				Revision history for the Harmonised Role Model
ebIX	EFET European Federation of Energy Traders SO YOU CAN RELY ON THE MARKET	entsoe		
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Content

1 Changes in version 2022-01

Date: 2022-05-06

1.1 Changes to Roles

1. Updated association from the Resource Aggregator to the Accounting Point.

    Renamed association:

    > Aggregates Resources within

2. Updated definition of the Consumer.

    New definition:

    > A party that consumes energy.

    > **Additional information:**

    > This is a Type of Party Connected to the Grid.

    Previous definition (from HRM 2020-01):

    > ~~A party that consumes electricity.~~

    > ~~**Additional information:**~~

    > ~~This is a Type of Party Connected to the Grid.~~

3. Updated definition of the Party Connected to the Grid.

    New definition:

    > A party that contracts for the right to take out or feed in energy at an Accounting Point.

    Previous definition (from HRM 2020-01):

    > ~~A party that contracts for the right to consume or produce electricity at an Accounting Point~~

4. Updated name and definition of the Energy Service Company (ESCO).

    New name:

    > Energy Service Company ~~(ESCO)~~

    New definition:

    > A party offering energy-related services to the Party Connected to Grid, but not directly active in the energy value chain or the physical infrastructure itself. The Energy Service Company (ESCO) may provide insight services as well as energy management services.

    Previous definition (from HRM 2020-01):

    > ~~A party offering energy-related services to the Party Connected to Grid, but not directly active in the energy value chain or the physical infrastructure itself. The ESCO may provide insight services as well as energy management services.~~

5. Addition of the new role Modelling Authority «System operation».

   Definition:

   > A party accountable for the sourcing, consistency and quality of one or more model datasets.

   Association(s):

   - An association to the System Operator named "Sources grid model for".

6. Addition of the new role Model Merging Agent «System operation».

   Definition:

   > A party responsible for establishing a merged model and ensuring its completeness, consistency and quality.

   > **Additional information:**
   > The definition is based on CGM BP IG.

   Association(s):

   - An association to the System Operator named "Provides grid model to".

7. Updated definition of the Market Operator.

   New definition:

   > A party that provides a service whereby the offers to sell electricity are matched with bids to buy electricity.

   > **Additional Information**:
   > 1) The definition above is based on [Regulation on the internal market for electricity (EU) 2019/943](#):

   > 2) A more detailed description:

   > A party that provides a service of collecting offers to sell and bids to buy electricity, and matching these offers and bids in order to determine a market price at the clearing point. This activity can be conducted in the forward, days-ahead and/or intraday timeframes, and can be combined with transmission capacity allocation in the context of market coupling.

   > This is usually an energy/power exchange or platform.

   Previous definition (from HRM 2020-01):

   > ~~A market operator is a party that provides a service whereby the offers to sell electricity are matched with bids to buy electricity.~~

   > ~~**Additional Information:**~~
   > ~~This usually is an energy/power exchange or platform.~~

   > ~~The definition is based on [Regulation on the internal market for electricity (EU) 2019/943.](#)~~

8. Addition of the new role Resource Capacity Mechanism Operator.

Definition:

A party responsible to operate the resource capacity mechanism in a member state.

Additional information:
It can either be the TSO or an independent party. A Resource Capacity Mechanism Operator can contract one or several Resource capacity market units, and a resource capacity market unit can only be contracted by one Resource Capacity Mechanism Operator.

Association(s):

- An association from Resource Capacity Mechanism Operator to Resource Capacity Market Units named "Contracts", with a cardinality of [1..*] at the Resource Capacity Market Units side.

1.2   Changes to Domains

9. Addition of the new domain Resource Capacity Market Unit.

Definition:

Resource Capacity Market Unit
An aggregated Resource that can aggregate one or several Resources, and a Resource can form part of only one Resource Capacity Market Unit.

Additional information:
A Resource Capacity Market Unit may participate in the domestic Capacity Renumeration Mechanism and in the foreign Capacity Renumeration Mechanism if the direct cross border participation is applied. The Resource Capacity Market Operator together with the TSO where the Resource Capacity Market Unit is located is responsible for carrying out availability checks and maintaining data in the Registry.

Association(s):

- An association from Resource Capacity Mechanism Operator to Resource Capacity Market Units named "Contracts", with a cardinality of [1..*] at the Resource Capacity Market Units side.
- An association from Resource Capacity Market Units to Resource named "Aggregates", with a cardinality of [1..*] at the Resource side.

10. Addition of the new domain Control Area.

Definition:

A coherent part of the interconnected system, operated by a single system operator and shall include connected physical loads and/or generation units if any.

Additional information:
Source: [Commission Regulation (EU) 543/2013](link).

Association(s):

- An association to one or more Metering Grid Areas named "Is composed of".

11. Addition of the new domain FRR Sharing Region.

Definition:

A set of LFC areas of the same synchronous area, but not necessarily the same ~~bidding zone~~Bidding Zone. All LFC Areas of a sharing region share a certain amount of FRR with each other.

Additional information:
Based on: System Operation Guideline, Commission Regulation (EU) 2017/1485, Article 168.

Association(s):

- An association to the LCF Area, named "Is composed of" with a cardinality of 2..* at the LCF Area side.

1.3 Other changes

12. Addition of clarification about using the term "energy" instead of "electricity" in chapter 3.1 Introduction.

The definitions of roles, domains or other objects use the term "energy" to allow harmonised roles to be used by other energy sectors than electricity one i.e. gas or heat (especially the ones using transmission or distribution grid to deliver energy from producers to consumers). For information exchanges in electricity market "energy" shall be understood as "electricity".

2   Changes in version 2020-01

Date: 2020-05-08

2.1   Changes to Roles

1. Updated "Additional information" in the definition of NEMO:

    An entity designated by the competent authority to perform tasks related to single day-ahead or single intraday coupling.

    Source: Commission Regulation (EU) 2015/1222 (CACM).

    Additional Information:
    A NEMO performs MCO (Market Coupling Operator) and CCP (Central Counter Party) functions.

    A NEMO runs a power exchange related to day-ahead or intraday market.

    A NEMO is a type of Market Operator.

2. Addition of the new role **Party Administrator**:

    A party responsible for maintaining party characteristics for the energy sector.

    This is a "free standing role" with the note: "Party Administrators administrate master data for different parties or roles".

3. Addition of the new role **Metered Data Administrator** with the following definition:

    A party responsible for storing and distributing validated measured data.

4. Updated definition of **Resource Aggregator** (addition of a note):

    A party that aggregates resources for usage by a service provider for energy market services.
    Note:

    In the current version, the only service provider in HRM is the Balancing Service Provider.

5. Updated definition of **Consent Administrator**:

    A party responsible for ~~keeping~~ administrating a register of consents for a domain. The Consent Administrator makes this information available on request for entitled parties in the sector.

6. Updated definition of **Balance Responsible Party**:

    New definition:

    A Balance Responsible Party is responsible for its imbalances, meaning the difference between the energy volume physically injected to or withdrawn from the system and

the final nominated energy volume, including any imbalance adjustment within a given imbalance settlement period.

Note:
Based on [Electricity Balancing - Art.2 Definitions](#).

Additional information:
Responsibility for imbalances (Balance responsibility) requires a contract proving financial security with the Imbalance Settlement Responsible of the Scheduling Area entitling the party to operate in the market.

Previous definition (from HRM 2019-01):

~~A party that has a contract proving financial security and identifying balance responsibility with the Imbalance Settlement Responsible of the Scheduling Area entitling the party to operate in the market. This is the only role allowing a party to nominate energy on a wholesale level.~~

~~**Additional information:**~~
~~The meaning of the word "balance" in this context signifies that the quantity contracted to provide or to consume must be equal to the quantity really provided or consumed.~~

7. Renamed **Balance Supplier** to **Energy Supplier** with the following updated definition:

New definition:

An Energy Supplier supplies electricity to or takes electricity from a Party Connected to the Grid at an Accounting Point.

Additional information:
An Accounting Point can only have one Energy Supplier ~~at a point in time~~.

When additional suppliers are needed, the Energy Supplier delivers/takes the difference between established (e.g. measured or calculated) production/consumption and the (accumulated) contracts with other suppliers.

Previous definition (from HRM 2019-01):

~~A party that markets the difference between actual metered energy consumption and the energy bought with firm energy contracts by the Party Connected to the Grid. In addition, the Balance Supplier markets any difference with the firm energy contract (of the Party Connected to the Grid) and the metered production.~~

~~**Additional information:**~~
~~There is only one Balance Supplier for each Accounting Point.~~

8. Updated definition of **Production Responsible Party**:

New definition:

A Production Responsible Party is responsible for its imbalances, meaning the difference between the energy volume physically injected to the system and the final nominated energy volume, including any imbalance adjustment within a given imbalance settlement period.

Additional information:
This is a type of Balance Responsible Party.

Previous definition (from HRM 2019-01):

~~A party who can be brought to rights, legally and financially, for any imbalance between energy nominated and produced for all associated Accounting Points.~~

~~**Additional information:**~~

~~This is a type of Balance Responsible Party.~~

9. Updated definition of **Consumption Responsible Party**:

New definition:

A Consumption Responsible Party is responsible for its imbalances, meaning the difference between the energy volume physically withdrawn from the system and the final nominated energy volume, including any imbalance adjustment within a given imbalance settlement period.

Additional information:
This is a type of Balance Responsible Party.

Previous definition (from HRM 2019-01):

~~A party who can be brought to rights, legally and financially, for any imbalance between energy nominated and consumed for all associated Accounting Points.~~

~~**Additional information:**~~
~~This is a type of Balance Responsible Party.~~

10. Updated definition of **Imbalance Settlement Responsible**:

A party that is responsible for settlement of the difference between the contracted quantities with physical delivery and the ~~realised~~ established quantities of energy products for the Balance Responsible Parties in a Scheduling Area.

Note:
The Imbalance Settlement Responsible may delegate the invoicing responsibility to a more generic role such as a Billing Agent.

11. Redefined definition of **Producer**:

A party that ~~produces~~ generates electricity.

Additional information:

This is a type of Party Connected to the Grid.

The definition is based on Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Article 2 (Definitions).

12. Redefined definition of **System Operator**:

~~System Operator means a natural or legal person responsible~~ A party responsible for operating, ensuring the maintenance of and, if necessary, developing the system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the distribution or transmission of electricity.

Additional information:

The definition is based on DIRECTIVE 2009/72/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, Article 2 (Definitions).

13. Rephrased the definition of **Reserve Allocator**:

Informs the market of reserve requirements, receives ~~tenders~~ bids against the requirements and in compliance with the prequalification criteria, determines ~~what tenders~~ which bids meet requirements and assigns ~~tenders~~ bids.

14. Renamed **Trader** to **Energy Trader**. No changes to definition.

15. Updated definition of **Market Operator**:

A market operator is a party that provides a service whereby the offers to sell electricity are matched with bids to buy electricity.

Additional Information:

This usually is an energy/power exchange or platform.

The definition is based on Regulation on the internal market for electricity (EU) 2019/943.

16. Updated definition of **Metered Data Aggregator**:

A party responsible for the establishment and qualification of ~~metered~~ measured data from the Metered Data Responsible. This data is aggregated according to a defined set of market rules.

17. Updated definition of **Metered Data Responsible**:

A party responsible for the establishment and validation of ~~metered~~ measured data based on the collected data received from the Metered Data Collector. The party is responsible for the history of metered data for a Metering Point.

18. Updated definition of **Reconciliation Responsible**:

A party that is responsible for reconciling, within a Metering Grid Area, the volumes used in the imbalance settlement process for profiled Accounting Points and the actual ~~metered~~ measured quantities.

Note:
The Reconciliation Responsible may delegate the invoicing responsibility to a more generic role such as a Billing Agent.

19. Updated definition of **Grid Access Provider**:

A party responsible for providing access to the grid through an ~~Metering Point~~ Accounting Point for energy consumption or production ~~to~~ by the Party Connected to the Grid. The ~~party~~ Grid Access Provider is also responsible for creating and terminating ~~Metering Points~~ Accounting Points.

20. Updated definition of **Metering Point Administrator**:

A party responsible for administrating and making available the Metering Point characteristics, including registering the parties linked to the Metering Point. ~~registering the parties linked to the metering points in a Metering Grid Area. The party is also responsible for registering and making available the Metering Point characteristics.~~

2.2 Changes to Domains

21. The definition of Resource is rephrased:

New definition:

A market representation of an asset or a group of assets related to the energy industry.

Additional information:
A Resource represents for example grid assets, consumption assets or production assets, such as generating units, consumption units, energy storage units or virtual power plants.

Previous definition (from HRM 2019-01):

~~An object that represents a grid asset, a consumption resource or a production resource related to the energy industry.~~

~~**Additional information:**~~

~~A Resource can represent for example a generating unit, a consumption unit or a virtual power plant defined in a contract.~~

22. The **Control Entity** is deprecated.

23. Addition of the new domain **Synchronous Area** (replacing the deprecated Control Entity), with the following definition:

An area covered by synchronously interconnected LFC blocks.

Note:
Examples of Synchronous Areas are Continental Europe, Great Britain, Ireland-Northern Ireland, Nordic and the power systems of Lithuania, Latvia and Estonia, together referred to as 'Baltic' which are part of a wider synchronous area (IPS/UPS).

Source:

Requirements for Generators. Art. 2 - Definitions.

24. Rephrased the definition of **Accounting Point**:

A domain under balance responsibility where ~~balance supplier~~ Energy Supplier change can take place and for which commercial business processes are defined.

Additional information:
~~These domains are usually defined in a contract. Typical business processes where this would be used may be "compensation management", "settlement", "calculation of energy volumes", etc~~

This is a type of Metering Point.

25. Re-introduces the **Exchange Point** as a generalisation of the **Metering Point**, with the following definition:

A domain for establishing energy exchange between two Metering Grid Areas.

Additional information:
This is a type of Metering Point.

2.3 Changes to associations

26. The association from **Scheduling Area Responsible** to **Imbalance Settlement Responsible** "Reports planned and regulation data to" is renamed to "Provides the position for every Balance Responsible Party".

27. The direction of the association from the **Balance Responsible Party** to the **Scheduling Area Responsible** is switched and renamed to "Determines the position for", with a cardinality of [1..*] on the **Balance Responsible Party** side.

28. Addition of an association from the new role **Metered Data Administrator** to the **Metering Point** named "Stores and distributes metered data of" and a cardinality of [1..*] at the **Metering Point** side.

29. The new domain **Synchronous Area** is associated with **LFC Block**, named "Is composed of", with a cardinality of [1..*] at the **LFC Block** side.

30. Deleted Association from **Balancing Service Provider** to **LFC Operator**, named "Provides balancing services to".

31. Added a new association from **Balancing Service Provider** to **Reserve Allocator**, named "Provides bids for balancing to".

32. Added a new association from **LFC Operator** to **Balancing Service Provider**, named "Activates balancing services from" with a cardinality of [1..*] at the Balancing Service Provider side and of [1] at the **LFC Operator** side.

33. Added an association from the re-introduced **Exchange Point** to the **Metering Grid Area**, with a cardinality of [2] at the **Metering Grid Area** side.

34. Correction of spelling error for the association between **Trader** and **Accounting Point**: "Supplies to / takes from" is corrected to "Supplies to / Takes from".

35. Renamed the association from **Balancing Service Provider** to **Reserve Resource** from "Provides Bids for" to "Acquires capacity from".

36. The association from **LFC Operator** to **Balancing Service Provider** is renamed from "Call bid" to "Activates balancing services from".

3   Changes in version 2019-01

Date: 2019-05-22

3.1   Changes to Roles

1. Update of definition of Coordination Center Operator:

   ~~Responsible for:~~

   ~~1.   The coordination of exchange programs between its related Control Blocks and for the exchanges between its associated Coordination Center Zones.~~
   ~~2.   Ensuring that its Control Blocks respect their obligations in respect to load frequency control.~~
   ~~3.   Calculating the time deviation in cooperation with the associated coordination centers. Carrying out the settlement and/or compensation between its Control Blocks and against the other Coordination Center Zones.~~

   A party responsible for the coordination of its Coordination Centre Zone in respect of scheduling, load frequency control, time deviation and compensation of unintentional deviation.

2. Control Area Operator and Control Block Operator are replaced with LFC Operator, associated with LFC Area, LFC Block, and Merit Order List Responsible, with the definition of LFC Operator:

   Responsible for the load frequency control for its LFC Area or LFC Block.

   Additional information:

   This role is typically performed by a TSO.

3. The role Balancing Service Provider (BSP) is added, with the following definition:

   A party with reserve-providing units or reserve-providing groups able to provide balancing services to one or more LFC Operators.

   Additional information:

   Based on Electricity Balancing - Art.2 Definitions.

4. The definition of the Merit Order List Responsible is updated to:

   Responsible for the management of the available tenders for all Acquiring ~~System~~ LFC Operators to establish the order of the reserve capacity that can be activated.

5. Added Nominated Electricity Market Operator (NEMO), with the following definition:

   An entity designated by the competent authority to perform tasks related to single day-ahead or single intraday coupling.
   Source: Commission Regulation (EU) 2015/1222 (CACM).

   Additional Information:
   A NEMO performs MCO functions. (Market Coupling Operator)
   A NEMO runs a power exchange related to day-ahead or intraday market.
   A NEMO is a type of Market Operator.

6. In the definition of Imbalance Settlement Responsible the text «Market Balance Area» is replaced with «Scheduling Area»

7. In the definition of Balance Responsible Party the text «Market Balance Area» is replaced with «Scheduling Area».

8. The definition of Transmission Capacity Allocator is updated:

The Transmission Capacity Allocator manages, on behalf of the System Operators, the allocation of available transmission capacity for a Bidding Zone Border. He offers the available transmission capacity to the market, allocates the available transmission capacity to individual Capacity Traders and calculates the billing amount of already allocated capacities to the Capacity Traders.

Additional Information:

The single allocation platform established by all TSOs for Forward Capacity Allocation performs the role of a Transmission Capacity Allocator.

9. The Capacity Coordinator is replaced with the Coordinated Capacity Calculator, including a new definition:

Coordinated Capacity Calculator is the entity or entities with the task of calculating transmission capacity, at regional level or above.

Source: Commission Regulation (EU) 2015/1222 (CACM).

10. The definition of Market Operator is changed:

A market operator is a party that provides a service whereby the offers to sell electricity are matched with bids to buy electricity.

Additional Information:
This usually is an energy/power exchange or platform.

11. Changed the definition of the Resource Provider to:

A role that manages a resource and provides production/consumption schedules for it, if required.

12. Scheduling Coordinator is replaced with Scheduling Agent, with the definition:

The entity or entities with the task of providing schedules.

Source: System Operation Guideline, Commission Regulation (EU) 2017/1485.

Additional information:

A party that is responsible for the schedule information and its exchange on behalf of a Balance Responsible Party.

13. Addition of Scheduling Area Responsible with the following definition:

A party responsible for the coordination of nominated volumes within a scheduling area.

Additional information:
This role is typically performed by a TSO.

14. Addition of a Resource Aggregator with the following definition:

A party that aggregates resources for usage by a service provider for energy market services.

15. Addition of a Consent Administrator with the following definition:

A party responsible for keeping a register of consents for a domain. The Consent Administrator makes this information available on request for entitled parties in the sector.

16. Redefined definition of System Operator:

System Operator means a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the system in a given area and, where

applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the distribution or transmission of electricity.

Additional information:
The definition is based on DIRECTIVE 2009/72/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, Article 2 (Definitions)

17. The Market Information Aggregator has become a "free standing role" (without any associations), with the following comment "The Market Information Aggregator can receive data from many parties".

18. "Centern" is corrected and renamed to "Centre" in "Coordination Centre Operator".

19. The following roles are deprecated:

   - Control Area Operator
   - Control Block Operator
   - Grid Operator

3.2   Changes to Domains

20. The term "Domain" is split into "Domains", "Resources", "Accounts" and "CIM Objects".

21. Control Block is replaced with LFC Block, with the definition:

   A part of a synchronous area or an entire synchronous area, physically demarcated by points of measurement at interconnectors to other LFC Blocks, consisting of one or more LFC Areas, operated by one or more TSOs fulfilling the obligations of load-frequency control.

   Source: System Operation Guideline, Commission Regulation (EU) 2017/1485.

22. The Control Area is replaced with LFC Area, with the definition:

   A part of a synchronous area or an entire synchronous area, physically demarcated by points of measurement at interconnectors to other LFC Areas, operated by one or more TSOs fulfilling the obligations of load-frequency control.

   Source: System Operation Guideline, Commission Regulation (EU) 2017/1485.

23. Market Balance Area is replaced with Scheduling Area, with the definition:

   An area within which the TSOs' obligations regarding scheduling apply due to operational or organisational needs.

   This area consists of one or more Metering Grid Areas with common market rules for which the settlement responsible party carries out an imbalance settlement and which has the same price for imbalance.
   Source: System Operation Guideline, Commission Regulation (EU) 2017/1485.

   Additional information:
   This covers both Imbalance Area and Imbalance Price Area from the Electricity Balancing Guideline (2017/2195).

24. Added the domain Bidding Zone with the following definition:

   The largest geographical area within which market participants are able to exchange energy without capacity allocation.

   Source: Commission Regulation (EU) 543/2013.

25. Added the domain Bidding Zone Border, with the following definition:

Defines the aggregated connection capacity between two Bidding Zones

A market area (Which defines the aggregated connection capacity between two Bidding Zones) where the transmission capacity between the Bidding Zones is given to the Balance Responsible Parties according to rules carried out by a Transmission Capacity Allocator. Trade between Bidding Zones is carried out on a bilateral or unilateral basis.

26. Added domain Capacity Calculation Region (CCR), with the following definition:

The Capacity Calculation Region is the geographic area in which coordinated capacity calculation is applied.

Source: [Commission Regulation (EU) 2015/1222 (CACM)](#).

Additional information:

The transmission capacity between Bidding Zones, included in the Capacity Calculation Region, is given to the Balance Responsible Parties through an implicit capacity allocation process or through an explicit allocation auction.

27. Updated definition of Coordination Center Zone to:

~~The composition of a number of Control Blocks under the responsibility of the same Coordination Center Operator.~~

The composition of a number of LFC Blocks under the responsibility of the same Coordination Centre Operator.

28. Changed definition of Metering Point:

~~A domain where energy products are measured or computed.~~

An entity where energy products are measured or computed.

29. Updated definition of the Balance Group ("balance" is renamed to "imbalance", and the text «Market Balance Area» is replaced with «Scheduling Area».):

An energy account under responsibility of a Balance Responsible Party used to determine imbalance considering predefined inputs and outputs within a specific Scheduling Area.

30. The definition of the Metering Grid Area is rephrased to:

A Metering Grid Area is a physical area where consumption, production and exchange can be measured. It is delimited by the placement of meters for continuous measurement for input to, and withdrawal from the area.

Additional information:
It can be used to establish volumes that cannot be measured such as network losses.

31. "Center" is renamed to "Centre" in "Coordination Center Zone" and "RGCE Interconnected Group".

32. Corrected the definition of RGCE Interconnected Group, i.e. "programmes" is corrected to "programs".

33. Control Entity is flagged with stereotype «Candidate for deprecation».

34. The following domains are deprecated:

- Allocated Capacity Area
- Capacity Market Area

- Common Capacity Area
- Control Area
- Control Block
- Local Market Area
- Market Area
- Market Balance Area

3.3 Changes to associations

35. Addition of cardinality in the association from Capacity Trader [1..*] to Transmission Capacity Allocator [1].

36. Addition of cardinality in the association from Coordination Center Operator [1] to Coordination Center Zone [1].

37. Addition of an associations from LFC Block [1].to LFC Area [1..*], named "Is composed of".

38. Addition of an association from LFC Operator [Unspecified] to LFC Block [0..1], named "Manages".

39. Addition of an association from LFC Operator [1] to LFC Area [1..*], named "Manages".

40. Addition of an association from Merit Order List Responsible [1] to LFC Operator [1..*], named "Provides MOL to".

41. Addition of an association from LFC Area [1] to Scheduling Area [1..*], named "Consist of".

42. Addition of an association from Balancing Service Provider [1] to LFC Operator [1..*], named "Provides balancing services to".

43. Addition of an association from Bidding Zone [1] to Scheduling Area [1..*].

44. Addition of an association from Scheduling Area [1] to Bidding Zone [1..*], with an XOR dependency to the association from Bidding Zone to Scheduling Area and a connected textbox: "Either one, dependent on Bidding Zone configuration".

45. Addition of a name to the association from the Scheduling Area Responsible to Scheduling Area, named "Operates". And, the cardinality is changed to [1..*] at the Scheduling Area side.

46. Addition of an association from Merit Order List Responsible [1] the Reserve Allocator [1..*], named "Obtains tender results from".

47. Addition of an association from Bidding Zone [1] to Market Operator [1..*], named "Has".

48. Addition of an association from Bidding Zone Border [1..*] to Bidding Zone [2], named "Connects".

49. Addition of an association from Bidding Zone Border [0..*] to Capacity Calculation Region (CCR) [1], named "Belongs to".

50. Addition of an association from Transmission Capacity Allocator [Unspecified] to Bidding Zone Border [1..*], named "Manages".

51. Addition of an association from System Operator [Undefined] to Coordinated Capacity Calculator [1..*], named "Provides Grid Models to".

52. Addition of an association from Accounting Point [Undefined] to Reserve Resource [0..*], named "Has".

53. Addition of an association from Balancing Service Provider [Undefined] to Reserve Resource [1..*], named "Provides bids for".

54. Addition of an association from Bidding Zone [Undefined] to Metering Grid Area [1..*], named "Is composed of".

55. Addition of an association from Resource Aggregator [Undefined] to Accounting Point [1..*], named "Aggregates".

56. Addition of an association from Consent Administrator [Undefined] to Accounting Point [1..*], named "Keeps a register of consents for".

57. The association from the Interconnection Trade Responsible named "Sends nominations to" to the Nomination Validator is changed to the opposite direction and renamed to "Confirms nominations".

58. The association from Transmission Capacity Allocator to the System Operator named "Provides results to" is changed to go from the Transmission Capacity Allocator to the Nomination Validator.

59. The association from the Balance Responsible Party to the Imbalance Settlement Responsible, named "Makes contracts with" is turned and renamed to "Settles imbalance for".

60. The cardinality of the association from Balance Supplier to Production Responsible Party, on the Production Responsible Party side is changed to [0..*] (was unspecified).

61. The cardinality of the association from Balance Supplier to Consumption Responsible Party, on the Consumption Responsible Party side is changed to [0..*] (was unspecified).

62. The association from Trader to Market Operator is turned with the cardinality of [1] on the Market Operator side and [1..*] on the Trader side, named "Provides trading platform to".

63. The cardinality of the association from Trader to Accounting Point is changed from [1..*] to [0..*].

64. The cardinality on the Control Centre Zone side of the association from RGCE Interconnected Group is changed from * to 2.

65. The association between Market Operator and Market Balance Area, "Operates" is «Deprecated».

66. The association between System Operator and Market Operator, "Declares constraints to" is «Deprecated»

67. The association between System Operator and Market Operator, "Provides market information" is «Deprecated».

3.4   Other changes

68. The documentation of the Harmonised Role Model diagram "*The Bidding Zone Border is the border between two Bidding Zones*" is removed.

69. The definition of a Domain is moved to the introduction.

70. The following note is deleted:
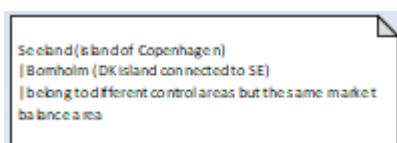
71. Addition of stereotypes to the HRM:

«**H**armonised Role»	Essential harmonised business responsibility. A role cannot be split over several market participants;
«**H**armonised Resource»	A grid asset, a consumption resource or a production resource;
«**H**armonised Domain»	A composition of one or more Metering Points;
«From CIM Object»	An object defined in IEC/CIM;
«Harmonised Account»	A stereotype for Balance Group must be added.

Stereotypes will be suppressed from the HRM diagram in the pdf-version of the HRM.

72. Text boxes and deprecated domains have been removed:
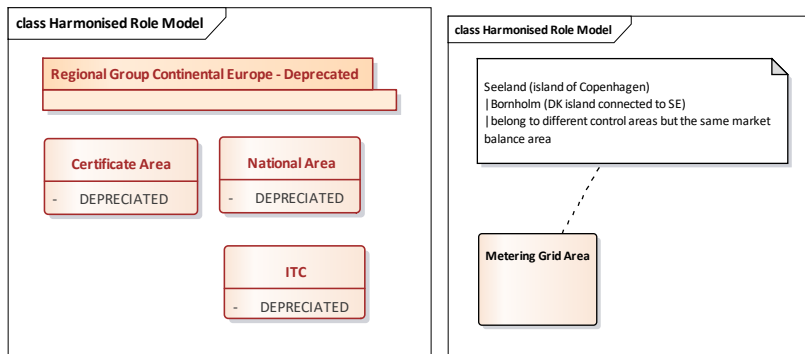
73. changed definition of the Stereotype «Harmonised account» in the introduction in the pdf-version:

"A harmonised account represents a business object for aggregated reporting"

4 Changes in version 2018-01

Date: 2018-09-27

Editorial updates:
1. Updated the front page
2. Updated chapter 1 and 2; the three organisations developing the role model are described as "ENTSO-E, EFET and ebIX®"
3. Corrected the alphabetical order of the role *Merit Order List Responsible*

5   Changes in version 2017-01

Date: 2017-10-06

1. Removed association between Nomination Validator and Transmission Capacity Allocator
2. Added a new association from Transmission Capacity Allocator to System Operator
3. Renamed the Block Energy Trader to Trader and simplified the definition
4. Added association from Trader to Balance Responsible Party
5. Changed cardinalities:
    a. The association from Balance Supplier to Grid Access Provider was changed from undefined to [0..*] at the Grid Access Provider side.
    b. The association from Party Connected to Grid to Grid Access Provider was changed from undefined to [1] at the Grid Access Provider side.
    c. The association from Interconnection Trade Responsible to Capacity Trader was changed from undefined to [1..*] at the Capacity Trader side.
6. Depreciated the following domains:
    a. ITC
    b. Certificate Area
    c. National Area
7. Functional Group was depreciated in version 2015-01, hence removed from 2017-01
8. Depreciated the Regional Group Continental Europe package, including the links to Control Entity and RGCE Interconnected Group
9. Rephrased the definition of Balance Group
10. Removed text related to "Equivalent to" under "Additional Information" in the definition of Balance Responsible Party
11. Corrected the definition of the Data Provider
12. Updated the definition of Metering Point Administrator
13. Updated the definition of Grid Access Provider
14. Added a footnote to the Scheduling Coordinator
15. Added the role Energy Service Company (ESCO)
16. Changed the HRM diagram:
    a. The model is made more readable by making the distance between roles and domains smaller
    b. All associations in the HRM have got a direction (arrow)
    c. Removed text and colour related to responsibility of roles and domains
    d. Removed the text box related to Control Entity
17. Changed the HRM document:
    a. Renamed "Actor" to "Role" in the first column of the table in chapter 5.1
    b. Renamed "Domain" to "Type" in the header part of the table in chapter 5.2
    c. All association names start with an upper-case letter
    d. Updated the definition of Domain in chapter 3 of the HRM
    e. Removed the introductory text in chapter 5.2
    f. Textual corrections and clarifications
18. Renamed MOL Responsible to Merit Order List Responsible
19. Added an explanation of RGCE (Regional Group Continental Europe) to the definition of RGCE Interconnected Group

6 Changes in version 2015-01

Date: 2015-09-24

1. Deprecation of Functional group
2. Added Data Provider
3. suppression of the association to functional group of the related classes
4. Removal of text boxes with examples
5. Multiplicity of [0..*] between BRP and Balance group
6. Changed names:
   a. Reserve Object" to "Reserve Resource"
   b. "Resource Object" to "Resource"
7. added relation between "Reserve Resource" and "Accounting Point"
8. Removal of relation between Resource Provider and Reserve Resource
9. Reserve Resource definition changed
10. Resource definition changed
11. Balance Group additional information changed
12. Modified relation between Balance Group and Accounting Point
13. modified definition of Resource Provider
14. Revised a number of cardinalities

7   Changes in versions 2014-01 and older

Version	Release	Date	Paragraphs	Comments
2014-01		2014-01-28		Updated with changes agreed by the Harmonisation group. Changes to Data Provider definition and diagram note, Grid Access Provider definition, Resource Object definition and maintenance statement. Approved by Market Committee on 2013-05-15
2011-01		2011-12-06	Complete review	Complete review of document text (the approval procedures have been removed and the main text (including the introduction) has been updated). Add new Roles "Block Energy Trader", "Capacity Coordinator" as well as the domain "Accounting Point" Modification of different relations. Approved by: - ENTSO-E Market Committee. - The EFET Management - Committee - The ebIX Plenary.
2009-01		2009-06-26	Modified definition	Adjusted all names in figure to upper camel case. Modified example for Capacity Market Area Added example to Common Capacity Area Modified definition of Grid Access Provider Modified definition of Market Information Aggregator
			Changed relation	Modified name of relation of Grid Access Provider with Local Metering Point.
2008-02		2008-12-08	New roles	MOL Responsible for ERRP Reserve Allocator for ERRP
			Change relation	Suppress the relation between the Metered Data Responsible and the Local Metering Point. Add the relation between the Metered Data Responsible and the Metering Point

Version	Release	Date	Paragraphs	Comments
2008-01		2008-07-01	Change version number	The version number is changed in order to take into consideration the 2 publications per year (yyyy-01 and yyyy-02).
			Definition changes	Market Operator

Balance Supplier

Grid Operator

Resource Object

Capacity Trader |
| | | | Domain name change | CBT to ITC |
| 5 | 0 | 2007-12-01 | 5 and 6 | Rationalised the relationships to focalise where possible on responsibility. Improved definition layout. Added new roles: Reconciliation

Responsible, Reconciliation

Accountable, Market

Information Aggregator |
| 4 | 0 | 2006-07-06 | 5 and 6 | Introduced new domains Resource Object, Reserve Object and new roles Resource Provider, Capacity Trader, Interconnection Trade Responsible, Nomination Validator. Modified definition Market Operator, System Operator and Transmission Capacity Allocator |
| 3 | 2 | 2005-03-29 | 6 | Clarified definitions in order to bring it into line as a harmonised version |
| 3 | 1 | 2004-09-22 | 3.1 introduction

5 and 6 | Definition of Role and party

Addition of Metered data responsible

Correction of metered data aggregator responsible |
3	0	2004-04-29		Add new domain of "unit" "functional group" and "balance group", include the UCTE environment and adopt model to more correctly reflect the overall market.
2	0	2003-02-12		Add more detail to market domains
1	0	2002-06-17		Initial release of document
0	8	2001-02-10		Initial version for comment