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EASEE-gas

European Association for the Streamlining of Energy Exchange – gas

Harmonised Gas Role Model

Working Document



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1 Harmonised Gas Role Model

1.1 Harmonised role descriptions

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Role Name	Description
Allocation Responsible	A party allocating energy to portfolios based on agreed
	procedures.
Area Coordinator	A party with coordinating functions in the transmission
	and/or distribution system and responsibilities for the
	management of balancing groups, system balancing
	activities and/or the provision of data (for example settlement and balancing information). Other duties and
	responsibilities might be stipulated in the respective
	national laws.
	Additional information:
	In some countries some additional duties might be
	assumed by the area coordinator, for instance: Coordination of infrastructure planning and maintenance
	activities, congestion management,
Balance Responsible Party	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	volume physically injected to or withdrawn from the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.
	imbalance settlement period.
	Additional information: Its actions are based on a legally
	binding agreement, being a transport contract or
	another contract. May be a Network User following the
0 " 51.16 5 "1.1	definition in the ENTSOG glossary.
Capacity Platform Responsible	The Capacity Platform Responsible manages, on behalf
	of the System Operators, the offering and allocation of all available transmission capacity products. He offers
	the available transmission capacity products. He offers
	allocates the available transmission capacity to
	individual Capacity Responsible Parties and calculates
	the billing amount of already allocated capacities to the
	Capacity Responsible Parties.



Role Name	Description
Capacity Responsible Party	A party that has a contract to participate in the Capacity Market to acquire capacity through a Capacity Platform Responsible.
Clearing Responsible	Additional information: Its actions are based on a legally binding agreement, being a contract with the capacity platform or with the Transmission System Operator or another contract. May be a Network User following the definition in the ENTSOG glossary. A party being a Clearing House to settle trades concluded on the Energy Trading platform or trades registered directly at the Clearing House for clearing by means of special rights as single sided or on-behalf nominations.
	Additional information: A Clearing Responsible nominates energy based on concluded transactions on the Energy Trading Platform for the relevant Traders to the relevant Area Coordinator via the Trader's chosen Balance Responsible Party.
Distribution System Operator	A party who carries out the function of distribution and is responsible for operating, ensuring the maintenance of, and, if necessary, developing the distribution 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 of gas (This definition can be found in the Directive 2009/73/EC).
Energy Service Company	A party offering energy-related services to other market roles, but not directly active in the energy value chain or the physical infrastructure itself. The Energy Service Company may provide insight services as well as energy management services.
Energy Trading Platform Responsible	A party that provides a service whereby the offers to sell energy are matched with bids to buy energy. Additional Information:
	This usually is an energy/power exchange or platform
Final customer	A party purchasing gas for its own use. (This definition can be found in the Directive 2009/73/EC).
	Additional information:
	Includes gas consumers and electricity producer. Same as "end-user" in other documents.



Role Name	Description
LNG System Operator	A party who carries out the function of liquefaction of natural gas, or the offloading, and re-gasification of LNG and is responsible for operating a LNG facility. (This definition can be found in the Directive 2009/73/EC).
Market Information Aggregator	A party that provides market related information that has been compiled from the figures supplied by different actors in the market. This information may also be published or distributed for general use.
	Additional information: The Market Information Aggregator may receive information from any market participant that is relevant for publication or distribution. It could be EU regulator, national regulator, ENTSOG as transparency platform responsible, TSO/SSO/LSO's transparency platform, Inside Information Platforms or Registered Reporting Mechanism Users.
Meter Operator	A party responsible for installing, maintaining, testing, certifying and decommissioning physical meters.
Metered Data Responsible	A party responsible for the collection, storing, validation, aggregation and distributing validated metered data. It is also responsible for the history of metered data.
Party Administrator	A party responsible for maintaining party characteristics for the energy sector.
Producer	A party that generates or produces energy.
Production Facility Operator	A party that manages gas production within a production facility.
Reconciliation Responsible	A party that is responsible for reconciling, within a given network, the energy used in the imbalance settlement process for portfolios and the actual metered quantities.
Storage System Operator	A party who carries out the function of storage and is responsible for operating a storage facility. (This definition can be found in the Directive 2009/73/EC).
Supplier	A party who carries out the function of supply (the sale, including resale, of gas to final customers).
System Operator	Parent role: A party that develops, operates, maintains and provides access to gas infrastructure such as transmission
	networks, underground storage, LNG terminals and distribution networks.
Trader	A party that is selling or buying energy.
	Additional information: A Trader can interact on an energy trading platform (virtual or physical).

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Role Name	Description
Transmission System Operator	A party who carries out the function of transmission and is responsible for operating, ensuring the maintenance of, and, if necessary, developing the transmission 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 transport of gas. (This definition can be found in the Directive 2009/73/EC).
	Additional information: Roles which are not related to grid operation are covered elsewhere in the model.
Weather Data Provider	A party that determines the forecasted and validated weather data for a designated area and provides it to the roles that request the information.



1.2 Harmonised role Model - Role Interactions

1.2.1 Allocation Responsible active and passive

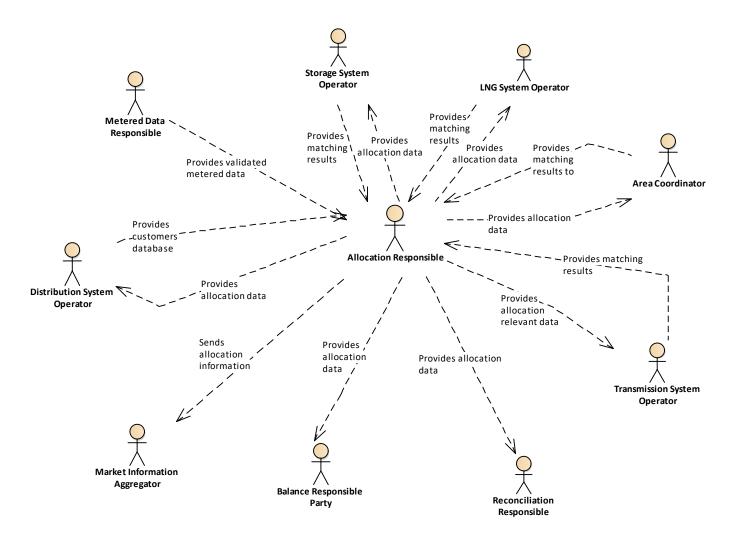


Figure: 1 Allocation Responsible active and passive

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1.2.2 Area Coordinator active and passive

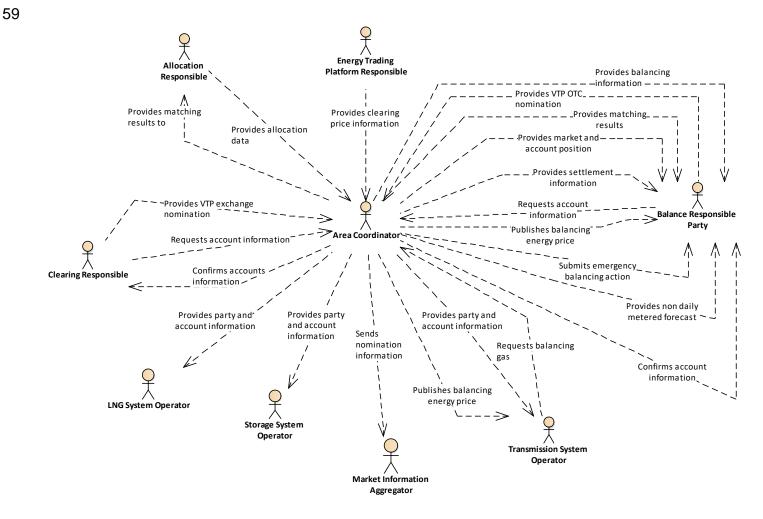


Figure: 2 Area Coordinator active and passive



1.2.3 Balance Responsible Party active

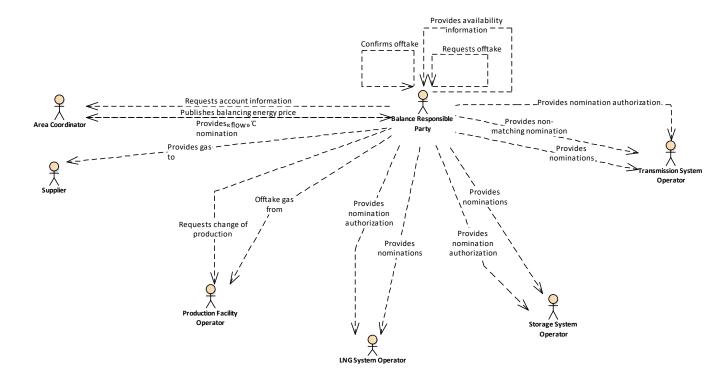


Figure: 3 Balance Responsible Party active



1.2.4 Balance Responsible Party passive

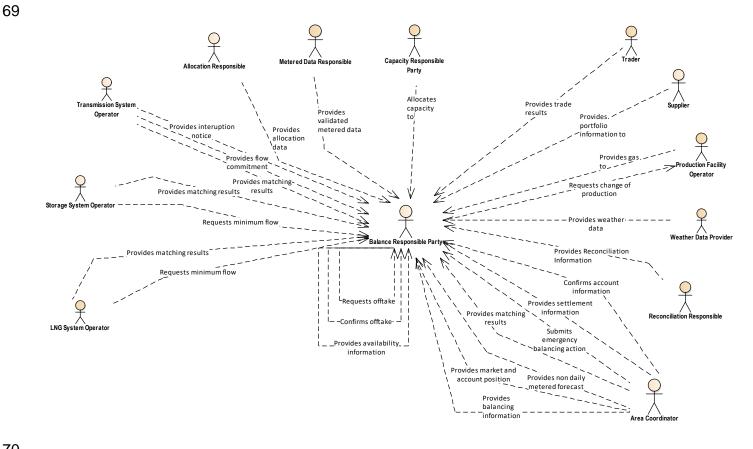


Figure: 4 Balance Responsible Party passive

1.2.5 Capacity Responsible Party active and passive

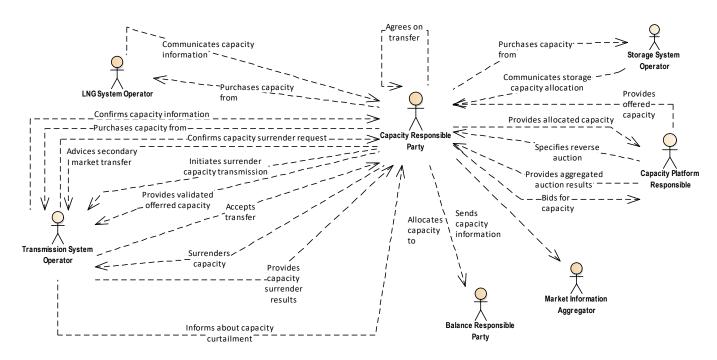


Figure: 5 Capacity Responsible Party active and passive

1.2.6 Capacity Platform Responsible active and passive

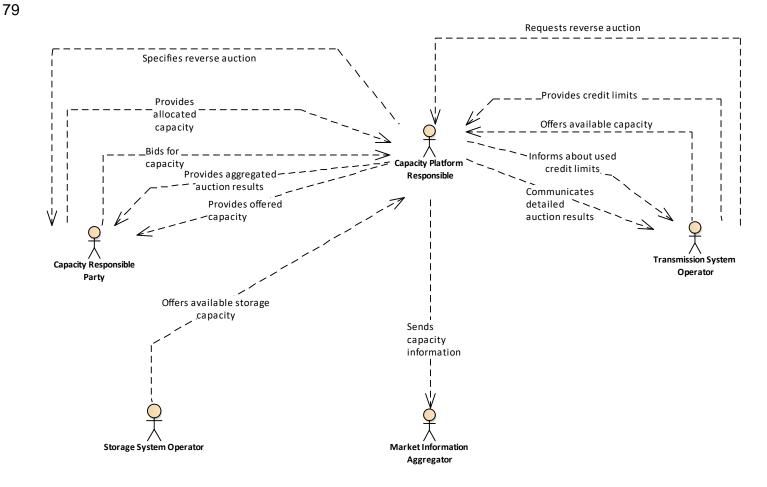


Figure: 6 Capacity Platform Responsible active and passive



1.2.7 Clearing Responsible active and passive

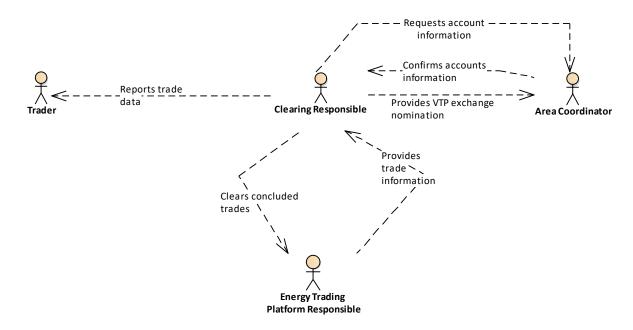


Figure: 7 Clearing Responsible active and passive

1.2.8 Distribution System Operator active and passive

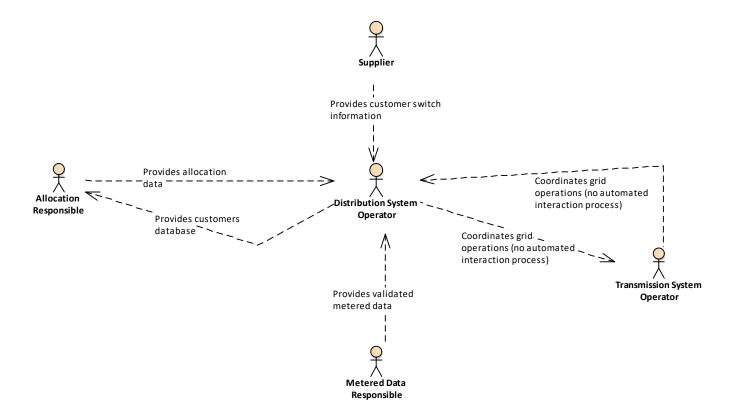


Figure: 8 Distribution System Operator active and passive

1.2.9 Energy Trading Platform Responsible active and passive

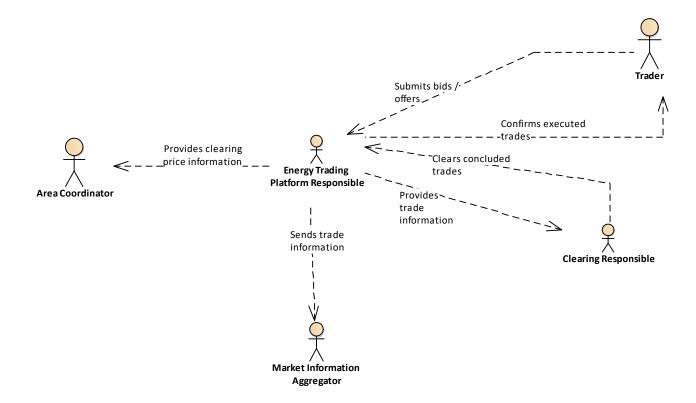


Figure: 9 Energy Trading Platform Responsible active and passive

1.2.10 Final Customer passive

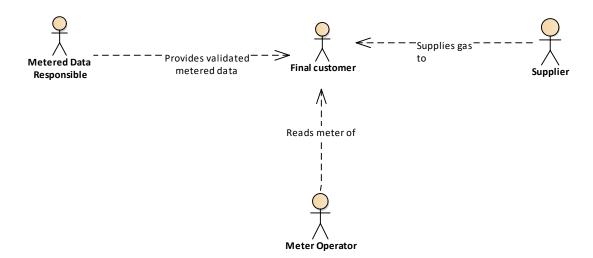


Figure: 10 Final Customer passive

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1.2.11 LNG System Operator active and passive

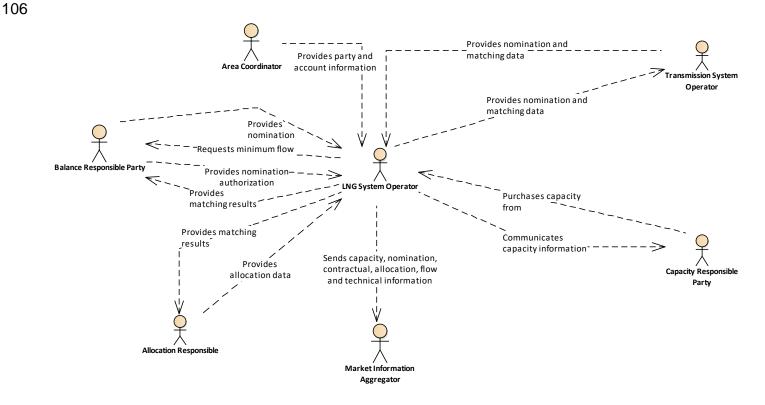


Figure: 11 LNG System Operator active and passive



110 1.2.12 Market Information Aggregator active and passive

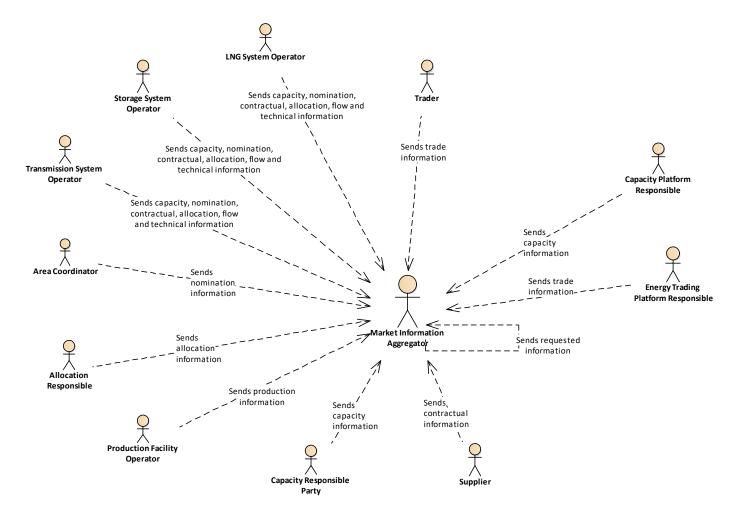


Figure: 12 Market Information Aggregator active and passive



1.2.13 Metered Data Responsible active and passive

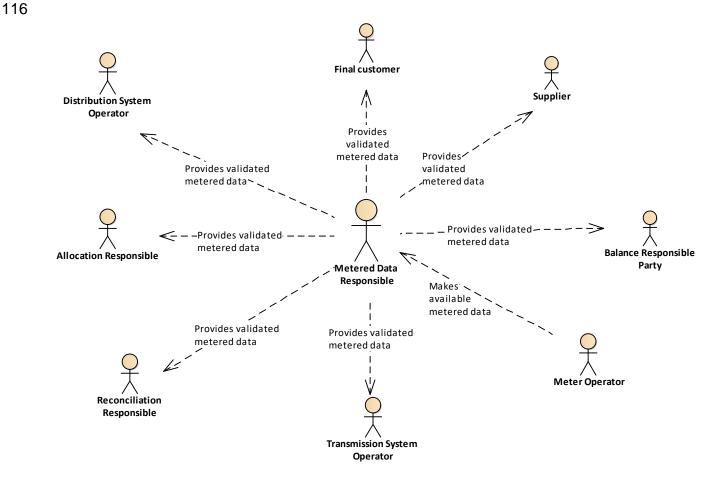
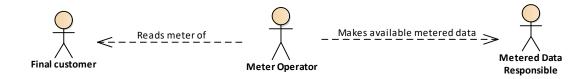


Figure: 13 Metered Data Responsible active and passive



121 **1.2.14 Meter Operator active**

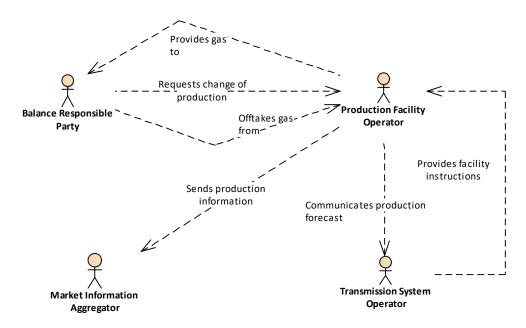


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Figure: 14 Meter Operator active



127 1.2.15 Production Facility Operator active and passive

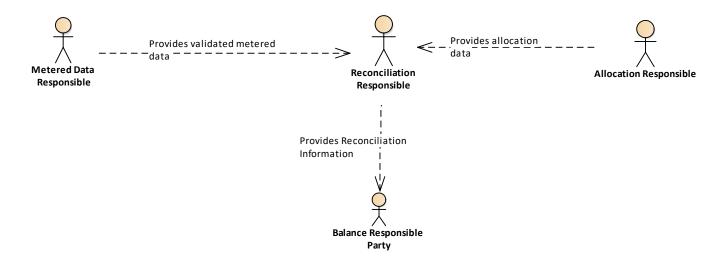


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Figure: 15 Production Facility Operator active and passive



132 1.2.16 Reconciliation Responsible active and passive



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Figure: 16 Reconciliation Responsible active and passive



1.2.17 Storage System Operator active and passive

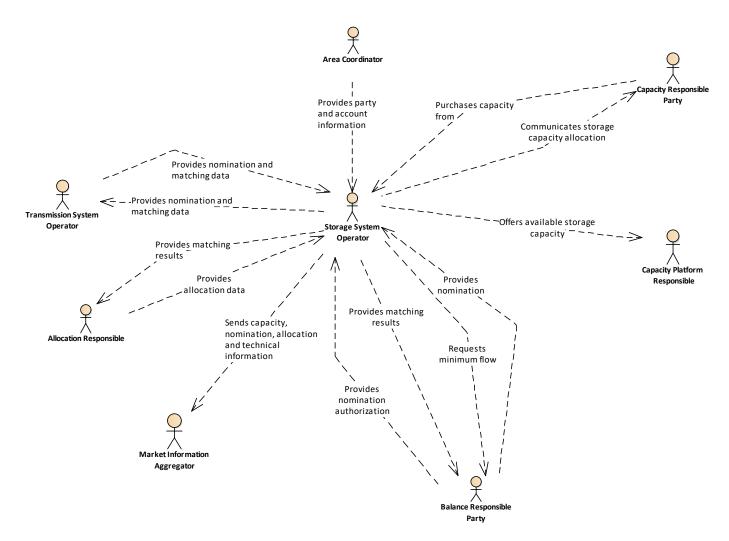


Figure: 17 Storage System Operator active and passive



1.2.18 Supplier active and passive

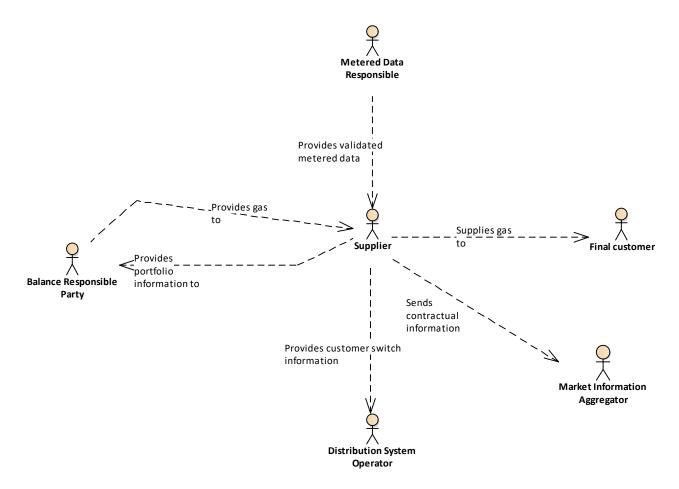


Figure: 18 Supplier active and passive

149 **1.2.19** Trader active and passive

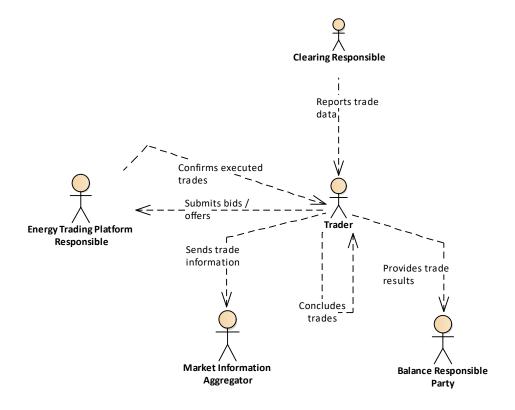


Figure: 19 Trader active and passive



1.2.20 Transmission System Operator active

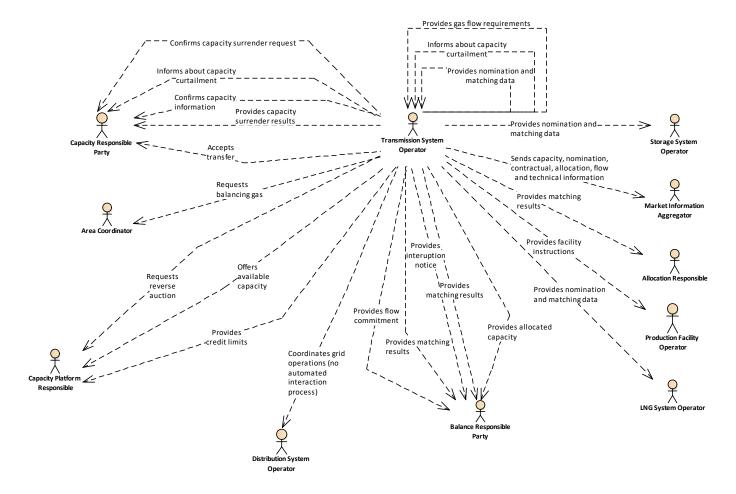


Figure: 20 Transmission System Operator active

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1.2.21 Transmission System Operator passive

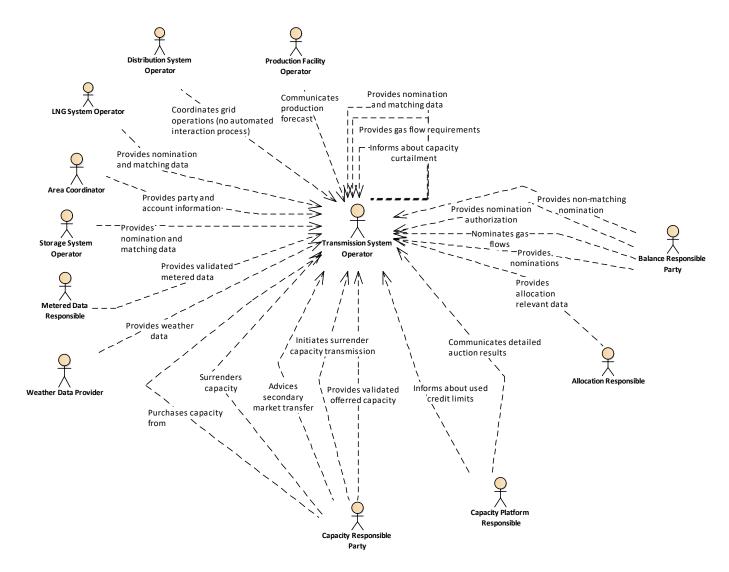


Figure: 21 Transmission System Operator passive

165 1.2.22 Weather Data Provider active

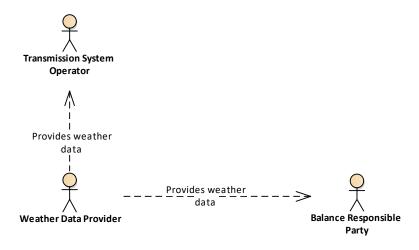


Figure: 22 Weather Data Provider active

172 1.2.23 Role generalisations

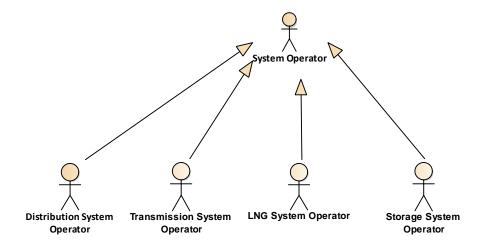


Figure: 23 Role generalisations

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2.1 Overview of the roles in the model

The overview provides a perspective of the role model making use of only one interaction between each pair of roles in order to avoid clutter in the diagram. The interaction chosen may not necessarily be significant to some but the objective is simply to place the roles in the diagram.

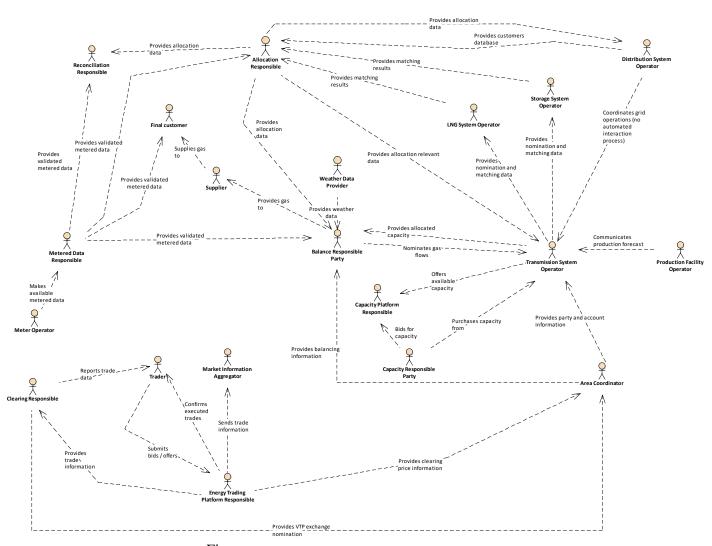


Figure: 24 Overview of the roles in the model

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2.2 Business Process Interactions

The following business processes are covered by the Gas Role Model:

- Capacity Allocation Process
- Gas Trading Process
 - o Exchange Gas Trading Process
 - o OTC Gas Trading Process
- Nomination and Matching Process
- Balancing and Settlement Process
- o Metering Process

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- o Allocation Process
- o Balancing Process
- o Settlement Process
- REMIT and Transparency Process

2.2.1 Capacity Allocation Process

The Capacity Allocation Process is necessary for the implementation of a transparent and non-discriminatory system of access to and allocation of gas networks transmission capacities for all Capacity Responsible Parties.

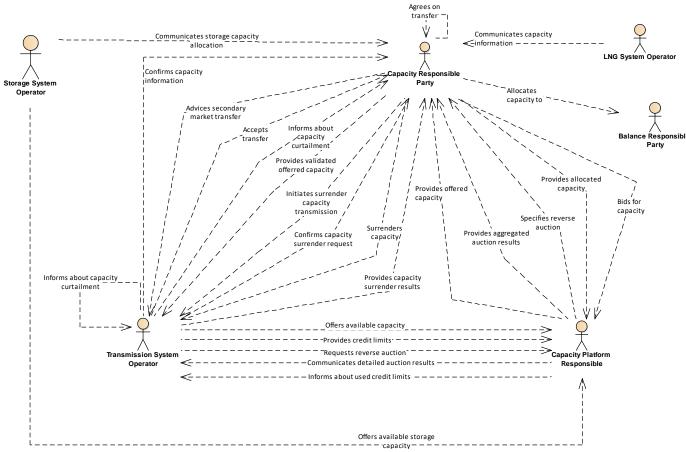


Figure: 25 Capacity Allocation Process

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2.2.2 Exchange Gas Trading Process

The Exchange Gas Trading Process takes place at an energy trading platform where a Trader from party A offers a quantity of gas with a certain price for a specific delivery time and a Trader from another party B agrees to the offer. The offer and agreement lead to a trade which is executed by the Clearing Responsible Party of the Energy Trading Platform Responsible. This nomination to the virtual trading point of the Area Coordinator is done single sided (see Nomination & Matching process). The Balance Responsible Parties of party A and B will balance their portfolios in line with the traded quantities. Area Coordinators may use the process for Area Balancing purposes.

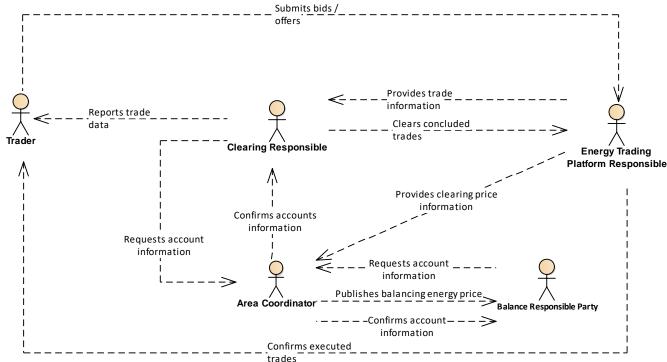


Figure: 26 Exchange Gas Trading Process

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2.2.3 OTC Gas Trading Process

In the OTC Gas Trading Process Balance Responsible Parties provide availability and offtake information for buying or selling gas based on bilateral contracts. These gas quantities will be used to balance the portfolio of the Balance Responsible Party. To be able to operate gas trading contracts, Balance Responsible Parties receive input from Traders, Suppliers and Capacity Responsible Parties.

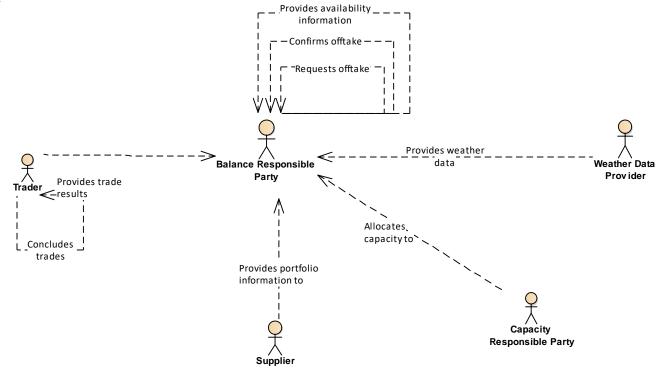


Figure: 27 OTC Gas Trading Process

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2.2.4 Nomination And Matching Process

The Nomination and Matching Process consists of two steps:

- 1. A nomination is the prior reporting by the Balance Responsible Party to the System Operator of the actual flow that the Balance Responsible Party wishes to inject into or withdraw from the system. Additionally, a nomination to the virtual trading point is done by the Balance Responsible Party to the Area Coordinator to indicate the traded quantities.
- Matching is the process of comparing and aligning processed quantities of gas for Balance Responsible Parties at both sides of a connection point between systems, which results in confirmed quantities for the Balance Responsible Parties. The matching on the virtual trading point confirms the traded quantities.

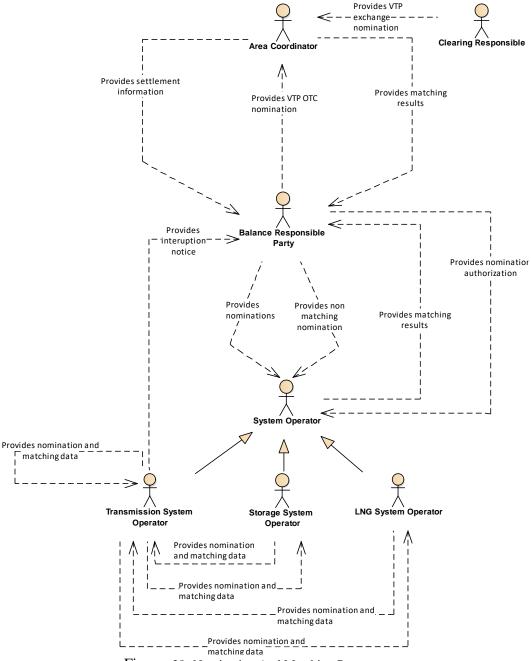


Figure: 28 Nomination And Matching Process

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2.2.5 Metering Process

The Metering Process describes the interactions necessary to obtain connection point metering information, compiling the information and providing it to all interested parties.

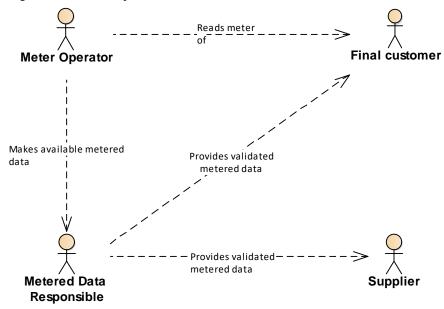


Figure: 29 Metering Process

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2.2.6 Allocation Process

The Allocation Process is carried out by an Allocation Responsible and consists in attributing amounts of energy to Balancing Responsible Parties at a connection point based on confirmed nominations' quantities, metering data and the agreed allocation rule. The allocation information is provided to all concerned parties. Provisional allocations are based on non-validated metering or replacement data. Final allocations are based on validated metering data.

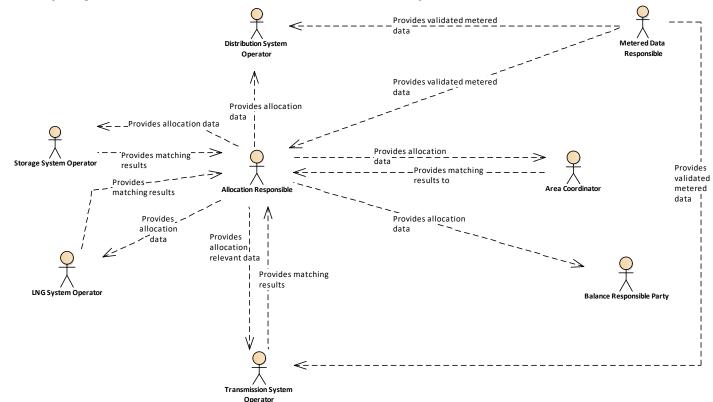


Figure: 30 Allocation Process

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2.2.7 Balancing Process

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In a balancing area the Balancing Process applies the rules for Balancing Responsible Parties to balance their portfolio, for Area Coordinators to inform Balance Responsible Parties about their portfolio imbalance and for Area Coordinators to undertake balancing actions to keep the balancing area within its operational limits. The portfolio imbalance is calculated based on allocation data for connection points and concluded trades on the virtual trading point.

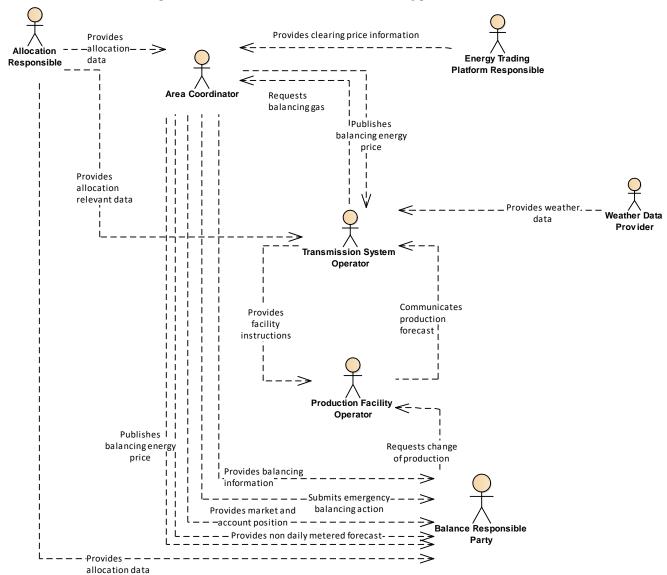


Figure: 31 Balancing Process

2.2.8 Settlement Process

The Settlement Process is carried out to settle balancing actions and daily imbalance charges, to settle the difference between provisional and final allocations and also to settle reconciliation that would be necessary between the allocations and actual consumption subsequently derived from Final Customer meter readings when obtained. The Settlement Process includes the information flows between parties to perform such settlements.

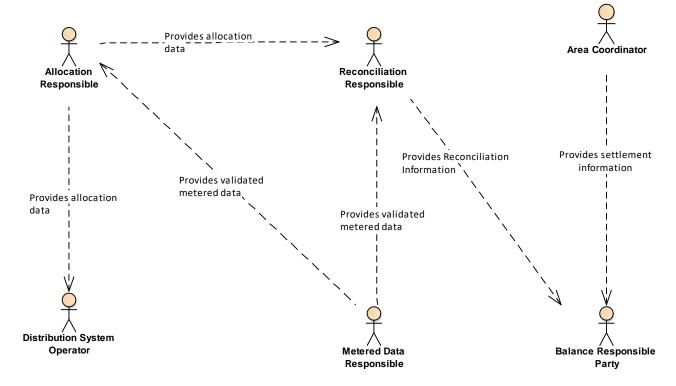


Figure: 32 Settlement Process

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2.2.9 REMIT and Transparency Process

This process defines the interactions between Transmission, LNG and Storage System Operators and the Transparency platform for the transmission of the supply and demand information, based on nominations, forecasts and realised flows in and out of the system as well as the gas contained in LNG and storage facilities in addition to available storage that is required for publication in order to ensure market transparency under Regulation (EC) 715/2009 ('Regulation 715').

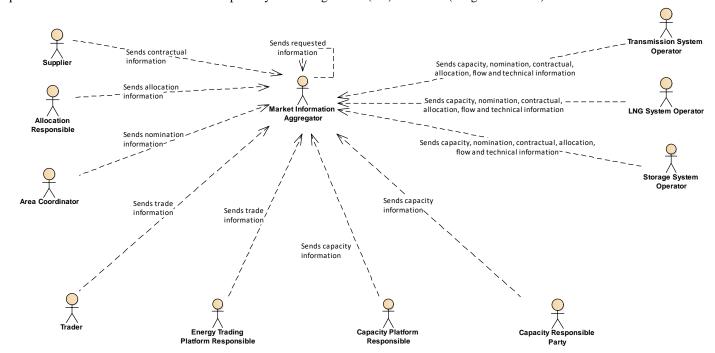


Figure: 33 REMIT and Transparency Process

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3 Document Change Log

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VERSION	MODIFICATION
2016-10-11 Prerelease 1.0	First release of the Harmonised Gas Role Model after
	approval.
2016-11-01 Prerelease 1.1	Correction of additional interactions in figure 4
	Correction of missing interactions in figures 13, 19
	 Correction of naming in figures 13, 19
	Correction of definition Clearing Responsible
2017-06-15 Prerelease 2.0	Draft release of the Harmonised Gas Role Model from a
	business process perspective.
2017-07-13 Prerelease 2.1	Approved release of the Harmonised Gas Role Model
	from a business process perspective.
2017-08-25 Draft 01	Role perspective diagrams included
	 Breakdown of Settlement which includes Metering,
	Allocation and Balancing
	Name change from "Transparency" to "REMIT and"
	Transparency"
	Include generic role "System Operator" in overview
	 Nomination and Matching and REMIT and
	Transparency
	Definition of System Operator added
2017-10-11 Draft 02	Added bullet point with CBPs in chapter 1.1
	 Renamed role PSO to PFO – Production Facility
	Operator
	Reworked generalizations diagram
	Renamed chapter 7.1 to Capacity Allocation
	• Divided Gas Trading into 2 sub divisions "Exchange
	Gas Trading" and "OTC Gas Trading"
	Renamed chapter 7.4 to Balancing and Settlement
	• Created 4 sub divisions – Metering, Allocation,
	Balancing, Settlement)
2017-12-18 Draft 03	Added/Modified definitions for all business processes
	Modified definition Trader
	Added interaction AC->BRP
	Added interaction Trader->Trader
	Added interaction TSO->PFO
2018-01-30 Draft 04	Introduction of the role Weather Data Provider
	Impact on the processes:
	OTC gas trading
	Allocation
	Balancing
2018-05-30 Stable Release V01	Modified business process names
	Modified business process definitions
	 Process Capacity Allocation: Removed 2 interactions,

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VERSION	MODIFICATION
	 added interaction Ensured naming coherence in processes Allocation, Balancing and Settlement Added loop interaction for role Market Information Aggregator Modified definition for role Market Information Aggregator
2019-07-26 V01 Draft A	 Add information for SSO to CRP Communicates storage capacity allocation in all related diagrams. Delete information flow SSO to CPR Communicates storage capacity allocation in all related diagrams. BEPR to AC change the information flow direction to AC to BERP in all related diagrams.
2020-01-31	Changes implemented to harmonise with the release of Edig@s version 6.
2022-03-03	 Harmonisation with electricity role model. Updates of role definitions and interactions: Deprecated role Balancing Energy Price Responsible Changed definitions for BRP, CPR, CRP, CR, ETPR, MIA, MDR, Trader according to the document Created new roles: Energy Service Company, Party Administrator, Producer