VADEMECUM

TO THE ITALIAN POWER EXCHANGE

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Introduction

About GME

"Gestore dei Mercati energetici S.p.A." (GME) is the company in charge of organising and managing the Electricity Market, the Natural Gas Market, the Environmental Markets, and the Fuels Market in Italy, under principles of neutrality, transparency, objectivity, and competitiveness.
GME is wholly owned by the company "Gestore dei Servizi energetici - GSE S.p.A." (GSE), which is in turn wholly owned by the Ministry of Economy and Finance. GSE has also full control of the companies "Acquirente unico S.p.A." (AU) and "Ricerca sul Sistema Energetico S.p.A. (RSE).
GME was established in the wider context of the electricity sector liberalisation process, started in 1999. Its mission is to favour the development of a competitive national power system.

GME has so far been one of the main reference entities of the energy sector, acting in support of the relevant institutions (Ministry of Environment and Energy Security, Ministry of Economy and Finance, "Autorità di Regolamentazione per Energia, Reti e Ambiente" - ARERA, Regulatory Authority for Energy, Networks and Environment -, etc.).

GME is a multi-commodity company operating in accordance with the guidelines given by the Ministry of Environment and Energy Security and with the regulatory provisions issued by ARERA. In this framework, GME organises and manages the electricity markets, consisting of: i) "Mercato a Pronti dell'Energia" (Spot Electricity Market - MPE), including "Mercato del Giorno Prima" (Day-Ahead Market - MGP), "Mercato Infragiornaliero" (Intra-Day Market - MI), "Mercato per il Bilanciamento e il Ridispacciamento" (Balancing and Redispatching Market/Integrated Scheduling Process), and "Mercato per la negoziazione di prodotti giornalieri" (Daily Products Market – MPEG); and ii) "Mercato a Termine dell'Energia con obbligo di consegna fisica dell'energia" (Forward Electricity Market with physical delivery obligation - MTE). The Power exchange - a fundamental instrument for developing a competitive electricity market in Italy - favours the setting of efficient market clearing prices, which enable participants, producers. and wholesalers to sell and buy electricity in the most transparent, secure, and cost-effective ways. Indeed, GME fulfils its responsibilities under principles of neutrality, transparency, objectivity, and competitiveness, in accordance with the Decree establishing it.

Since 2007, GME has also managed the "Piattaforma dei Conti Energia a Termine" (Forward Account Registration Platform - PCE). On this platform, parties trading electricity bilaterally off the MPE and, in particular, in the MTE or on an over-the-counter (OTC) basis register their commercial obligations and the related forward account (CET) bids/offers for injection and withdrawal.

The national markets (Day- Ahead Market, Intra-Day Market) are integrated with other European electricity markets through two initiatives introduced as part of Commission Regulation (EU) 2015/1222 on capacity allocation and congestion management (CACM), which established a Target Model for the integration of EU day-ahead and intraday electricity markets. In this connection, GME was designated as Nominated Electricity Market Operator (NEMO for Italy, under arts. 4, 5, and 6 of the CACM Regulation, for the development and management of the Single Day-Ahead Coupling (SDAC) and of the Single Intraday Coupling (SIDC), together with the NEMOs and Transmission System Operators (TSOs) of EU Member States.

Through the coordination between GME and the other NEMOs, Italian participants (producers and buyers) in GME's Electricity Market have automatic access, through GME itself, to other European markets and can thus freely trade electricity with other participants, within the limits of transmission capacities on the grid, at no extra cost, and under conditions of complete transparency and equal treatment.

Moreover, under art. 28, para. 1 of Legislative Decree no. 199 of 8 November 2021, GME organises and manages "Bacheca PPA" (PPA Bulletin Board) having the purpose of bringing together parties potentially interested in entering into long-term agreements for purchase and sale of electricity from renewable energy sources, and of enabling them to fulfil their obligation to register the agreements concluded.
Finally, GME organises and manages "Mercato locale della flessibilità" (Local Flexibility Market – MLF), where Distribution System Operators (DSOs) may procure the local ancillary services made available by Balance Service Providers (BSPs) through the distributed resources that they have, in compliance with the pilot projects established under ARERA Resolution 352/2021/R/eel of 3 August 2021.

GME also participates in the implementation of environmental policies, by organising and managing environmental markets, i.e. venues for trading energy efficiency certificates (white certificates) - consisting of "Mercato dei titoli di efficienza energetica" (Energy Efficiency Certificates Market - MTEE) and "Registro dei Titoli di Efficienza Energetica" (Energy Efficiency Certificates Register) -, platforms for trading Guarantees of Origin (P-GO) - consisting of "Mercato delle Garanzie d'Origine" (Guarantees of Origin Market – M-GO), "Piattaforma per la registrazione degli scambi bilaterali delle garanzie d'origine" (Platform for registration of bilaterals of Guarantees of Origin – PB-GO), and "Bacheca GO" (GO Bulletin Board) -, and "Mercato dei Certificati di Immissione in Consumo di biocaruranti" (Markets for certificates of release to consumption of biofuels – MCIC).

Moreover, Law no. 99 of 23 July 2009 vested GME with the economic management of "Mercato del Gas Naturale" (Natural Gas Market) under art. 30, para. 1, and with the management of the services associated with gas sales/purchases under art. 30, para. 2.

Since 10 May 2010, GME has run "Piattaforma per la negoziazione del gas naturale" (Platform for the trading of natural gas bids/offers - P-GAS), as subsequently changed and integrated. The P-GAS consists of three segments:

- the Imports' Segment, where importers of gas produced by countries not belonging to the European Union may comply with their obligation to bid quotas of imported gas;
- the Royalties' Segment, where holders of leases for exploitation of gas fields sell royalties owed to the State;
- the Segment as per Legislative Decree 130/10, on which investors participating in the Virtual Storage system may comply with the obligation to bid the gas quantities that their associated virtual storage operators make available to them in the winter period.

Since 10 December 2010, GME has also organised and managed "Mercato del gas naturale a pronti" (Spot Gas Market - MGAS), where parties authorised to carry out transactions at "Punto di Scambio Virtuale" (PSV – virtual trading point) may buy and sell volumes of natural gas.

Additionally, art. 32 of Legislative Decree no. 93 of 1 July 2011 established that GME would take over the management of physical forward gas markets.

Finally, pursuant to Annex A to ARERA Resolution 660/2017/R/Gas (Integrated text of provisions on guarantees of free access to the liquefied natural gas regasification service – TIRG), GME organises and manages **"Piattaforma di assegnazione della capacità di rigassificazione"** (Platform for the Allocation of Regasification Capacity - PAR).

GME was also vested with activities in the fuel sector. Under Legislative Decree no. 249 of 31 December 2012, GME organises and manages **"Piattaforma di mercato per l'offerta dei servizi della logistica petrolifera di oli minerali"** (Trading Platform for Mineral-Oil Logistics Services – P-LOGISTICS).

Always in the fuel sector, GME also organises and manages **"Piattaforma di Rilevazione della Capacità di Stoccaggio e di Transito di Oli Minerali"** (Mineral-Oil Storage and Transit Capacity Data Reporting Platform - PDC-oil). On this platform, the *obliged* parties referred to in art. 21, para. 2 of Legislative Decree no. 249 of 31 December 2012, and in art. 2, para. 1 of Ministerial Decree no. 17433 of 5 July 2017, fulfil their obligation to report yearly and monthly data about mineral-oil storage and transit capacities.

GME plays a specific role in market monitoring in support of ARERA. This role, which originated from ARERA Resolution no. 115/2008 (specific provisions concerning electricity market monitoring in Italy), was subsequently strengthened by Regulation (EU) No 1227/2011 on wholesale energy market integrity and transparency (REMIT).

About the Electricity Market

The Electricity Market was created in Italy as a result of the approval of Legislative Decree 79/99. This decree, which marked the beginning of the structural reform of the Italian electricity sector, responded to the following needs:

- promoting competition in the activities of electricity generation and wholesale through the creation of a "marketplace";
- maximising transparency and efficiency in the naturally monopolistic activity of dispatching.

The Electricity Market is an electronic venue for the trading of wholesale electricity, where the electricity price corresponds to the market clearing price resulting from the intersection between the volumes of electricity demanded and offered by its participants.

It is a real physical market, where the commercial positions of injection[1] and withdrawal[2] of electricity into and from the grid are defined under the economic merit-order criterion[3]. The Italian Power exchange is a voluntary market: purchase and sale contracts may also be concluded off the exchange platform, i.e. bilaterally or over the counter (OTC).

[1]The commercial position of injection in respect of a portfolio and for each Imbalance Settlement Period (ISP) represents the volumes of electricity to which the Dispatching Rules apply.

[2] The commercial position of withdrawal in respect of a portfolio and for each ISP represents the volumes of electricity to which the Dispatching Rules apply.

[3] Under the economic merit-order criterion, supply offers are ranked in increasing price order and demand bids are ranked in decreasing price order.

Regulatory Framework

The Electricity Market arose in Italy from Legislative Decree no. 79 of 16 March 1999 (Legislative Decree 79/99) as part of the process of transposition of Directive 96/92/EC concerning common rules for the internal market in electricity.

Trading on IPEX (first stage of the market) began on 1 April 2004. On 1 January 2005, the market was opened to full demand-side participation with a view to enabling interested parties to purchase electricity on the power exchange, subject to the obligation of scheduling their withdrawal profile on an hourly basis.

On 1 November 2009, GME launched its **"Mercato a Termine dell'energia Elettrica"** (Forward Electricity Market - MTE) to allow the trading of electricity over longer timescales than the daily ones offered by the traditional market.

Under art. 17 of Annex A to AEEG's Decision 111/06, as updated by ARERA Resolution 345/2023/R/eel, as subsequently amended and supplemented, GME also manages **"Piattaforma dei Conti Energia a Termine"** (Forward Account Registration Platform - PCE) for registering forward electricity sale and purchase contracts that have been concluded off the bidding system, as well the related CET bids/offers for injection and withdrawal implementing such contracts.

The Italian Electricity Market is governed by the following Community and national legislation and regulations:
- **Law no. 481 of 14 November 1995** establishing "Autorità per l'energia elettrica e il gas" (AEEG, now ARERA), which has the mission of regulating and monitoring the electricity and gas sectors.
- **Legislative Decree 79/99 of 16 March 1999** implementing Directive 96/92/EC concerning common rules for the internal market in electricity: in particular, art. 5 of the decree entrusts GME with the economic management and organisation of the Electricity Market under principles of neutrality, transparency, objectivity and competitiveness among or between producers.
- **"Testo Integrato della Disciplina del Mercato Elettrico"** (Integrated Text of the Electricity Market Rules or ME Rules) laying down rules governing the operation of the Electricity Market (under art. 5 of Legislative Decree no. 79 of 16 March 1999).
- **Decree of the Minister of Productive Activities of 19 December 2003,** approving the ME Rules (GME's takeover of responsibilities for the Electricity Market), as subsequently amended and supplemented.
- **"Disposizioni Tecniche di Funzionamento"** (DTF – Technical Rules), the implementing and procedural provisions of the ME Rules, posted on GME's website (www.mercatoelettrico.org).
- **Law 239/2004 of 23 August 2004**, reorganising the energy sector and enabling the Government to revise the applicable legislation on energy matters; this law reorganises the energy sector as a whole and defines, among others, general energy policy objectives, e.g. guarantee of security, flexibility, and continuity of energy supplies and promotion of the unitary operation of energy markets.
- **AEEG's Decision 111/06** (as subsequently amended and supplemented), establishing - with effect from 1 April 2007 - a procedure for registering forward electricity purchase/sale contracts, based on a "sistema per conti di energia" (forward account system), i.e. the Forward Account Registration Platform (PCE).
- **Law-Decree no. 73 of 18 June 2007** (converted into Law no. 125 of 3 August 2007) concerning urgent measures for implementing Community legislation on liberalisation of energy markets and, in particular, art. 1, paras. 2 and 4 on the "servizio di tutela" (standard-offer service) and the "servizio di salvaguardia" (last-resort service).

- **AEEG's Decision ARG/elt 115/08 of 5 August 2008**, as subsequently amended and supplemented: consolidated text of rules on the monitoring of the wholesale electricity market and of the Ancillary Services Market ("TIMM"). With this decision, AEEG introduced a new procedure for the activities to be conducted by Terna, GME, and GSE in support of its own monitoring activities.

- **AEEG's Decision ARG/elt 203/08**, laying down provisions on GME's markets (with effect from 1 January 2009). These provisions include, among others, the option - also for consuming units - to participate in the Adjustment Market (now Intra-Day Market) and the concurrent abolition of "Piattaforma di Aggiustamento Bilaterale per la Domanda" (Demand-Side Bilaterals Adjustment Platform - PAB).

- **Law no. 2 of 28 January 2009** amending Law-Decree no. 185 of 29 November 2008 and converting it into law; this law concerns urgent measures for supporting families, work, employment, and companies and for redesigning the national strategic framework to combat the crisis. Among the principles stated in this law, those that directly involve the activities of GME, as the entity in charge of the economic management of the Electricity Market under art. 5 of Legislative Decree 79/99, are: i) creation of an Intra-Day Market (MI), replacing the Adjustment Market (MA); ii) reduction of the period during which GME must hold the data about supply offers/demand bids confidential from twelve months to a maximum of seven days; iii) reform of the Ancillary Services Market (MSD); iv) functional integration of the Intra-Day Market (MI) with the Ancillary Services Market (MSD), as well as development of physical and financial forward markets.

- **Decree of the Minister of Economic Development of 29 April 2009** giving guidelines for the reform of the ME Rules, under art. 3, para. 10, Law no. 2 of 28 January 2009 (impetus to the evolution of regulated forward markets and strengthening of Electricity Market monitoring tasks).

- **Law no. 99 of 23 July 2009** concerning provisions on development and internationalisation of companies, as well as on energy matters. Among the principles stated in this law, those that directly involve the activities of GME, as the entity in charge of the economic management of the Electricity Market under art. 5 of Legislative Decree 79/99, provide that: *the guarantees that cover the obligations acquired by participants in the markets organised and managed by GME, in whatever form, shall not be diverted from their intended use or subject to ordinary, interim, or precautionary actions by the creditors of the individual participants or of GME, even in case of opening of insolvency procedures. The guaranteed amount shall not be subject to set-off (whether by operation of law, judicial or voluntary). GME shall determine the procedures and time limits for redemption of the posted guarantees, as well as the time upon which the contracts concluded in the markets, the clearing, and the consequent payments shall become binding between participants in the markets organised and managed by GME and, in the case of opening of an insolvency procedure against a participant, enforceable vis-à-vis third parties, including the bodies in charge of the same procedure. No actions, including actions for invalidity, shall prejudice the above-mentioned definitivity.*

- **Regulation (EU) No 1227/2011** of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency, as subsequently amended and supplemented, among others, by Regulation (EU) 2004/1106.

- **Commission Regulation (EU) 2015/1222** of 24 July 2015 establishing a guideline on capacity allocation and congestion management (CACM Regulation).

- **Regulation (EU) 2024/1747** of the European Parliament and of the Council of 13 June 2024 amending Regulations (EU) 2019/942 and (EU) 2019/943 as regards improving the Union's electricity market design.

- **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.

- **Legislative Decree no. 210 of 8 November 2021** implementing 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, and concerning provisions on the revision of national legislation to comply with Regulation (EU) 2019/941 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC, as amended and converted into Law no. 11 of 2 February 2024.

– **ARERA Resolution 247/2023 of 6 June 2023** concerning the start of activities necessary to implement an electricity storage capacity allocation platform in compliance with Legislative Decree 210/2021.
– **ARERA Resolution 345/2023/R/eel of 25 July 2023** approving "Testo Integrato del Dispacciamento Elettrico" (Integrated Text of the Electricity Dispatching Rules – TIDE), which repealed and replaced AEEG's Decision 111/06, as subsequently amended and supplemented.
– **Decree of 18 April 2024** issued by the Minister of Environment and Energy Security and implementing the provisions of art. 13 of Legislative Decree 210/2021.
– **ARERA Resolution 304/2024/R/eel of 23 July 2024** concerning the replacement of "Prezzo Unico Nazionale" (national single price – PUN) and amendments to the Integrated Text of the Electricity Dispatching Rules (TIDE) in view of its entry into force on 1 January 2025.

1. ORGANISATION OF THE POWER SYSTEM

The national power system is an organised grid system. In an open-market context, the typical activities of this system are carried out by separate entities. These activities are: electricity generation, transmission, distribution, and sale to final customers.

Electricity generation takes place by using fossil or renewable energy sources, within a free market framework: primary energy sources are converted into electricity, which is then transmitted to consuming zones through a grid system consisting of lines, substations, and transforming stations.

Electricity transmission is a regulated activity: electricity generated by generating zones throughout the country (or imported from other countries) is transferred to consuming zones. The grid operates as a system of communicating vessels, into which all the injected electricity is withdrawn, without the possibility of determining the plant or installation from which the electricity that is consumed originates. The last stage of the cycle of the national power system is distribution - also a regulated activity - i.e. the delivery of electricity at medium and low voltage to users.

1.1. ENTITIES OF THE POWER SYSTEM

In addition to Parliament and Government, the main entities that contribute to the functioning of the power system - each with a specific role explicitly defined by the applicable legislation - are: i) the Ministry of Environment and Energy Security (MASE), which defines, among others, the strategic and operational guidelines for security and cost-effectiveness of the national power system; ii) the Regulatory Authority for Energy, Networks and Environment (ARERA), which guarantees the promotion of competition and efficiency in the electricity and gas sectors and has regulating and monitoring tasks; iii) Terna S.p.A., which manages the national transmission grid under security conditions, and the power flows thereon through its dispatching activity, i.e. by balancing supply and demand of electricity for 365 days a year and 96 quarter-hours a day; iv) Gestore dei Servizi energetici (GSE), the public holding company that promotes the development of renewables by managing support schemes and granting the related incentives; v) Acquirente Unico (AU), which is vested, among others, with the task of procuring wholesale electricity at centralised level and then assigning it to suppliers of the electricity service to vulnerable customers; and vi) GME, which organises and manages the Electricity Market under principles of neutrality, transparency, objectivity, and competitiveness among or between producers.

1.2. TECHNICAL CONSTRAINTS OF THE POWER SYSTEM

In the national power grid system, the activities of transmission and dispatching are subject to very strict technical constraints, such as:

- the need for instantaneously and continuously balancing the volumes of electricity injected into the grid and those withdrawn from the grid, taking into account transmission and distribution losses;
- the need for keeping electricity frequency and voltage on the grid within a very narrow range, so as to protect the security of installations;
- the need for ensuring that the power flows on each line do not exceed the maximum admissible transmission capacity (transmission or transit limits) of the same line.

Even minimum deviations from any of the above parameters for more than a few seconds may rapidly trigger critical conditions in the power system. Satisfying these constraints is further complicated by the characteristics of the technologies and procedures through which electricity is generated, transmitted, and consumed.

In particular, the difficulties arise from three factors:

- variable and non-rationable demand: demand on the grid has high variability in the short term (on a quarter-hourly basis) and in the medium term (on an hourly, weekly, and seasonal basis); to reduce the variability and non-rationability

of demand, local flexibility markets are being developed, as part of Demand Side Response, for procuring the local ancillary services that are necessary or useful to operate the distribution grid in an efficient and secure way. Participants are selected under market mechanisms with a view to increasing or decreasing their generation or consumption levels, respectively, and solving distribution grid congestions. The future goal will be the integration of this type of pilot projects into electricity markets, so that these services may help solve congestions also on transmission grids.

- no storage of electricity and dynamic constraints on the real-time adjustment of supply: in the past few years, the increasing deployment of systems generating electricity from "Fonti Rinnovabili non Programmabili" (non-schedulable renewable energy sources – FRNP) has had an impact on dispatching processes and on the secure operation of the power system. Indeed, electricity may be generated even in hours in which it is not needed, with a consequent increase in congestions; additionally, and the siting of FRNP systems is often not coordinated with the availability of transmission capacity. In this regard, it is worth mentioning that a mechanism for electricity storage capacity procurement is being implemented within the EU regulatory framework, i.e. Regulation (EU) 2024/1747, transposed into the Italian legislation under Legislative Decree 210/21. This regulation introduces into the Italian electricity market design a new system for long-term procurement of electricity storage capacity to be added to energy, ancillary services, and capacity markets, in order to ensure to the Italian power system an adequate amount of electricity storage capacity and to enable it to achieve its decarbonisation and security targets.
- grid externalities: after being injected into the grid, electricity flows through all the available lines, like in a system of communicating vessels, under complex physical laws that depend on the equilibrium between injections and withdrawals; hence, the path of electricity is not traceable and, if a local imbalance is not promptly redressed, it will propagate to the overall grid inducing voltage and frequency variations.

1.3. MANAGEMENT OF THE POWER SYSTEM

The high complexity of the power system and the coordination needed to guarantee its operation make it imperative to identify a central coordinating entity, in charge of monitoring and controlling all the installations making part of the system. This entity, known as dispatching or control centre[4], represents the core of the power system and has the task of guaranteeing the continuity and quality of the service under maximum security conditions. This centre ensures that generation matches consumption at any time and that frequency and voltage do not deviate from optimum values, while satisfying transmission limits on grids and dynamic constraints on power plants. Therefore, the control centre balances the system in real time (the so-called "balancing"). Automatic systems for controlling generating units (the so-called "primary and secondary reserve") ensure the necessary equilibrium between injections and withdrawals at any time and at any node of the grid, by increasing or decreasing injections into the grid so as to offset any imbalance thereon. The control centre takes direct action - by sending switching-on, generating capacity increase or decrease commands to tertiary-reserve units - only when the operating margins of automatic control systems fall below and must be brought back to security standards.

The party responsible for the operation, maintenance, and development of the national high- and extra-high voltage grid, as well as of dispatching, is TERNA.

[4] Dispatching is the activity aimed at giving instructions for coordinated utilisation and operation of power plants, of the transmission grid, and of ancillary services.

2. OPERATION OF THE ELECTRICITY MARKET

2.1. ASPECTS RELEVANT FOR THE POWER SYSTEM

Electricity Markets

GME is responsible for organising and managing the Electricity Market, where electricity trading is aimed at defining the commercial positions of injection and withdrawal portfolios. Unlike other European energy markets, GME's market is not a merely financial market, where prices and volumes only are determined, but a real physical market, where commercial positions and injection and withdrawal nominations are defined.

Balancing and Redispatching Market (MSD)

This market represents the set of activities that Terna carries out to select bids/offers, submitted into the Integrated Scheduling Process for the balancing and redispatching service, on the day ahead of or on the same day as the one to which such bids/offers refer.

In this market, organised by GME, bids/offers are collected and results concerning bid/offer acceptance are notified. The reserve is possibly used by Terna in real time for balancing purposes.

Market Zones

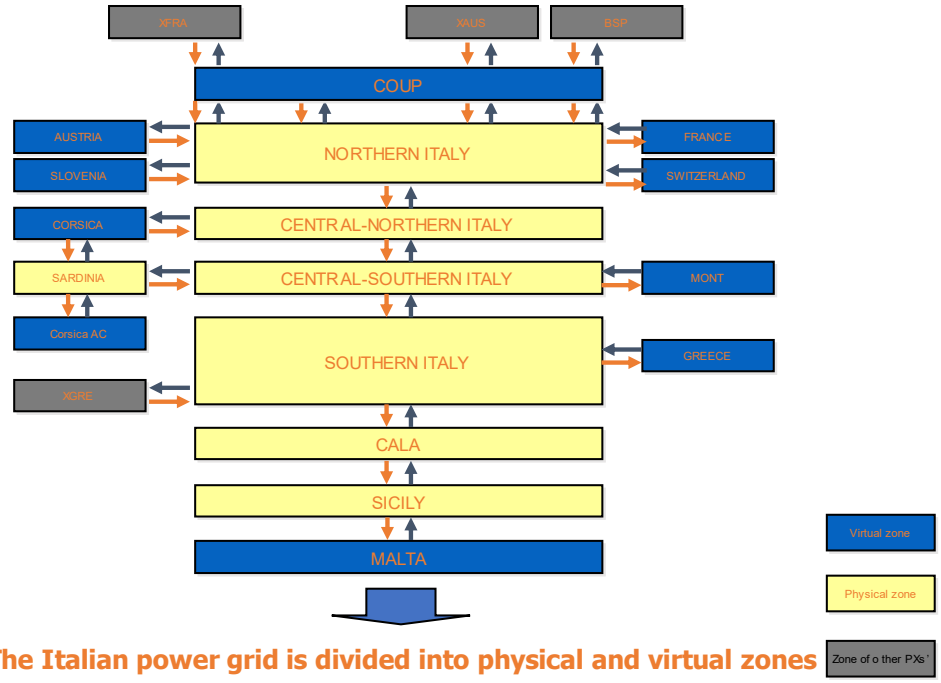
The power system is divided into portions of transmission grids ("zones") where, for power system security, there are physical limits to transmission of electricity to/from the corresponding neighbouring zones. These transmission limits are determined through a computational model that is based on the balance between electricity generation and consumption. The Italian power system thus consists of market zones, groups of geographical and/or virtual zones, each with a zonal electricity price.

The identification of the zones of the so-called "rete rilevante" (relevant grid) takes into account the three-year National Transmission Grid Development Plan. The zones of the "relevant grid" may correspond to physical geographical zones, or to virtual zones (i.e. points of interconnection with foreign countries).
To identify and remove any congestion that may be caused by commercial positions or CET bids/offers for injection or withdrawal - whether defined in the market or implementing bilateral contracts - GME uses a simplified map of the grid. The map only shows the most significant transmission limits, i.e. those between national geographical zones and foreign zones.

The Italian zones are interconnected with those of neighbouring European countries: northern Italy with France, Switzerland, Austria, and Slovenia; central-northern Italy and Sardinia with Corsica; central-southern Italy with Montenegro; southern Italy with Greece; and Sicily with Malta. With the entry into force of Regulation (EU) 2019/943 of the European Parliament and of the Council, a process of revision of the European zonal configuration has started. The configuration of these zones depends on how Terna manages the flows along the peninsula. These zones may be summarised as follows:

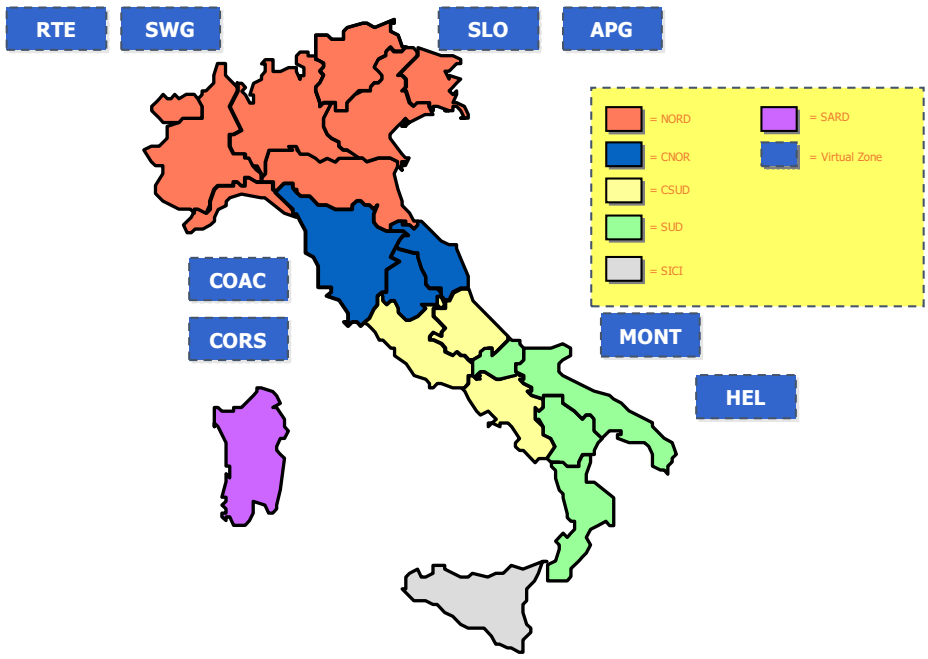
- 7 geographical zones: northern Italy (NORD), central-northern Italy (CNOR), central-southern Italy (CSUD), southern Italy (SUD), Calabria (CALA), Sicily (SICI), and Sardinia (SARD);
- 14 foreign virtual zones: France (FRAN), Switzerland (SVIZ), Austria (AUST), Slovenia (SLOV), BSP (zone representing the interconnector dedicated to market coupling between Italy and Slovenia), Corsica (CORS), Corsica AC (COAC), Greece (GREC), France coupling (XFRA), Austria coupling (XAUS), Malta (MALT), Montenegro (MONT), Greece coupling (XGRE), and Italy coupling (COUP).

Topology of interconnection of geographical and virtual zones



The Italian power grid is divided into physical and virtual zones

Geographical zones of the national transmission grid



Units and Portfolios

Each geographical or virtual zone is a set of units associated with zonal portfolios.

The units associated with portfolios are the minimum units of electricity in respect of which injection and withdrawal nominations must be defined, whether to execute bilateral contracts by submitting CET bids/offers into the MGP, or as a result of the acceptance of demand bids or supply offers defining their commercial position in the Electricity Market.

- In the case of **injection** nominations, injection units usually coincide with individual points of injection (points of the power grid, equipped with one or more metering systems, at which electricity is injected into the grid), i.e. individual generating units (units converting the energy supplied by any primary source into electricity). This depends on the fact that, as generating units can control their injections instant by instant, they are dispatched by Terna directly and individually, in order to guarantee the balancing of the system, because the different units have different physical and dynamic properties. Injection nominations must be defined for individual units, so as to permit the selection of units from which resources for the dispatching services may be procured.
- Conversely, in the case of **withdrawal** nominations, withdrawal units may correspond both to individual points of withdrawal, i.e. individual consuming units, and to sets of withdrawal points. In the future, under ARERA Resolution 304/2024, also consuming units will be dispatched by Terna directly and individually so as to ensure system balancing.

Balance Responsible Party (BRP)

For each unit, a "BRP" is identified. The BRP is answerable to Terna both for the execution of basic schedules, equal to injection and withdrawal nominations, and for the execution of movement schedules defined by bids/offers selected in the MSD. Non-compliance with the final schedule, resulting from the sum of the basic schedule and of the movement schedule, involves the payment of imbalance charges, i.e. the penalties applied to those units that result imbalanced.

Balancing Service Provider (BSP)

A BSP is a party that has concluded a contract for the supply of global national ancillary services with Terna, as defined in the Dispatching Rules. The BSP is responsible for defining the movement schedules and, for this purpose, it receives an appropriate remuneration.

2.2. COMPONENTS OF THE ELECTRICITY MARKET

GME's Electricity Market, which is aimed at defining the basic schedules of generating and consuming units, consists of the MPE and of the MTE with delivery-taking/-making obligation.

2.2.1. Spot Electricity Market (MPE)

The Spot Electricity Market consists of four submarkets:

- **Day-Ahead Market (MGP)**, where producers, wholesalers, and eligible final customers may sell/buy electricity for the next day;
- **Intra-Day Market (MI)**, consisting of the MI-A and MI-XBID sessions; this is the venue where market participants submit electricity supply offers and demand bids for adjusting the commercial positions of injection and withdrawal defined in the MGP;
- **Daily Products Market (MPEG),** i.e. the venue where supply offers and demand bids in respect of daily products are traded;
- **Balancing and Redispatching Market (MSD**)/Integrated Scheduling Process, i.e. the venue where Terna procures resources for the balancing and redispatching services; this market consists of the sessions specified in the Dispatching Rules.

The MGP and MI make part of the netting markets, i.e. they are considered in a unitary way for the following purposes: verification of the available amount of financial guarantees, clearing and settlement of the related payments, and default.

The Markets

The Electricity Market consists of a set of market sessions, i.e. a set of activities of receipt and processing of bids/offers, as well as of determination of market results. In each session, bids/offers must be received within a given time interval: this interval is called sitting.

TIMELINE OF ACTIVITIES IN THE MPE FOR DAY D

Reference Day	D-1					D										
	MGP	MI1	MSD1	MI-XBID (Phase 1)	MI2	MBn	RRn	aFRR	MI-XBID (Phase 2)	MSD2	MSD3	MSD4	MI3	MI-XBID (Phase 3)	MSD5	MSD6
Preliminary information	11:30	15:00	n.a.		22:00	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	10:00		n.a.	n.a.
Opening of the sitting	08:00**	12:55	12:55	15:30	12:55	22:30*	22:30*	22:30*	22:30	12:55°*	12:55°*	12:55°*	12:55*	10:30	12:55°*	12:55°*
Closing of the sitting	12:00	15:00	17:00	21:40	22:00	Q-60 (quarter-hours included in the hours 1-24)	H-55' (hours 1-24)	Q-25 (quarter-hours included in the hours 1-24	H-1 (quarter-hours included in the hours 1-12) 9:40 (quarter-hours included in the hours 13-24)	17:00°*	17:00°*	17:00°*	10:00	H-1 (quarter-hours included in the hours 12-24)	17:00°*	17:00°*
Provisional results	12:45	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Final results	12.58	15.30	21.00	n.a.	22:30	#	#	n.a.		2:00	6:00	9:45	10:30	n.a.	14:00	18:00

** the time refers to day D-9

* the time refers to day D-1
° use is made of bid/offers entered into the MSD1
Dispatching Rules

Bids/Offers

Participants trade in the market by submitting demand bids or supply offers.

Bids/offers consist of pairs of values, i.e. volume and unit price of electricity (MW/MWh; Euro/MWh). They express the willingness to sell (or buy) a volume of electricity not higher than the one specified in the offer (or bid) at a price not lower (or not higher) than the one specified in the same offer (or bid).

Bids/offers refer to portfolios, which are associated with generating and consuming units (except in the MSD where bids/offers are entered by unit) and to individual market time intervals (Imbalance Settlement Periods or ISPs in the MSD).

Bids/offers may be:

- **Simple:**
    - in energy markets, a bid/offer specifying the volumes of electricity offered for purchase or sale and a unit buying or selling price, and any other information as defined in the ME Rules; it may refer to a zonal portfolio, to a market, to a simple or block product and to a market time interval or multiple market time intervals having the same duration, respectively;
    - in the MSD, a bid/offer specifying a volume of electricity offered for purchase or sale at a unit buying or selling price, and any other information as defined in the Dispatching Rules; it may refer to a unit and to an ISP;
- **Balanced:** simple supply offers at a price equal to the minimum technical limit and simple demand bids at a price equal to the maximum technical limit entered into each sitting of the MI-A, even by different market participants, provided that they refer to the same market time interval and to zonal portfolios belonging to the same bidding zone, such that the respective volumes are balanced and are identified as mutually balanced through an appropriate alphanumerical code selected by market participants;
- **Multiple:** a bid/offer consisting of a number of simple bids/offers submitted by the same market participant for the same simple product, pertaining to the same market time interval and to the same zonal portfolio;
- **Pre-defined**: a simple or multiple bid/offer that is considered as submitted by a market participant in each sitting of the MGP and of the MSD in which GME does not receive bids/offers from the same market participant.

Types of bids/offers			
Day-Ahead Market (MGP)	Auction Intra-Day Market (MI-A)	Continuous-Trading Intra-Day Market (MI-XBID)	Balancing and Redispatching Market (MSD)
Purchase - Sale	Purchase - Sale	Purchase - Sale	Purchase - Sale
"Volume - Price" Pairs	"Volume - Price" Pairs	"Volume - Price" Pairs	"Volume - Price by type of service" Pairs
Simple, Multiple, Pre-defined	Simple, Multiple, Balanced	Simple	Simple, Pre-defined

Bids/offers in the MGP, MI, and MSD should contain at least the following data:

- identification code of the market participant submitting the bid/offer;
- identification code of the market and of the market sitting or session for which the bid/offer is entered;
- identification code of the unit to which the bid/offer refers, for bids/offers entered into the MSD, or of the zonal portfolio to which the bid/offer refers, for bids/offers entered into the MGP and MI;
- type of product to which the bid/offer refers, for bids/offers entered into the MGP and MI;

- market time interval for simple products, or market time intervals for block products, for bids/offers entered into the MGP and MI;
- ISP to which the bid/offer refers, for bids/offers entered into the MSD;
- type of bid/offer (purchase/sale);
- where applicable, specification of pre-defined or balanced bid/offer;
- offered volume;
- unit price for the offered volume.

The units of measurement used in the market are as follows:

- for electricity, the unit of measurement is the MWh, specified with three decimals;
- for volumes of capacity offered by participants in the MGP, MI-A, MI-XBID, MPEG, and MTE, the unit of measurement is the MW, specified with one decimal;
- for volumes of capacity offered by participants in the MSD the unit of measurement is the MW, specified with three decimals;
- for volumes of capacity nominated by participants in the Nomination Platform (PN), the unit of measurement is the MW, specified with three decimals;
- for monetary quantities, the unit of measurement is the euro, specified with two decimals;
- for unit prices of electricity, the unit of measurement is the euro/MWh, specified with two decimals.

Parties with adequate experience and competence in the use of ICT systems and related security systems may participate in the market after successfully completing the admission procedure with GME.

The summary diagram of the MPE is as follows:

	MGP	MI-A	XBID	MSD	
Traded resource	Electricity	Electricity	Electricity	Electricity for congestion management	Electricity for real-time balancing
Portfolio/Unit enabled to participate	All injection and withdrawal portfolios	All injection and withdrawal portfolios	All injection and withdrawal portfolios	All injection and withdrawal units enabled to provide dispatching services	All injection and withdrawal units enabled to provide dispatching services
Parties enabled to participate	Market participants (BRP or its delegated agent)	Market participants (BRP or its delegated agent)	Market participants (BRP or its delegated agent)	Market participant (BSP)	Market participant (BSP)
Price	Clearing price	Clearing price	Matching price	Offered price	Offered price

DAY-AHEAD MARKET (MGP)

The Market

The Day-Ahead Market (MGP) is a wholesale electricity market, where blocks of electricity are traded for the next day and where prices and volumes traded, as well as commercial positions of injection and withdrawal, are defined for the next day.
The MGP, which is based on an implicit-auction model, hosts most of the transactions of purchase and sale of electricity.
The sitting of the MGP opens at 08:00 of the ninth day before the day of delivery and closes at 12:00 of the day before the day of delivery.
GME publishes preliminary information about the MGP on its website at 11:30 of the day of closing of the sitting.
GME notifies the individual market results to participants and the commercial positions to BRPs by 12:58 of the day of closing of the sitting.
All parties that have acquired the status of "Electricity Market Participants" may trade in the MGP. GME acts a central counterparty to purchase and sale transactions in the MGP.

Bid/Offer Types and Constraints

When the sitting of the MGP is open, participants may submit bids/offers where they specify the volume and the maximum/minimum price at which they are willing to purchase/sell.
Supply offers and demand bids must be consistent with the injection or withdrawal capabilities of the portfolios to which they refer and, above all, they must correspond to the real willingness to inject or withdraw the related volumes of electricity.

In particular:

- supply offers express the willingness to sell a volume of electricity not higher than the one specified therein and at a unit price not lower than the one specified therein. Participants may refer supply offers only to injection or storage portfolios. The acceptance of an offer involves the market participant's commitment to inject the volumes of electricity specified in the offer into the grid in a given ISP or, in case of partial acceptance of the offer, the corresponding share;
- demand bids express the willingness to purchase a volume of electricity not higher than the one specified therein and at a unit price not higher than the one specified therein. Participants may refer demand bids to injection[5] , withdrawal or storage portfolios.

Multiple bids/offers may include both supply offers and demand bids.

Bids/offers are accepted after the closing of the market sitting under the economic merit-order criterion and subject to transmission limits between zones. In particular:

- all accepted supply offers or demand bids are valued at the clearing price of the zone to which they belong. This price is determined, for each minimum market time interval, by the intersection between the demand curve and the supply curve and is different from one zone to the other when transmission limits are saturated;
- after the MGP, GME calculates the reference price of electricity traded in the MGP - PUN Index GME - for each minimum market time interval as the average of zonal prices weighted for the volumes bought in respect of zonal withdrawal portfolios in each geographical market zone. For weighting, account is taken of the volumes pertaining to demand bids accepted on all the market time intervals and to blocks including the minimum market time interval in respect of which the reference price is calculated;

[5] According to TIDE, the pumped-storage units and the auxiliary services units are classified as production units. Since these units have both the step up and step down margins, the market participants can submit demand bids that also refer to injection portfolios

- for each demand bid accepted in the sessions of the MGP in respect of withdrawal portfolios belonging to a geographical market zone, GME determines the compensatory component that the participant submitting the bid/offer must pay (if negative), or receive (if positive); this component is equal to the product between the volume accepted and the difference between the related zonal price and the PUN Index GME.

Preliminary Information

GME provides market participants with information about the expected electricity requirements for each hour and each zone and the maximum admissible transmission limits between neighbouring zones for each minimum market time interval and each pair of zones.

For each minimum market time interval and each zone, GME also specifies the conventional price, i.e. the price that GME conventionally applies to demand bids without a price limit in order to assess their adequacy with respect to the available amount of the market participant's financial guarantees.

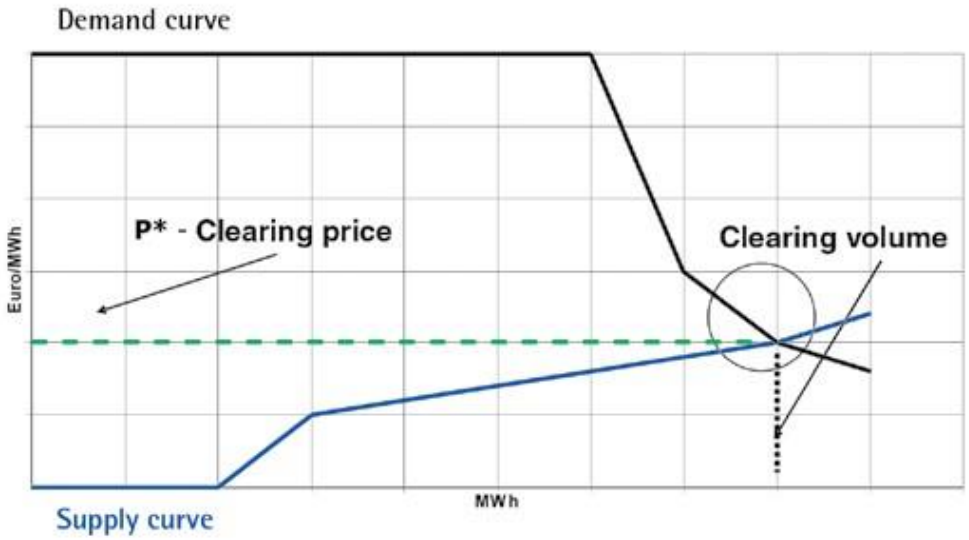
Bid/Offer Acceptance

At the end of the bid/offer submission sitting, GME activates the market resolution process. For each minimum market time interval of the following day, the market algorithm will accept bids/offers in such a way as to maximise the value of transactions, while satisfying maximum transmission limits between zones.

The acceptance process may be summarised as follows.

- All valid and adequate supply offers that have been received are ranked in increasing price order on an aggregate supply curve and all valid and adequate demand bids that have been received are ranked in decreasing price order on an aggregate demand curve. The intersection of the two curves gives: the overall traded volume, the clearing price, the accepted bids/offers and the commercial injection and withdrawal positions obtained as the sum of the accepted bids/offers pertaining to the same portfolio.

Determination of the clearing price



- If the flows on the grid resulting from the commercial positions do not violate any transmission limit, the clearing price is a single one in all the zones and equal to **P***. Accepted bids/offers are those having a selling price not higher than P* and a purchasing price not lower than P*.
- If at least one limit is violated, the algorithm "splits" the market in two market zones - one exporting zone, including all the zones upstream of the constraint, and one importing zone, including all the zones downstream of the constraint. In each zone, the algorithm repeats the above-mentioned intersection process and, for each market zone, it builds a supply curve (including all the supply offers submitted in the same zone, as well as the maximum imported volume) and a demand curve (including all the demand bids submitted in the same zone, as well as a volume equal to the maximum exported volume). The result is a zonal clearing price (Pz), which is different in the two market zones. In particular, **Pz** is higher in the importing market zone and lower in the exporting one. If, as a result of this solution, additional transmission limits within each market zone are violated, the market splitting process is repeated also within this zone until obtaining a result consistent with grid constraints.
- Both the selling and buying Pz are applied to all injection and withdrawal portfolios. However, under the Decree issued by the Ministry of Environment and Energy Security on 18 April 2024, GME applies a compensatory component to demand bids in respect of withdrawal portfolios belonging to a geographical market zone. This component, which is referred to in ARERA Resolution 304/2024/R/eel, is equal to the product between the volume accepted and the difference between the related zonal price and the PUN Index GME. If it is negative, it is paid by the participant submitting the bid/offer; if it is positive, it is received by the same participant.

The above-described market splitting mechanism represents a non-discriminatory implicit auction for the assignment of transmission rights.

Over-The-Counter (OTC) Contracts

The electricity traded through bilateral transactions that are registered onto the PCE participates in the above-described process, since it contributes both to: i) committing a share of the transmission capacity available for flows; and ii) determining the volumes to be weighted for the PUN Index GME. CET bids/offers registered onto the PCE are sent to the MGP in the form of bids/ offers and contribute to determining the results of the MGP.

INTRA-DAY MARKET (MI)

The Market

The Intra-Day Market (MI), consisting of the MI-A and MI-XBID sessions, is the venue where electricity demand bids and supply offers are traded with a view to adjusting the commercial injection and withdrawal positions defined in the MGP. Intra-day markets are an important instrument for market participants. Indeed, as injections and/or withdrawals may change between the Day-Ahead Market and real-time operations, market participants may balance their positions in these markets. The growth of intermittent energy sources increased the importance of relying on efficient intra-day markets.

For each flow day being traded, the MI-A auction sessions and the three phases of the MI-XBID sessions take place sequentially, without overlapping with each other, and in the following order:

a) MI-A auction session (MI-A1);
b) Continuous-trading phase of the MI-XBID session (Phase I MI-XBID);
c) MI-A auction session (MI-A2);
d) Continuous-trading phase of the MI-XBID session (Phase II MI-XBID);
e) MI-A auction session (MI-A3);
f) Continuous-trading phase of the MI-XBID session (Phase III MI-XBID).

MI-A

The MI-A is the auction trading session of the MI, in which interconnection capacities between all the Italian market zones and those on the borders involved in market coupling are allocated. The European Target Model provides that intra-day cross-zonal transmission capacity should be allocated through three pan-European implicit auctions - Intraday Auctions (IDAs) – whose goal is to harmonise the calculation of cross-border capacity and assign a price to such capacity at the same time as its allocation. Under ACER Decision No 01/2019 of 24 January 2019 (implementing art. 55 of the CACM Regulation), the IDA methodology - a single EU-wide methodology to price cross-zonal capacity allocated in the intraday markets of many EU countries - entered into force.

In Italy, ARERA Resolution 212/2024/R/eel provided that, as of 13 June 2024, three IDAs would enter into force on the Italian borders with France, Austria, Slovenia, and Greece via the Euphemia algorithm.

The MI-A consists of the following 3 sessions:

- MI-A1
  - in this market session, participants may enter bids/offers in respect of all the market time intervals of day D;
  - the sitting for submission of bids/offers is open from 12:55 of day D-1 to 15:00 of day D-1;
- MI-A2
  - in this market session, participants may enter bids/offers in respect of all the market time intervals of day D;
  - the sitting for submission of bids/offers is open from 12:55 of day D-1 to 22:00 of day D-1;
- MI-A3
  - in this market session, participants may enter bids/offers in respect of all the market time intervals included between 12:00 and 24:00 of day D;
  - the sitting for submission of bids/offers is open from 12:55 of day D-1 to 10:00 of day D;

In each MI-A auction session, GME identifies the market solution for accepted bids/offers and the corresponding prices of valuing,

relying on the Euphemia algorithm. All accepted demand bids or supply offers are valued at the clearing price of the zone to which they belong.

For each MI-A session, GME identifies accepted bids/offers and the corresponding prices of valuing and defines:

a) the valuing prices of electricity determined without taking into account transmission constrains between bidding zones;

b) the valuing prices, for each zone, of accepted supply offers in each bidding zone and accepted demand bids.

The demand bids and supply offers – in respect of available portfolios and products – that may be entered into the MI-A auctions may be simple, multiple, or balanced, as indicated in para. 2.2.1 of this document.

Results

For each MI-A auction session, GME publishes the following data and information:

a) valuing prices of accepted bids/offers;

b) for each bidding zone, overall volumes of electricity underlying accepted demand bids and supply offers;

c) demand curve and supply curve for each bidding zone.

Furthermore, for each MI-A auction session, GME notifies to each market participant that has entered bids/offers into the MI-A auction (and limited to such bids/offers):

a) the commercial positions;

b) the accepted bids/offers, specifying the volume of electricity accepted;

c) the bids/offers rejected as inadequate, specifying the reason for such inadequacy.

d) the billed payables/receivables.

Finally, for each MI-A auction session, GME notifies to each BRP the commercial positions of zonal portfolios consisting of one or more units for which it qualifies as a BRP.

MI-XBID

The European regulatory framework established a Target Model (CACM Regulation 2015/1222) for the European integrated electricity market in the intraday timeframe, providing that the European Single Intraday Coupling (SIDC) should be based only on IDAs even for electricity transactions under the continuous trading mechanism, in which the available interconnection capacity between the different zones making up the SIDC is implicitly allocated at the same time as the matching of demand bids and supply offers located in different zones.

Continuous trading is a mechanism based on automatic matching of purchase and sale proposals, with the option of submitting new proposals on a continuous basis during the trading sessions.

The MI-XBID consists of the following 3 sessions:

- Phase I MI-XBID
  - in this market session, participants may enter bids/offers in respect of all the market time intervals of day D;
  - the session opens at 15:30 of day D-1 and closes at 21.40 of day D-1;
- Phase II MI-XBID
  - in this market session, participants may enter bids/offers in respect of all the market time intervals of day D;

- the session opens at 22:30 of day D-1 and closes:
    - one hour before the start of each market time interval (q-1), for each of the market time intervals corresponding to the first twelve hours of day D or fractions of hour of the first twelve hours of day D;
    - at 9:40 of day D, for the market time intervals corresponding to the second twelve hours of day D or fractions of hour of the second twelve hours of day D;

- Phase III MI-XBID
    - in this market session, participants may enter bids/offers in respect of the market time intervals included between 12:00 and 24:00 of day D;
    - the session opens at 10:30 of day D and closes one hour before the start of each market time interval (Q -60').

For each continuous trading phase of the MI-XBID and each available product, GME organises an order book divided by bidding zone. Each book shows all bids/offers entered into the MI-XBID and those entered by participants in other markets connected with the XBID, provided that they can be matched with each other based on the available intra-day interconnection capacity and ranked under priority criteria. In particular, the entry of:

a) a demand bid determines the matching with one or more supply offers at a price lower than or equal to that of the entered bid, until exhausting the bid;

b) a supply offer determines the matching with one or more demand bids at a price lower than or equal to the one of the entered offer, until exhausting the offer;

For each concluded transaction, the price is the one of the bid/offer having time priority; moreover, the partial execution of a bid/order gives rises, for the unexecuted portion, to the creation of a bid/offer that remains in the order book with the price and time priority of the original bid/offer.

Results

In each phase and at the end of the MI-XBID session, after transactions have been concluded, GME makes available to each market participant at least the following data:

a) matched bids/offers, specifying the volume of electricity and the related matching price;

b) commercial positions;

c) bids/offers rejected as inadequate, specifying the reason for such inadequacy;

d) billed payables/receivables.

Additionally, after the conclusion of transactions, GME provides each BRP with the commercial positions of zonal portfolios consisting of one or more units for which it qualifies as a BRP.

Finally, at the end of each trading session of the MI-XBID, GME publishes at least the following data and information for each geographical and/or virtual zone and for each available product:

a) minimum and maximum prices of the session;

b) volume traded in the session.

Non-Arbitrage Fee

In the MI, to replicate the effect of the application of the PUN Index GME to withdrawal portfolios belonging to geographical zones, GME applies a non-arbitrage fee to all accepted bids/offers pertaining to such portfolios.

In particular, for each purchase transaction concluded in the MI and pertaining to a withdrawal portfolio belonging to a geographical zone, GME applies a non-arbitrage fee that the market participant entering the bid/offer will pay (if negative) or receive (if positive). This fee is equal to the product between the accepted volume in MW and the difference between the related zonal price and the PUN Index GME.

Vice versa, for each sale transaction concluded in the MI and pertaining to a withdrawal portfolio belonging to a geographical zone, GME will determine the non-arbitrage fee that the market participant entering the bid/offer will pay (if positive) or receive (if negative). This fee is equal to the product between the accepted volume in MW and the difference between the related zonal price and the PUN Index GME.
The non-arbitrage fee will be calculated on the basis of the granularity of the PUN Index GME.

NOMINATION PLATFORM (PN)

Nomination Platform

The Nomination Platform (PN) is the platform referred to in ARERA Resolution 345/2023/R/EEL. The platform, organised and managed by GME, enables the nomination on units of the commercial positions resulting from the MGP and MI. Thus, the nomination, which may be provisional or definitive, is the volume of electricity for injection or withdrawal pertaining to one or more units and registered on the PN for the scheduling on such units of the commercial positions resulting, for each ISP, from trading in the MGP and/or MI.

The parties enabled to make such nominations are indicated in ARERA Resolution 304/2024/R/EEL.

The nomination phase of each ISP (corresponding to one Q) of day D opens at 13:00 of day D-1 and closes 57 minutes before the start of each ISP (Q-57').

Communications about the PN

GME notifies the provisional injection or withdrawal nominations on the PN and the definitive injection or withdrawal nominations on the PN:

- to the party responsible for the nomination as communicated by Terna to GME, to the BRP, and to its delegated agent;
- to Terna.

GME makes these notifications within the time limits specified in Technical Rule no. 03 MPE.

After receiving the notification of definitive nominations, Terna defines the basic schedule for each unit that is necessary for the sessions of the MSD dealt with in the following paragraph.

BALANCING AND REDISPATCHING MARKET (MSD)

The Market

The **Balancing and Redispatching Market (MSD**) or **Integrated Scheduling Process** represents the venue where Terna enters into purchase and sale contracts with a view to obtaining resources for the dispatching service and for global ancillary services. The MSD may consist of multiple sessions, as indicated in the Dispatching Rules.

In the MSD, demand bids and supply offers are selected under the criteria laid down in the Dispatching Rules.
In the MSD, bids/offers may refer only to enabled units and be submitted only by the respective BSPs. Also pre-defined bids/offers may be submitted into the MSD.

Results

GME notifies Terna of the bids/offers received in the MSD for each unit and each ISP. Subsequently, Terna notifies GME of the accepted bids/offers. For these bids/offers, GME publishes the following data and information:

a) overall volumes covered by accepted demand bids and supply offers;
b) average value of the prices of accepted demand bids and supply offers, as well as the price of the lowest-priced demand bid and the price of the highest-priced supply offer that have been accepted.

Finally, GME notifies each participant entering bids/offers into the MSD (and limited to such bids/offers):

a) accepted bids/offers, specifying the accepted volume;
b) billed payables/receivables.

DAILY PRODUCTS MARKET (MPEG)

In the MPEG, market participant buy and sell daily products with electricity delivery obligation. GME is the counterparty of market participants for the transactions concluded in the MPEG. Moreover, as a qualified market participant under Annex A to ARERA Resolution 345/2023/R/EEL, GME holds a forward account on the PCE through which it registers the net delivery position corresponding to purchase and sale transactions concluded by the market participant in the MPEG.

Transactions in this market take place under the continuous trading mechanism. The market sessions are held according to the following timings:

- from 8:00 to 17:00 of D-2; if D-2 falls on a holiday, the session will be held from 8:00 to 17:00 of the immediately preceding working day;
- from 8:00 to 9:00 of D-1, only if such day does not fall on a holiday; it follows that, if day D is preceded by a holiday, the trading session for the product with delivery on day D will be held only from 8:00 to 17:00 of the first working day preceding day D;

On Fridays – last working days of the week – the following products will be traded:

- products with delivery on Saturday, from 8:00 to 9:00;
- products with delivery on Sunday and products with delivery on Monday and Tuesday, from 8:00 to 17:00; products with delivery on Tuesday may also be traded from 8:00 to 9:00 of the Monday session.

In the MPEG, the “unit price differential” product is listed, with different types of contracts in which the underlying electricity volume is set by GME equal to 1 MW, multiplied by the ISPs underlying the same contracts. The types of delivery profiles are as follows:

a) base-load, listed for all calendar days, whose underlying is electricity to be delivered in all the ISPs belonging to the day of trading;
b) peak-load, listed for the days from Monday to Friday, whose underlying is electricity to be delivered in the ISPs from the thirty-third (from 08:00) to the eightieth (until 20:00) belonging to the day of trading.

Participants submit bids/offer in which they specify the delivery profile of the product, the type of transaction (purchase or sale), and the price.

GME organises an order book for each listed daily product and each delivery profile. In the order book, bids/offers are ranked on the basis of their price: demand bids in decreasing order and supply offers in increasing order. If the price is the same, they will be ranked by time of submission of the bid/offer. Participants are not allowed to enter bids/offers without specifying their price.

Trading

During continuous trading, transactions are concluded through automatic matching of demand bids and supply offers entered into the order book and ranked under priority criteria. In particular, the entry of

a) a demand bid determines the matching with one or more supply offers at a price lower than or equal to that of the entered bid, until exhausting the bid;
b) a supply offer determines the matching with one or more demand bids at a price lower than or equal to the one of the entered offer, until exhausting the offer;

The partial execution of a bid/offer gives rises, for the unexecuted portion, to the creation of a bid/offer that remains in the order book with the price and time priority of the original bid/offer.

At the end of each trading session of the MPEG, GME determines, for each market participant, the net position to be delivered on the PCE, for all the hours included in the related daily product traded. For each hour, the net delivery position is given by the sum of purchase and sale transactions concluded in the MPEG.

Results

For each trading session and each contract, GME publishes at least the following information:

a) minimum and maximum prices;
b) reference price of the session;
c) volume traded in the session.

2.2.2. Forward Electricity Market (MTE)

The **Forward Electricity Market (MTE)** is the venue where forward electricity contracts with delivery and withdrawal obligation are negotiated. All electricity market participants are admitted to this market.

In the MTE, GME acts as a central counterparty. Moreover, as GME has the status of qualified market participant[6], it holds an electricity account on the PCE. Therefore, at the end of or during the trading period, at the request of the market participant, GME registers on the PCE the net delivery position corresponding to the purchase and sale transactions concluded by the same participant in the MTE.

Trading in the MTE is continuous and the sessions are held from 9:00 to 17:30 of market days, except for the next-to-the-last day of open market of each month, when the time of closing of the session is advanced to 14.00.
Two types of contracts may be traded in the MTE. The underlying electricity volume is set by GME equal to 1 MW and multiplied by the ISPs covered by the contract. The types of contracts are as follows:

- **Base-load**, whose underlying is the electricity to be delivered in all the ISPs of the days belonging to the delivery period;
- **Peak-load,** whose underlying is the electricity to be delivered in the ISPs from the thirty-third (from 08:00) to the eightieth (until 20:00) of the days belonging to the delivery period, excluding Saturdays and Sundays.

These types of contracts are tradable with the following delivery periods: monthly, quarterly, and yearly.

Participants enter bids/offers where they specify the type and delivery period of the contracts, the number of contracts, and the price at which they are willing to purchase/sell.

GME organises an order book for each type of contract and each delivery period. On this book, bids/offers are ranked by price: in decreasing order for demand bids and in increasing order for supply offers. If the price is equal, bids/offers are ranked by time of entry. Bids/offers without a price limit have the maximum price priority.

Trading

Transactions in the market take place through continuous trading, during which contracts are concluded via automatic matching of bids/offers of opposite sign entered into the order book and ranked under priority criteria.

[6] Under Annex A to AEEG's Decision 111/06.

In particular, the entry of

- a demand bid with a price limit determines the matching of the bid (until it is exhausted) with one or more supply offers with a price lower than or equal to the one of the entered bid;
- a supply offer with a price limit determines the matching of the offer (until it is exhausted) with one or more demand bids having a price higher than or equal to the one of the entered offer;
- a bid/offer without a price limit determines the matching of the same (until it is exhausted) with one or more bids/offers of opposite sign that are present in the order book upon entry of such bid/offer.

A cascading mechanism is applied to forward contracts with a maturity of more than one month, at the end of their trading period (thus, except for monthly contracts).
Under the cascading mechanism, at the end of the session of the last day of trading, the positions on the yearly contract are split into equivalent positions on contracts with shorter maturity (monthly and quarterly). Likewise, a position on a quarterly contract is split into equivalent positions on corresponding monthly contracts. This mechanism is applied separately to base-load and peak-load contracts.
For these contracts, at the end of the last session of trading of monthly contracts, GME - after carrying out adequacy verifications - determines the net delivery position of each participant; this position will result from the sum of the purchase and sale transactions concluded in the MTE, for all the hours of the month included in the delivery period of the contracts. Then, the net position is registered on the forward accounts that the participant holds on the PCE.
Moreover, during the trading period, a participant having an open position in the MTE may ask GME to advance the delivery of such position on the Forward Account Registration Platform (PCE), by sending a specific request signed by its legal representative. In this case, within the second working day following receipt of the request, GME will determine the requesting participant's total net delivery position for each hour of the following month in which delivery has to be made (advanced delivery procedure - MTE).

Results

For each trading session and each contract, GME publishes at least the following data:

- minimum and maximum prices;
- reference price of the session;
- volume traded in the session.

2.2.3. FORWARD ACCOUNT REGISTRATION PLATFORM (PCE)

Producers and eligible customers may sell and purchase electricity not only in GME's regulated market, but also by entering into purchase and sale contracts off the bidding system (the so-called bilateral or OTC contracts). In the latter case, the supplies and the price at which electricity is valued are freely determined by the parties.
However, also OTC contracts are verified to ensure their consistency with transmission constraints.
The procedures for registering the contracts admitted to the market and concerning the trading of future supplies of electricity (i.e. forward electricity purchase and sale contracts) are defined in ARERA Decision 111/06, as subsequently amended by TIDE. Since 1 April 2007, GME has been managing the PCE, taking on the role of counterparty to the financial obligations falling on participants that register transactions thereon. All the parties referred to in art. 3.4.1 of TIDE are admitted to the PCE, provided that they are proficient and competent in the use of ICT systems and related security systems or that they have ICT-proficient and competent employees or assistants.

To participate in the PCE, these parties must:

- submit a Participation Application in the format annexed to the Rules Governing the Forward Account Registration Platform (PCE Rules);
- sign and submit a Participation Agreement in the format annexed to the PCE Rules; in the Agreement, the contracting party must state that it is aware of and accepts the PCE Rules without any condition or reservation and undertakes, among others, to pay the fees for participating in the PCE;
- if the applicant is a legal entity, the Participation Application, signed by the legal representative or other duly authorised person, must be accompanied by a declaration (as per Decree no. 445 of the President of the Republic of 28 December 2000) certifying its powers of representation.

Upon admission, the applicant acquires the status of participant. PCE participants are entered into an appropriate "List of PCE Participants", which is held and administered by GME in accordance with personal data privacy legislation.

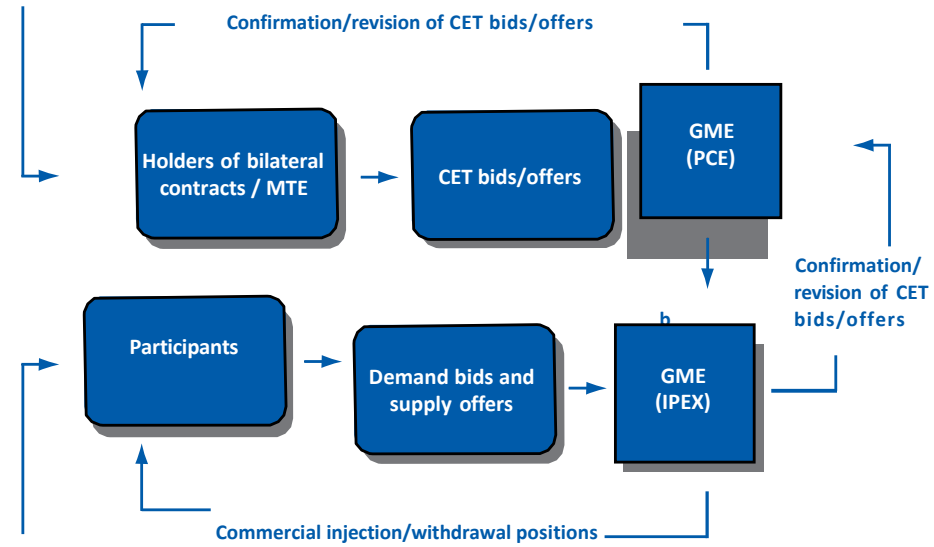
The PCE is managed through an information system to which participants have access through the Internet. Access to the PCE information system is based on personal identification of users-participants (user id and password assigned by GME). The exchange of information between participants, GME and Terna (including submission of registrations, notification of results, and schedules defined by GME on the PCE) takes place by exchanging XML files through the Internet or by filling in appropriate forms available on GME's website (web forms).

The PCE information system is controlled from the trading room, which is equipped with hardware and software components permitting to collect and process transactions and CET bids/offers registered on the PCE. The trading room personnel members ensure the continuous operation of the system under maximum security conditions and provide support to participants.

The registration of transactions (request, confirmation, change, rejection) may be made at any time; however, transactions in respect of day D may be registered from day D-60 until 10:00 of day D-1. The request for registering CET bids/offers may be submitted at any time; however, the deadline for submitting requests for registration of CET bids/offers in respect of day D is set at 11:30 of day D-1.

Registration of contracts

Contracts off the bidding system (OTC) / MTE



Bidding system (regulated market)

For details, see Vademecum to the Forward Account Registration Platform

3. ADMISSION AND PARTICIPATION IN THE ELECTRICITY MARKET

GME's Electricity Market is open to all parties that

- have adequate experience and competence in the use of ICT systems and related security systems;
- have not been convicted, with a final judgement or with a judgement applying the penalty at the request of the parties, for agiotage, for one of the violations of the privacy of ICT communications, for computer fraud, or fraud to the damage of the State or other public entity, as well as for income tax and value added tax crimes;
- have not been previously excluded from the Electricity Market (except if they have been excluded on request).

If the party applying for market admission is a legal entity, the requirements of competence and no conviction refer to the owner, legal representative, or duly authorised person.

3.1. ADMISSION TO THE ELECTRICITY MARKET

To be admitted to the Electricity Market, the applicant must have successfully completed a specific admission procedure. In particular, the applicant must submit to GME:

- a Market Participation Application (in the format annexed to the ME Rules), together with documents certifying that it meets the above-mentioned requirements (no conviction and, if the application is submitted by a legal entity, powers of representation);
- a signed copy of the Market Participation Agreement (in the format annexed to the ME Rules), where the contracting party certifies that it is aware of and accepts, without any condition or reservation, the ME Rules and undertakes, among others, to pay the fees established by GME under art. 7 of the same Rules.

3.2. MARKET PARTICIPATION APPLICATION AND MARKET PARTICIPATION AGREEMENT

To participate in the market, the applicant must complete the Market Participation Application and Market Participation Agreement forms, which are available in Word format on GME's website – in the "Markets Access/Electricity/Electricity Market/How to Participate/Forms" section. In the same section, the applicant will find the documents to be enclosed to the Application and to the Agreement.

The forms must be completed (by filling in the blanks in the section reserved for the market participant) and signed by the applicant (if it is a natural person) or by the legal representative or duly authorised person (if the applicant is a legal entity).

In the Market Participation Application, the applicant will have to complete the fields reserved for the market participant's data and specify:

- name, surname and contact data (both phone number and e-mail address) of the contact person for possible communications;
- name, surname, taxpayer's code/passport number[7], date of birth, nationality[8], address and contact data (phone number, mobile phone number, and e-mail address) of the party/parties that are authorised to access GME's information system on behalf of the applicant under a strong authentication and smart card/digital signature procedure;
- identification code assigned by Terna (for participation in the Electricity Market).

[7] The passport number may be indicated as an alternative to the taxpayer's code only by foreign nationals not residing in Italy and not having the taxpayer's code.

[8] Mandatory field only for parties that have indicated the passport number.

Additionally, with regard to the Market Participation Agreement, the applicant must:

- complete and sign the original hard copy of the Agreement;
- specifically approve the contractual clauses as per arts. 1341 and 1342 of the Italian Civil Code, by affixing a second signature after their listing.

The Market Participation Application and the Market Participation Agreement, together with the required documents, must be delivered or sent to GME.

3.3. STATUS OF MARKET PARTICIPANT

After receiving the documents required for admission to the market and after ensuring that they are valid and that the applicant fulfils the requirements, GME will - within 15 days - notify the applicant of the acceptance or rejection of its application by registered letter with acknowledgement of receipt, or by certified e-mail.
The 15-day time limit might be suspended, for the period indicated in the suspension notification, to allow the applicant to complete or regularise the initially submitted documents.
Upon admission, the applicant acquires the status of market participant and, as such, is entered into the **Register of Market Participants** posted on GME's website.
The market participant is required to notify GME - within 3 working days - of the occurrence of any change in circumstances that may involve the change of any of its data and information.

3.3.1. Exclusion from the Electricity Market

Market participants may be excluded from the Electricity Market, if they have filed a written request for exclusion with GME. However, the exclusion will not exempt the market participant from fulfilling obligations acquired in the Electricity Market prior to the request for exclusion or when, after verifying violations of the ME Rules or of the Technical Rules, GME has excluded the market participant from the Electricity Market.

3.4. ACCESS TO GME'S INFORMATION SYSTEM

The Electricity Market is managed through an information system, called "Sistema Informativo del Mercato Elettrico" (SIME). Market participants access the information system only through the Internet, by connecting to GME's website (www.mercatoelettrico.org). Access to SIME is based on personal identification of users-market participants and authentication of their transactions through digital certificates that they must obtain. After the applicant has been admitted to the Electricity Market, its users are entered into the information system. Users may access all the features of the information system (e.g. submission of bids/offers, notification of market results, etc.) by exchanging XML files.

Access to the system is based on a procedure of identification of market participants/users and authentication of their transactions via personal digital authentication certificates. Moreover, to be able to carry out transactions in the system, users should also have personal digital signature certificates; the latter should be issued by a company included in the public list of trust service providers for qualified electronic signatures (maintained and made available by "Agenzia per l'Italia Digitale"), and be compatible with the Electricity Market information system.

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4. ACCOUNTING IN THE ELECTRICITY MARKET, VAT TREATMENT AND SETTLEMENT OF PAYMENTS

4.1. BILLING

Every day, to facilitate the checking of transactions concluded on the Electricity Market and the consequent payables/receivables resulting therefrom, GME shall determine, for each Market Participant, the values of:

- the accepted bids/offers in respect of purchases and sales on the MGP and MI;
- the purchases and sales concluded on the MTE and of those in respect of forward contracts concluded off the market and registered on the MTE;
- the accepted bids/offers in respect of purchases/sales of the Market Participants on the MSD;
- the purchases and sales concluded on the MPEG;
- the fees owed to GME for each MWh covered by demand bids and supply offers accepted on the Electricity Market;
- the fees owed to GME for each MWh registered on the PN.

4.2. INVOICING

For the MGP and MI, for each invoicing period (i.e. for each calendar month in which payables/receivables have been financially settled), GME provides to each Market Participant qualifying as debtor or creditor towards GME with one or more pro forma invoice notifications, within the timings indicated in Technical Rule no. 08 ME. These notifications illustrate the sum of payables/receivables of the transactions carried out on the MGP and MI. Moreover, within the timings defined in Technical Rule no. 08 ME, GME will issue invoices in respect of GME's sales and will receive invoices in respect of GME's purchases from each Market Participant.

For the MTE and the MPEG, identifying the calendar month of transactions concluded on the MPEG and MTE and the invoicing period with "M", then, in the month "M+1" and within the timings established in Technical Rule no. 08 ME, GME will issue one or more pro forma invoice notifications for each Market Participant qualifying as a debtor or creditor towards GME. In the month "M+2", within the timings established in Technical Rule no. 08 ME, GME will issue to each Market Participant the invoices for sales made on the MPEG and MTE in the month "M", while at the same time, GME will receive from each Market Participant the invoices for purchases made on the MPEG and MTE in the month "M".

GME will also issue separate invoices to both buying and selling Market Participants concerning the fees that they owe for the services provided by GME for each MWh traded and for the MWh registered on the PN.

The exchange of the pro forma invoice notifications and of the invoices between GME and the Market Participants will take place through the "SetService" platform. If the legislation applicable from time to time on electronic invoicing and related implementing provisions so provide, invoices will be transmitted via "Sistema di Interscambio" (SDI).

The invoices and invoice notifications are organised into fields and sets of fields and show the details of all the transactions made on the Electricity Market.

4.3. VAT TREATMENT

In compliance with the applicable legislation and given the "physical" nature of the market, purchases and sales of electricity are VAT-relevant transactions and the chargeability of VAT thereon depends on the place where the purchasing customer (Market Participant) has established its business for VAT purposes.

In particular, for sales to Italian customers, GME always issues invoices with VAT at the standard rate, or at a reduced rate if the customer qualifies as a "wholesale customer" (*cliente grossista*), or under the reverse charge mechanism if the customer submits a statement certifying its status as a taxable dealer for each bid/offer submitted and, in any event, until revocation.

Therefore, in the latter case, GME will issue an invoice without applying VAT, which will be accounted for by the customer under the reverse charge mechanism.
Conversely, for purchases made by GME, Market Participants will issue invoices without applying VAT to GME, because GME qualifies as a taxable dealer under art. 7bis of Decree of the President of the Republic 633/72. GME will account for VAT by applying the reverse charge mechanism.
If transactions take place with foreign customers, GME will issue invoices without VAT and receive invoices without VAT for sales or purchases of goods and services, respectively and, in the latter case, it will apply the Italian VAT rate under the reverse charge mechanism.

Supplies of electricity concluded at a negative unit price qualify as non-VAT-chargeable, as they fall outside the scope of VAT.
Supplies of services in connection with electricity transactions concluded at a negative unit price qualify as general services whose VAT chargeability depends on the place where the customer has established its business.

All the fees for the management of the Electricity Market that are invoiced by GME are VAT-relevant and the chargeability of VAT thereon depends on the place where the customer (Market Participant) has established its business for VAT purposes. Therefore, GME will issue an invoice with VAT at the standard rate, if the customer has its place of business in Italy.
By contrast, if the customer has established its place of business in one of the countries of the European Union and is a taxable person in its own country, GME will issue invoices without applying VAT. In this case, the customer will apply VAT under the reverse charge mechanism.
If the customer has established its place of business in a non-EU country, GME will issue invoices without VAT.

4.4. SETTLEMENT OF PAYMENTS

In view of settling payments with regards to transactions made on the MGP and MI (MI-A and MI-XBID), given that W identifies as the week in which the traded electricity has been delivered, the period of settlement of payables/receivables will be week W+1. On the first working day of week W+1, GME determines, for each Market Participant, the net position (net balance to be settled) - calculated as the difference between receivables and payables - on the basis of the amounts (including VAT, where chargeable) concerning purchase and sale transactions concluded on the MGP and MI (MI-A and MI-XBID), in week W - going from Monday (T-6) to Sunday (T) – in which the traded electricity has been delivered.

In view of settling payments with regards to transactions made on the MPEG and MTE, given that M identifies as the month in which the traded electricity has been delivered, the period of settlement of payables/receivables will be the calendar month M+2. For each Market Participant, GME determines the net position (net balance to be settled) - calculated as the difference between receivables and payables - on the basis of the amounts (including VAT, where chargeable) concerning purchase and sale transactions concluded on the MPEG and MTE in month M. For details regarding the determination of the net balance to be settled, reference is to be made to Technical Rule no. 08 ME.

Where possible and only in view of settling payments, GME determines the overall amount owed by the Market Participant in respect of transactions concluded on the MGP, MI (MI-A and MI-XBID), MPEG, and MTE according to the procedures set forth in the Technical Rules.

Payments will be settled by the Market Participant or by GME according to a specific Calendar published on GME's website. They will be made through urgent SEPA Credit Transfer or equivalent procedure, with value date on the same day, in accordance with the procedures and within the time limits specified in Technical Rule no. 08 ME.

On GME's website Market Partecipants can find the details of the bank account into which they must pay the amounts due for transactions concluded on the Electricity Market and registrations on the PCE.

If GME, for reasons attributable to itself, makes its payments after the time limits established, it will pay interest to its creditor Market Participants at the rate published on GME's website.

4.5. FEES

The fees represent the remuneration owed to GME for the services provided to Market Participants. The fees are as follows:

- access fee: GME invoices this fee upon admission of the applicant to the Electricity Market;
- yearly fixed fee: GME invoices this fee, for the first 12 months, as a single payment within the third working day of the month following admission of the applicant to the Electricity Market and, subsequently, every 12 months;
- fee per MWh covered by purchase and sale transactions; this fee is applied separately to each bid/offer accepted during the invoicing period;
- fee per MWh registered on the PN;
- OMPR ME yearly fixed fee;
- variable records-based fee: determined in compliance with the EU legislation applicable from time to time and depending on the number of records transmitted to ACER in the previous year.
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4.5.1. Payment of Fees

Market Participants are required to pay the variable fees per MWh traded on the Electricity Market and per MWh registered on the PN by the 16th working day of the month in which the related invoice has been made available. The same time limit also applies to PA Participants.

Furthermore, each Market Participant must pay the amounts due for:

- the access fee, within thirty calendar days of the date of issuing of the related invoice;
- the yearly fixed fee, within the last working day of the month in which the related invoice has been issued;
- the OMPR ME fixed yearly fee and the variable records-based fee, within the last working day of the month in which the related invoice has been issued;

On a yearly basis, GME determines the extent of the fees with effect from 1 January of the following year. The fees are posted on GME's website together with the parameters for their determination.

4.6. GUARANTEE SYSTEMS

Market Participants must post financial guarantees (which may be cumulated with one another) to cover obligations arising in the electricity markets, gas markets, or on the PCE. The guarantees may be posted in the form of a first-demand bank guarantee or of a non-interest bearing cash deposit. The guarantees must meet the requirements specified in the ME Rules. If they are posted in the form of bank guarantees, they must conform to the various formats annexed thereto (art. 100) and may be updated by submitting an updating letter in the various formats, according to the type of bank guarantee posted, annexed to the ME Rules (art. 101). Once they have been posted, the guarantees will be decreased by an amount known as the maintenance margin, whose value is defined in the Technical Rules.

A system of integrated management of guarantees (netting) is adopted in the Day-Ahead Market (MGP), Intra-Day Market (MI-A/MI-XBID), and Spot Gas Market (MP-GAS). Under this system, an overall net exposure, resulting from the acquisition of positions in spot electricity and gas markets and covered by a single guarantee, is determined.

In the Daily Products Market (MPEG) and in the Forward Electricity Market (MTE), segregated guarantees systems are adopted, under which an exposure for each market, covered by a specific guarantee allocated for such market, is determined.

Art. 100, para. 1 of the ME Rules and art. 70 of the MGAS Rules provide that:

- Market Participants wishing to trade in the netting markets, the MPEG, the MTE, and the MTGAS or on the PCE, shall post financial guarantees in the form of bank guarantees in the formats of Annex 3 to the ME Rules and/or Annex C to the MGAS Rules. Where applicable, Market Participants shall allocate the guarantees according the Technical rule no. 04 for ME and the Technical rule no. 19 for MGAS;
- for the purpose of submitting adequate bids/offers only into the netting markets, the MPEG and the PCE, Market Participants shall post financial guarantees in the form of bank guarantees in the formats of Annex 5 to the ME Rules and/or Annex E to the MGAS Rules, or as an alternative or in addition to such guarantees, in the formats of Annex 3 to the ME Rules and/or Annex C to the MGAS Rules. Where applicable Market Participants shall allocate the guarantees according the Technical rule no. 04 for ME and the Technical rule no. 19 for MGAS.

The bank guarantee posted in the formats of Annex 3 to the ME Rules and/or Annex C to the MGAS Rules covers all prior and future obligations of the Market Participant towards GME for its participation in the energy/gas markets (netting, MPEG, MTE, and MTGAS) and on the PCE, of whatever nature, including those of an accessory nature and excluding those arising from non-payment of fees.

The bank guarantee posted in the formats of Annex 5 to the ME Rules and/or Annex E to the MGAS Rules covers all obligations of the Market Participant towards GME for its participation in the netting markets, the MPEG, and on the PCE, excluding those arising from non-payment of fees.

The bank guarantees or their updating letters must be submitted to the bank in charge of GME's treasury services. The bank will place a stamp on the document with the date of receipt, which will become the "date of submission".

5. INTERNATIONAL PROJECTS

GME plays its role of NEMO for Italy under Commission Regulation 2015/1222 (CACM Regulation), by promoting projects aimed at integrating European electricity markets.

GME is a member of Europex (Association of European Power Exchanges) and, as a NEMO, it cooperates with the other designated European exchanges and TSOs in the projects of electricity market coordination and integration SDAC and SIDC, for efficient management of market coupling processes and full implementation of the CACM Regulation. Moreover, together with ARERA, Terna, and the Ministry of Environment and Energy Security, GME takes part in the Western Balkans 6 (WB6) project, aimed at promoting the integration of Balkan countries with the EU SDAC and SIDC, thanks to its experience in the organisation of national markets and of the European integrated electricity market.

5.1 PRICE COUPLING OF REGIONS

The Price Coupling of Regions (PCR) is an initiative taken in 2009 by eight European power exchanges – EPEX Spot, GME, HenEx, Nord Pool, OMIE, OPCOM, OTE, and TGE – to develop a single price coupling solution, aimed at calculating electricity prices throughout Europe and at allocating interconnection capacity in the day-ahead market. The project contributes to implementing the objective of a harmonised electricity market between the participating EU countries. The PCR is open to all other European power exchanges wishing to join it. One of the key elements of the PCR is the development of a single coupling algorithm, called Euphemia (acronym of Pan-European Hybrid Electricity Market Integration Algorithm), which is used to calculate the allocation of electricity and prices in Europe, maximising general welfare, and increasing transparency in the calculation of prices and flows.

5.2 SINGLE DAY-AHEAD COUPLING

The CACM Regulation established a Target Model for the European integrated electricity market in the day-ahead timeframe, providing that the European Single Day-Ahead Coupling (SDAC) should be based on electricity trading under an implicit auction mechanism. This mechanism concurrently carries out the implicit allocation of daily physical transmission rights and the clearing of electricity demand bids and supply offers. The SDAC adopts a decentralised approach in which each NEMO (including GME) manages its own trading system and may organise its own market according to a common matching algorithm (Euphemia), taking into account the global grid model defined by European TSOs for the respective markets. For details, see https://www.nemo-committee.eu/sdac.

5.3 SINGLE INTRADAY COUPLING

The EU regulatory framework (CACM Regulation) established a Target Model for the European integrated electricity market in the intra-day timeframe, providing that the European Single Intraday Coupling (SIDC) should be based on electricity trading under an implicit auction (IDA) and continuous trading (XBID) mechanism, in which the interconnection capacity available between the different zones making up the SIDC is implicitly allocated at the same time as the matching of demand bids and supply offers located in different zones.

The European continuous trading solution relies on a centralised IT platform, called XBID, which integrates the continuous trading intraday markets of 25 countries: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and Hungary.

To supplement the continuous trading mechanism, the European Target Model also provides that intraday cross-zonal transmission capacity should be allocated through three Pan-European implicit Intraday Auctions (IDAs); the purpose of these auctions is to harmonise the computation of cross-border capacity and its pricing at the same time as its allocation.

In particular, under ACER Decision No 01/2019 of 24 January 2019 (implementing art. 55 of the CACM Regulation), the IDA methodology – the single EU-wide methodology to price cross-zonal capacity allocated in the intraday markets of many EU countries - entered into force. In Italy, ARERA Resolution 212/2024/R/eel provided that, as of 13 June 2024, continuous trading in the XBID should be integrated with three IDAs on the Italian borders with France, Austria, Slovenia, and Greece via the Euphemia algorithm. The go-live of IDAs replaced the Complementary Regional Intraday Auctions (CRIDAs) and encompassed in the coupling mechanism (of which the implicit intraday auctions managed by GME in the MI-A are an integral part) not only the borders with Slovenia and Greece, previously included in CRIDAs, but also the borders with France and Austria. For details, see: https://www.nemo-committee.eu/sidc

LEGISLATION AND MANUALS

Legislation

- Integrated Text of the Electricity Market Rules approved by the Ministerial Decree of 19 December 2003, as subsequently amended and supplemented (ME Rules).
- Technical Rules posted on GME's website under art. 4, para. 4.2 of the Integrated Text of the Electricity Market Rules.

Manuals

Downloadable from www.mercatoelettrico.org

- Electricity Market FAQs
- Electricity Market Guide
- Vademecum to the Italian Power Exchange (IPEX)
- Market Participant's User Guide for the SetService IT Platform
- Vademecum to the Forward Account Registration Platform (PCE)

GLOSSARY

Acquirente Unico (AU - Single Buyer)

company ("società per azioni") created by "Gestore della Rete di Trasmissione Nazionale" (now "Gestore dei Servizi Energetici - GSE") with the task of guaranteeing the availability of electricity to cover the demand of all captive customers. AU operates by purchasing the required electrical capacity, reselling it to distributors on non-discriminatory terms, and making it possible the application of a single national tariff to customers. To do so, AU may purchase electricity on the power exchange or through bilateral contracts. The legislation on emergency oil stocks assigned additional responsibilities to AU.

Applicable Period

see Imbalance Settlement Period.

ARERA

see Autorità di Regolazone per Energia, Reti e Ambiente.

AU

see Acquirente Unico.

Autorità di Regolazione per Energia, Reti e Ambiente (ARERA – Regulatory Authority for Energy, Networks and Environment)

Independent regulatory authority established by Law no. 481 of 14 November 1995 with the task of guaranteeing the promotion of competitiveness and efficiency in the electricity & gas sectors. With regard to GME's activity, ARERA is responsible, among others, for defining rules for merit-order dispatch and market power control mechanisms.

Balancing and Redispatching Market (MSD)

Balancing and Redispatching Market (MSD) means the Integrated Scheduling Process, i.e. the venue where Terna procures resources for the balancing and redispatching service and which consists of the sessions specified in the Dispatching Rules.

Bilateral Contract (or OTC Contract)

contract of supply of electricity concluded off the power exchange between a producer/wholesaler and an eligible customer. The price for the supply as well as the injection and withdrawal profiles are freely determined by the parties.

Clearing Price

see Market Clearing Price.

Daily Products Market (MPEG)

venue where demand bids and supply offers for daily products are traded.

Day-Ahead Market (MGP)

venue for the trading of electricity supply offers and demand bids for each market time interval of the next day. All electricity operators may participate in the MGP. In this market, supply offers may only refer to injection or storage portfolios, and demand bids may refer to injection, withdrawal or storage portfolios. GME accepts offers/bids by merit order, consistently with the transmission limits notified by Terna S.p.A. Accepted supply offers are remunerated at the zonal clearing price. Accepted demand bids are remunerated at the zonal clearing price and increased by the compensatory component equal to the difference between the zonal clearing price and the PUN Index GME. Accepted offers/bids determine the commercial positions of injection and withdrawal of each portfolio for the next day. Participation in this market is optional.

Economic Dispatch

see Merit-Order Dispatch

Energy Efficiency Certificates (TEE or White Certificates)

Energy Efficiency Certificates were established by the Decrees issued by the Ministry of Productive Activities, in consultation with the Ministry of Environment and Land Protection, on 20 July 2004 (Ministerial Decrees of 20 Jul. 2004), as subsequently amended and supplemented. These certificates give evidence of the energy savings that electricity and gas distributors with over 50,000 customers are required to achieve. Energy Efficiency Certificates, which are issued by GME under an authorisation granted by GSE, may be sold or bought in the Energy Efficiency Certificates Market (MTEE) or bilaterally. Bilateral transactions should then be registered on the Platform for Registration of Energy Efficiency Bilaterals (TEE Register).

Fee for Assignment of Rights of Use of Transmission Capacity (CCT)

fee defined in art. 23.4 of ARERA Resolution 304/2024/R/eel (TIDE), as subsequently amended and supplemented. With regard to CET offers/bids for injection/withdrawal pertaining to zonal injection portfolios associated with a forward withdrawal account for the step-down margin only, registered under the PCE Rules, this fee is equal, for each minimum market interval, to the product between: 1) the difference between the PUN Index GME and the zonal price of the zone where the units associated with the portfolios are located; 2) the post-MGP CET offers/bids. In each minimum market time interval, both in the MGP and in the MI, this fee for GME is equal to the difference between the purchasing value and the selling value of power exchange volumes.

Forward Account Registration Platform (PCE)

venue for registering transactions and CET bids/offers that is organised and managed by GME under Annex A to AEEG (now ARERA) Resolution 111/06, updated under Annex A to ARERA Resolution 345/2023/R/EEL, as subsequently amended and supplemented. Five types of contracts may be registered on the PCE: four contracts of standard type (base-load, peak-load, off-peak, week-end) and one contract of non-standard type. Participants may register data concerning the volumes and delivery duration of their forward contracts up to two months ahead of the date of physical delivery. In general, each participant owns one or more forward sale accounts, one or more forward purchase accounts, one or more forward storage accounts, and one forward blank account. The participant may register purchases and sales on each of such accounts, provided that the net balance resulting from the new registration is a net sale (in the first case), a net purchase (in the second and fourth case), and a net sale or purchase (in the third case). The registration of purchases and sales, which modify the net position of each participant on each account, is allowed up to two days before the start of the corresponding physical delivery. Therefore, each contract may be registered 60 to 2 days ahead of delivery. The balance of the account defines the volume of electricity that may be delivered/withdrawn or sold/purchased in the MGP or combinations thereof. By definition, CET bids/offers for injection/withdrawal must be equal to or at the most lower than the net position; a CET bid/offer lower than the net position represents a repurchase at the PUN Index GME in the MGP, in the case of a sale account or a storage account, and a sale at the PUN Index GME in the MGP, in the case of a purchase, storage, or blank account. This

means that, in each Imbalance Settlement Period (ISP), there may be imbalances with respect to injection and withdrawal schedules and that, at the end of the month, the aggregated imbalance with respect to the schedules may be positive (the forward market is long and resells the surplus on the power exchange) and negative (the forward market is short and purchases the deficit on the power exchange). It is worth pointing out that, for each CET bid/offer, participants may specify a positive price; in the case of a sale, such price represents the minimum price (with respect to the market price) below which the participant prefers purchasing electricity on the power exchange, rather than delivering the specified volume (likewise, in the case of a purchase, the participant may specify a maximum price above which such participant prefers reselling electricity on the power exchange rather than withdrawing it).

Forward Electricity Market (MTE)

venue where forward electricity contracts with delivery and withdrawal obligation are traded.

Gestore dei Mercati Energetici (GME)

company ("società per azioni") established by GSE and vested with the economic management of the Electricity Market, under criteria of transparency and objectivity with a view to promoting competitiveness among producers and thus ensuring the availability of an adequate level of reserve capacity. Previously known as "Gestore del Mercato Elettrico", GME changed its registered name on 19 November 2009. In particular, GME manages the Day-Ahead Market (MGP), the Intra-Day Market (MI), the Daily Products market (MPEG), the Balancing and Redispatching Market/Integrated Scheduling Process (MSD), and the Forward Electricity Market (MTE). GME also manages the Environmental Markets (Energy Efficiency Certificates Market and Market of Guarantees of Origin), as well as spot and forward natural gas markets, making part of the Natural-Gas Market (MGAS), in compliance with art. 30 of Law no. 99 of 23 July 2009 and art. 32, para. 2 of Legislative Decree no. 93 of 1 June 2011, as well as with the provisions of AEEGSI (now ARERA) Resolution 312/2016/R/GAS. GME has also taken over the management of the P-GAS platform and, in the fuel sector, the management of the P-Logistics platform and the PDC-oil. As part of regasification, it organises and manages the PAR platform.

Gestore dei Servizi Energetici (GSE)

publicly-owned company ("società per azioni") playing a central role in promotion, development, and support of renewable sources in Italy. GSE's sole shareholder is the Ministry of Economy and Finance, exercising its shareholder's rights jointly with the Ministry of Enterprises and Made in Italy. GSE controls the following companies: "Acquirente Unico" (AU S.p.A.), "Gestore dei Mercati Energetici" (GME S.p.A.) and "Ricerca sul Sistema Energetico" (RSE S.p.A.).

GME

see Gestore dei Mercati Energetici.

GSE

see Gestore dei Servizi Energetici.

Imbalance Settlement Period (ISP)

The Imbalance Settlement Period/s (ISP/s) is/are the minimum time interval/s in respect of which nominations may be registered and imbalances are settled.

Integrated Scheduling Process

see MSD.

Intra-Day Market (MI)

venue for trading electricity demand bids and supply offers for each market time interval of the following day, for the purpose of modifying the commercial positions of injection and withdrawal defined in the MGP. It consists of the MI-A and MI-XBID sessions. The MI-A represents the auction trading session of the MI, in which the interconnection capacities between all the zones of the Italian market and the interconnection capacity on the borders involved in market coupling are allocated. MI-XBID means the continuous trading session of the MI, carried out within the XBID, in which the interconnection capacities between all the zones of the Italian market and the interconnection capacity on the borders on which the XBID is active are allocated. Participation in this market is optional.

IPEX

name used abroad for the Italian power exchange.

ISP

see Imbalance Settlement Period.

Italian Power Exchange (IPEX)

virtual venue where wholesale electricity supply and demand meet. The economic management of IPEX is vested in GME as per art. 5, Legislative Decree 79/99.

Liquidity

ratio of volumes traded on the power exchange (in the MGP) to the overall volumes (including OTC contracts) traded in "Sistema Italia".

Macro-Zone

group of geographical and/or virtual zones conventionally defined for the production of statistical market indexes. A macro-zone has a low frequency of market splitting and a homogeneous trend of selling prices.

Market Clearing Price (or Clearing Price)

generally, it identifies the price that is set in the MGP, MI, MPL, and MGS at the intersection of demand and supply curves, so as to balance demand with supply, maximise social welfare, and perform efficient transactions. In the Electricity Market, the clearing price is determined for each minimum market time interval and, if the market is split into 2 or multiple zones, both in the MGP and in the MI, it may be different in each market zone (zonal price). In the MGP, the zonal clearing price may be applied to all supply offers or demand bids.

Market Coupling

mechanism of coordination of regulated electricity markets in different EU countries, which is aimed at managing congestions on interconnected grids (cross-border trade). The objective of market coupling is to maximise the use of interconnection capacity under cost-effectiveness criteria (guarantee that energy flows are directed from markets with lower prices towards markets with relatively higher prices). Under the CACM Regulation, the reference initiatives are the Single Day-Ahead Coupling (SDAC) and the Single Intraday Coupling (SIDC).

Market Splitting

mechanism aimed at managing grid congestions and similar to market coupling. The difference lies in the fact that the market zones involved are managed by a single entity. This is the case of the Italian market managed by GME and having a zonal configuration.

Merit-Order Dispatch (or Economic Dispatch)

activity that GME carries out on behalf of Terna S.p.A. in accordance with art. 5.2 of Legislative Decree 79/99, with the provisions of ARERA Resolutions TIDE and 48/04, as well as with the Integrated Text of the Electricity Market Rules. This activity consists in determining the commercial positions of injection and withdrawal of portfolios on the basis of the offer price and, if this price is equal, on the basis of priorities specifically assigned to the different types of unit by Terna S.p.A. In particular, supply offers are accepted – and thus commercial positions of injection are determined – by increasing offer price order, whereas demand bids are accepted - and thus commercial positions of withdrawal are determined - by decreasing offer price order. Furthermore, offers/bids are accepted consistently with the transmission limits between pairs of zones that are daily defined by Terna S.p.A.

National Transmission Grid (RTN)

set of lines that, in Italy, make part of the grid used to carry electricity from generation centres to distribution and consumption areas.

Nomination Platform (PN)

the platform referred to in ARERA Resolution 345/2023/R/EEL, as subsequently amended and supplemented. It is organised and managed by GME to enable the nomination on units of the commercial positions resulting from the MGP and MI.

OTC Contract

see Bilateral Contract.

Over-The-Counter (OTC) Markets

non-regulated markets, i.e. all those markets where financial assets are traded off the official stock exchanges. Usually, the trades are not standardised and "atypical" contracts may be concluded. The contracts negotiated on these markets generally have a level of liquidity lower than the one of regulated markets.

Pay-as-Bid

market model under which each bid/offer is valued at the price specified therein. This rule is currently used in the MSD.

PCR

Price Coupling of Regions.

PN

see Nomination Platform.

PUN Index GME

average of zonal prices in the MGP, weighted for total purchases, pertaining to physical or commercial withdrawal portfolios.

Pz

see Zonal Price.

Renewable Energy Sources (RES - Renewables)

this category includes solar, wind, hydro, geothermal, tidal, and wave energy and the conversion of vegetal products or organic and inorganic waste into electricity.

RES

see Renewable Energy Sources.

TEE (or White Certificates)

see Energy Efficiency Certificates.

Terna S.p.A.

company ("società per azioni") in charge of electricity transmission and dispatching over the high-voltage and extra-high voltage grid throughout Italy. Its current structure results from the acquisition (November 2005) of part of the assets of GSE, as set forth in Prime Minister's Decree of 11 May 2004. Terna is a listed company. Its shares were first traded on the Stock Exchange in June 2004. Currently, its relative majority shareholder is "Cassa Depositi e Prestiti", having a stake of 29.99%.

Transit Limits

see Transmission Limits.

Transmission (or Transit) Limits

maximum electricity transmission capacity between a pair of zones, expressed in MW. The transmission limits are part of the preliminary information that Terna S.p.A. daily notifies to GME and that GME posts on its own website. GME uses these limits in the procedure leading to the identification of clearing prices in the MGP and MI.

Transmission System Operator (TSO)

entity in charge of managing and operating the power transmission grid.

TSO

see Transmission System Operator.

White Certificates

see Energy Efficiency Certificates.

Zonal Portfolio

a zonal portfolio may be a physical zonal portfolio or a commercial zonal portfolio in respect of which the market participant is enabled to submit bids/offers.

Zonal Price (Pz)

clearing price for each geographical and virtual zone.

Zone

portion of the power grid where, for system security purposes, there are physical limits to transfers of electricity to/from other geographical zones. The Italian market has three types of zones: geographical zone (representing one part of the national grid), national virtual zone (consisting of a constrained zone); foreign virtual zone (representing one point of interconnection with foreign countries).