.
Reconciliation responsible	Responsible for reconciling the imbalance between consumption according to balance settlement and metered consumption for a profile-settled metering point in a grid area. The statement is submitted to the parties that are "reconciliation responsible" for the given metering area.
Reconciliation accountable	Financially responsible for settling the energy volume supplied to a local metering point according to the reconciliation.

3. Danish players

The table below shows the definitions of the Danish players in the form of the roles filled by each player.

Danish players	Roles (ETSO/ebIX)	
Electricity consumer	Consumer	
Balance responsible party (BRP)	Balance responsible party	
BRP for production	Production responsible party	A balance responsible party has one or more types of duties. The three roles of a balance responsible party are mentioned on the left.
BRP for trade	Trade responsible party	
BRP for consumption	Consumption responsible party	
Electricity supplier	Balance supplier	
	Reconciliation accountable	
Transmission company	Grid operator	A transmission company, as a player, is not responsible for system operation and has no direct customer connection. The player's responsibility is best compared to that of a grid company, yet without direct contact with the electricity consumer.
	Meter operator	
	Metered data collector	
	Metered data responsible	
	Metered data aggregator	
Transmission system operator (TSO/Energinet.dk)	System operator	The transmission system operator is also a transmission company and therefore has the same roles. The roles are therefore not shown under the transmission system operator.
	Responsible for balance settlement	
Transmission capacity allocator (Performed by E.ON - Transmission system operator/ Transmission company south of the Danish-German border)	Transmission capacity allocator	

Danish players	Roles (ETSO/ebIX)	
Meter operator (may be part of grid company)	Metered data collector	In rare cases, some of the grid company's duties are delegated to a meter operator. In these cases, the meter operator's duties include collecting, storing and qualifying metered data. The meter operator takes over the duties – responsibility remains with the responsible grid company. The ETSO/ebIX roles of the two players therefore overlap.
	Metered data responsible	
	Meter operator	
	Metered data aggregator	
Grid company	Grid operator	
	Grid access provider	
	Metering point administrator	
	Meter operator	
	Metered data collector	
	Metered data responsible	
	Metered data aggregator	
	Reconciliation responsible	
Public service obligation (PSO) company **Electricity supplier (with special obligations).** The operation of the PSO company is restricted to electricity sales within its own supply area.	Balance supplier	
Electricity producer	Producer	

In addition to the Danish players listed above, consumption, production and trade are billed and settled on a continuous basis. This role is defined by ETSO as 'Billing agent'. The role will not appear as a separate player in the Danish role model as it already forms an integral part of many of the players' duties. The role is, to a greater or smaller extent, included in the other players' roles.

4. Danish domains

ETSO and ebIX use the word "domain" [1] in their terminology. A domain falls into two sub-categories:

- **Area:** A physical or logical area – for instance a balance area or a grid area.
- **Point:** A physical or logical point where energy is metered.

Throughout this section, the term "area" will be used for both of these categories.

The table below provides a list of the identified Danish areas and points as well as appropriate definitions. The table comprises three columns:

- **Danish term:** The Danish name for the area.
- **ETSO/ebIX terms:** This refers to the domains ETSO and ebIX have defined to cover the European market. In some cases a Danish area covers two or more ETSO and ebIX areas.
- **Description:** A description of the area and, if relevant, Danish conditions. If a Danish area is matched by two or more ETSO and ebIX areas, the descriptions combined will cover the Danish term (for instance, there are three ETSO/ebIX terms which collectively cover the Danish term "UCTE-begreber").

Danish term	ETSO/ebIX terms	Description
Denmark is divided into two price areas. • Western Denmark, comprising Jutland and Funen • Eastern Denmark, comprising Zealand, the Archipelago and Bornholm. Both balance areas refer to Energinet.dk, which has the national responsibility for ensuring that the areas are in balance.		
Prisområde (Øst/Vest)	Market balance area	A geographical area comprising one or more metering grid areas. The balance responsible parties are required to create balance, and imbalances are settled at the same price throughout the area.
UCTE-begreber	Coordination centre zone	The amalgamation of one or more "control blocks". Western Denmark belongs to Zone North.
	Control block	The amalgamation of one or more "control areas". Western Denmark is expected to become a control block in 2007.

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[1] ETSO's description of "domain": A domain represents a delimited area that is uniquely identified for a specific purpose and where energy consumption, production or trade may be determined.

Danish term	ETSO/ebIX terms	Description
	Control area	The amalgamation of one or more price areas under the same technical load frequency.
UCTE	UCTE	International body coordinating and developing the European transmission grid with focus on TSOs. One of its objectives is to develop the European transmission grid for improved stability, price, exhange of electricity and coherence.
Nord Pool-område	Common capacity area	A market area where the transmission capacity between the balance areas has been transferred to Nord Pool. Covers Norway, Sweden, Denmark, Finland as well as the Kontek Link and the Danish-German border.
CBT område (ITC område fra 2007)	CBT area	An alliance between the European TSOs, designed to ensure uniform compensation for cross-border energy flows. ETSO is responsible for invoicing.
Netområde	Metering grid area	Delimited physical area where consumption, production and exchange of electricity can be metered.

A metering point is a general term for a physical or logical point where energy is measured. A metering point can be broken down into more specified metering points, see the following hierarchy.

- Metering point
  - Exchange metering point
  - Local metering point
    - Production metering point
    - Consumption metering point

Below follows a description of how the metering points are used in the Danish model.

Målepunkt	Metering point	Metering point where energy is measured.
	Local metering point	The smallest unit that needs to be in balance.
	Production metering point	Metering point for one or more production facilities.
	Consumption metering point	Metering point for one or more consumption units.

Danish term	ETSO/ebIX terms	Description
Udvekslings-målepunkt	Exchange metering point	Metering point measuring energy exchanges with other metering grid areas.
Elmåler	Meter	A physical device for the registration of energy consumption.
	Register	The physical register where the metered data can be read. One or more registers make up one metering point.

The Danish role model - version 1.0

TRANSLATION:
Målepunkt = Metering point
Udvekslingsmålepunkt = Exchange metering point
Lokalt målepunkt = Local metering point
Transmissionsselskab = Transmission company
Netvirksomhed = Grid company
Måleoperatør = Meter operator
Er tilsluttet = Is connected
Forsyningspligtselskab = PSO company
Elleverandør = Electricity supplier
Aktører tilknyttet nettet = Players connected to the grid
Elproducent = Electricity producer
Elforbruger = Electricity consumer
Østdanmark = Eastern Denmark
Vestdanmark = Western Denmark
Netområde = Grid area
Prisområde = Price area
Balanceansvarlig = Balance responsible party (BRP)
Produktionsbalanceansvarlig = BRP for production
Handelsbalanceansvarlig = BRP for trade
Forbrugsbalanceansvarlig = BRP for consumption
Område = Area