GME
Gestore
Mercati
Energetici

ANNUAL REPORT 2015

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EXECUTIVE SUMMARY

2015 is characterized by a further decisive step towards the integration of the European energy markets, favored, on the one hand, by the sharp drop in raw material prices and the resulting recovery in competitiveness of the oil/gas intensive countries and, on the other hand, by the consolidation of supranational regulatory and organizational framework related to the progressive implementation of regulations and community projects.

On the markets, in fact, in an economic environment made again uncertain and unstable by a recovery that is struggling to find a solid basis, the unmatched decline of the crude oil (52.1 $/bbl, -47.6%), accompanied by the heavy markdowns of coal (56.4 $/MT, -26%) and gas (TTF: 18.8 €/MWh, -5.3%), characterizes 2015 with the completion of the long-term dynamics observed on energy demand, upon the first feeble attempt to reverse the free drop of the previous five years, and with the spread of renewable generation, now fully operational after having reached the highest point of its upward flight in 2014. Far from providing evidence of a possible economic recovery, it should be defined and monitored especially the revival of consumption registered in the electricity sector (315.2 TWh, +1.5%) as well as in the gas one (66.947 mmc, +9.1%), whose evolution appears to bind above all to more transient cyclical phenomena, high temperatures and low water availability as well as to structural long-term inputs.

All these dynamics are reflected in the Italian electricity market in terms of volumes and prices. In fact, trades on the spot platforms of GME, both in the MGP (287.1 TWh, +1.8%), which stops the losing streak started in 2009 and raises the liquidity close to the highest level since 2005 (68%), as well as in the MI (24.9 TWh, +9.3%), where the traded energy increase above all reveals the success of the new intra-day market introduced in February 2015.

At the same time, the low cost of fuel, a level of consumption in timid recovery but still far from its highest standards, as well as the high incidence of the renewable offer depict present and future national scenarios in favor of a reduction of the wholesale electricity prices and their spread with the rest of Europe. The confirmation comes from the spot, where the PUN in the MGP is confirmed to be just above an all-time low of 52 €/MWh, and from the forward markets, more and more mature due to the increasing amount of cash collected mostly on the continental financial platforms and directed to prospects for further downside.

With regard to 2015, the analysis of dynamics of prices and volumes observed in the MGP shows an overall low variability of the PUN, only altered by periodic and volatile peaks occurring in the presence of particular conditions of context. The phenomenon shows with particular intensity in July, when the exceptional heat wave in summer has pushed consumption at record levels and the PUN to a monthly value among the highest in the last three years (70 €/MWh). These factors, accompanied by the most competitive bid/offer reorganization of the renewable energy plants appear crucial for interpreting the recovery recorded in 2015 from thermal power generation (+10.5%), especially from combined cycle (+20.6%), as well as the changes observed in the price structure in terms of slight expansion of the North-South gap (+0.3 €/MWh), in the strong reduction in the volatility of stock prices of the South and Sicily (-4/-5 pp), and of their zeroing frequency (-120/-134 hours). However, no new developments on zonal basis emerge, except for the significant decrease shown by the price of Sicily (-28.9%) due to the regulatory intervention that regulated the management on the market of the major plants of the island until the commissioning of the new interconnection cable with the mainland.

The consolidation of these dynamics on the core is even more interesting when viewed in the light of the launch of the market coupling, the implicit auction mechanism that from February 2015 has synchronized the Italian day ahead market based on the major European electricity markets, thus allowing a coherent allocation of the cross-border electricity with the price differential formed on the border. The start of the project, which stands as a key step in the direction of the increasing European integration, although it's not possible to cancel the structural gap powered by the more expensive mix of Italian generation, allowed to promptly seize the opportunities of the market, thus contributing to the progressive decrease of the system inefficiencies and the establishment of new structures in the European electricity market. This is a result that, in some cases, is fully homogeneous in terms of enhancement in the price of electricity within a single supranational area extended from the Northern Italian area to Scandinavia.

The electricity sector also includes, with the same spirit, the projects currently promoted nationally and internationally by GME, recognized by a formal act of the Ministry of Economic Development - in accordance with the provisions of EC Regulation no. 2015/1222 (the so-called CACM) and based on a favorable opinion expressed from AEEGSI - as the sole *Nominated Electricity Market Operator* (NEMO) for Italy in terms of management of the coupling processes related to the integrated day-ahead market and making up the intraday market. Following the direction taken, GME will then be committed in the next few years to encourage expansion of the coupling experiences to new borders and new markets, both in the context of the *Italian Borders Working Table* (IBWT) and of the *PXs Cross Borders Intra-Day* (XBID), whose launch, planned at the time in the second half of 2017, was preceded in 2016 by the pilot project launched in parallel by Italy and Slovenia for the coordinated management of the relevant border on the current intra-day markets.

An active contribution to the implementation of a system of common supranational rules was also offered in the context of market monitoring, in which GME has confirmed to be the key contact for the competent institutions. Between the end of 2015 and early 2016, in fact, it has started the operation of two platforms, aimed at supporting the market participants and the regulatory authorities in fulfilling their obligations and functions defined by (EU)

Regulation no. 1227/2011 (REMIT): the *Data Reporting Platform* (PDR), operational since 7 October 2015 for all customers of GME, through which sending ACER the transactions carried out in relation to the contracts for the supply and transmission of electricity and natural gas (Art. 8 of REMIT), and the *Inside Information Platform* (PIP), online since 4 January 2016, destined, however, to ensure market participants the timely publication of inside information in their possession (Art. 4 of REMIT).

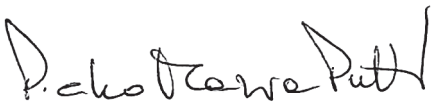
The impulse towards a growing European integration has also guided the activities being implemented in the gas sector. In this context, in 2015, GME has supported AEEGSI, together with SRG, in the harmonization process of the balancing mechanisms of the regulatory framework designed at Community level by (EU) Regulation no. 312/2014. As a nomination agent, it also entered into specific cooperation agreements with third European exchanges interested in offering financial products on its platforms with physical delivery of gas at the PSV, thus contributing to that effect to the increase of liquidity registered on the Italian hub.

In terms of market, also the analysis in the gas sector shows, on the one hand, the return of the positive sign for the Italian market, following four years of relentless decline, and driven by the blaze in the thermoelectric sector and a rise in civilian consumption, and, from the other hand, a further decline of the price traded at the PSV (22.2 €/MWh, -4.7%), however, which increases its spread from other continental hubs after a phase of substantial alignment (approximately +2 €/MWh). In this context, the markets of GME, represented mainly by the PB-GAS, while expressing much reduced rate volumes compared to the amounts delivered by SRG (6.8%), confirm the positive evolution of their liquidity and their supporting role to need for balancing of the TSO. They are indicative, in this respect, the two most important phenomena that emerged during the year: the further increase of trades between participants other than the SRG on the sector G+1 (13 TWh, +22.3%), now risen to approximately 30% of the total, a symptom of a consolidated spot nature of the platform, and the increasing activation of the sector G-1 (7.3 TWh, +4.3 TWh), used by the SRG for balancing purposes in particular scarcity of storage resources available in sector G+1. With reference to the prices, it should be noted a strengthening of the link between the PSV and the prices expressed on the most liquid segment of G+1, witnessed by the significant similarity between the two values (22.1 €/MWh) and the perfect alignment of their infra-annual trend, in 2015 with no summer and winter seasonal feature, but characterized by a gradual descent to the lowest monthly level reached in December. Slightly above these references is however the price of the sector G-1 (23 €/MWh), on which the use of resources other than Stogit grows; however, it remained the most widely used locational product. Among the other markets of GME, finally, considerable volumes were traded in the MI-GAS (1 TWh), on which in 55% of cases the sessions with trades have taken place at the activation of the sector G-1 under the prevailing impulse of the SRG, the counterparty in almost all the recorded combinations.

As for the environmental markets, finally, the most important novelty of 2015 is represented by the fact that GME assumes the role of central counterparty in the transactions concluded on the now mature market of Energy Efficiency Certificated (MTEE) by eliminating the risks affecting participants to carry out transactions with defaulting counterparties. It's positive the market reaction, on which there was an increase in transactions (3.8 million toe, +8.3%), which, however, only partially contained the overall reduction in energy efficiency certificates traded

in the field (8.7 million toe, -25%), powered by the decline in volumes traded bilaterally. In the cancellation year of the mandatory amount of renewable energy to be injected in to network of importers and producers of electricity from conventional sources, it resulted in a physiological decrease also the volume of trades in the system of green certificates (37 TWh, -14.6%), thus preparing to move to a managed feed-in tariff scheme. The decline was evenly distributed between the amount of exchange (7 TWh, -15.2%) and bilateral agreements (30 TWh, -14.4%). Up slightly, finally, the exchange of guarantees of origin (46 TWh, +4.7%), which occurred almost entirely through bilateral agreements between participants.

Chairman
and Chief Executive Officer



Pietro Maria Putti

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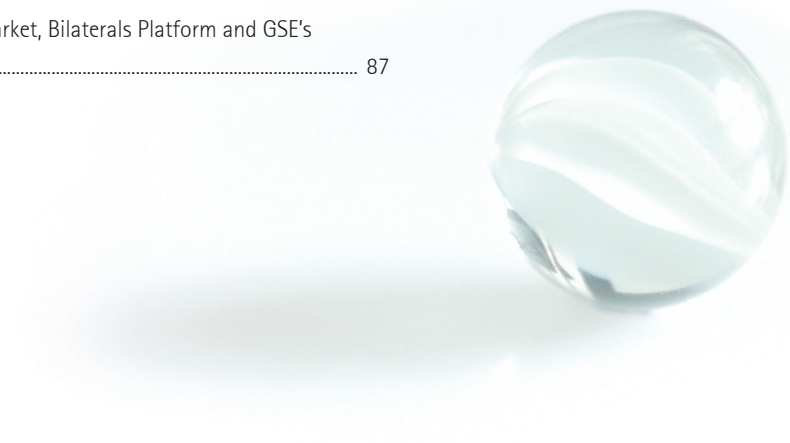

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SECTION

1

THE COMPANY

1.1 GOVERNANCE AND MARKETS

1.1.1 Company profile

"Gestore dei Mercati Energetici S.p.A." (GME) is a joint-stock company, which was established in 2001 as part of the process of liberalization of the electricity sector, initiated by the so-called Bersani's Decree[1]. GME is fully controlled by Gestore dei Servizi Energetici - GSE S.p.A.[2], whose shares are in turn wholly owned by the Italian Ministry of Economy and Finance (MEF).
The company operates in compliance with the guidelines of the Ministry of Economic Development (MiSE) and the legal guidelines established by the Authority for Electricity, Gas and Water System (AEEGSI).

A multi-commodity company

Under the applicable legislation and regulations, the company has gradually broadened its skills from the organization of electricity markets, to the environmental ones, to those of the gas and fuel.
In particular, as shown in the diagram in Figure 1.1.1, within the electricity sector, GME manages:

- the Electricity Market (ME) that consists of:
  a) the Spot Electricity Market (MPE), articulated in the Day-Ahead Market (MGP) and the Intra-Day Market (MI);
  b) the Forward Energy Market (MTE);
  c) the Electricity derivatives delivery platform (CDE), aimed at allowing participants to liquidate, with physical delivery via registration on the PCE (see *intra*), the contracts concluded in the IDEX (the electricity derivatives segment managed by Borsa Italiana S.p.A.);
- the Electricity Account Trading Platform (PCE) for the registration of the forward sale and purchase contracts of electricity concluded outside the bids/offers system.

Also in the sector of electricity, GME also manages the operations of the Ancillary Services Market (MSD), whose economic management is the responsibility of Terna S.p.A.
Similarly, in the field of gas, GSE manages:

a) the Gas Market (MGAS), articulated in the Day-Ahead Market (MGP-GAS), the Intra-Day Market (MI-GAS) and Forward Electricity Market (MT-GAS);
b) the gas platform for fulfilling the obligations to transfer related to domestic production, import and virtual storage provided for in Ministerial Decree of 18 March 2010 (P-GAS);
c) the natural gas balancing platform (PB-GAS), on behalf of Snam Rete Gas S.p.A. (SRG S.p.A.).

GME was also tasked to collect data on the storage capacity of mineral oils, functional to the future launch of the platform of the logistics market for oil and mineral oil and the wholesale market for liquid petroleum products for motor vehicles that GME has to organize and manage under Legislative Decree 249/2012. In order to detect the capacity data, GME organizes and manages the platform of Detection of the Storage Capacity of Mineral Oils (PDC-oil) within which they are acquired the data and

1 Pursuant to Articles 5 of Legislative Decree 79/99, the so-called Bersani's Decree.

2 Former manager of Rete di Trasmissione Nazionale S.p.A., GSE is a company that works for the promotion of sustainable development through engineering and technical qualification and verification of renewable sources and high efficiency cogeneration plants. The company also recognizes the incentives for electricity produced and injected into the grid from such plants. Since 2011, GSE is required to ensure measures to foster greater competition in the natural gas market.

information pertaining to the logistic capacity, according to a "standard" model for detection, approved by the Ministry of Economic Development with directorial decree no. 17371 of 30 May 2013.
With reference to the implementation of the EU Regulation no. 1227/2011, concerning the transparency and integrity of the wholesale energy markets (REMIT), and the related Implementing Regulation No. 1348/2014 (Implementing Acts), GME created in 2015 and operates two platforms through which it supports market participants in the fulfillment of the data reporting obligations to ACER (PDR platform) and publication of inside information (PIP platform)[3].
Finally, pursuant to Art. 5 of the (EU) Regulation No. 2015/1222 of 24 July 2015 - governing the Community guidelines on the capacity allocation and electric congestion management - by letter of 15 September 2015 of MiSE, after having obtained the opinion expressed by AEEGSI by Resolution no. 414/2015/i/eel of 6 August 2015, GME has been assigned the role of sole Italian reference *Nominated Electricy Market Operator* (NEMO) for the management of processes and coupling flows related to the integrated Day – Ahead market and the integrated Intra-Day market.
A brief description of the characteristics of these markets is contained in Figure 1.1.1.

Markets and platforms Fig. 1.1.1

Electricity

- MGP – Day-Ahead Market
- MI – Intra-day Market
- MSD – Ancillary Services Market
- MTE – Forward Electricity Market
- PCE – OTC Registration Platform
- CDE – Delivery of electricity derivatives

Environment

- MCV – Green Certificates Market
- MTEE – Energy Efficiency Certificates Market
- M-GO (former M-COFER) – Market of the Guarantees of Origin
- TEE Register
- PBCV – Platform for Registration of Bilaterals of Green Certificates
- PB-GO (former PB-COFER) Platform for Registration of Bilaterals of the Guarantees of Origin

Gas

- P-GAS – Natural gas trading platform (Segments: import, royalties, former Legislative Decree 130/10)
- MGP-GAS
- MI-GAS
- MT-GAS
- PB-GAS – Natural gas balancing platform

Fuels

- PDC-Oil - Mineral oil storage capacity data reporting platform

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
MCV	MGP (Passive demand) MA MSD	MGP (Active demand)	MTEE Register of TEE	PCE PBCV	MTE EUA*	MI reform of MA) MTE (reform) CDE	P-GAS (segments: import and royalties) MGP-GAS MI-GAS	PBGAS MI (enlargement)	M-COFER PB-COFER P-GAS (Segment: former Legislative Decree 130)	MT-GAS PDC-Oil M-GO (former M-COFER) PB-GO (former PB-COFER)		PDR PIP NEMO MTEE (central contr.)

*Market closed in 2014.

3 Access to the PDR is guaranteed only to those market participants registered in one or more electricity markets managed by GME. Access to the PIP is instead allowed to all those market participants in possession of the ACER code.

A single central counterparty for physical markets

The markets managed by GME were characterized by their physical nature: all products traded, both spot and forward, in fact, involve the obligation to provide for physical delivery and access to trading is allowed only to those who, directly or through a proxy, have in any case the possibility of physically delivering those products. Moreover, GME acts as a central counterparty on all its markets, with the sole exception of the MSD (where the central counterparty is Terna S.p.A.), the PB-Gas (where the counterparty is SRG S.p.A.), the P-Gas, where the counterparties in transactions are directly coupled in response to the transaction, and on the platforms of registration of bilateral contracts of the Green Certificates (PBCV), Guarantees of Origin (PB-GO) and Energy Efficiency Certificates (TEE Register).

Market regulation

With reference to the GME's governance:

- GME lays down the rules of operation of the Electricity Market, the Green Certificates Market, the Natural-Gas Market and the P-GAS bilaterals platform and submits them to the Ministry of Economic Development for approval; the Ministry approves the rules after hearing the opinion of AEEGSI;
- GME lays down the rules of operation of the Energy Efficiency Certificates Market, the rules of the registration platform of bilateral transactions of the energy efficiency certificates as well as the operation rules of the Electricity Account Trading Platform and the Natural Gas Balancing Platform, approved by the Authority for electricity, gas and water system;
- GME lays down the rules of operation of the regulated market and of the platform for registering bilateral trades of Guarantees of Origin, which are then sent to the Authority for electricity, gas and water system for their check in compliance with AEEGSI's Resolution ARG/elt 104/11.

The rules of operation of the Mineral-Oil Storage Capacity Data Reporting Platform (PDC-oil) are instead laid down and approved by GME itself.

Market monitoring

GME constantly monitors trading on its markets through dedicated offices. This monitoring activity integrates the one carried out on electricity markets in support of AEEGSI, in accordance with specific decisions. GME is also engaged in the implementation of the new electricity market surveillance introduced by the REMIT Regulation. In this respect, for a more detailed description of the activities made under the REMIT Regulation, see paragraph 1.2.2.

GME's bodies and organizational structure

The management body of the company is the Board of Directors, consisting of three members who are appointed for a three-year term by a resolution of the shareholder's meeting[4]. The management of operations is solely vested in the Board of Directors. The Directors in office carry out the operations needed to achieve GME's aims.

One member of GME's Board of Directors acts as both Chairperson and Chief Executive Officer:

- under the by-laws, he/she legally represents and signs on behalf of the company and chairs the shareholder's meeting;
- he/she convenes and chairs the Board of Directors and oversees the implementation of the Board's resolutions;
- under a Board's resolution, he/she is vested with all the powers of management of the affairs of

4 By resolution of 22 October 2015, the Sole Shareholder of the Company has appointed the new corporate Board of Directors that will remain in office until the Shareholder's Meeting called to approve the financial statements for the year 2016.

the company, except those otherwise specified by the applicable laws, the by-laws or reserved to the Board of Directors;

- he/she reports to the Board of Directors and to the Board of Auditors, at least every three months, on the management of the company's affairs and on their predictable evolution, as well as on the company's most significant operations.

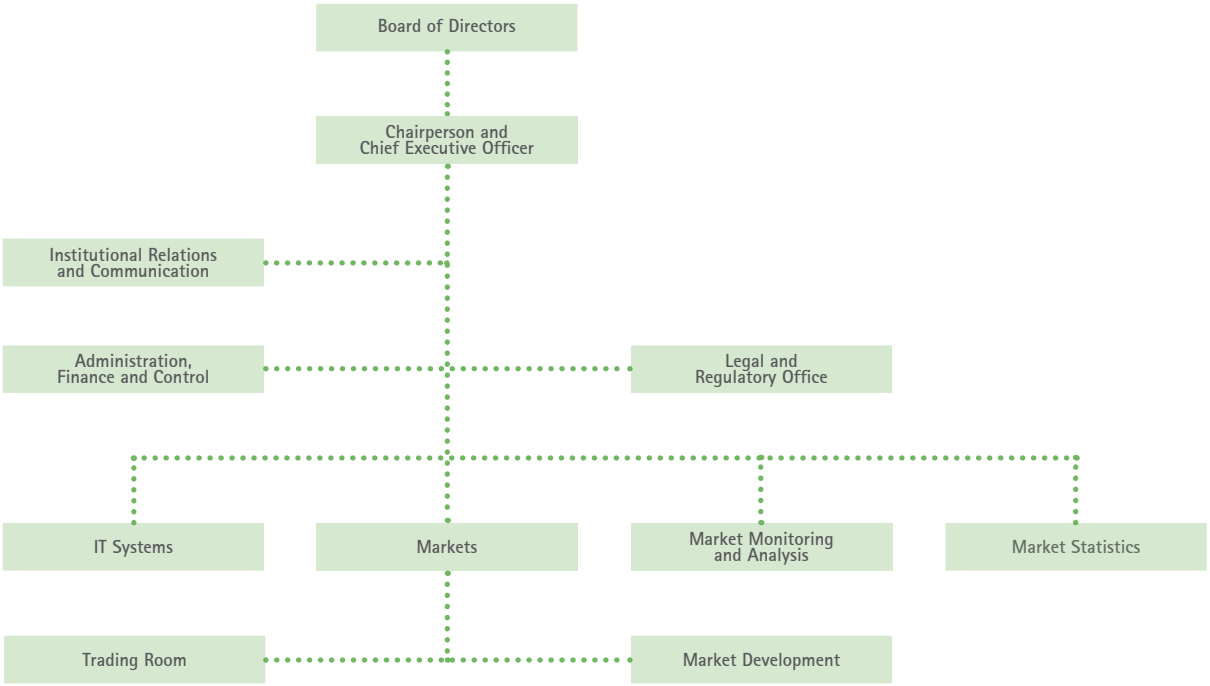
GME's bodies also include:

- the Board of Statutory Auditors;
- the Supervisory Body.

As of 31 December 2015, the company had 102 personnel members (of whom 2 seconded), working at seven units, according to the diagram shown in Figure 1.1.2.

GME's organizational chart

Fig. 1.1.2



Market rules

Tab. 1.1.1

	ELECTRICITY MARKET				PBGAS	
	MTE	MPE	PCE	MGAS	G-1	G+1
Participation	Voluntary	Voluntary on the MGP and MI Compulsory on the MSD	Voluntary	Voluntary	Voluntary	Compulsory
Requirements for participation in the markets and trading*	Requirement to hold one energy account in order to deliver the net position	Requirement to hold one offer point in order to enter orders	Participation restricted to dispatching users and their authorized agents	Requirement to be a PSV user in order to deliver the net position	Users of the natural gas transmission and balancing service	Users of storage services, except transmission companies and users of the strategic storage service only
Product traded	Yearly, quarterly, monthly (with base-load and peak-load profiles)	Opening hours MGP, MI1: 1-24 MI2: 1-24 MI3: 9-24 MI4: 13-24 MI5: 17-24	OTC contracts	MGP-GAS, MI-GAS: daily, MT-GAS: BoM, monthly, quarterly, half-yearly, yearly (both thermal and calendar year)	Daily	Daily
Trading mechanism	Continuous trading	Auction	OTC trading	Continuous trading	Auction	Auction
Price rule	Pay as bid	Zonal marginal price onthe MGP and MI Pay as bid on the MSD	N/A	Pay as bid	Zonal marginal price	Marginal price
Guarantees	Bank guarantee and/or cash deposit		Bank guarantee. Cash deposit only if necessary and urgent	Bank guarantee and/or cash deposit	As determined by Snam Rete Gas	As determined by Snam Rete Gas
Central Counterparty	GME	GME on the MGP and MI Terna on the MSD	GME (for CCTs only)	GME	Snam Rete Gas	Snam Rete Gas
Payments	M+2		M+2	M+1 for trades M+3 for closing non-delivered positions	Time limit determined by Snam Rete Gas	Time limit determined by Snam Rete Gas

(*) In addition to the admission requirements specified in the rules and regulations governing the individual markets, parties that can participate in the markets/platforms should have adequate professional qualifications and be proficient in the use of ICT systems and related security systems or rely on ICT-proficient employees or assistants.

PGAS					
Import	Virtual Storage	Royalties	MCV	MTEE	MGO
Compulsory (sale side)	Compulsory (sale side)	Compulsory (sale side)	Voluntary	Voluntary	Voluntary
Members of the PSV subject to the offer obligation for the shares of imports	Members of the PSV that are parties of the virtual storage service	Members of the PSV subject to the offer obligation for the shares	GSE, domestic and foreign producers, wholesalers, importers, associations, former Art. 2.23 first period, of Law no. 481 of 14/11/1995, participants obliged under Art. 11 of Legislative Decree no. 79 of 16/03/199	Requirement to hold an account with the Register of TEEs for trading on the MTEE	Requirement to hold an account with the Register of GOs for trading on the the MTEE
Monthly, annual - thermal	Monthly, half-yearly	Monthly	Certificate related to annual and quarterly periods	Certified by type of intervention (1 TOE)	Certified by type of source (1MWh)
Continuous trading	Continuous trading	Auction	Continuous trading	Continuous trading	Continuous trading
Pay as bid	Pay as bid	Marginal price	Pay as bid	Pay as bid	Pay as bid
As determined by each selling participant	As determined by each selling participant	As determined by each selling participant	Cash deposit to cover the total purchases	Cash deposit to cover the total purchases	Cash deposit to cover the total purchases
N/A Billing and payments between participants	N/A Billing and payments between participants	N/A Billing and payments between participants	GME	GME	GME
Time limit determined by each selling participant	Time limit determined by each selling participant	Time limit determined by each selling participant	D+3	D+3	D+3

Fees

Tab. 1.1.2

Market/Platform	Reference legislation/regulations	Access fee (on a one-time basis)	Yearly fixed fee
Electricity Market	Integrated Text of the Electricity Market Rules	€ 7,500	€ 10,000
PCE	Regulation of the OTC Registration Platform	€ 1,000	€ 0
Gas market	Regulation of the natural gas market	€ 0	€ 0
PB-GAS	Regulations of the Platform for balancing gas	€ 0	€ 0
P-GAS	Regulations of the P-GAS	€ 0	€ 0
Green Certificates	Integrated Text of the Electricity Market Rules Regulation of the Certificates Bilaterals Registration Platform	€ 0	€ 0
Guarantees of Origin	Regulation of the operation of the regulated market and the recording platform of bilateral trade of guarantees of origin	0 €	0 €
Energy Efficiency Certificates	Regulation of the operation of the TEE market Regulation for recording bilateral transactions of TEEs	0 €	0 €

Variable fee

Fee per MWh traded:

- MPE
  - a fee for the first 0.02 TWh of electricity traded monthly;
  - a fee of 0.04 €/MWh for volumes of electricity traded monthly exceeding the threshold of 0.02 TWh up to a maximum of 1 TWh;
  - a fee of 0.03 €/MWh for volumes of electricity traded monthly exceeding the threshold of 1 TWh up to a maximum of 10 TWh;
  - a fee of 0.02 €/MWh for volumes of electricity traded monthly exceeding 10 TWh.
- MTE
  - € 0.01 per MWh traded
- CDE
  - € 0.045 per MWh registered

Fee for MWh subject of the transactions registered: 0.008 €/MWh.

If the participant is at the same time an electricity market participant, no access fee and fixed annual fee are to be paid to GME

- Fee for MWh traded: 0.01 €/MWh;
- Fee for activation of the error procedure: € 500.00 per request;
- Contribution to resources to be used for default management: 0.0025 €/MWh.

If the participant of the gas market is also a participant of the electricity market, no access fee is to be paid to GME

Fee for MWh traded: 0.0108 €/MWh.

If the participant of the PB-GAS is at the same time a gas market participant, no access fee and fixed annual fee are to be paid to GME If the participant of the PB-GAS is also a participant of the electricity market, no access fee is to be paid to GME

Trading fee:

- 0.0025 €/GJ on the Imports and Royalties Segments;
- 0.009 €/MWh on segment pursuant to former Legislative Decree 130/10.

Fee for certificate traded (each of 1 MWh):

- € 0.06 for certificate for the first 2,500 certificates traded;
- € 0.03 for certificate above 2,500 certificates traded

The structure and extent of the above fees is applied to the total certificates traded both in the sessions of the regulated market and through the Green Certificates Bilaterals Registration Platform (PBCV).

Fee up to 31 December 2015 for GO traded/recorded on the market and/or bilaterally: € 0.004

Fee for TEE traded: € 0.1

Fees for the REMIT services

Tab. 1.1.3

	Service offered	Fee
RRM – No GME/other	PDR - Downloading data reports in the ACER format	500 €/year
RRM – GME	PDR - Data Reporting (GME data only)	1,000 €/year
RRM – GME	PDR - Data Reporting (GME data + External data upload)	1,000 €/year
GME	Inside Information Publication (PIP)	0 €/year

1.2 NEW INITIATIVES

1.2.1 New role of the central counterparty GME in the TEE Market

In October 2015, GME has assumed the role of central counterparty in the trading conducted in the Energy Efficiency Certificates Market (MTEE), in analogy to what has already been done on other environmental markets regulated and managed by it (i.e. Green Certificates, Guarantees of Origin).
The assumption of the role of central counterparty in the MTEE has allowed the elimination of the risk of participants to carry out transactions with counterparties that, following the conclusion of the trades, failed to meet their administrative and fiscal obligations.
In particular, the role of central counterparty has favored the disappearance of the following:

a) the obligations for participants to submit GME the tax documentation regarding the *VAT Information Exchange System* (VIES), not being able to verify "intra-Community transactions" carried out on the market by participants with Italian VAT, given that the sole counterparty is GME, subject also holding an Italian VAT;
b) the above rules introduced by GME on 23 December 2014 to regulate the operational functions associated with the management of the so-called "*List of unacceptable counterparties*" because, as the sole counterparty of the transactions become GME, the provision of the power of the participants to indicate any counterparties with whom it did not intend to be part of the trade has failed;
c) the amendments to the Rules of the MTEE for the purposes of compliance with the provisions laid down by the Regulator in the field of electronic invoicing - approved by AEEGSI's Resolution no. 134/2015/R/EFR of 26 March 2015 - because, as GME became the sole trading counterparty for participants, there were no longer the previous provisions governing the aspects of "provisional" finality and the related confirmation of the market transactions involving a Public Administration as counterparty.

In order to implement what was planned, GME has therefore amended, prior implementation of appropriate consultative process, the provisions of the Operating Rules of MTEE (AEEGSI's Resolution no. 437/2015/R/EFR of 10 September 2015) and on 30 September 2015 GME has published the new version of the MTEE Rules, as well as the new versions of the relevant Technical Rules (Technical Rule no. 1 rev. 04, Technical Rule no. 2 rev. 04, Technical Rule no. 4 rev. 05) in order to regulate all aspects of detail, both administrative and technical, necessary for the performance of the counterparty role, which was firstly implemented in the market session on 6 October 2015.

1.2.2 Activities in the REMIT field

As part of the work to implement the REMIT and the Implementing Rules No. 1348/2014, the so-called *Implementing Acts*, containing the implementing procedures of the obligations of any entity operating in various capacities in the wholesale electricity and gas markets by REMIT, GME during 2015 has implemented two platforms, through which it supports market participants in meeting the data reporting obligations to ACER (Art. 8 of REMIT) and publication of inside information (Art. 4 of the REMIT), or, respectively, the *Data Reporting Platform* (PDR) and the *Platform for the publication of inside information* (PIP).

REMIT imposes on the participants of the wholesale electricity and natural gas market the obligation to disclose ACER all those transactions conducted in relation to the contracts for the supply and transport of electricity and natural gas, both through the submission of sale and purchase orders and transactions concluded in the regulated markets, either through OTC trading (the so-called data reporting). Such reporting can be performed by entities accredited by ACER as *Registered Reporting Mechanism* (RRM). In this context, in April 2015, GME has started the accreditation process at ACER to qualify as RRM and has simultaneously took the actions functional for the establishment of a platform dedicated to the service of *Data Reporting* (PDR) in order to enable its market participants to meet as easily as possible the obligation of reporting to ACER. The accreditation of GME among the top 15 RRMs took place in August 2015, and therefore the operation of the PDR began on 7 October 2015, in line with the date of entry into force of the sending obligation by participants to send ACER the data and information related to the sale and purchase orders submitted and the transactions concluded in the wholesale electricity and gas markets (the so-called standard contracts in the regulated markets).

Data Reporting Platform (PDR)

Access to the platform is open to all those entities who have previously acquired the qualification of participants in one or more markets of GME, which can or cannot rely on GME as RRM at ACER, depending on the type of service selected at the time of the contract signing.

In case of choosing GME as RRM, GME shall prepare and daily send ACER, on behalf of the PDR participants, the sale and purchase orders submitted and the transactions concluded in the markets/platforms of GME as well as, if required by the participant, the orders and transactions submitted or concluded in other markets/platforms, appropriately supplied already in the format required by ACER (the so-called data reporting and upload services). Through the upload service, participants can also fulfill the obligation of reporting, in place since 7 April 2016[5], or with regard to contracts not admitted to trading in the regulated markets (the so-called non-standard contracts), bilateral OTCs and related to the allocation of the electricity or natural gas transport capacity in the secondary markets. Thereby GME offers its participants a service as complete and efficient as possible, providing them with minimization of expenses arising from the data transmission obligations under REMIT.

In order to verify the execution of the reporting carried out by GME and to evaluate the quality, the platform also allows the requesting parties the service of the consultation of the Reports sent as well as the notifications of successful receipt of the same by ACER.

For participants registered in GME's markets/platforms that do not intend to rely on GME as RRM, GME has made available, through the PDR, a dedicated service (the so-called download service) through which it's required the daily preparation of the Reports, already in the format required by ACER, with all data and information relating to orders and transactions submitted and/or concluded by them in the markets/platforms of GME to be transferred to the relevant RRM for the obligation of reporting.

At the end of the first reporting phase (7 October 2015 – 6 April 2016), they were enabled to the 218 Participants, of which 200 (about 92% of the total) chose GME as the relevant RRM activating the service of data reporting or *Data Reporting* plus *Upload*. During this first phase of reporting, GME, through the PDR, sent about 85,000 Reports to ACER, of which approximately 1% is uploaded from the outside by the participants. This result is in line with the needs of the participants, in the period under review, to send ACER exclusively those contracts concluded in the regulated markets. The number of reports uploaded externally by participants in the PDR will be expected to increase, from 7 April 2016, with the start of the second phase of reporting, which requires sending ACER also those contracts not concluded in the regulated market. In support of this prediction, despite the small number of reports uploaded until the end

5 Art. 12, para. 2 of the Implementing Acts.

of March 2016 by the participants, about 60% of those who chose GME as their RRM have also selected to have the possibility to upload the data from outside through the upload service.

Platform for the publication of inside information (PIP)

As part of the measures under REMIT for the prevention of abusive practices in the wholesale electricity and natural gas markets, involving, among others, the prohibition of market manipulation and insider trading (Art. 5 and Art. 3, respectively) and in the obligation of disclosure of inside information (Art. 4) by the market participants, in the course of 2015 GME has created a platform for the publication of inside information (PIP), operational since 4 January 2016, all around the clock all the year and entered in the list of European platforms provided by ACER on the REMIT Portal.

In compliance with the provisions in the REMIT, inside information shall mean "information that has a precise nature that has not been made public, relating, directly or indirectly, to one or more wholesale energy products and that if made public, it would likely have a significant effect on the prices of those products" (Art. 2).

In this legal context, through the PIP, GME, primarily has intended to give stakeholders a tool that would allow an effective fulfillment of the requirements for publication of information pertaining to it, in line with the operating procedures and technical specifications indicated by ACER in the consultation document entitled "*Common Schema for the Disclosure of Inside Information - Public Consultation Paper*" and in the computer schemes for transmission of inside information, published respectively in May and September 2015.

Secondly, through the PIP, GME has collected the non-binding invitation by ACER to the regulated markets to implement the centralized platform for the publication of inside information, thus creating a central, standardized place accessible to the widest number of possible subjects where concentrating the collection of this information and thereby favoring an increase in transparency and competition between participants.

Finally, with the establishment of the PIP, GME has intended to facilitate the monitoring of cases of insider trading and market manipulation, expressly prohibited by Art. 3 and Art. 5 of REMIT, by the competent institutions, including while implementing of the provisions of Art. 22 of Law no. 161 of 30 October 2014[6].

In order to encourage the widest possible participation and ensure effective centralization of information, access to the PIP was permitted, after signing the relevant contract, to all market participants properly registered with the ACER European Register (Art. 9), and then holding an ACER code, regardless of whether they are registered in the markets/platforms of GME, offering them the opportunity to publish information about assets in the electricity or of the relevant gas sector, located on the Italian territory or abroad, through the platform.

From the point of view of its use, by freezing the data to the first quarter of 2016, the PIP registered the membership of 75 participants, of which about 9% active with messages related to capacity unavailability. These messages have involved the generation side of the electricity sector, affecting a total of 34 production units, due to 9 different types of plants, for a total of about 12 GW of installed capacity, mainly powered by natural gas (79%).

6 Article 22 of the law in question assigns AEEGSI new powers of investigation and enforcement while implementing the provisions of REMIT, including, among others, the possibility of the Authority to rely on GME for conducting investigations in cases of suspected violation of the the prohibition of insider trading and market manipulation.

1.2.3 Cooperation agreements with ICE and ECC

Subject to the provisions contained in AEEGSI's Resolution no. 282/2015/R/GAS of 12 June 2015 and following the interest expressed by European market participants, ICE Clear Europe Limited and European Commodity Clearing AG and European Commodity Clearing Luxembourg S.à.rl, to offer, on their trading platforms, the financial instruments with physical delivery of gas at the Italian PSV (Virtual trading point, operated by SRG S.p.A.) hub, GME, making use of its role within the Italian gas system, signed, as nomination agent, specific cooperation agreements with the aforementioned European exchanges.
In this respect, it should be noted that the AEEGSI's Resolution 282/2015/R/GAS of 12 June 2015 ordered, *inter alia*, that:

- the subjects, the so-called third exchanges, on behalf of which GME can perform at the PSV recording of transactions concluded by such third exchanges on its systems are as follows: a) the operator of a regulated market in which they are traded derivative financial instruments that provide for the physical delivery and whose clearing and guarantee of the transactions concluded in this market are settled through a clearing house; or b) the clearing house that, directly or through its subsidiaries or affiliates thereof, is responsible for all formalities for the physical delivery of the products offered; provided that (both categories) are subject to national and supranational supervisory authority exercising supervision in the country where such third exchanges are based or operate;
- GME is entitled to register in the PSV system, on behalf of third exchanges, transactions for delivery of gas quantities covered by contracts concluded at the same third exchanges, operating as nomination agents and that, to this end, SRG changes the PSV Conditions[7] providing for the introduction of the figure of the "authorized account holder"; this account is attributable to the third exchanges, from which the recordings can only be performed only by GME;
- in line with the provisions for the MGAS: *i)* the positions on the PSV accounts corresponding to the transactions concluded by the third exchanges are recorded by GME with no need for confirmation by the counterparties of the same third exchanges; *ii)* the principle of partial acceptance apply to the positions recorded by GME under the previous items, in cases where they are carried out for amounts exceeding the sale limit defined in the Conditions of access to the PSV.

With the same deliberation, the AEEGSI has ruled also that the general conditions of the contract signed by GME with the third exchange should ensure equal treatment among potential interested parties and that, for the service offered, GME shall apply a fee to ensure coverage of efficient costs.
Both parties have started negotiations with delivery to the PSV in the month of September 2015.
In order to regulate the flow of information related to the activity of nomination agent performed by GME, in the name and on behalf of the aforementioned third exchanges as defined in the AEEGSI's Resolution 282/2015/R/GAS, GME and SRG S.p.A. have therefore updated the Convention referred to in AEEGSI's Resolution no. 525/2012/R/GAS of 6 December 2012. The Convention, as amended, was approved by the AEEGSI's Resolution no. 436/2015/R/GAS of 10 September 2015.

7 Changes approved by AEEGSI with Resolution no. 436/2015/R/gas of 10 September 2015.

1.3 INTERNATIONAL ACTIVITIES

1.3.1 Integration projects of the Italian electricity market in the European context

2015 was a very significant year in terms of integration of the national electricity markets in the European market. From a regulatory perspective, in fact, there was the final approval of the EC Regulation no. 2015/1222 laying down the "*Guideline on capacity allocation and congestion management – CACM*", which came into force on 14 August 2015, which poses new rules, common to carry out the activities of electricity exchanges and the allocation of cross-border capacity through market coupling.
In operating terms, also it has been made a further extension of the area of the European market already subject to integration, through the entry of Italy as part of the coordinated management project of the Day-ahead markets, known as MRC.
On both fronts, GME plays an important role in the promotion and management of the relevant processes, with the extension of market coupling of the day-ahead market to two new borders, France and Austria, and with the launch of significant processes that in next two years will determine the further extension of market coupling to the intra-day market.

CACM rules and qualification of Nominated Electricity Market Operator (NEMO)

The (EU) Regulation No. 2015/1222 of 24 July 2015 - entered into force on 14 August 2015 - governs the Community guidelines on capacity allocation and electrical congestion management (CACM), and in particular Article 4, paragraph 1, introduces the obligation on all Member States to ensure, within four months of the entry into force, the appointment of one or more *Nominated Electricity Market Operators* (NEMOs) responsible for implementing the market coupling over the day-ahead and intra-day time horizons.
Under the provisions of Article 5 of the CACM, by letter dated 15 September 2015 the MiSE - upon favorable opinion expressed by AEEGSI with Resolution no. 414/2015/i/eel of 6 August 2015 certifying full compliance, by GME, with the requirements listed in Article 6 of the CACM - notified the European Commission the designation of GME as the sole reference Italian NEMO for the management of coupling processes related to the integrated Day-Ahead market and with reference to the new Intra-Day market.
In compliance with Article 4, paragraph 10, of the CACM, dated 21 December 2015, ACER has published the first list of the NEMOs appointed on its institutional website, which includes also GME for Italy.

Italian Borders Working Table (IBWT)

During 2015 the "*Italian Borders Working Table*" (IBWT) project finally moved to the operational phase. This project was launched by GME, in conjunction with TERNA S.p.A. and the Power Exchanges (PX) and the Grid Operators (TSO) of the countries that share an electric border (Austria, Slovenia, Switzerland, France, Greece) with Italy within the integration process of the wholesale electricity markets in the EU in the EC Regulation no. 714/2009, in order to define and share the processes and operational procedures before and after coupling[8], functional to the operational implementation, on all Italian electricity borders, of the the regional coupling mechanism. Since 24

8 The processes of pre-coupling relate primarily to preparatory calculation of available capacity and sharing of information related to the offers/bids submitted. The processes of post coupling, however, relate mainly to the commercial settlement management of the inter-border flows on the basis of the market outcomes as well as the calculation and distribution of congestion income generated by the price differential between electricity markets in neighboring countries.

February 2015, in fact, following the approval of the contractual framework of the project by the national Regulator (AEEGSI's Resolution no. 45/2015/R/EEL of 12 February 2015) and the necessary adaptations to the provisions set out in the Integrated Text of the Electricity Market Rules, GME has initiated, together with TERNA S.p.A., the operation of the coupling on the Italy-France and Italy-Austria borders, by bringing together in the new and broader regulatory and operational framework of the IBWT project also the operation of the first coupling mechanism already experienced on the Italy-Slovenia border. Coupling currently does not include, while participating in the project, the borders with Switzerland and Greece.

The positive impacts of the IBWT coupling were immediately apparent with the efficient use of interconnections and more frequent price alignment, especially between the French and Italian markets. For a more comprehensive discussion, see the deepening "A year of market coupling".

The operational launch of the IBWT project has determined for GME the commissioning and the operational launch of the new IT systems designed and manufactured by GME within the European project titled *Price Coupling of Regions* (launched and managed by the main European exchanges and aimed at the application of a Price Coupling at UE level), with particular reference to the use of the Euphemia's algorithm of matching and the PMB communication system, as well as the activation of the joint procedures for managing the markets shared with other exchanges in the PCR field. The changes, extremely significant from the point of view of GME under the management and operational profile - were made in absolute continuity for participants in the Italian market.

Price Coupling of Regions (PCR)

During the year, however, the PCR project has involved the membership of the Romanian exchange (OPCOM) and the Polish exchange (TGE) as a Full Member, as well as the Croatian exchange (CROPEX) as Observer Member.

Based on the successes achieved so far, the PCR strengthens its natural candidacy as the sole solution for the *European Price Coupling* management for the day-ahead market provided by the CACM.

The operational start of the IBWT project also resulted in the integration of the Italian day-ahead market in the broader coordination of electricity Day-Ahead markets, through the full access of GME in the *Multi-Regional price Coupling* (MRC) project. This is a project that qualifies as a European collaborative supra-project and convergence of the different European Regional Initiatives (ERIs) and is aimed at establishing a common framework of reference, not only operationally, for all the macro regions that have started, or are about to start, the relevant coupling activities on the day-ahead market[9]. Specifically, the MRC project promotes the convergence of the phases of pre- and post-coupling of the regional projects involved in the operation phase and was supported by the first two initiatives that have started the operational phase of the Community coupling: the supra-regional North West Europe (NWE) project, launched on 4 February 2014 (which already included the regional Central West Europe and Nordic-Baltic projects) and the regional South West Europe (SWE) project, launched in May 2014 through implicit allocation of the transmission capacity available on the Spanish border.

Multiregional Price Coupling-MRC

The MRC project is governed by a cooperation agreement called *MRC Day Ahead Operations Agreement* (MRC DAOA), joined by GME, together with TERNA S.p.A., on 4 February 2015 according to the operational start of IBWT regional project.

9 With reference to the Italian context, the reference European macro-region is the Central South Region within which the IBWT coupling described in item 1) of this paragraph, assumes the reference regional project qualification.

In the path of integration of the EU electricity markets, GME participates, together with other European PXs and the support of the EUROPEX sector association, in the project for the design and implementation of the intraday coupling process (*PXs Cross Borders Intra-Day* - PXs XBID) by which the European Network Managers - in coordination with the related management systems of the markets - could allocate, implicitly, the inter-border capacity available in the intra-day horizon, in line with the market model (Target Model) based on the continuous trading, outlined by the provisions of EC Regulation no. 2015/1222 laying down the "*Guideline on capacity allocation and congestion management – CACM*", entered into force on 14 August 2015.

The PXs Cross Borders Intra-Day - PXs XBID Project

After that, in 2014, the trades of the *PX Cooperation Agreement* (PCA) - a framework agreement governing the rights and obligations of each exchange compared to the use of common management software (SOB-CMM), as well as those relating to sharing of the related procurement costs of the same and the project governance - and after AEEGSI recognizes the coverage of the development costs of the functional IT platform for the implementation of the XBID (see above), on 5 June 2015 GME has assigned the development, hosting and maintenance, the *Master Services Agreement XBID Solution* (MSA) for the development of the market software as well as the related contracts titled "*Deliverable Specific Agreement for the Development of the XBID Solution*" and "*Deliverable Specific Agreement for the License of the XBID Solution*" with the other exchanges participating in the project and with the supplier, selected by means of public tender.
The go live of the project is currently expected for the second half of 2017.

In parallel to the XBID project and in order to make more efficient the intra-day allocation mechanism of the available interconnection capacity with foreign countries, GME, in 2015, has been engaged in a project aimed at introducing a first pair of intra-day markets that shall initially involve the border between Italy and Slovenia. This project was started in June 2016.
The identified mechanism foresees that the market coupling is conducted through the coordinated operation of some auction sessions of the Italian Intra-Day Market (MI) to which the Slovenian market shall be coupled. As a first hypothesis, this coupling process has affected the sessions of the MI2 and MI5 of the Italian market.

The Market Coupling Intra-day project with Slovenia

Such *Intra-day Market Coupling* mechanism was aimed to enable an initial pilot project that could be extended to other Italian borders, extending the benefits of the broader European XBID project (see above). Said pilot project has, however, benefited from the experience gained by GME under the bilateral market coupling at the time positively realized with Slovenia for the time Day-ahead horizon.
The Intra-day Market Coupling could later be integrated, completing the capacity allocation process, through the *Cross Border Intra-day Continuous Trading* (XBID) which is, as mentioned above, the European reference Target Model for the allocation of capacity on the continuous trading intra-day market horizon with a go-live currently estimated for July 2017.
In 2015, the counterparties of said pilot project (GME, TERNA, BSP, ELES) have implemented the preliminary activities for the definition of the project design phase, constituting the working groups functional to the development of the different activities (*Steering Committee* for the general coordination, *Implementation Project Team* for the technical issues legal/regulatory task-force and *Procedures Working Group*). By letter of 29 September 2015, the National Regulatory Authority (the AEEGSI for Italy and AGEN-RS for Slovenia) expressed full agreement of the aims of the project, while hoping for a quick operational start-up, also in order to verify the potential extension of this mechanism to further borders included in the European Central South Region macro-region.
The parties also concluded, in November 2015, the drafting work of the multilateral draft contract called "*INTRADAY IT-SI market coupling implicit auctions - DESIGN AND IMPLEMENTATION PHASE AGREEMENT*"

- and sent to the NRAs for approval - whose Annex titled *High Level Business Process* (HLBP) includes also an initial mapping of the managerial and procedural activities to be implemented with the operational launch of the project.

1.3.2 Activities of GME in the Europex field

GME has confirmed also for 2014 its commitment in international field as an active part of the integration of wholesale electricity markets within the EU.
The activity carried out in the individual integration projects referred to in the paragraphs above has been accompanied, too, by the participation of the GME in the working groups set up in the Europex field, the trade association that, in the Community context, coordinates and conveys the positions and the best practices identified by the European energy exchanges to the reference stakeholders (ACER, EUROPEAN COMMISSION, ENTSO-e, etc.), with reference to the issues relating to the definition and implementation of the market models and with reference to the coordination of the related wholesale market monitoring functions and application of REMIT. In the group activity carried out within the association, it should be noted, in particular, also with reference to 2015, the confirmation by the association's Board of the allocation of the presidency of Europex to the Chairman and CEO of GME.
Given the main coordination activities, it should be noted in particular the continued participation in the *Working Group Power Markets* (WGPM), whose mission is focused primarily, especially in the first half of 2015, on the analysis of the new rules contained in the CACM Regulations and, in next semester, the outcome the effective entry into force of this Regulation, on the planning and sharing between the various associated subjects of the activities common and functional to the implementation of the Regulations. Within this WGPM they were also discussed and shared the association's response contributions to the respective consultation papers promoted by the European Union in the field of reorganization and efficiency of electrical Community wholesale markets, as well as all documentation prepared depending on the various forums organized at Community level (Florence Forum, Madrid Forum, etc.). A second strand of the association activity focused on the work of the *Working Group on Financial Instrument and Transparency* (WGFIT), whose activity is mainly concentrated in the assessment of the transposition elements and the correct application of REMIT rules. In this context, GME, including through participation in the various Round-Tables held with representatives of ACER, was able to analyze and monitor the main directions of development of coordination for the transfer process towards the Agency of the orders and trading contracts in place by market participants, in order to properly fulfill their obligations under the REMIT rules. To complete the activities carried out in the associative field, also in 2015 GME confirmed its representation also in additional working groups within EUROPEX: namely the *Working Group Environmental Markets*, focused on the analysis of the rules and of the European policies for the management of markets and environmental platforms and the *Working Group Gas Markets*, whose activity is directed to the developments concerning the EU integrated natural gas market.

1.4 THE MONITORING

GME monitors transactions on its markets in order to ensure their efficiency and transparency and promote liquidity. This function, which is essential for building confidence in markets, is aimed at identifying the implementation by participants of practices contrary to the provisions of the Rules and the Regulations of the markets or the national and Community legislation in force. In 2015 the further consolidation of the instruments and procedures for that purpose prepared by GME has guaranteed, on the one hand, to achieve an appropriate level of standardization of the activities, on the other hand, has made it possible to manage the increasing complexity resulting from the evolution of the scenarios observed on the markets regulated by GME, and the increase in the volumes traded on them. The results of this activity are briefly shown in Table 1.4.1. It is worth noting that during 2015, especially in the environmental markets, there was a marked reduction compared to previous years of the behavior monitored by GME, which occurred concurrently with the entry into force of new rules and regulations, such as, in particular, the reverse charge mechanism (the so-called reverse charge), introduced by Law no. 190 of 23 December 2014, and, in terms of the Energy Efficiency Certificates Market (MTEE), the indication of "non-acceptable counterparties" list, the power with which it was granted the participant the opportunity to report the list of counterparties with which it does not intend to carry out negotiations[10].

The market monitoring activity is carried out by GME in coordination with the main national and Community regulatory institutions in the field, from which GME has been recognized point of reference both for the definition and implementation of the common framework of rules and values to be taken at European level, both for operational support to be provided in cases of failure to comply by the participants with the principles and obligations imposed by law.

In detail, in the supranational context, in 2015 the participation of GME in the process of gradual integration and harmonization of monitoring practices has resulted not only in the establishment of the two REMIT[11] platforms, but also in the renewed presence in round tables organized by ACER and Europex in order to identify and share best practices in the field of wholesale markets monitoring, and activities carried out in the various groups of experts made up of ACER for the implementation of REMIT, with particular reference to issues of market manipulation, insider trading and data reporting.

At national level, the cooperation of GME with the AEEGSI on monitoring, historically sanctioned by Resolution ARG/elt 115/08 (TIMM), under which GME realizes for the National Authority - on a periodic basis or by effect of *ad-hoc* requests - data processing, reporting, analysis and what-if, simulations, has been further strengthened over the past two years, with the entry into force, in particular, of two measures. On the one hand, the law no. 161 of 30 October 2014, under which the National Authority may use the GME in the execution of the investigation regarding the lack of comments from the market participants with regard to the prohibitions in Art. 3 and 5 of REMIT (respectively, the prohibition of insider trading and market manipulation) and the obligations in Art. 4 of the same Rules (duty of disclosure of inside information), on the other hand, the 86/2015/E/com, by which GME has called to report AEEGSI all participants in its markets that, breaching Art. 9 of REMIT, are not enrolled in the REMIT register, the register of the market participants managed by the Italian National Authority.

10 For further details, see Deepening 3: "Markets for the Environment: New Rules on Environmental Markets" in GME, 2015, Annual Report for 2014, p. 88.

11 For more details, see section 1.2 in this volume.

Measures taken as a result of the monitoring activity

Tab. 1.4.1

Year	Market	Measure	No	Participants concerned
2013	MCV	Report to AEEGSI	5	12
2013	MTEE	Report to AEEGSI	7	9
2014	MCV	Precautionary suspension + 1-month suspension	1	1
2014	MTEE	Archiving	1	1
2014	MTE	Report to AEEGSI	1	2
2015	MTEE	Suspension for three sittings	1	1
TOTAL	**-**	**-**	**13**	**21**

1.5 RESULTS

1.5.1 Volumes and market participants

In 2015 there has been a relaunch of the power and natural gas consumption, thus interrupting a long recession. In contrast, in environmental markets decline signals of the traded volumes emerge. It continues, finally, the growth trend of the participants registered in all markets managed by GME.

2015 marks the end of the long decreasing phase of the domestic demand, which in 2014 reached the lowest point, as evidenced by the recovery in demand for electricity of Terna (315 TWh; +1.5%) and exchanges on spot markets managed by GME (312 TWh; +2.4%). Even more supported is the re-start of trading on the spot regulated market (MPE), which rose to 220 TWh (+5.2%). In detail, the Day-ahead Market (MGP), the most important of the spot markets, amounted to 195 TWh (+4.7%), while the Intra-day Market (MI) has registered an increase of 9.3% to 25 TWh, just below the all-time high of 2012. The participants of the MI, important flexibility instrument, seem to have appreciated the changes[12] initiated in February 2015, which introduced a new session (MI5 nominally, but in fact MI3). Opposite is the trend for volumes arising from bilateral contracts and named in the MGP that, after the rebound of 2014, reached 93 TWh (-3.7%), affected by the significant reduction of the recordings resulting from trading concluded in the Forward Electricity Market (MTE). These dynamics have boosted market liquidity, which gains 1.9 percentage points than the previous year, reaching 67.8%. Volumes traded by non-institutional participants increased and reached 123 TWh, a lower level only to 130 TWh in 2013, thus contributing to 43% of liquidity. The contribution of institutional participants remains unchanged (72 TWh), though discounting an increase in volumes traded by the Acquirente Unico and a further decline, on the sales side, of the Gestore dei Servizi Energetici (GSE).

Power consumption and market liquidity supported by non-institutional participants are relaunched

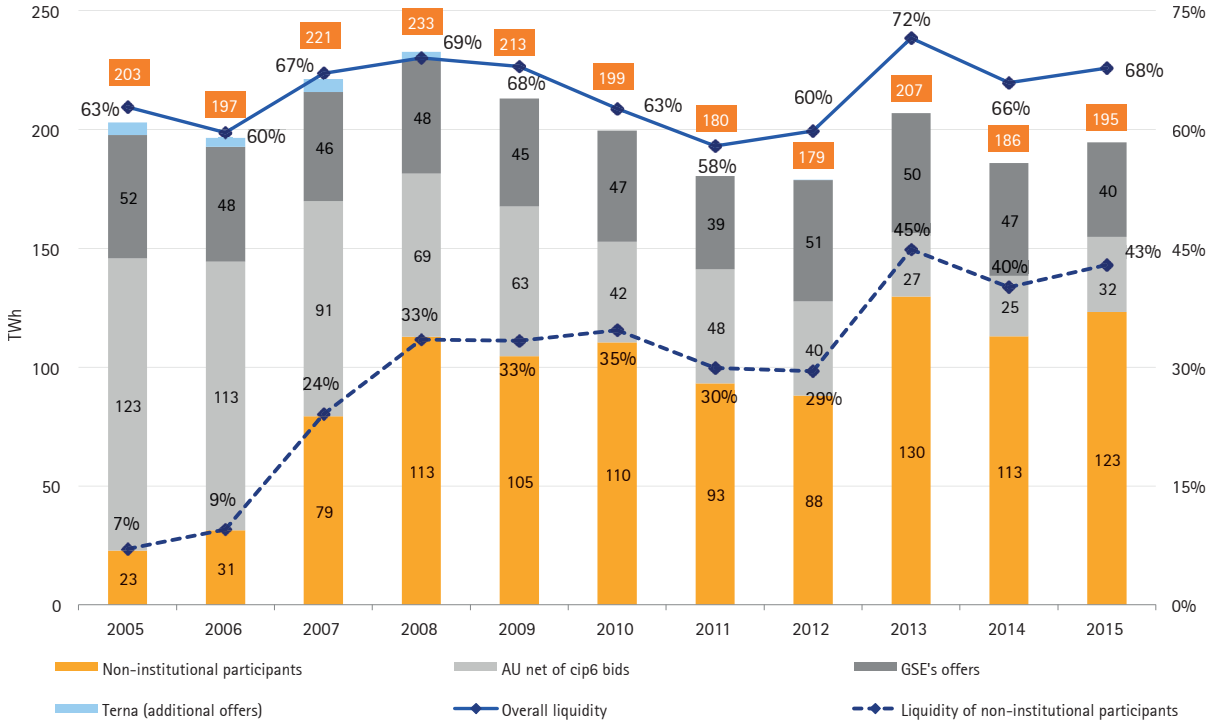
Similar findings also come from the activity of the participants, which is still on the rise in the regulated electric spot markets (+14 participants active in the MGP and +15 in the MI) but for the first time down in the PCE (-9). Still growing, however, is the number of registered participants, which also in 2015 update the absolute records in the IPEX (264 registered participants; +10 in 2014) than in the PCE (321 registered participants; +4) (Fig. 1.5.1, Fig. 1.5.2).

New record of participants registered in the markets

12 See Section 2, para. 2.2.2 in this Volume.

Liquidity in the MGP

Fig. 1.5.1



Futures trading: MTE collapses, still a record for the PCE

Regarding futures trading, in 2015 there is the disappearance of the recording of O.T.C. transactions of the MTE for the purpose of clearing, and the drastic reduction of trading. On the PCE, however, the registered contracts mark a new all-time high at 354 TWh (+2.5%), consolidating the interest of participants for this trading as a risk hedging instrument and confirming, through the record value of churn ratio (2.07), the intense trading activities carried out by the participants through the platform (Tab. 1.5.1, Tab. 1.5.2).

The two segments of the PB-Gas consolidate

In 2015, the PB-Gas again confirms a liquid and vibrant market, collecting, in the two segments, substantially all of the exchanges made at GME. The increase in registered participants (+10) is associated to a further increase in traded volumes, which update the new all-time high of 48 TWh (+5.9%), the expression of 6.8% of the total delivered in the system by SRG. The growth was driven by volumes traded in the sector G-1 (over 7 TWh), more than doubled over the previous year, and the "extra-balancing" component of the segment G+1 - i.e. the trade concluded directly between participants in the PB-Gas in excess of the volumes required or offered by the balancing Head - which, with its almost 13 TWh (+22.3%, and all-time high), represented over 31% of traded volumes, thus confirming the importance of the nodal segment G+1, not only as a tool to limit the risk associated with imbalance but also as a real exchange "spot" platform.
As for the other gas markets, there has been a considerable increase in the number of subscribers (+17), with traded volumes just exceeding 1 TWh, all in the Intra-Day Market (only 0.10 TWh in 2014). No exchange in the P-GAS, created to allow participants to fulfill their obligations to transfer, respectively, amounts of their imports (P-GAS Import), the royalties due to the State for the exploitation of domestic deposits (P-GAS rates) and the future storage capacity (P-GAS former Legislative Decree 130/10) (Tab. 1.5.1, Tab. 1.5.2).

In 2015 the long expansion phase that has characterized the history of the TEEs breaks. Faced with a new increase of the participants registered in the regulated market (1,055, +217) and in the TEE Register (1,469, +273), the exchanged securities (8.7 million toe) are down by a sharp contraction (-25,8%), which invested the sole bilateral negotiations, fell to 5 million toe, down by more than 40% from the all-time high of 2014. By contrast, in the regulated market (MTEE), the traded securities rose to 3.8 million toe (+8.3%), accounting for 43% of the total traded, the highest value ever.

Participants registered on the environmental markets grow but CVs and TEEs exchanges drop GOs increase

In the Green Certificate system it's detected, for the second consecutive year, a decline in trading volumes (37 TWh, -14.6%) due to the reduction of the mandatory amount of renewable energy to be supplied to the grid for producers and importers from conventional sources. On the organized market (MCV), despite the increase of participants registered (+7), albeit modest, the trading volumes fall back from the all-time high of 2014 to 7 TWh (-15.2%), thus confirming, however, the amount on the total negotiated to 19%, the highest ever recorded. OTC trades recorded in the PBCV (30 TWh) show, in fact, a decline of the same order of magnitude (-14.4%), which follows on from the previous year (-6.4%).

Regarding the Guarantees of Origin (GO), finally, the Bilaterals Platform (PBGO) focuses almost all of the volumes traded, which, with a growth of 4.7% over the previous year rose to 46 TWh. The market of Guarantees of Origin (MGO), who took over in 2013 to MCOFER, where guarantees are exchanged for 0.10 TWh (-77.6%), are, however, at historic lows. However, despite the increase of members, in terms of active participation, both trading platforms mark a decline (-7 participants with combinations in the MGO, -8 on the PBGO) (Tab. 1.5.1, Tab. 1.5.2).

1.5.2 Trend of the participants in GME's markets

Participants in GME's markets

Tab. 1.5.1

Participants no.*	2009	2010	2011	2012	2013	2014	2015	Change 15/14
Electricity markets								
IPEX								
- registered	172	207	192	200	223	254	264	+10
- with offers/bids								
MGP	115	131	137	149	159	194	208	+14
MI	53	69	91	114	122	149	164	+15
MTE	16	15	20	25	22	19	13	-6
PCE								
- registered	167	205	208	259	287	317	321	+4
- with schedules	88	95	103	120	125	126	117	-9
Gas markets								
MGAS								
- registered		20	33	42	66	71	88	+17
- with offers/bids								
MGP		3	17	15	10	-	-	-
MI		-	7	5	4	5	15	+10
MTGAS					-	-	-	-
PB-GAS								
- registered			60	65	74	86	96	+10
- with offers/bids								
Segment G+1			59	74	73	77	75	-2
Segment G-1					8	45	51	+6
P-GAS								
- registered		53	61	72	77	78	80	+2
- with offers/bids								
Import		21	17	18	19	14	2	-12
Former Legislative Decree 130/10				13	4	-	-	-0
Royalties		25	25	26	12	4	5	+1
Environmental markets								
MCV								
- registered	497	620	675	745	852	901	908	+7
- with combinations	157	173	207	235	303	322	290	-32
PBCV								
- registered	n.d.	969	1,082	1,177	1,381	1,466	1,509	+43
- with combinations	593	603	646	622	871	851	763	-88
MTEE								
- registered	268	334	379	447	588	838	1,055	+217
- with combinations	172	209	235	264	328	458	609	+151
TEE Register								
- registered	n.d.	421	513	635	866	1,196	1,469	+273
- with combinations	163	189	206	238	298	378	402	+24
MGO								
- registered				180	262	291	299	+8
- with combinations				28	62	21	14	-7
PBGO								
- registered				219	324	359	374	+15
- with combinations				59	159	148	140	-8

*The number of registered participants refers to the figure calculated as at 31/12 of each year.

Volumes traded on GME's markets

Tab. 1.5.2

TWh	2009	2010	2011	2012	2013	2014	2015	Change 15/14
Electricity markets								
MGP	**313.43**	**318.56**	**311.49**	**298.67**	**289.15**	**281.98**	**287.13**	**+1.8%**
Exchange	213.03	199.45	180.35	178.66	206.90	185.85	194.59	+4.7%
Bilaterals	100.39	119.11	131.15	120.00	82.25	96.13	92.54	-3.7%
MI/MA	**11.93**	**14.61**	**21.87**	**25.13**	**23.34**	**22.79**	**24.92**	**+9.3%**
MI1	1.68	9.47	14.47	15.99	12.80	12.23	12.91	+5.6%
MI2	0.95	5.15	5.38	6.21	6.07	6.47	6.15	-4.9%
MI3			1.22	1.72	2.00	2.01	2.39	-
MI4			0.80	1.21	2.47	2.09	1.22	-
MI5							2.24	
MA	9.30							
MTE	**0.12**	**6.29**	**33.44**	**54.96**	**41.10**	**32.27**	**5.09**	**-84.2%**
Exchange	0.12	6.29	31.67	30.36	8.00	18.40	5.09	-72.4%
OTC clearing	-	-	1.77	24.60	33.10	13.87	0.00	-100.0%
PCE*	**176.35**	**236.48**	**290.82**	**307.61**	**325.50**	**345.72**	**345.47**	+2.5%
Gas markets								
MGAS		**0.00**	**0.16**	**0.17**	**0.02**	**0.10**	**1.01**	**+887.3%**
MGP		0.00	0.15	0.14	0.01	-	-	-
MI		-	0.01	0.04	0.00	0.10	1.01	+887.3%
MTGAS					-	-	-	-
PB-GAS			**1.71**	**34.93**	**40.88**	**41.52**	**48.19**	**+16.1%**
Segment G+1			1.71	34.93	40.83	38.58	40.86	+5.9%
Segment G-1					0.05	2.94	7.33	+149.2%
P-GAS		**2.14**	**2.91**	**2.87**	**0.62**	**-**	**-**	-
Import		0.00	-	-	-	-	**-**	-
Former Legislative Decree 130/10				-	-	-	**-**	-
Royalties		2.14	2.91	2.87	0.62	-	**-**	-
Environmental markets								
CV	**23.40**	**25.37**	**31.09**	**32.33**	**44.81**	**43.05**	**36.78**	**-14.6%**
Exchange	1.84	2.58	4.13	3.81	7.57	8.20	6.95	-15.2%
Bilaterals	21.56	22.79	26.97	28.52	37.25	34.85	29.84	-14.4%
TEE *(Mtoe)*	**2.34**	**3.09**	**4.10**	**7.62**	**8.24**	**11.76**	**8.73**	**-25.8%**
Exchange	0.97	0.98	1.28	2.53	2.82	3.49	3.78	+8.3%
Bilaterals	1.36	2.11	2.82	5.08	5.42	8.27	4.95	-40.2%
GO				**2.22**	**42.63**	**44.48**	**46.18**	**+3.8%**
Exchange				0.47	1.34	0.47	0.11	-77.6%
Bilaterals				1.75	41.29	44.01	46.08	+4.7%

*Contracts registered in the PCE by trading year, net of the contracts related to the MTE (including OTC clearing) and to the CDE.

1.5.3 Results of operations

2015 was characterized by a decrease in the pass-through items[13] of about 0.8 billion EUR (-4.4% compared to the previous year), mainly due to the decrease in revenues from electricity sales in the Electricity Market (-0.6 billion EUR), as a result of the reduction in volumes delivered in the Forward Electricity Market, only partially offset by higher volumes traded on the Spot Electricity Market. This dynamic is accompanied by the decrease in the value of ancillary items to the *Over The Counter* (OTC) electricity trade (-0.2 billion EUR), due to lower differential, recorded during the year, between the zonal prices and the PUN.

Summary of financial and operating information of GME (2014 - 2015)

Tab. 1.5.3

Data in million €	Revenues and Passing-through costs	Marginal revenues	EBITDA	RO	Net income	Total assets (a)	Equity
2014	17,547,153	35,292	17,433	12,183	8,614	72,803	20,251
2015	16,780,948	34,851	18,744	11,548	7,408	77,608	22,342

(a) the total assets has been calculated net of credits from pass-through items related to sales in the Electricity Markets to participants and to the Parent company, based on the CCT on the electricity over the counter trade, the financial income related to Market Coupling and the guarantee margins paid for the purpose of coupling management on Italy-France and Italy-Austria borders. In addition, the figure does not include unavailable deposits paid by the participants.

Marginal revenues[14] in 2015 show a decrease of about 0.4 million EUR compared to the previous year (-1.2%). This decrease is due to:

- for -0.4 million EUR, based on a decrease in revenues for services provided on the Electricity Spot and Forward Market mainly as a result of the reduction of the volumes traded in these markets, only partially offset by the increase in the fixed annual fee paid by the participants;
- for +0.1 million EUR, based on the increase in revenues for the services provided in the Natural Gas Market and in the PB-GAS platform, mainly resulting from the higher volumes traded during 2015 compared to the previous year;
- for -1.0 million EUR, based on the decrease in revenues for the services provided in the markets and in the bilateral platforms for the exchange of environmental securities, resulting mainly from the reduction in CV and TEE volumes traded compared to the previous year;
- for 0.9 million EUR, based on the increase in other marginal revenues mainly due to *i)* higher revenues from participation in the CRP project and related mainly to the accession to the project of Polish (TGE) and Romanian (OPCOM) power exchanges (and the subsequent redistribution of historical costs incurred by the exchanges participating in the project (0.5 million EUR) and *ii)* the increase in revenues from *European Electricity Exchange* (EEX) on the Convention for the license to use the PUN (+0.3 million EUR).

GME's marginal costs (2014 - 2015)

Tab. 1.5.4

Data in million €	for raw materials and services	for use of third party assets	for staff	depreciation, write-downs and provisions	other operating expenses	Total
2014	6,563	1,898	9,062	5,250	0,336	23,109
2015	5,617	1,115	9,092	7,196	0,283	23,303

13 Pass-through items mean the positive elements of income that fully offset the negative items of income to which they refer.

14 Margin revenues means the positive elements of the income allocated to cover operating costs and return on invested capital.

Marginal costs including amortization, depreciation, write-downs and provisions amounted to a total of 23.3 million EUR, a decrease of more than 0.2 million EUR compared to the previous year. This increase is mainly attributable to:

- the decrease greater than 0.9 million EUR of the cost of raw materials and related services mainly for: (*i*) the lower costs for the management of the renovation of the new registered office (-0.3 million EUR), (*ii*) the lower costs for data transfer services (-0.3 million EUR) connected to the reunification of the diverse corporate headquarters and the consequent termination of some services, the signing, under more favorable economic conditions, of new contracts as well as (*iii*) the lower costs for services relating to company premises (-0.3 million EUR) mainly as a result of their reunification during the year;
- the decrease, for about 0.8 million EUR, of the costs for using third-parties assets due to the aforementioned reunification of several corporate locations and the related reduction of rents;
- the increase, for over 1.9 million EUR, of the amortization, depreciation and provisions following: (*i*) higher amortization due, mainly, from the entry into service of the improvements made to the new registered office (+1.0 million EUR), (*ii*) the increased provision for doubtful debts made in respect of certain receivables from which - based on the information available - they could emerge losses (+0.5 million EUR), (*iii*) the higher allowances in relation to the effects derived from the contents of AEEGSI Resolution AEEGSI 648/2015/R/eel, connected to the increase in operating income due to the PCE and the revaluation of the fund not yet demoted (+0.7 million EUR) as well as (*iv*) the provision, carried out during 2014, to cover potential charges against the Company in connection with a legal action (-0.3 million EUR).

GME's key ratios (2014 – 2015)

Tab. 1.5.5

	% ratio EBITDA/Marginal revenues	% ratio RO/Marginal revenues	ROI (a)	ROE (b)
2014	49.4	34.5	16.7	42.5
2015	53.8	33.1	14.9	33,2

(a) ROI is calculated as the ratio between operating profit and total assets;
(b) ROE is calculated as the ratio between net profit and shareholders' equity.

Gross operating income amounted to 18.7 million EUR, an increase of 1.3 million EUR (+7.5%) compared to the previous year.
The operating profit amounted to approximately 11.5 million EUR, a decrease of 0.6 million EUR (-5.2%). The profit after tax amounted to 7.4 million EUR, down by 1.2 million EUR (-14.0%) compared to the previous year.

The table below shows the average number of employees during the year broken down by category of contract, as well as that as of 31 December 2015 compared with the same information from the previous year, with the evidence of the dynamics of seconded personnel.

GME's personnel members

Tab. 1.5.6

Number	Consistency		Consistency	
	average in 2015	as at 31.12.2015	average in 2014	as at 31.12.2014
Directors	8.0	8	8.4	8
Executives	30.7	30	30.2	31
Employees	64.0	64	62.8	64
Total	**102.7**	**102**	**101.4**	**103**
of which seconded	*2.0*	*2*	*2.0*	*2*
Total number, net of those seconded	**100.7**	**100**	**99.4**	**101**

SECTION

2

MARKET EVOLUTION

2.1 INTERNATIONAL MARKETS

Over the last decade than ever in 2015, electricity markets have provided clear and converged directions on the trend of the main commodities. Place in an economic environment that has starting difficulties, in the face of the advanced recovery hypotheses by the main European institutions of the sector, the prices of fuels have all confirmed, sometimes intensified, the bearish trends recorded in the previous two years, thus reaching the lowest levels since 2005.

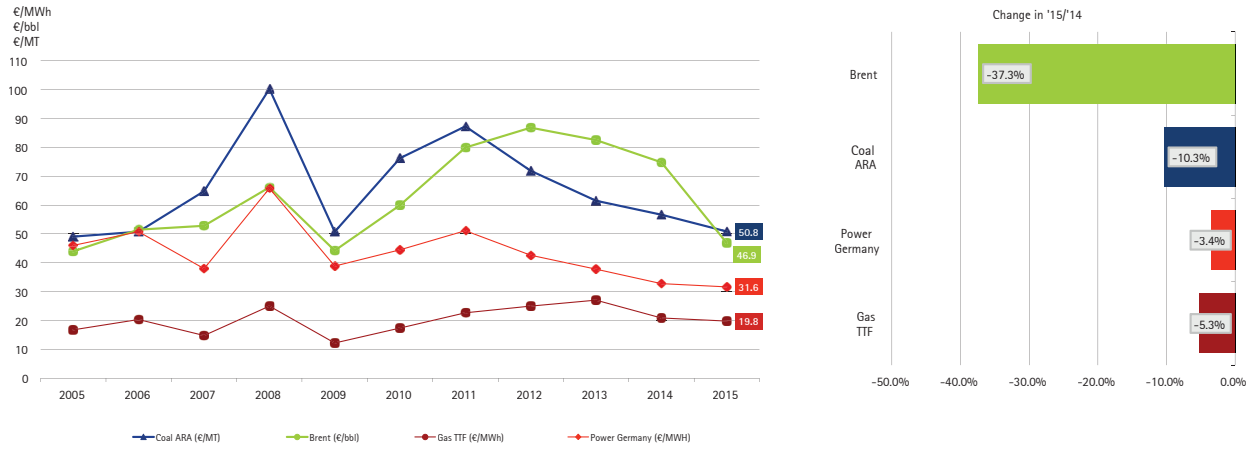
Electricity markets at the minimum ten-year values

The figure undoubtedly more important emerged in 2015 comes from oil markets, where, because of the stronger trend change of the past ten years, prices return to minimum levels ever recorded since 2005, thus supporting the decline signals shown between 2013 and 2014 and canceling the strong bullish progression observed in 2010-2012. A similar trend affects the main hubs of natural gas, on which the consolidation of the strong downward trend started in 2014 brings the annual quotations back to four years ago and the monthly ones recorded in the first months of 2016 to 2009 levels. It continues uninterrupted, finally, the free decrease of the coal, that, due to the fourth consecutive significant decrease, whose price is down to an all-time minimum since 2005.

On the electricity markets, where prices remain the lowest values of the decade, and the spreads between Countries are confirmed as an expression of the costs of the various national parks, the drastic reduction in the price of fossil fuels, while not eliminating the structural gap of electricity generation powered by gas, has increased competitiveness. By virtue of this trend and the extension of the market coupling on the Italian northern borders, in 2015 there was the formation of new "seasonal" structures in the European electricity market, characterized by minimum or null price differential and electricity transnational flows managed in line with the electricity enhancement[1] (Fig. 2.1.1).

Prices in Euro of the main energy commodities

Fig. 2.1.1



1 These phenomena were mainly recorded in the spring and autumn when seasonal fluctuations in demand contribute to the convergence of national prices.

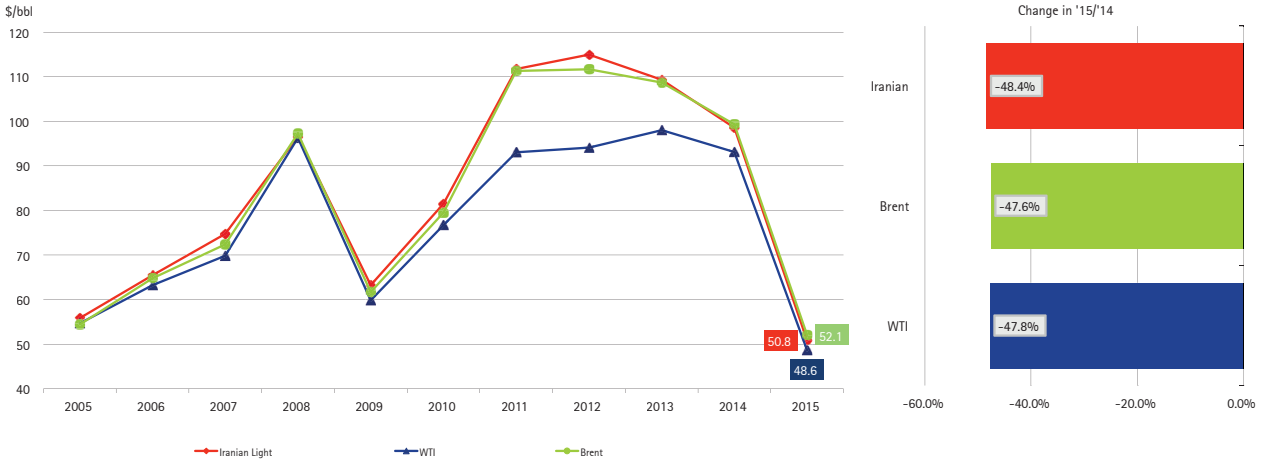
Anticipated by the steep decline in the second half of 2014, the outstanding trend decline observed in 2015 brings the oil prices to 52.1 $/bbl (-47.6%), halving the level and canceling in one year only the significant growth experienced between 2009 and 2011. On a monthly basis, the lowest values were concentrated in the second half of the year, reaching in December, with 38 $/bbl, the all-time low since 2004. The trend and intra-annual dynamic unites all the international references of crude oil, which gap closes again after five years, and its refined products, whose prices collapsed to 490.5 $/MT for gas oil (-41.7%) and 256.1 $/MT for fuel oil (-54%) (Fig. 2.1.2, Fig. 2.1.3).

Meltdown of crude oil and derivatives, coal in free fall

Less intense decline, but placed inside a multi-year downward trend, is that of coal, which, in its fourth consecutive downward trend on all international references, yields in 2015 further 20-25%, reaching 56-57 $/MT in Europe and in South Africa, the lowest annual values for the commodity respectively since 2005 and 2007 (Fig. 2.1.4).

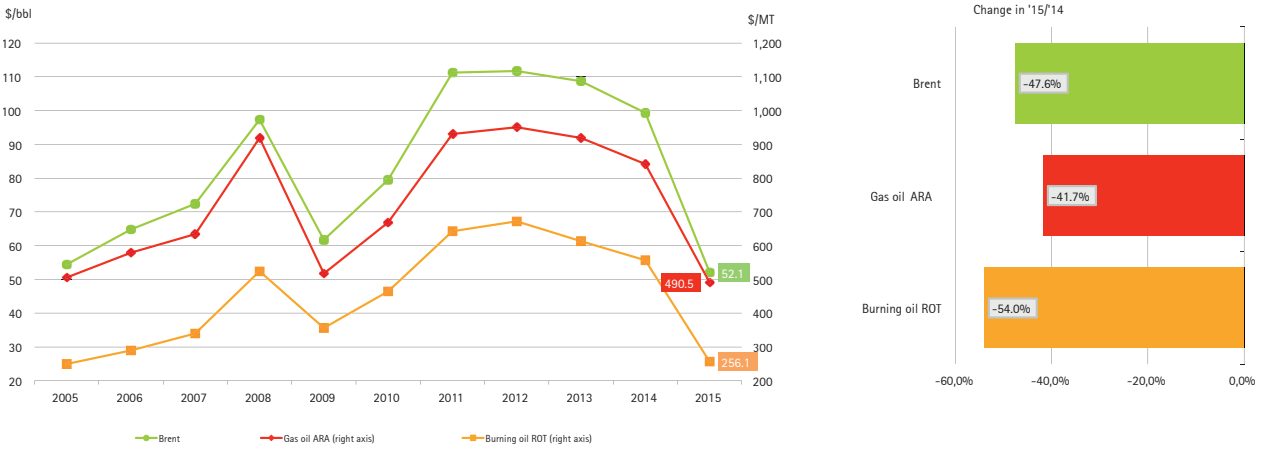
Spot prices on the main international crude-oil markets

Fig. 2.1.2



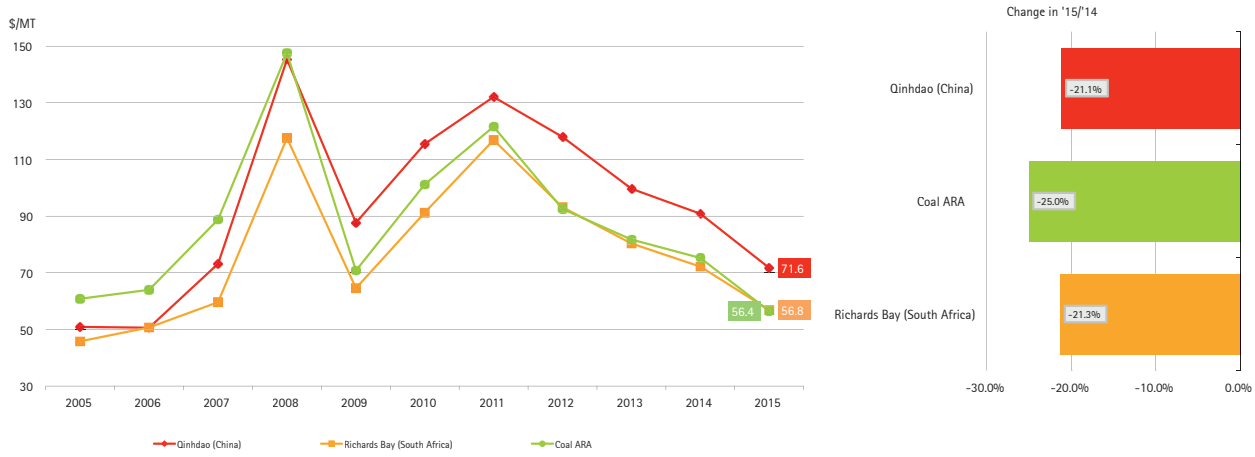
Spot prices of the Brent and of the main oil products

Fig. 2.1.3



Spot prices on the main coal markets

Fig. 2.1.4



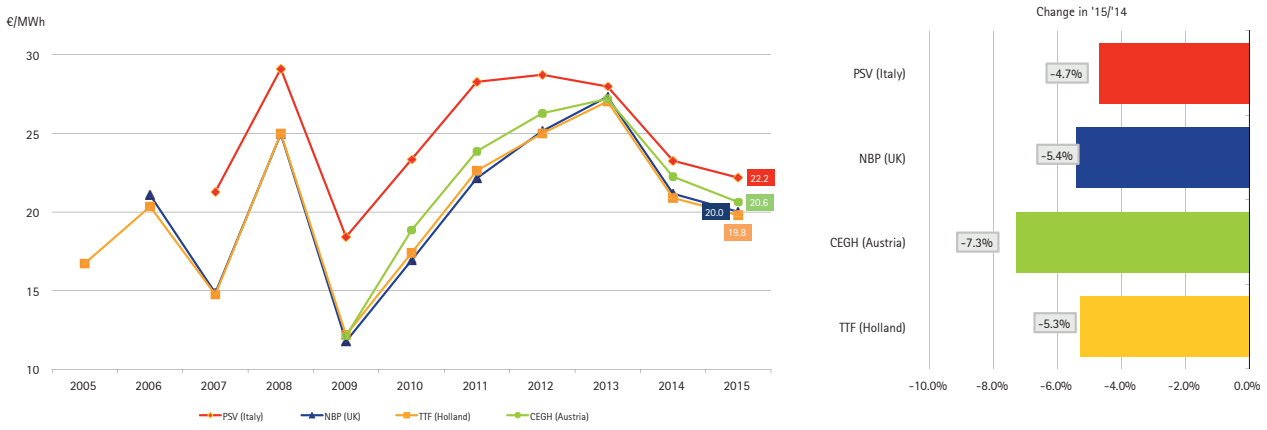
It continues the long bearish trend started with the 2014 break even on the prices reported in major European gas hubs, amounting in 2015 to 19-22 €/MWh, as a result of the trend reductions that were higher than market expectations (5-7%). The further withdrawal seems the result of a gradual and steady decline occurred in March, which brought prices to about 16-19 €/MWh in December. With regard to individual national references, 2015 confirms the reopening of a gap of 2-3 €/MWh between the Italian PSV and other continental hubs, already observed in 2014 after substantial alignment between the prices achieved in the previous year. Albeit in the presence of infra-annual trends absolutely similar, the spread remained steady in all months of 2015, being slightly more marked in February and July. From a prospective point of view, the markets seem to expect for 2016 a strengthening of the bearish trend, betting on future annual prices in line with the values of the last year glimpse. This prediction is confirmed by the first quarter of 2016, characterized by prices amounting to 12-13 €/MWh in central and northern Europe and 14-15 €/MWh in Italy (Fig. 2.1.5).

Gas prices is still reduces and trading stops

As for the volumes traded, the overall setback emerged on a European basis (-7%) reflects almost exclusively the negative trend of trading for the British NBP (-9%), the only one characterized by a high level of maturity and able to cover 82% of the continental traded volumes. Other Countries are characterized by modest signs of growth, namely in Belgium, rose to its all-time high for trading (+6%), and in Austria, characterized by the second consecutive increase (+9%) after the decline suffered in 2013. In Italy, finally, the recordings at the PSV, while staying close to their all-time high, interrupt their growing multi-year series showing the first slight decline since 2008 (-6%) (Tab 2.1.1).

Spot prices on the main gas markets

Fig. 2.1.5



Volumes traded on gas markets (GWh)

Tab. 2.1.1

HUB

Country	Exchange point	2008	2009	2010	2011	2012	2013	2014	2015	Change in 15/14
UK	NBP	-	-	-	-	12,353,458	10,646,731	10,875,335	9,925,278	-9%
Belgium	ZTP	505,579	721,205	724,010	769,797	742,462	771,502	747,167	790,703	6%
Holland	TTF	636,885	803,530	1,122,114	1,597,906	1,979,126	n.d.	n.d.	n.d.	-
Austria	CEGH	166,020	253,340	378,660	435,010	525,100	393,030	439,892	478,330	9%
Italy	PSV	173,741	260,588	479,146	641,135	719,206	730,891	889,518	837,940	-6%
Total	**-**	**1,482,224**	**2,038,663**	**2,703,930**	**3,443,849**	**16,319,351**	**12,542,154**	**12,951,912**	**12,032,251**	**-7%**

The electrical spot prices confirmed to be at the low levels of the decade, according to a long-term bearish trend engaged by the spread of renewable generation and by the weak and accelerated demand in the last two years by the drastic drop in production costs.

Electricity markets down and new transnational balances

The Italian prices remain the highest values (52.3 €/MWh), by reason of a structurally less economical production portfolio, while in continental Europe local and seasonal developments have prompted a strong fragmentation of the prices, well summarized by the unusually high differential observed between France and Germany (38.5 €/MWh and 31.6 €/MWh, respectively), rose to the highest level since 2005 (about 7 €/MWh) and concentrated in the first quarter of the year (about 13 €/MWh) and in October (9 €/MWh) (Fig. 2.1.6).

Precisely this context includes the perhaps more interesting phenomenon emerged in 2015, represented by the formation of new structures in the European electricity market related to the reduction in fuel costs, the seasonal movements of demand as well as the progressive extension of market coupling at the continental level. It's exemplary in this respect as it occurred along the French-Italian border, managed in coupling since 24 February 2015. Given, in fact, a large structural gap produced by the extreme diversity of the generation mix, which has maintained the annual average price differential between Italy and France at 14 €/MWh[2], of the three factors mentioned above have favored the implementation of a single price for Italy and France in 16% of the hours of the year, with more frequent peaks in the months of March, April and October[3].

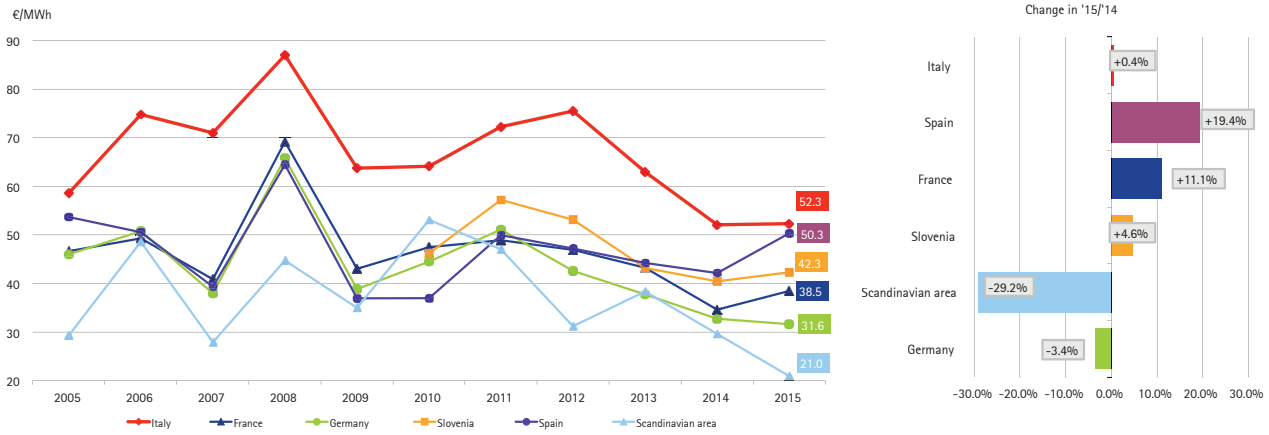
2 The reference for the Italian zonal market is represented by the price of the North area.

3 See In-depth analysis "*A year of market coupling*" in this Volume.

The possible consolidation of the bearish scenarios and new supranational balances seem also to be confirmed in future market expectations that, after well-planned enhancement of electricity in Italy, France and Germany in 2015, bet on a further drop in prices for 2016 and on the spread formation that are not negligible between Germany and France and at all-time lows between France and Italy (Fig. 2.1.7).

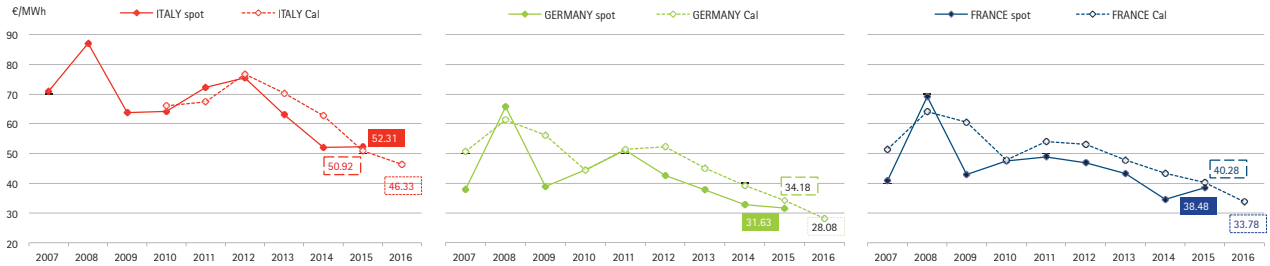
Spot prices in the main European power exchanges

Fig. 2.1.6



Spot price and corresponding price of the Calendar baseload product[4]

Fig. 2.1.7



In this economic environment the electricity exchanges recorded on more mature continental spot markets show for the second consecutive year variations linked almost exclusively to local economic phenomena.

Electricity spot volumes characterized by modest expansion and explosive growth of Italian and French forward trading

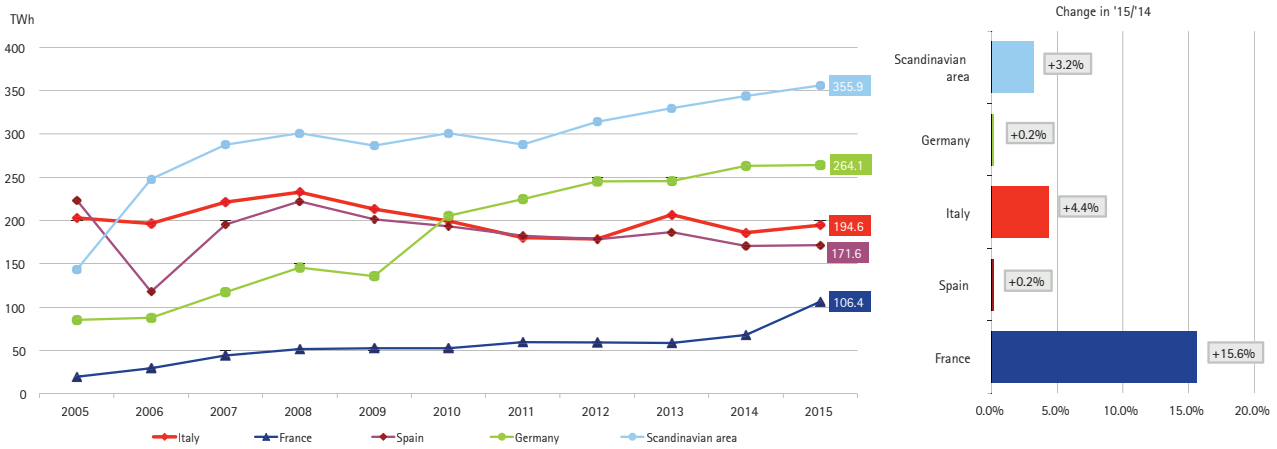
The figure of Germany appears well established around 264 TWh, as well as that of Spain around 172 TWh, while the Italian volumes rise about to 195 TWh mainly due to the greater demand for electricity concentrated in July in response to exceptional climatic events (+4.4%). This trend does not include trading in Scandinavian area that, being the highest on a continental basis, at the fourth consecutive increase amount close to 356 TWh (+3.2%) and the French ones that double compared to the historically manifested level, reaching 106.4 TWh (+15.6%) also for the contribution due to the coupling on the relevant Italian border (Fig. 2.1.8).

4 The chart shows the settlement price of the Calendar product in its last trading day.

Far more significant are indications from the futures exchanges, where the 2015 is characterized by a further strong growth of trade in Germany (approximately 1,747 TWh, +30.7%) and marks a decisive step towards maturity for the Italian and French electricity, characterized by a boom in trading, partly anticipated by the more moderate increase recorded in 2014 and driven by the entry of new companies operating in this market segment (406.3 TWh, +149% and 298.9 TWh, respectively) (Fig. 2.1.9).

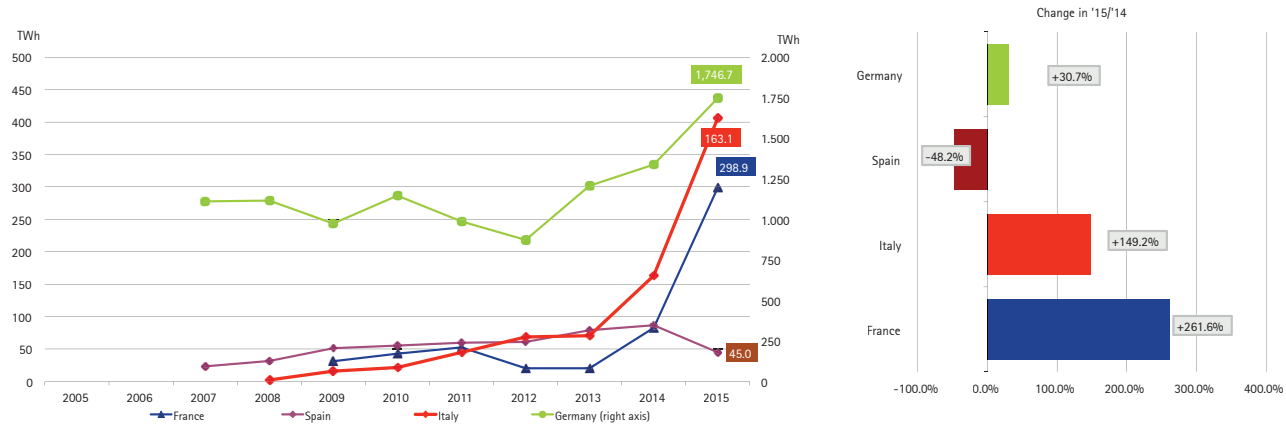
Volumes traded on the main spot exchanges

Fig. 2.1.8



Volumes traded on the main forward exchange

Fig. 2.1.9



IN-DEPTH ANALYSIS

One year of market coupling

From 24 February 2015, the Italian spot market managed by GME, coupled to the Slovenian one in 2011, is synchronized with two other neighboring markets, the French and the Austrian markets as part of the *Italian Border Working Table* (IBWT) and, through this, to the wider European market under the so-called *Multi Regional Coupling* (MRC). For over a year, then, along the northern border of our system, the electricity flows from (and to) France, Austria and Slovenia are implicitly[5] determined through the market coupling, (zonal) market access method that, identifying the value of electricity on the surrounding areas, simultaneously defines in an excellent way the value and then the allocation of transmission capacity between these.
This step marks an important stage in the harmonization process of European electricity market promoted by the so-called third package and the latest CACM Regulations on the allocation of capacity and resolution of cross-border congestion.
The extension of market coupling to the majority of Italian borders has certainly not changed the nature of the Italian cross-border relations, marked by the still negative cost differential for Italy as a result of the different production technologies. The structural gap appears well summarized by the price spreads separating Italy from neighboring countries that, on the basis of prices between about 53 €/MWh of the Italian reference (price of the North area) and 32 €/MWh in Austria, amount in 2015 to about 11 €/MWh - 21 €/MWh, resulting in a general increase over the equivalent values of 2014, with no significant differences within the day and characterized by monthly maximum levels reached in the middle of summer, when in different sessions of July the whole Italian system has been subject to a strong surge in its daily prices[6] (Tab. 1).

Tab. 1 – Prices and differential for hourly profile

Tab. 1

Year	Profile	North	FR	AT/DE	SI	Delta (North, FR)	Delta (North, AT/DE)	Delta (North, SI)
2011	Baseload	70.18	48.89	51.12	57.2	21.29	19.06	12.98
	Peak	77	55.8	57.11	64.67	21.2	19.89	12.33
	Off-Peak	63.36	41.99	45.13	49.73	21.37	18.23	13.63
2012	Baseload	74.05	46.94	42.6	53.15	27.11	31.45	20.9
	Peak	79.62	53.48	48.51	61.81	26.14	31.11	17.81
	Off-Peak	68.48	40.39	36.68	44.49	28.09	31.8	23.99
2013	Baseload	61.58	43.24	37.78	43.18	18.34	23.8	18.4
	Peak	65.23	49.15	43.13	49.79	16.08	22.1	15.44
	Off-Peak	57.94	37.32	32.42	36.56	20.62	25.52	21.38
2014	Baseload	50.35	34.63	32.76	40.43	15.72	17.59	9.92
	Peak	54.15	38.98	36.8	46.2	15.17	17.35	7.95
	Off-Peak	46.55	30.27	28.73	34.66	16.28	17.82	11.89
2015	Baseload	52.71	38.48	31.63	42.3	14.23	21.08	10.41
	Peak	56.97	42.1	35.06	47.68	14.87	21.91	9.29
	Off-Peak	48.44	34.85	28.2	36.91	13.59	20.24	11.53

5 On both lines, it is still made available a quota of capacity determined through the explicit auction mechanism.
6 In July 2015, the average price of North area stood around 70 €/MWh.

Not found at a level of annual aggregation, the effects of the coupling shall be found above all in the time structure and seasonal movements in prices.
It should be noted thereby that, in 2015, even in the face of high annual differential, the extension of the coupling to the Italian northern border has favored the alignment of prices in 37% of the hours between Italy and Slovenia, which is also characterized by a generation mix mainly influenced by the cost of fossil fuels, in 16% from Italy and France and, finally, in 2% of Italy and Austria, always united with Germany and its generation facilities powered primarily by renewable sources. The impact is even more evident when analyzed in the light of what has been observed in Switzerland, not part of the *Italian Borders Market Coupling* (IBMC), whose price, although with no significant differences from the French one, still shows a convergence to the practically zero Italian reference level.
At the same time, with the exception of Switzerland, the differential reversal hours, partly incorporated on the borders handled in coupling by increasing cases of convergence drop (Tab. 2).

Alignment frequency and differential reversal for the border – 2015 post coupling

Tab. 2

Zone	Alignment frequency to the North area	Frequency of negative price differential with the North area
France	15.8%	0.4%
Austria	2.3%	0.3%
Slovenia	36.9%	0.4%
Switzerland	0.1%	14.7%

Dwelling on the French border, the one with larger interconnection capacity, it also noted that the price convergence phenomena are not distributed evenly throughout the year, but have presented periodic peaks concentrated in the spring and at the beginning of autumn, when the Italian and transalpine prices show historically reduced margins as a result of the mutual seasonal movements of national applications[7]. In particular, in March and April, Italy and France were found to belong to the same supranational market area respectively in 30% and 33% of the hours, while in October, the percentage increased to 53%, thus surpassing even the convergence rate occurred between France and Germany. In these times of the year, and even more so in a context such as the current one characterized by reduction in the cost of fossil fuels, the market coupling thus fosters a real chance to experience a new balance for the European electricity market, resulted in the formation of zonal configurations that, in some cases, come to include the Northern Italian area to Belgium (3% of the hours in 2015) or Denmark (0.3%).
In this scenario, our system has confirmed to be a net importer for about 40 TWh (up of 8% on the corresponding volumes in 2014), with a percentage of net imports from the three borders affected by market coupling equal to 52% TWh (+4% compared to the same period of 2014), managed by 44% through implicit auctioning. Volumes imported focused mainly on the French border (16 TWh, 97% of the hours), by virtue of greater amplitude of the ATC between the two areas, second only to that between Switzerland and Northern area. With reference to the frequency of import exchanges, however, on the Austrian border it is observed the prevalence of import net transactions, for a total of 1.8 TWh, distributed on the 99% of the hours.
639 GWh is the value of the exports (down of 33% compared to the same period last year), concentrated in the IBMC area on the Slovenian (90 GWh, 595 hours) and French border (102.5 GWh, 204 hours), while, in correspondence of the increasing alignment between the prices, the number of flow indifference hours (168 hours in Austria, 1,177 hours in France, 2,746 hours in Slovenia) increases and here the volumes are predominantly import results.

7 The figure is also confirmed by the evidence of the first months of 2016. In March and April, in fact, the differential between Italy and France amounted on average to 7 €/MWh, compared to 13 €/MWh produced in January and February.

In this context, the main effects produced by the establishment of the MC are found in the significant reduction in the inefficient use of transport capacity between Italy and France and Italy and Austria, both in terms of uneconomic use of capacity as well as in terms of its partial use. While, in fact, in 2014 the capacity on the two borders was allocated in an uneconomic manner in 5/3% of the hours, with the start of market coupling, such frequency drops to 0.3% and 0.2%, of which the largest percentage is attributable to import with negative hourly prices differential. Again, if the impact of the coupling is more evident in the comparison of these data with those of Switzerland that already only in the first quarter of 2016 - during which the price of the North area has been subject to a strong downtrend - counts as much as 20% of hours with exchanges in counter-flow, confirming the inadequacy of the mechanism of explicit auctions in handling contingencies that are difficult to predict and such as to decisively reverse the consolidated market expectations on price trend.

Tab. 3

Volumes and allocative capacity inefficiency - 2015 (**)

Zone	Import (GWh)	Export (GWh)	Net import (GWh)	Net import on the total	Import Coupling on the total import	Inefficiency (*)	Uneconomic inefficiency	Inefficiency due to partial use
France	16,332,619.69	102,517.88	16,230,101.81	41%	81%	7.6%	0.3%	7.2%
Austria	1,791,256.86	4,206.83	1,787,050.03	4%	78%	71.0%	0.2%	70.8%
Slovenia	3,149,553.57	90,411.49	3,059,142.08	8%	98%	0.2%	0.2%	0.0%
Switzerland	19,401,408.52	495,920.06	18,905,488.46	47%	-	100%	14.7%	85.3%
Total	40,674,838.64	693,056.26	39,981,782.38	100%	-	-	-	-

(*) Inefficiency means the hourly frequency with which the capacity along the borders is under-utilized and/or allocated in a manner inconsistent with respect to the price differential.
(**) Starting from the delivery date 25 February 2015, the reference date for the extended launch of the market coupling.

2.2 ELECTRICITY MARKETS

2.2.1 The Day-Ahead Market (MGP)

In 2015, in a framework of slight recovery in economic conditions (GDP: +0.8%) even the electricity trade in the MGP returning to grow on an annual basis (287.1 TWh; +1.8%), ending the series of declines that began in 2009. The reversed trend is also found in the evolution of electricity demand detected by Terna (315.2 TWh; +1.5%). The electricity demand have been probably affected also by the high temperatures recorded in summer - when the demand of Terna at 16 on 21 July marked a new historical peak at 59,353 MW - and the calendar factor (three working days more than in 2014). The stability of the percentage of commercial volumes (MGP) compared to that recorded in the physical market (Terna), which stood at 91% in the last four years, highlights the effect of the consolidation of the spread of non-programmable renewable sources on the rise of non-passing through self-consumption for the day-ahead market (Tab. 2.2.1).

Slight recovery in electricity demand

From the supply side, in view of the further decline of the offers submitted in the MGP[8], there is a strong recovery in sales (+1.8%), driven by thermal power plants that increase by 10.5% from the all-time low of 2014, bringing the market percentage at the 2013 level (61%). With sales of coal production still falling (-4.5% in 2014, -6.6% in 2015), the growth of thermal-electrical generation was supported by combined cycle plants (+20.6%), which rely on the recovery in demand as well as on braking of renewable generation, which stops the expansion phase of the previous seven years. Specifically, the reversed trend of the production of green energy is related to the availability of water for much of 2015, with the production of water systems down of 14.5% on the previous year, and the decrease in available energy from the other renewable sources (Wind -8.5%; solar and other -10.5%). However, the geothermal source grows (+5.1%) (Fig. 2.2.1, Tab. 2.2.2).

Recovery of thermal-electrical field and drop of the renewable supply

Trend of volumes on the MGP

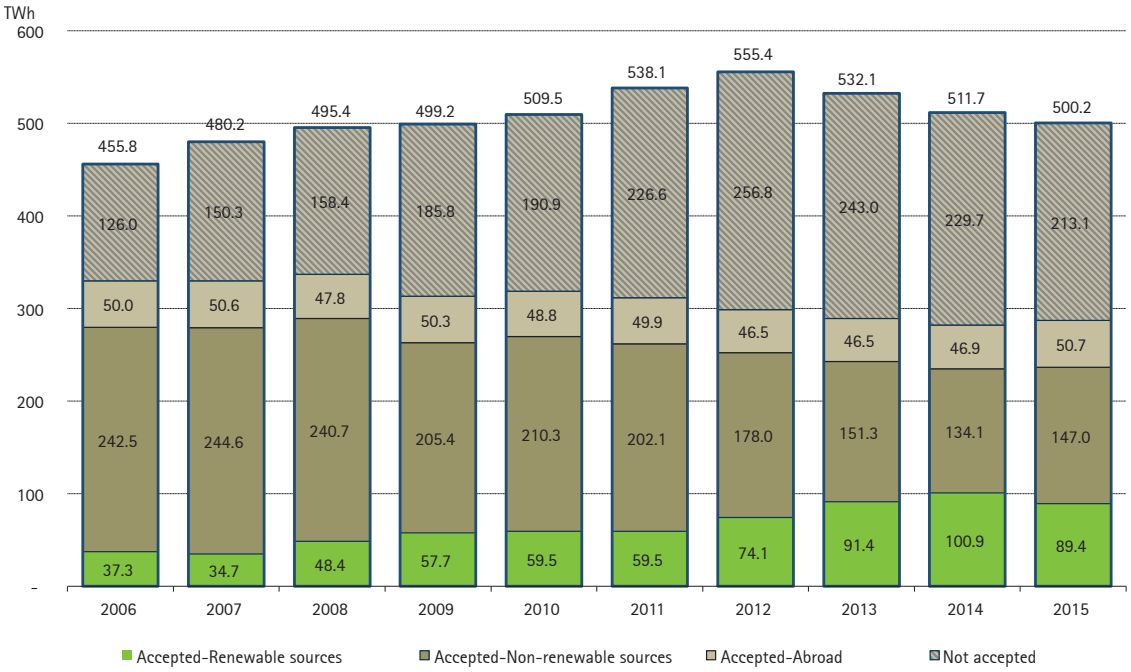
Tab. 2.2.1

TWh	2010	2011	2012	2013	2014	2015	*Change in '15/'14*
Request by Terna	**330.5**	**334.6**	**328.2**	**318.5**	**310.5**	**315.2**	*1.5%*
Demand	**345.1**	**338.2**	**330.5**	**329.8**	**318.2**	**305.3**	*-4.1%*
with price indication	28.3	28.2	34.8	46.5	44.8	36.8	*-17.9%*
rejected	26.4	26.6	31.8	40.6	36.0	18.1	*-49.9%*
Purchases	**318.6**	**311.5**	**298.7**	**289.2**	**282.0**	**287.1**	*1.8%*
% upon Terna's request	96.4%	93.1%	91.0%	90.8%	90.8%	91.1%	*0.3%*
Offer/bid	**509.5**	**538.1**	**555.4**	**532.1**	**511.7**	**500.2**	*-2.2%*
Sales	**318.6**	**311.5**	**298.7**	**289.2**	**282.0**	**287.1**	*1.8%*
at zero price	218.4	210.0	201.8	214.7	212.7	190.5	*-10.4%*

8 It should be taken into account that starting from February 2015, the data relating only to accepted offers/bids is available for foreign areas in coupling.

Offer in the MGP

Fig. 2.2.1



Sales by source and technology

Tab. 2.2.2

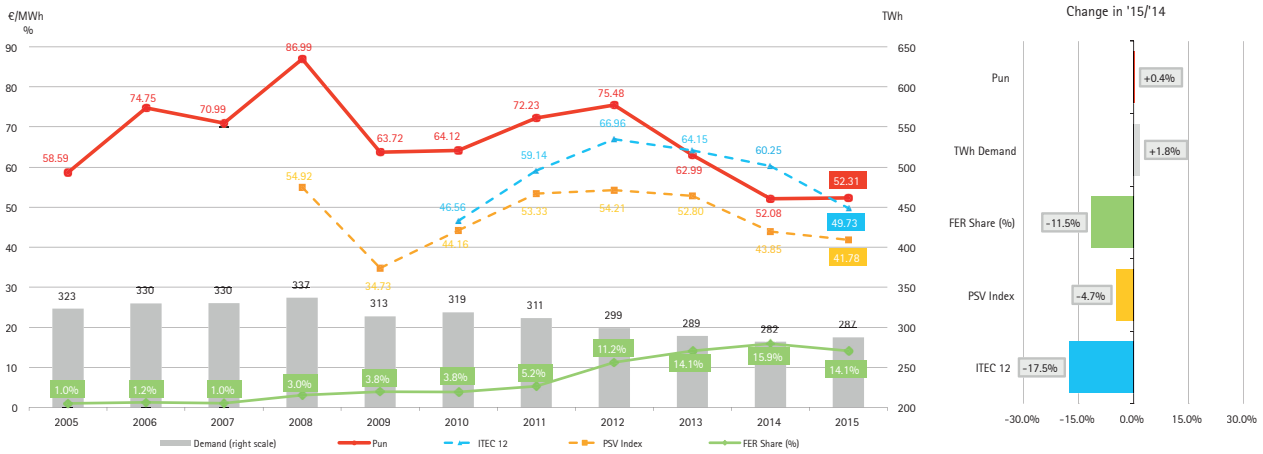
TWh	2010	2011	2012	2013	2014	2015	*Change in '15/'14*
Conventional sources	**204.6**	**197.9**	**175.1**	**147.9**	**130.6**	**144.3**	*10.5%*
Combined cycle	149.6	138.5	113.8	92.5	75.1	90.5	*20.6%*
Coal	24.4	29.3	32.3	26.2	25.0	23.4	*-6.6%*
Other	30.6	30.1	29.0	29.3	30.5	30.4	*-0.3%*
Renewable sources	**59.5**	**59.5**	**74.1**	**91.4**	**100.9**	**89.4**	*-11.4%*
Hydraulic	42.2	37.9	35.2	45.3	50.5	43.2	*-14.5%*
Run of river	*24.6*	*23.4*	*22.3*	*27.0*	*31.3*	*28.7*	*-8.2%*
Reservoir	*17.6*	*14.5*	*12.9*	*18.3*	*19.2*	*14.5*	*-24.8%*
Geothermal	5.1	5.4	5.3	5.3	5.6	5.8	*5.1%*
Wind	5.6	7.2	10.3	14.1	14.6	13.4	*-8.5%*
Solar and other	6.6	9.1	23.3	26.7	30.2	27.0	*-10.5%*
Pumping	**5.8**	**4.1**	**3.0**	**3.3**	**3.6**	**2.8**	*-22.1%*
TOTAL	**269.8**	**261.6**	**252.1**	**242.7**	**235.0**	**236.5**	*0.6%*
Abroad	48.8	49.9	46.5	46.5	46.9	50.7	*7.9%*
TOTAL SALES	**318.6**	**311.5**	**298.7**	**289.2**	**282.0**	**287.1**	*1.8%*

The purchase price of electricity in the Power Exchange (PUN), after steep declines in the previous two years (16.6% in 2013; 17.3% in 2014), marks a slight recovery compared to an all-time low of 2014 and stands at 52.31 €/MWh (+0.4%), showing the monthly average levels varied between 47 and 56 €/MWh, with the exception of July, when the price amounted to 67.77 €/MWh. The substantial stability of the PUN[9] is part of a context in which, alongside the aforementioned recovery in electricity consumption, it confirms and strengthens the general decline in fuel costs, with the price of Brent at its all-time low of the last six years (46.88 €/bbl) and average prices of gas spot price (PSV) at 22.14 €/MWh (-4.7%). The trend of PUN continues to reflect an underlying trend traced by raw material costs, involving seasonal and exogenous factors represented by the exceptional peak demand in July and the reduced availability of water supply concentrated in the latter part of the year. In this regard it is worth noting as the correlation index between the two variables is confirmed at a high level in the first half of 2015 (about 75%[10]) and subsequently declines to lower levels in the second half of the year (about 46%), as a result of the aforementioned economic trends (Fig. 2.2.2, Fig. 2.2.3).

Decline of the prices of fuels and basically stable PUN

Trend of the PUN and of its determinants[11]

Fig. 2.2.2



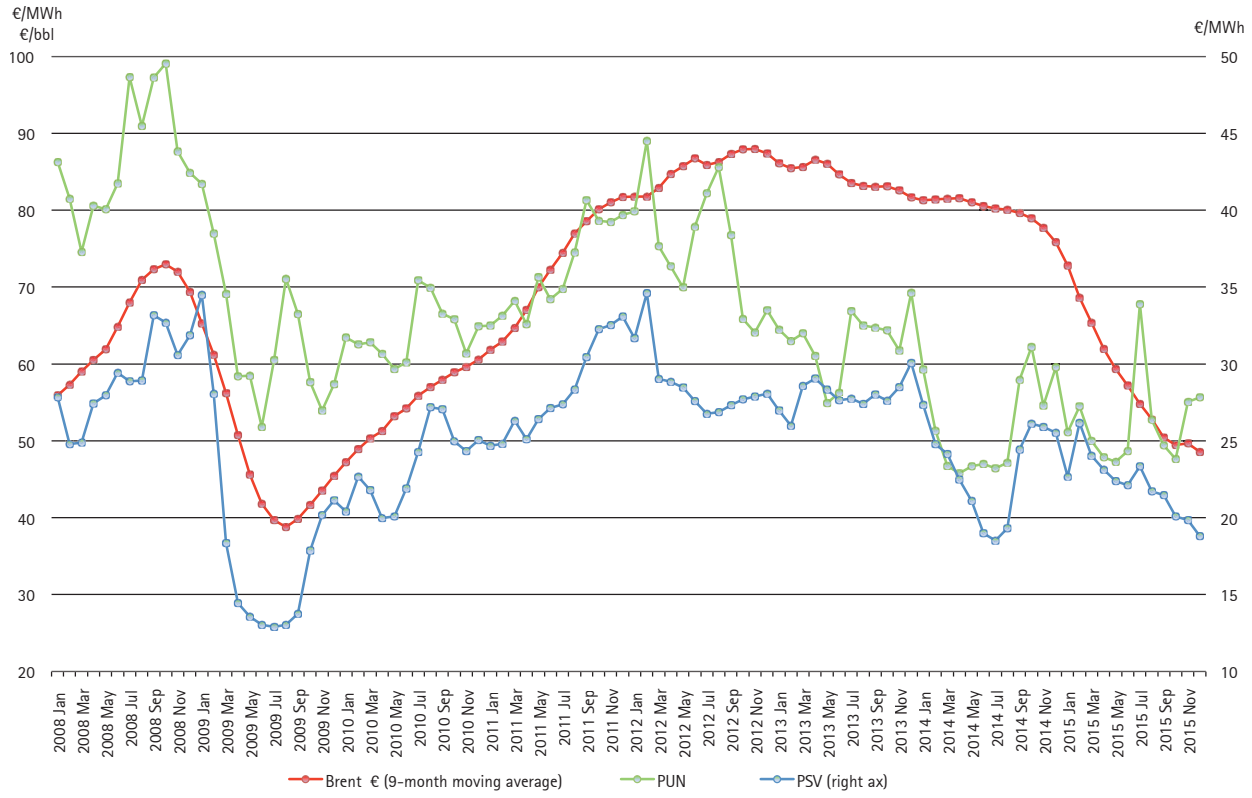
9 Net for the month of July, the average annual PUN is close to 51 €/MWh, down of 3% compared to the same figure of 2014.

10 Correlations were determined based on the time series of moving daily averages at 1 month of the PUN and the PSV.

11 The figure related to the FER share refers to the wind and solar sources.

Monthly trend of the PUN and PSV

Fig. 2.2.3

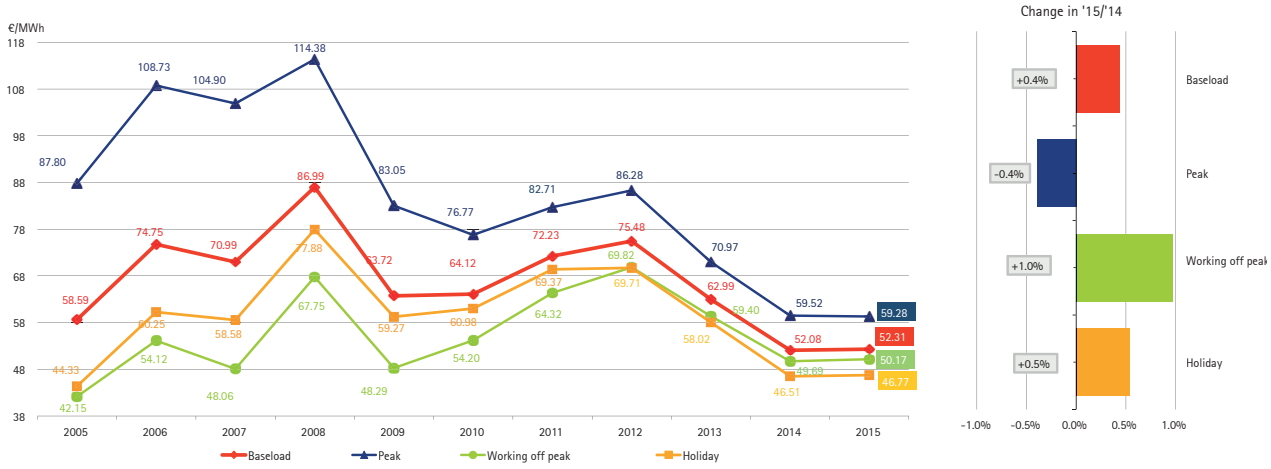


A breakdown by groups of hours reveals that the substantial stability of PUN is affected by a slight decline in the price at peak hours, which renews the all-time low at 59.28 €/MWh, and a slight recovery in the hours at light load (50.17 €/MWh in the working off-peak; 46.77 €/MWh in non-business days). Therefore, the relationship between the price in the working peak and off-peak decreases further (1.18) from the low levels on which it had stood in the last three years (approximately 1.2). The consolidation of flattening of the hourly price profile is also witnessed by the fact that the annual peak of the PUN in 2015, recorded on 23 July at 10 hours and amounting to 144.57 €/MWh, is the lowest ever recorded since 2004, and that the minimum hourly price of 2015 (5.62 €/MWh) is instead the highest in the last three years (Fig. 2.2.4).

Flattening of the hourly price profile consolidates

Yearly average PUN by groups of hours

Fig. 2.2.4



As regards selling prices, in the peninsular areas, in view of a growth in demand everywhere up except in the North, there are increases of about 2 €/MWh from the all-time lows in 2014. In this framework, it remains the ranking of the peninsular prices where the North is the area characterized by the highest price and the South is the area characterized by the lowest price and only net exporter area on the mainland, thus confirming the significant impact of the spread of renewable sources on the national supply structure and on electricity flows within the system. The North-South price differential remain at the average levels of the past four years, although in 2015 the low hydroelectric production, particularly in the last quarter of 2015, involves a slight widening of the gap on the previous year (3.29 €/MWh; 2.97 €/MWh in 2014).

Zonal prices rebounding on the peninsula...

With regard to the trends of the islander prices, in 2015 it definitely strengthens the convergence of the price of Sardinia at the lowest prices on the continent, following a process started in 2013 and strengthened by the introduction of the so-called "meshed" zonal configuration management[12] starting from February. The price of the island, in fact, fell to all-time lows (51.06 €/MWh; -2.2% in 2014), breaks down less than 2 €/MWh the price differential with the South (more than 10 €/MWh in 2012), confirming the complete resolution of sporadic hours of criticality, linked to the scarcity of supply and reduced transit capacity with the mainland, in which in the past it was achieved almost entirely the price differential. Much larger is the decline of the sales price in Sicily that falls to its all-time low since 2005 (57.53 €/MWh; -28.9%). This evolution, due to regulatory intervention[13] that has in fact set up an administratively controlled regime for relevant plants of the island until the commissioning of the new interconnect cable with the mainland, has significantly

...but significantly declining on the islands

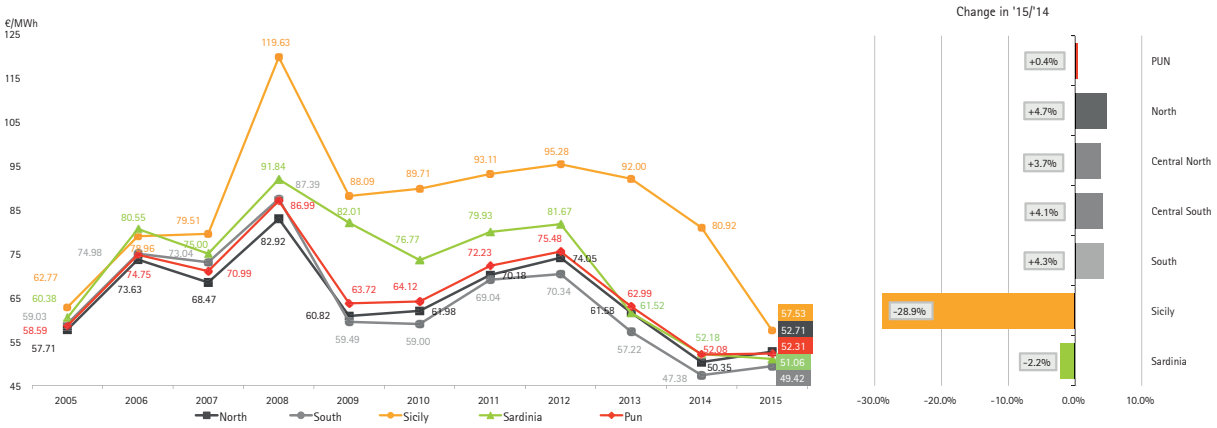
12 As of 10 February 2015 it was introduced the management of the so-called "meshed" zonal configuration with reference to CNOR-CORS, CORS-SARD SARD-CSUD, CSUD-CNOR transits.

13 Earlier this year it came into force the AEEGSI's Resolution 521/2014/R/Eel.

reduced the price differential with the continent that, by over 30 €/MWh in the previous two years, fell to just above 8 €/MWh, never so low since 2007. In this regard it should be noted that, in 2015, the island has saturated the transit import limits from the continent, being less competitive, in 74% of the hours (83% in 2014 and 85% in 2013), with an average differential compared to the PUN in these hours of 5.22 €/MWh, down by more than 30 €/MWh over the previous year (Fig. 2.2.5, Tab. 2.2.3, Tab. 2.2.4).

Fig. 2.2.5

Yearly average zonal prices on the MGP



Tab. 2.2.3

Zonal volumes on the MGP – 2015

TWh	Purchases		Sales		Offer		Demand		Offers/bids rejected	
North	155.8	*(-0.4%)*	109.6	*(-3.2%)*	229.9	*(-2.2%)*	160.0	*(+0.1%)*	120.2	*(-1.2%)*
Center North	28.1	*(+8.7%)*	17.9	*(-2.7%)*	30.1	*(-16.7%)*	30.4	*(+8.2%)*	12.2	*(-31.3%)*
Center South	45.0	*(+10.7%)*	28.9	*(-0.1%)*	57.7	*(-10.7%)*	46.5	*(+9.4%)*	28.9	*(-19.3%)*
South	29.2	*(+12.6%)*	54.4	*(+14.0%)*	77.9	*(+1.7%)*	30.5	*(+13.2%)*	23.5	*(-18.6%)*
Sicily	15.7	*(-13.1%)*	15.8	*(-6.5%)*	34.1	*(+2.2%)*	18.0	*(-3.7%)*	18.3	*(+11.1%)*
Sardinia	8.9	*(-22.3%)*	9.8	*(-0.3%)*	17.9	*(+12.5%)*	9.7	*(-17.2%)*	8.1	*(+33.0%)*
Abroad	4.4	*(+25.7%)*	50.7	*(+7.9%)*	52.6	*(+5.1%)*	10.3	*(-66.3%)*	1.9	*(-38.3%)*
Italy	287.1	*(+1.8%)*	287.1	*(+1.8%)*	500.2	*(-2.2%)*	305.3	*(-4.1%)*	213.1	*(-7.2%)*

() In brackets, the change from the previous year

Tab. 2.2.4

Zonal sales by source and technology – 2015

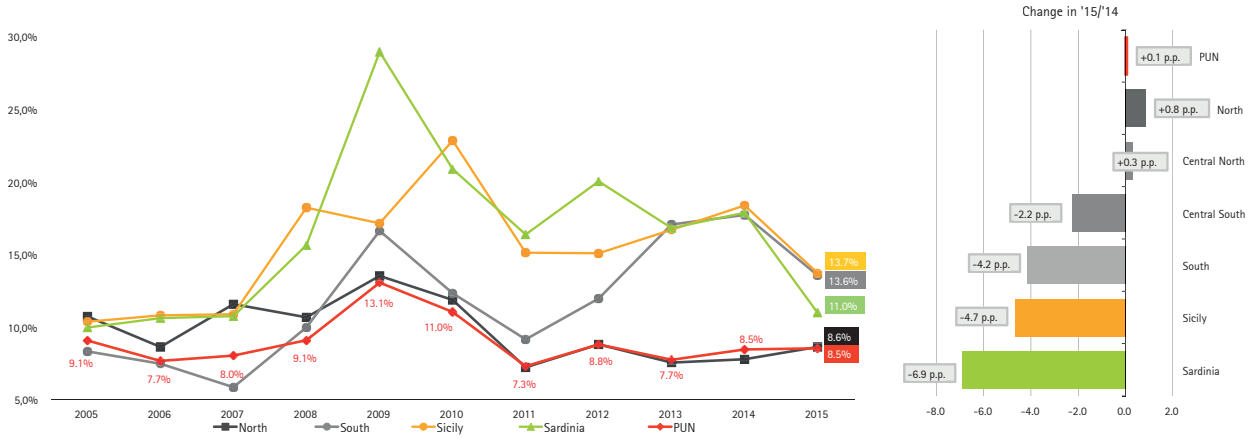
	North		Central North		Central South		South		Sicily		Sardinia	
	MWh	Change	MWh	Change	MWh	Change	MWh	Change	MWh	Change	MWh	Change
Conventional sources	6,899	+12.5%	715	+0.4%	2,218	+4.0%	4,661	+24.7%	1,144	-15.5%	832	-0.5%
Gas	4,829	+18.4%	616	+1.3%	655	+66.4%	2,713	+51.7%	1,054	-15.9%	510	+2.4%
Coal	1,019	+3.7%	2	-92.6%	1,369	-10.1%	-	-	-	-	280	-13.6%
Other	1,051	-1.8%	97	+29.6%	195	-10.3%	1,948	-0.1%	90	-10.8%	42	+208.8%
Renewable sources	5,357	-16.8%	1,327	-4.3%	1,024	-8.5%	1,555	-9.4%	658	+15.2%	287	+0.9%
Hydraulic	3,649	-19.6%	327	-15.1%	433	-6.9%	335	+22.1%	145	+131.9%	40	-2.1%
Geothermal	-	-	667	+5.1%	-	-	0	-100.0%	-	-	-	-
Wind	10	+46.2%	14	-2.7%	252	-11.6%	735	-15.6%	360	+7.3%	157	-0.6%
Solar and other	1,699	-10.4%	318	-9.6%	340	-8.0%	486	-15.1%	153	-11.7%	90	+5.2%
Pumping	261	-26.2%	1	+3.4%	55	+10.0%	-	-	0	-98.4%	1	-75.1%
Total	12,517	-3.2%	2,043	-2.7%	3,298	-0.1%	6,216	+14.0%	1,801	-6.5%	1,119	-0.3%

In 2015 the volatility of the PUN (8.5%) remains unchanged from the previous year and in line with the average values of the last five years. The analysis of the volatility of zonal selling prices, however, reveals a slight increase in the northern areas (North and North Central) and a sharp decline in other areas, the most significant in Sardinia, with the volatility that yields nearly 7 percentage points and reaches 11.0%. Therefore, volatility between the geographical areas is still quite differentiated, but with a narrower range of variation than in the past. This trend has been probably influenced by the structural interventions in the case of Sardinia, and the regulatory ones, in the case of Sicily, but also the decline of the most competitive renewable offer, which has considerably lowered the zero rate of hourly prices[14]. This effect is particularly apparent in the South, where the sales price equal to zero are recorded only in 19 hours against 139 in 2014. It is worth noting also that the number of sessions of the MGP in which they are observed diurnal prices lower than those nocturnal is reduced in all areas with the exception of Sicily alone (Fig. 2.2.6, Fig. 2.2.7, Tab. 2.2.5).

Decreasing volatility of Islander and South prices

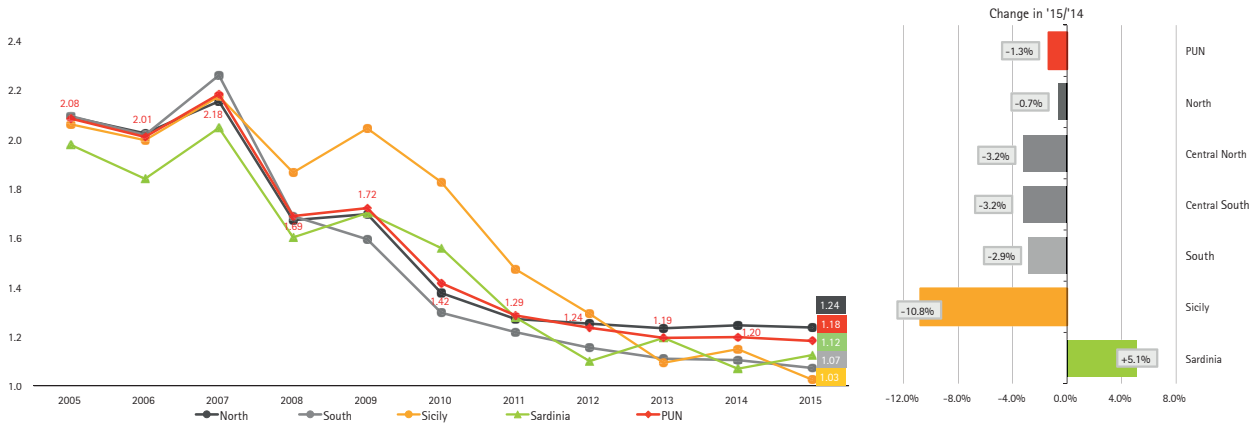
Price volatility

Fig. 2.2.6



Peak/off-peak price ratio on working days

Fig. 2.2.7



14 The reduction of the most competitive FER offer incorporates in part the decline in availability of renewable energy, in part a decline in volumes offered at zero price.

Zero prices and day-time/night-time price reversals on the MGP

Tab. 2.2.5

	PUN		North		Central North		Central South		South		Sicily		Sardinia	
No. of hours with price equal to zero	-	(0)	-	(0)	15	(61)	15	(71)	19	(139)	15	(71)	29	(163)
No. of sittings with a least a hourly price equal to zero	-	(0)	-	(0)	5	(21)	5	(25)	6	(37)	5	(25)	7	(42)
No. of sittings with daily prices < night prices	72	(106)	51	(82)	101	(114)	114	(132)	144	(160)	119	(162)	156	(106)
Sittings % with daily prices < night prices	19.7%	(29.0%)	14.0%	(22.5%)	27.7%	(31.2%)	31.2%	(36.2%)	39.5%	(43.8%)	32.6%	(44.4%)	42.7%	(29.0%)
Average difference in the sittings with daily prices < night prices €/MWh	-5.95	(-6.90)	-6.75	(-7.08)	-6.96	(-8.26)	-6.82	(-8.34)	-6.43	(-9.03)	-6.71	(-14.18)	-5.06	(-13.87)

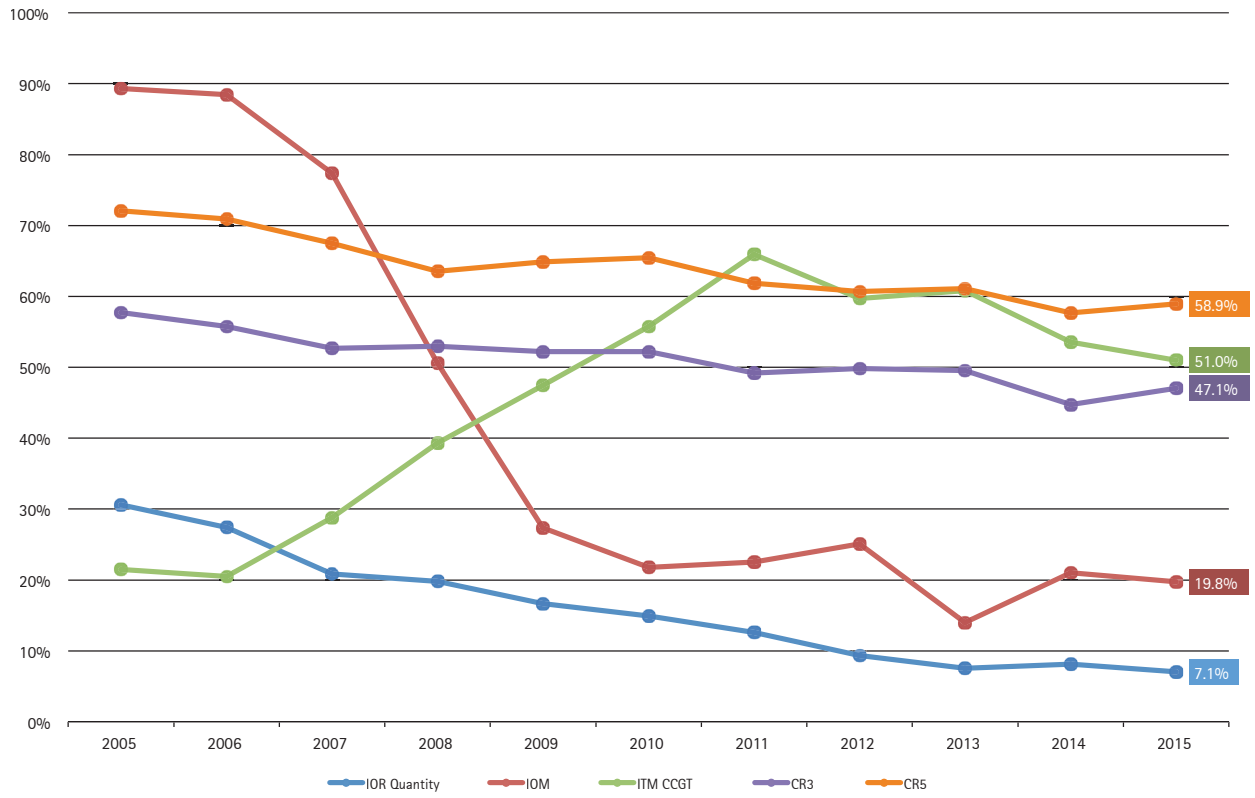
() In brackets, the values of the previous year

Market concentration: drop in guaranteed sales and increased competition at the margin

In 2015, the competitiveness and competition indicators express a general improvement. In detail, the percentage of guaranteed sales in the absence of competition (IORQ), confirming the trend shown since the market launch, updates its all-time low at a percentage of 7.1%. The indicator confirms at very low levels in the North and on the rises in the South (7.7%), while decreases in the remaining areas, particularly in the islands, where it descends to the lowest levels ever (Sardinia 6.0% and Sicily 5.5%). Slight improvements are also observed in the competition at the margin, as reported from the Index of Marginal Operator (IOM) of Enel, the main price-maker, who after the rebound of 2014, is below the 20% threshold. Still decreasing the Marginal Technology Index of combined cycle plants (ITM Ccgt) that, despite the increase in sales, reaches 51.0%, thus confirming the multi-year trend related to the expansion of the renewable supply. Generally improving is also the index of Hirshmann-Herfindahl of the sales (HHI), which is confirmed below the first threshold of competitiveness in the North and returns close to it in the South. The positive signals from the HHI index are not reflected, however, in the concentration indicators CR3 (47.1%) and CR5 (58.9%), marking a slight recovery from the 2014 all-time lows (Fig. 2.2.8; Tab. 2.2.6).

Indicators of competitiveness

Fig. 2.2.8



Concentration indicators in the MGP - 2015

Tab. 2.2.6

	Total		North		Central North		Central South		South		Sicily		Sardinia	
HHI Offers			1,882	*(1,958)*	3,459	*(4,212)*	4,177	*(5,008)*	1,714	*(2,007)*	2,548	*(3,131)*	3,273	*(3,629)*
HHI Sales			1,294	*(1,456)*	2,693	*(2,838)*	3,359	*(4,094)*	1,851	*(2,095)*	2,046	*(2,628)*	4,515	*(4,311)*
CR3	47.1%	*(44.7%)*	50.3%	*(46.9%)*	76.5%	*(68.6%)*	76.8%	*(74.7%)*	64.2%	*(59.0%)*	58.6%	*(58.1%)*	83.4%	*(79.9%)*
CR5	58.9%	*(57.7%)*	66.0%	*(62.7%)*	86.5%	*(84.6%)*	82.5%	*(83.8%)*	77.0%	*(74.4%)*	79.0%	*(74.4%)*	91.8%	*(95.1%)*
IOR Quantity	7.1%	*(8.1%)*	0.5%	*(0.4%)*	22.2%	*(24.1%)*	22.4%	*(27.3%)*	7.7%	*(5.9%)*	5.5%	*(9.1%)*	6.0%	*(19.7%)*
IOM 1° Oper	19.8%	*(21.0%)*	13.5%	*(15.0%)*	19.8%	*(19.9%)*	20.9%	*(21.7%)*	22.3%	*(25.0%)*	63.0%	*(65.0%)*	23.5%	*(25.9%)*
ITM Ccgt	51.0%	*(53.5%)*	50.8%	*(55.1%)*	48.7%	*(51.8%)*	49.4%	*(51.0%)*	50.8%	*(49.0%)*	69.7%	*(79.3%)*	46.1%	*(45.2%)*

() In brackets, the values referred to the same month of the previous year

2.2.2 The Intra-Day Market (MI)

New intra-day market launch

In February 2015, they were started the changes in the intra-day market required by the AEEGSI's Resolution 45/2015/R/EEL, which enabled participants to expand the flexibility options with the introduction of a new range (9-24) where before it was not possible to trade volumes.

In detail:

- the relevant periods negotiable in the MI3 were extended to the range 9-24, thus expanding the old range 13-24;
- the relevant periods of the MI4 were consequently extended to the range 13-24, thus expanding the old range 17-24;
- it was introduced the MI5, on which the applicable 17-24 periods are negotiable

Price trends more in line with the PUN

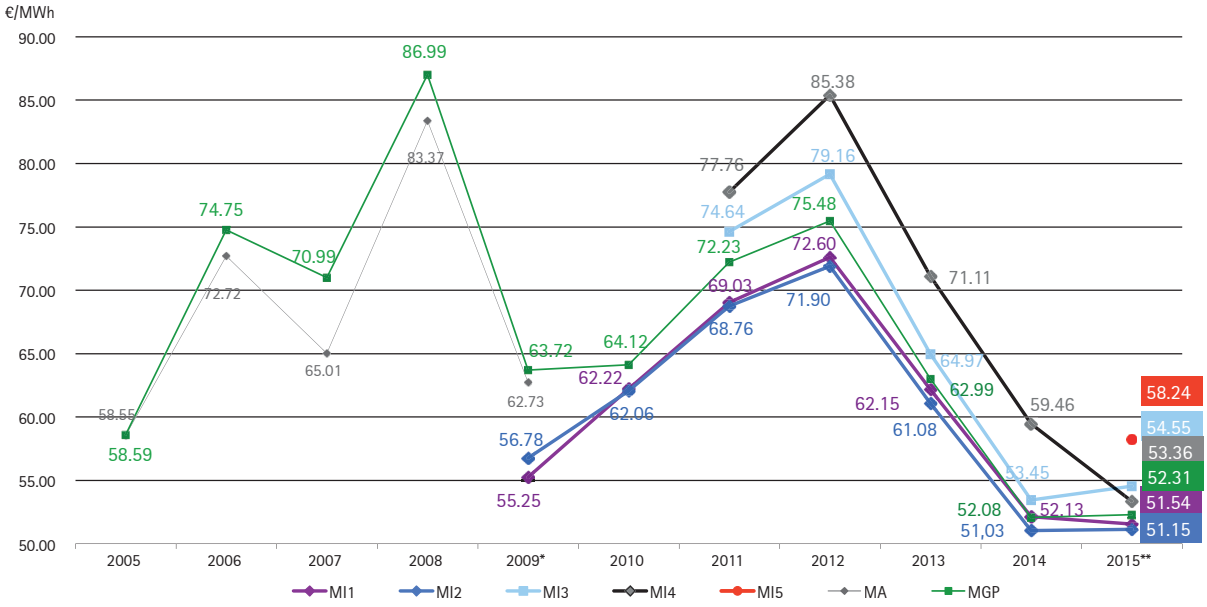
In 2015 it's confirmed, as in past years, the close correlation between the trend of the purchase prices of the Intra-day Market and those of the MGP (PUN). The two spot markets in fact showed a substantial stability in prices after the downward trend that had characterized the previous two years. If this is apparent for the first two sessions of the Intra-day Market (MI1 51.54 €/MWh -1.1%; MI2 51.15 €/MWh +0.2%), for the following ones, for the purpose of a more correct 2014/2015 comparison, it's required to refer to the hourly ranges regardless of the session which they refer to. So, when you consider the range 13-24, it shows that in 2015 the price (53.70 €/MWh in January, 52.94 €/MWh in the next 11 months) is in line with the previous year (53.45 €/MWh). Similarly, in the range 17-24 it is noted a slight decline in the price (58.27 €/MWh in January, 58.24 €/MW from February to December) compared to 2014 (59.46 €/MWh). Finally, in the new range 9-24, the price (54.63 €/MWh) stand just above that of the 13-24 range. The MI1 and MI2 sessions also showed lower levels compared to the PUN (-1.5% MI1 and -2.2% MI2) (Fig. 2.2.9, Tab. 2.2.7).

Increasing price volatility

The volatility of the MI prices is much higher compared to that of the MGP prices. In 2015 the gap is exacerbated due to the general increase in volatility on all sessions of the MI compared with levels almost unchanged on the spot market (8.5%). In detail, the volatility of the MI prices increases with the temporal succession of sessions, rising from 10.0% of the MI1 to 19.2% of the MI5. However, if the increase in the MI1 and MI2 is consistent with the trend of recent years, in subsequent sessions, the growth of the volatility marks a sharp reversed trend (Fig. 2.2.10).

Purchase price: annual trend

Fig. 2.2.9



* Data related to the MI1 and MI2 refer to the last two months of the year

** Launch of the new MI5 market since February

Average purchase price and average hourly volumes

Tab. 2.2.7

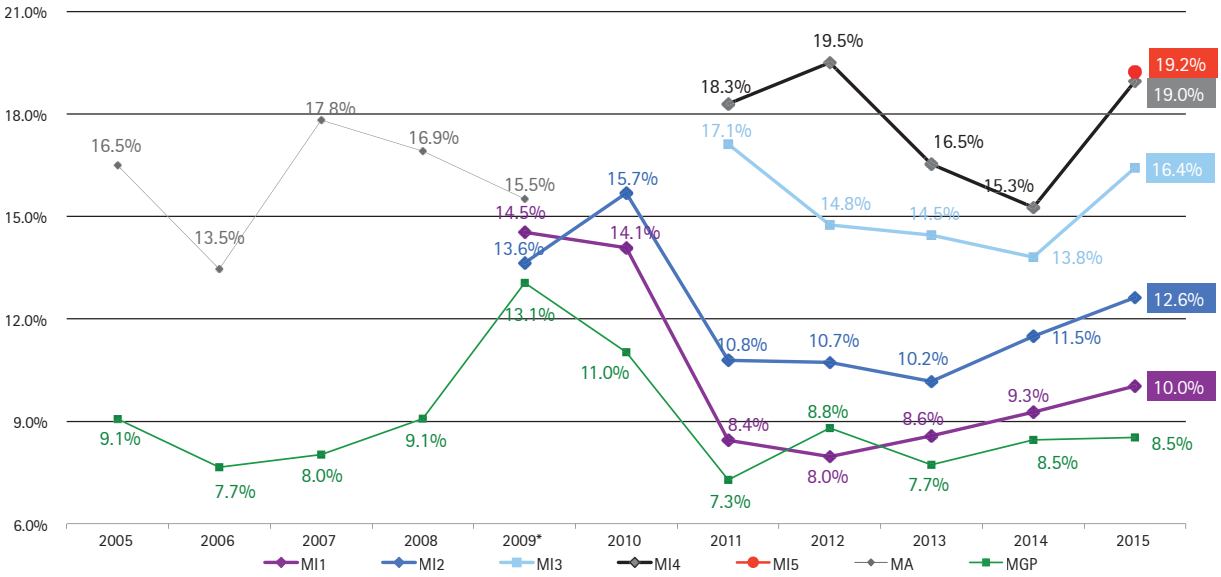
	Average purchase price €/MWh			Average hourly volumesMWh		
	2015	2014	*Change*	2015	2014	*Change*
MGP (1-24 h)	52.31	52.08	*+0.4%*	32,778	32,189	*+1.8%*
MI1 (1-24 h)	51.54 *(-1.5%)*	52.13	*-1.1%*	1,474	1,396	*+5.6%*
MI2 (1-24 h)	51.15 *(-2.2%)*	51.03	*+0.2%*	703	739	*-4.9%*
MI3	54.55		-	421		-
MI3 (13-24 h)	53.70	53.45		448	458	
MI3 (9-24 h)	54.63			418		
MI4	53.36		-	290		-
MI4 (17-24 h)	58.27	59.46		724	715	
MI4 (13-24 h)	52.94			253		
MI5 (17-24 h)	58.24		-	865		-

() In brackets, the values referred to the same month of the previous year

	Average purchase price €/MWh			Average hourly volumes MWh		
	2015		2014	2015		2014
Time slots	*Jan.*	*Feb.-Dec.*		*Jan.*	*Feb.-Dec.*	
9-24 h		54.63	-		418	-
13-24 h	53.70	52.94	53.45	448	253	458
17-24 h	58.27	58.24	59.46	724	865	715

Purchase price volatility: annual trend

Fig. 2.2.10



* Data related to the MI1 and MI2 refer to the last two months of the year

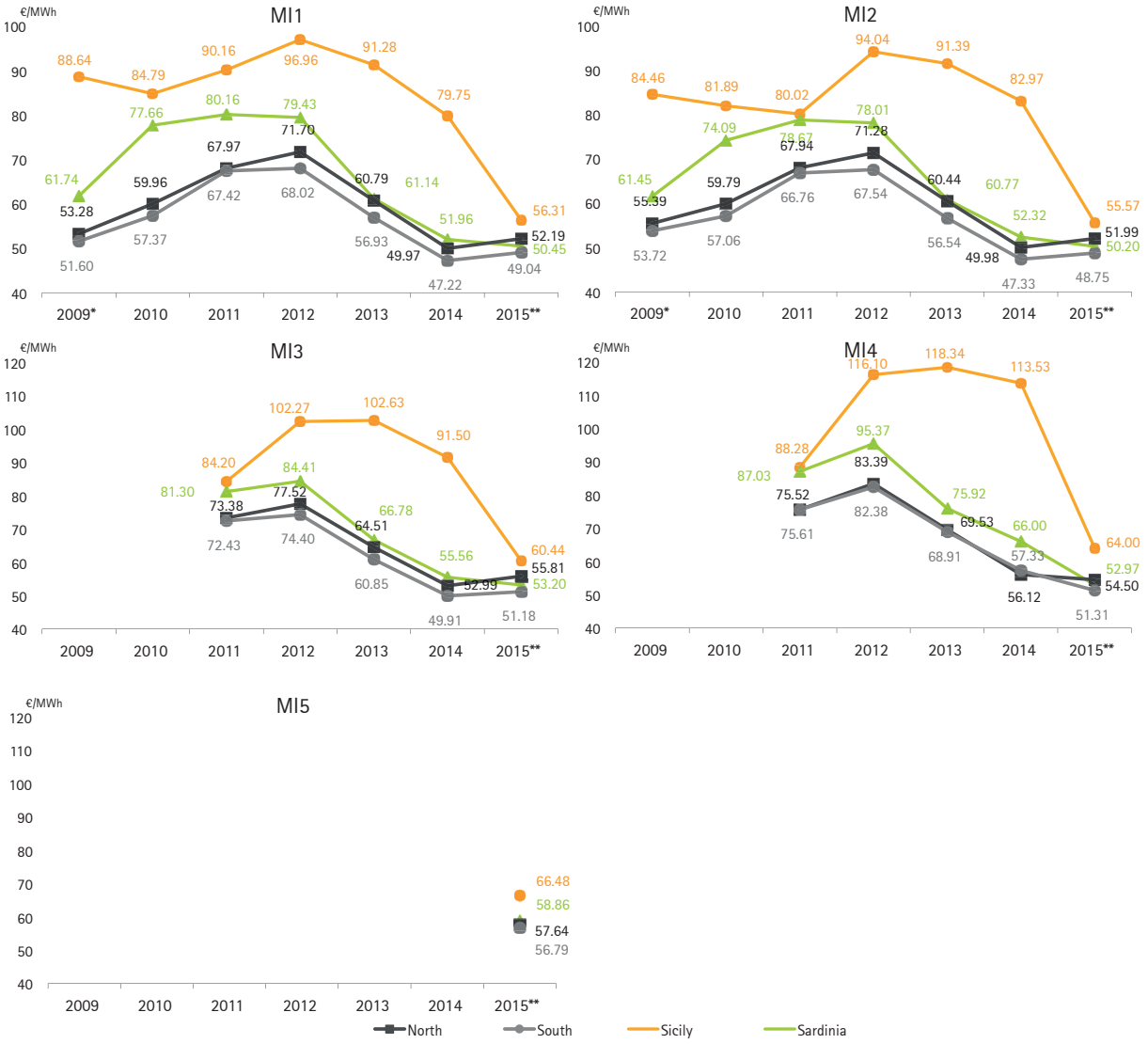
** Launch of the new MI5 market since February

Convergence of zonal prices in all sessions

At the zonal level, in 2015 the MI prices show a strong convergence in all sessions. This is due especially to Sicily, historically detached from the other areas, which dramatically reduces the spread coming down from over 30 €/MWh in 2014 to less than 10 €/MWh in the first three sessions, remaining slightly higher only in the MI4 (over 10 €/MWh), where, however, only the year before, had touched 60 €/MWh. Sardinia, aligns the peninsular areas even in the MI4, the unique session where, in previous years, lingered a significant price differential (+10 €/MWh in 2013; +6 €/MWh in 2014). The prices of the two island regions, with declines in the MI1 and MI2 around 3/4% in Sardinia and 30% in Sicily, therefore attest to all-time lows in all sessions, confirming and strengthening the trends highlighted in 2014. In the mainland, however, they are prices rising everywhere from the 2014 all-time lows with the exception only of the MI4, a peculiarity, the latter, not found in the comparison on consistent ranges (Fig. 2.2.11).

Zonal prices in the MI sessions

Fig. 2.2.11



* This figure refers to the last two months of the year

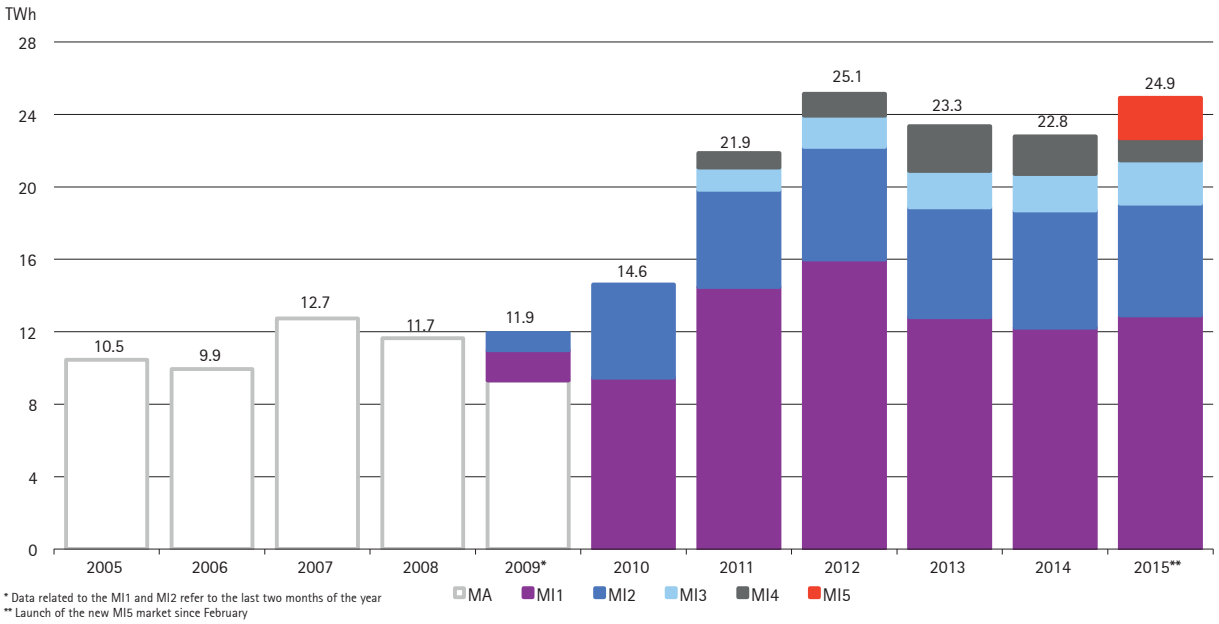
** Launch of the new MI5 market since February

The total volumes of electricity traded in the five sessions of the MI, after the declines recorded in the previous two years, started to increase, reaching 24.9 TWh (+9.3%), a lower level only than the historical peak recorded in 2012. The increase is also attributable to the introduction of a fifth session (in which the offers refer to the new range 9-24) reflecting the appreciation of the participants of the increased possibility to trade as well as to adjust the programming of plants. The MI1 reinforces the primacy of vastly more liquid session, with volumes returning to growth (12.9 TWh; +5.6%), while in the MI2 they reach the all-time of 2014 (6.2 TWh, -4.9%). In the remaining sessions, an analysis by ranges reveals the good performance of the new range 9-24 (418 MWh hourly average) that probably escapes in part to volumes of the 13-24 range, which thus marks a decline from the previous year (from 458 MWh hourly average in 2014 to 253 MW in February to December 2015). The range closest to the real-time delivery (17-24) exhibits, however, a growth of over 20% (from 715 MWh hourly average in 2014 to 865 MW in February to December 2015) (Tab. 2.2.7; Fig. 2.2.12).

Volumes traded return to grow...

Volumes traded

Fig. 2.2.12



* Data related to the MI1 and MI2 refer to the last two months of the year
** Launch of the new MI5 market since February

The national framework shows total purchases in the MI (23.9 TWh), slightly higher than sales (23.8 TWh), a circumstance which in the zonal level is found only the Central North. In other domestic areas, in fact, sales exceed, albeit slightly, purchases, as happens in foreign areas. Sales in the MI recorded double-digit increases in all regions except from Central North, Sicily and foreign areas, while purchases are also significantly grown anywhere but not in the two island areas.

Almost unchanged is the zonal distribution of volumes, with the North that focuses almost half of trade: 48% of purchases (up by 2 percentage points), 47% of sales (down 2 percentage points). Regarding other areas, on the side of purchases, increase the percentages of the central and southern regions (+1/+3 p.p.), while reduce in the islands (both -2 p.p.); on the sales side, however, it slightly reduces the percentage of Sicily (-2 p.p.) and is confirmed on the level of a year in the other zones (Tab. 2.2.8).

Zonal volumes

Tab. 2.2.8

	2010		2011		2012		2013		2014		2015			
TWh	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales		Purchases	
North	8.4	7.5	13.2	12.4	15.4	14.4	10.9	10.7	10.5	11.2	12.0	*(+13.6%)*	11.7	*(+4.1%)*
Center North	1.1	1.0	1.3	1.3	0.7	1.6	0.9	1.3	1.2	1.4	1.1	*(-7.8%)*	2.2	*(+59.3%)*
Center South	1.6	1.5	1.8	2.1	2.6	2.6	3.1	3.0	3.0	2.3	3.4	*(+14.6%)*	3.1	*(+32.9%)*
South	1.5	2.8	3.0	3.9	3.9	3.7	5.3	4.6	4.5	4.3	5.0	*(+11.9%)*	5.0	*(+15.9%)*
Sicily	1.4	1.0	1.8	1.0	1.5	1.3	1.6	1.4	1.9	1.8	1.6	*(-16.1%)*	1.4	*(-20.3%)*
Sardinia	0.6	0.7	0.5	0.6	0.3	0.5	0.4	0.9	0.5	1.0	0.8	*(+41.1%)*	0.6	*(-37.9%)*
Italy	**14.6**	**14.4**	**21.7**	**21.2**	**24.4**	**24.3**	**22.2**	**22.0**	**21.6**	**22.0**	**23.8**	*(+10.3%)*	**23.9**	*(+9.0%)*
Abroad	0.0	0.2	0.2	0.6	0.7	0.9	1.2	1.3	1.2	0.8	1.1	*(-8.8%)*	1.0	*(+16.2%)*
Total	**14.6**	**14.6**	**21.9**	**21.9**	**25.1**	**25.1**	**23.3**	**23.3**	**22.8**	**22.8**	**24.9**	*(+9.3%)*	**24.9**	*(+9.3%)*

() In brackets, the change compared to the previous year

The analysis for the trading by production plant type reveals the substantial increase in renewable plants, primarily by hydraulic and Wind source, which lead to all-time highs on both sides (sales 4.1 TWh, +8.6%; purchases 4.9 TWh; +74.5%). As for the thermal power plants, there is a modest increase in sales (12.6 TWh; +1.6%), which is affected, however, on the one hand, by the strong growth in coal plants (1.9 TWh; +61.6%) and, on the other hand, by a reduction of the gas (9.8 TWh; -1.8%) and other sources (1.0 TWh, -25.1%) plants. Still falling, however, are the purchases of thermal power plants (7.8 TWh; -17.0%) to the lowest values since 2010.

...and particularly from renewable energy plants

As in the past, the volumes traded in the MI by the injection point's holders (typically power plants) have represented the largest percentage of both sides, respectively equal to 84% of the total injection (sales) and 63% of the withdrawal (purchases). The volumes handled in the MI by the injection points holders (typically wholesalers and traders) on the other hand, are confirmed in the growth and record the all-time high on the sales side, with 3.4 TWh (+1.7%), equal to a percentage of 16% of the total injection. On the purchase side, however, the volumes, historically higher, flex by 3.8% from the record level of 2014 at 8.1 TWh, equivalent to 37% of the total withdrawal (Tab. 2.2.9).

Purchases and sales by source

Tab. 2.2.9

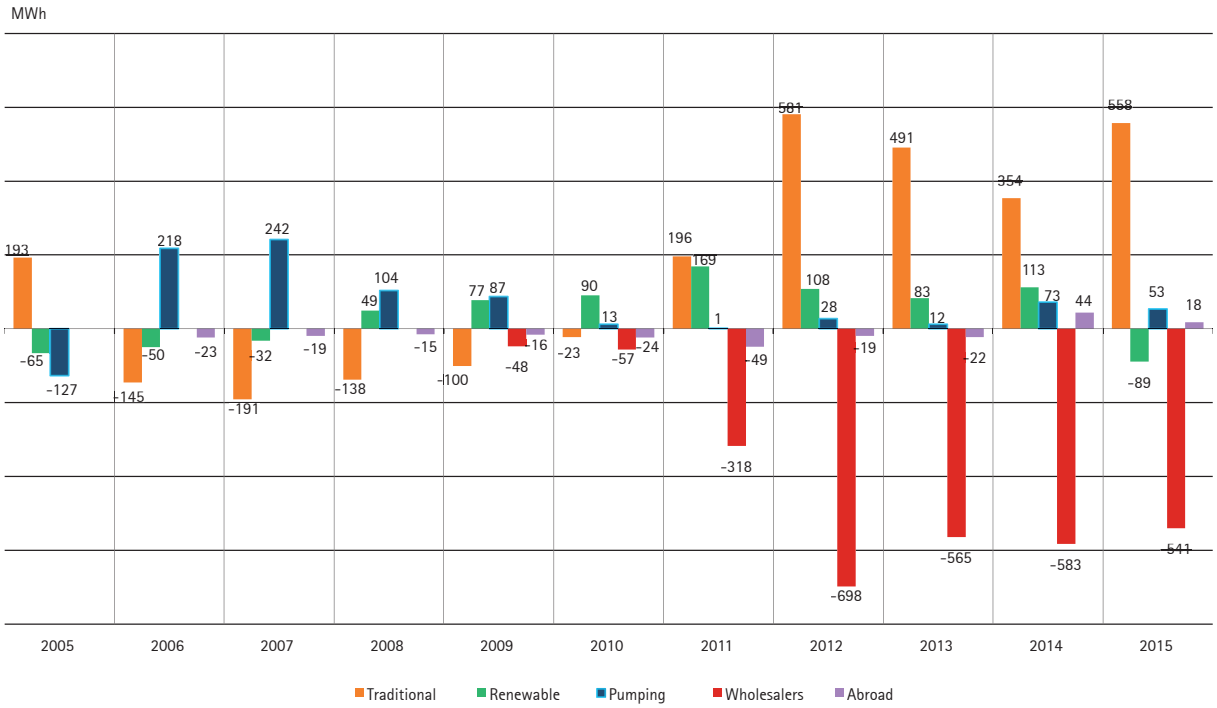
TWh	2010		2011		2012		2013		2014		2015			
	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales		Purchases	
Thermoelectric	8.5	8.7	15.5	13.8	18.7	13.6	15.2	10.9	12.4	9.3	12.6	*(+1.6%)*	7.8	*(-17.0%)*
Gas	6.3	4.4	12.8	8.1	15.9	9.1	12.2	7.0	10.0	5.2	9.8	*(-1.8%)*	5.0	*(-3.7%)*
Coal	1.0	1.5	1.3	2.1	1.2	1.7	1.5	1.4	1.1	1.6	1.9	*(+61.6%)*	0.6	*(-60.6%)*
Other thermal	1.2	2.9	1.5	3.6	1.6	2.8	1.5	2.6	1.3	2.5	1.0	*(-25.1%)*	2.1	*(-16.5%)*
Renewable sources	2.0	1.2	2.9	1.4	2.4	1.5	3.3	2.6	3.8	2.8	4.1	*(+8.6%)*	4.9	*(+74.5%)*
Geothermal	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*(+2,654.3%)*	0.0	*(+2,395.1%)*
Natural hydroelectric	2.0	1.2	2.9	1.4	2.4	1.4	2.7	2.0	2.9	2.1	3.2	*(+7.5%)*	3.5	*(+70.5%)*
Wind	-	-	0.0	0.0	0.0	0.1	0.6	0.6	0.8	0.7	0.9	*(+6.1%)*	1.2	*(+68.5%)*
Solar and other	-	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	*(+163.6%)*	0.1	*(+829.0%)*
Italy	**4.0**	**3.9**	**2.9**	**2.8**	**2.5**	**2.3**	**1.7**	**1.6**	**2.0**	**1.4**	**1.5**	*(-24.5%)*	**1.0**	*(-23.6%)*
Abroad	0.1	0.6	0.4	3.2	0.7	6.9	1.9	6.8	3.3	8.4	3.4	*(+1.7%)*	8.1	*(-3.8%)*
Total	**14.6**	**14.4**	**21.7**	**21.2**	**24.4**	**24.3**	**22.2**	**22.0**	**21.6**	**22.0**	**21.7**	*(+0.4%)*	**21.8**	*(-0.6%)*

() In brackets, the change compared to the previous year

The examination of the sales/purchases balance in the MI shows, in 2015, positive values for traditional thermal generation plants (+558 MWh hourly average and an increase over the previous biennium), for pumping (+53 MWh hourly average) and for foreign areas (+18 MWh hourly average). As expected, wholesalers record negative sales/purchases balances, amounting to -541 MWh, in line with the levels of previous years, while for the first time after seven years, the balance of renewable energy plants marks a negative value (-89 MWh hourly average), a phenomenon that could be linked to the strong growth of the wind generation sales that is most difficult to predict (Fig. 2.2.13).

Balance of the sales/purchases by type of plant. Hourly average

Fig. 2.2.13

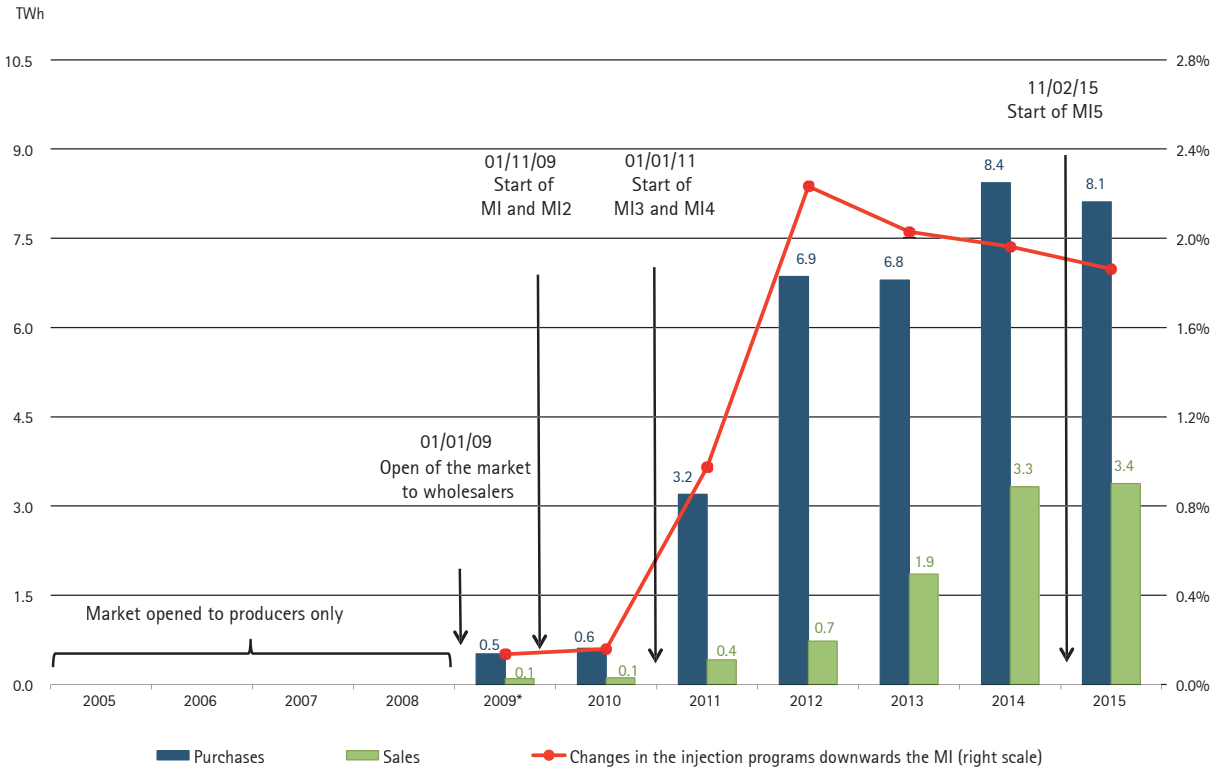


Slight decrease of the increase in production downstream of the MI

The activity of the participants in the five sessions of the MI resulted in an increase in injection programs in response to the MGP by 1.9%, a percentage consistent with the slightly downward trend observed in recent years after the peak of 2012 (Fig. 2.2.14).

Sales and purchases of wholesalers and changes in the injection programs downstream of the MI

Fig. 2.2.14

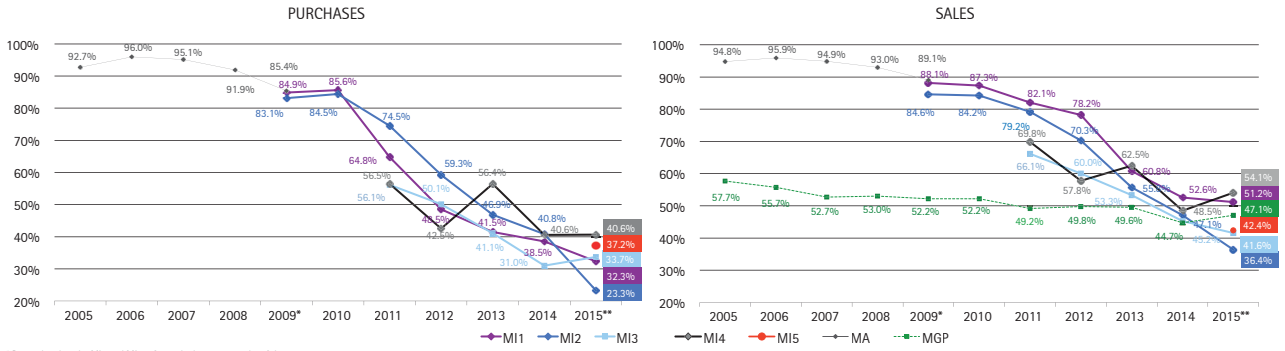


In 2015 it should be noted, finally, a general improvement of the competitiveness of the MI, as shown by the percentage of sales/purchases held by the top three participants (CR3) that, with few exceptions, records all-time lows in all markets. The percentage varies between 23.3% and 40.6% on the purchases side and between 36.4% and 54.1% on the sales side, where the lowest percentage and the highest one, on both sides, are respectively recorded by the MI2 and MI4. The CR3 on the sales side of the MGP, equal to 47.1%, is placed on an intermediate level than the CR3 of the MI sessions (Fig. 2.2.15).

General improvement in competitiveness

CR3

Fig. 2.2.15



* Data related to the MI1 and MI2 refer to the last two months of the year
** Launch of the new MI5 market since February

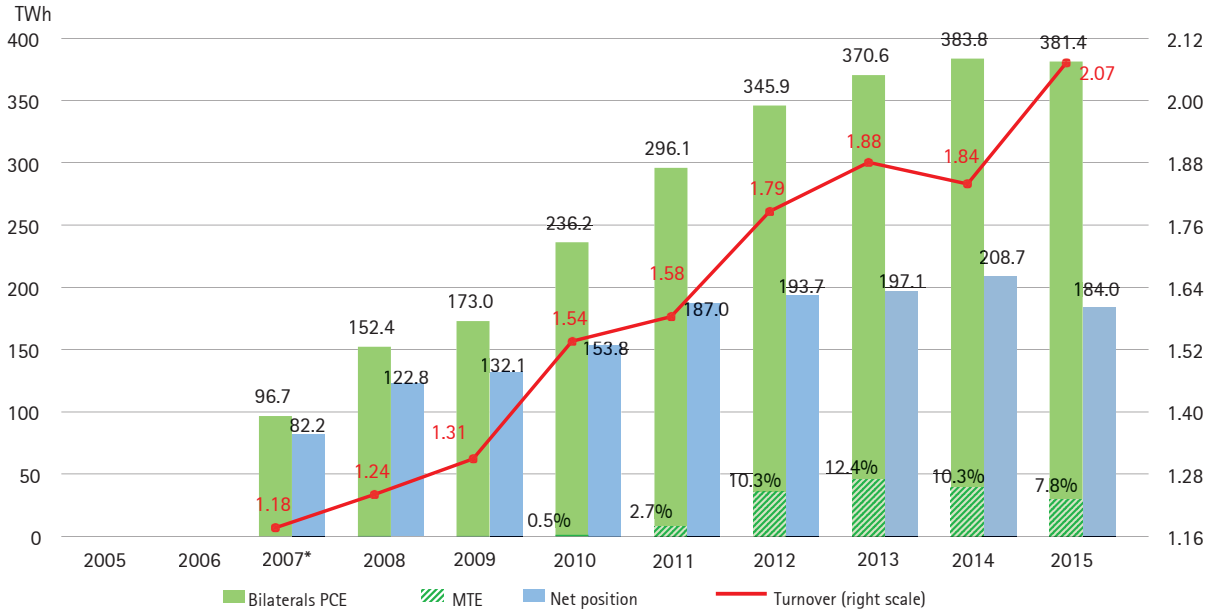
2.2.3 The OTC Registration Platform (PCE)

Declining volumes for the first time since the platform launch

The transactions recorded in the OTC Registration Platform (PCE) with delivery/withdrawal in the year 2015, for the first time since its launch, mark a slight drop over the previous year, reaching 381.4 TWh (-0.6%). The decline follows the gradual slowdown in the growth rate observed in previous years, decreased from 36.5% in 2010 to 3.5% in 2014, and reveals a stabilization of the expansive process that had characterized the platform since its launch in 2007 (Fig. 2.2.16).

Transactions recorded, net position and turnover

Fig. 2.2.16



* Data from May 2007

The decline was attributable to the sharp contraction of transactions under contracts concluded on the Forward Electricity Market (MTE), reaching 29.7 TWh (-24.9%)[15], with the percentage on total registrations dropped to 7.8% (it was 10.3% in 2013 and 12.4% in 2014). No transaction was recorded instead in the Electricity derivatives delivery platform (CDE), as well as in the previous four years. It continues, by contrast, the growth of transactions arising from contracts concluded by the participants outside the regulated market (bilateral contracts), rose to 351.7 TWh (+2.2%). Among them, the non-standard contracts, reaching 233.5 TWh, were, even in 2015, the most used by the participants (61.2% of the total), showing a growth rate of 2.0%; while among the standard contracts also up to 2.5%, the most liquid are still those with baseload profile (102.9 TWh; +9.8%) (Tab. 2.2.10).

15 The value refers to the volumes delivered in 2015.

Profile of recorded transactions and schedules

Tab. 2.2.10

TRANSACTIONS RECORDED				PROGRAMS						
Profile section	MWh	Change	Structure		Injection			Withdrawal		
					MWh	Change	Structure	MWh	Change	Structure
Baseload	102,863,015	*9.8%*	*27.0%*							
Off-Peak	8,253,517	*-12.5%*	*2.2%*	Required	106,490,027	*-9.4%*	*100.0%*	143,601,047	*-11.7%*	*100.0%*
Peak	7,060.663	*-42.0%*	*1.9%*	*of which with price indication*	36,734,937	*-15.6%*	*34.5%*	134	-	*0.0%*
Week-end	470	*-82.2%*	*0.0%*							
Total standard	118,177,665	*2.5%*	*31.0%*	Registered	92,537,111	-3.7%	86.9%	143,599,596	-11.7%	100.0%
Total non-standard	233,510,060	*2.0%*	*61.2%*	*of which with price indication*	22,830,376	*2.9%*	*21.4%*	134	-	*0.0%*
PCE Bilaterals	351,687,725	2.2%	92.2%							
MTE	29,681,391	-24.9%	7.8%	Rejected	13,952,916	*-35.0%*	*13.1%*	1,451	*241.1%*	*0.0%*
CDE	-	-	0.0%	*of which with price indication*	13,904,562	*-34.9%*	*13.1%*	-	-	*0.0%*
Total	381,369,116	-0.6%	100.0%	Schedules unbalancing	91,502,305	-18.7%		40,439,820	-12.3%	
Net position	184,039,416	-11.8%		Schedules balance	-	-		51,062,485	10.8%	

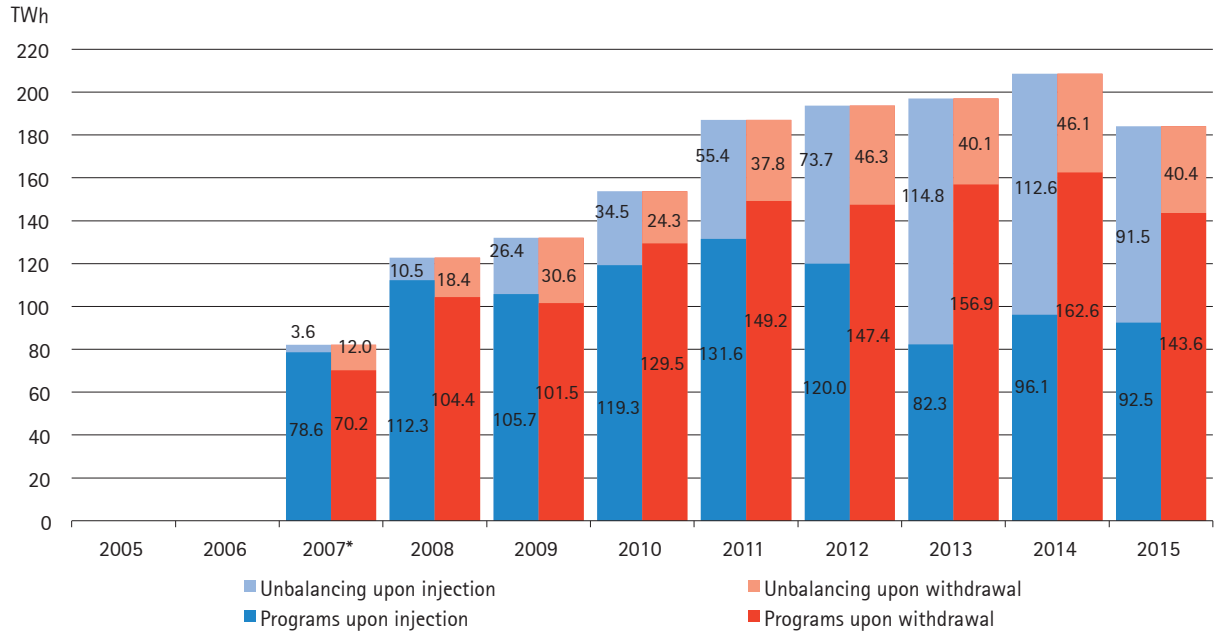
Also in 2015 the net position of the electricity accounts, determined from all the recorded transactions, marks the first annual decline since the launch of the platform, and with a decidedly more marked rate (-11.8%) compared to the recorded transactions (-0.6%), it leads to the lowest value of the last four years, amounting to 184.0 TWh.
Therefore, the turnover, i.e. the ratio of recorded transactions and net position, reaches an historical record of 2.07 (+0.23 than 2014), thus reporting a greater willingness of participant to the use of the platform solely for trading reasons (Fig. 2.2.16).

In 2015 they return to also shrink the physical programs recorded in the injection accounts that, after the rebound of 2014, decrease to 92.5 TWh (-3.7% on 2014). A decrease than the all-time high of 2014 characterizes also the programs recorded in the withdrawal accounts, which amount to 143.6 TWh (-11.7%), the lowest value since 2011.

Unbalancing scheduled reduce

Physical programs recorded and scheduled unbalancing

Fig. 2.2.17



* Data from May 2007

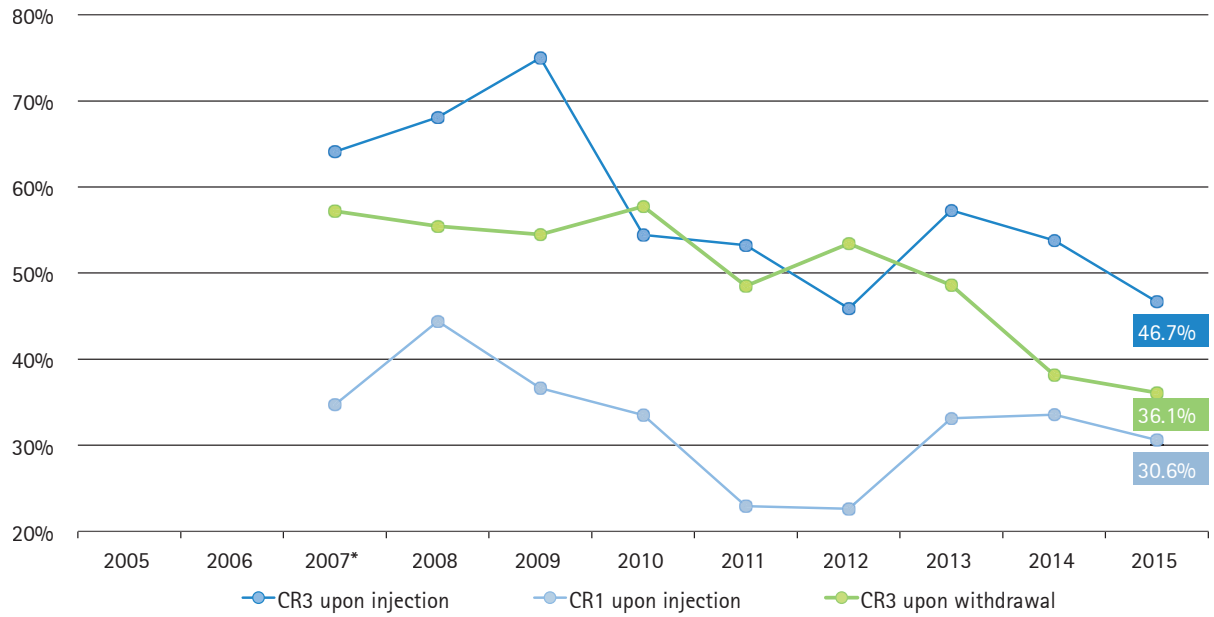
In this framework there is a reduction also in the overall program imbalance, which remains a flexibility instrument widely used by participants. In particular, on the injection side, the imbalance marks a significant decrease (-18.7%), reaching the lowest level in the last three years amounting to 91.5 TWh. It is confirmed, therefore, the trend, already emerged in 2014, of less need by participants to reschedule, in the short-term, bilateral commitments made in the medium-long term (Fig. 2.2.17).

There are also falling imbalances on the withdrawal side, which lead to 40.4 TWh (-12.3%), and the differential of the balance between injection and withdrawal programs, offset by sales of the regulated market.

Finally, positive signals are received by the indicators of the degree of concentration of imbalances in program on the injection side, where the CR3 flexes of 7.1 p.p., thus reaching 46.7%, with the percentage of the first participant that drops to 30.6% (-3.0 p.p.). Also on the withdrawal side, it's detected a reduction in the indicator CR3, which yields 2.1 p.p. and stands at all-time lows with 36.1% (Fig. 2.2.18).

Scheduled unbalancing: shares of participants

Fig. 2.2.18



* Data from May 2007

2.2.4 The Forward Electricity Market (MTE)

In 2015 it should be noted further expansion of the Italian futures market, with total volumes traded in regulated markets that rise to 406 TWh, more than doubled compared to 2014, thus confirming the progressive convergence of the Italian electricity market in Central European markets, characterized by procurement strategies of participants that are more oriented to the long term. Particularly important is the growth of the volumes traded over the counter[16] and recorded in the regulated markets for clearing purposes that rise from 96,2 TWh in 2014 to 313 TWh in 2015, including more than half of all forward electricity contracts (Tab. 2.2.11).

Context: continued Italian forward electricity market expansion

Yearly forward-traded volumes by trading year Tab. 2.2.11

TWh	2009	2010	2011	2012	2013	2014	2015	Δ % 2015/2014
Physical market (Terna)	320.3	330.5	334.6	328.2	318.5	309.0	315.2	2.0%
Spot market (IPEX)*	225.0	214.1	202.2	203.8	230.2	208.6	219.5	5.2%
Forward market **	15.9	21.7	45.1	68.8	70.6	163.1	406.3	149.2%
MTE Exchange	0.1	6.3	31.7	30.4	8.0	18.4	5.1	-72.4%
MTE OTC clearing	-	-	1.8	24.6	33.1	13.9	0.0	-100.0%
Other regulated markets	15.8	15.4	11.7	13.8	28.4	34.6	87.4	152.5%
Other regulated OTC clearing markets	-	-	-	-	1.1	96.2	313.9	226.3%

(*) It includes the volumes traded in the MGP, net of bilaterals and in the MI

(**) Volumes traded on the main European regulated markets, including recordings made for the purpose of clearing

In this context, in the Forward Electricity Market (MTE), managed by GME, it continues the current trend in place in the recent years characterized by a progressive and drastic reduction of the total volumes traded, which, in 2015, decrease to 5.1 TWh (32.3 TWh in 2014). In detail, it should be noted the disappearance of bilateral recordings for the purpose of clearing (53 in 2014), while the combinations of the MTE collapse to 252 (500 in 2014) together with the relevant contracts (1,004 against 4,550 in 2014) (Tab. 2.2.12, Fig. 2.2.19).

Liquidity of the MTE: stock volumes fall and OTC records disappear

With reference to the profile of the products, the decline mainly affected the baseload, historically the most used by participants, for which the 239 combinations made are more than halved over the previous year. Peakload products instead confirm at the almost modest levels of 2014 (13 combinations; +1). Similarly, if one considers the number of contracts concluded, the baseload products decrease to 899 MW (4,410 in 2014) and the peakload products to 105 MW (140 MW in 2014).

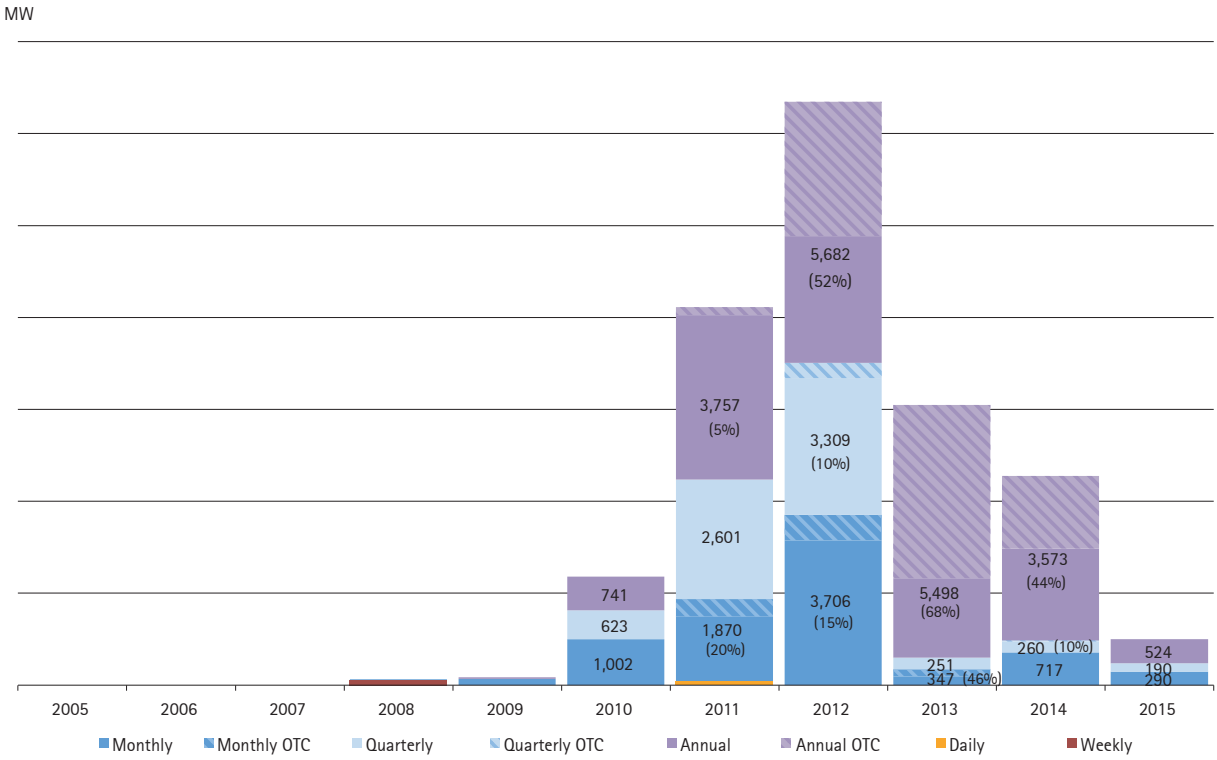
Poor exchanges still focus on baseload products

As regards the type of products for duration of delivery, it's confirmed the greater liquidity of the annual products, although their percentage on the total is reduced compared to a year ago (52% vs. 79%) in favor of products with shorter delivery with particular reference to the monthly items with delivery in M+1 (22% vs. 13%) and quarterly in Q+2 (12% vs. 1%) (Fig. 2.2.19, Tab. 2.2.12, Tab. 2.2.13).

16 The figure includes volumes contracted over the counter and then recorded on the clearing house in order to cancel the counterparty risk.

MTE: volumes traded by type

Fig. 2.2.19



MTE: volumes traded by trading year

Tab. 2.2.12

	2010	2011	2012	2013	2014	2015	Δ % 2015/2014
Contracts (MW)							
Total	**2,366**	**8,228**	**12,697**	**6,096**	**4,550**	**1,004**	**-78%**
Baseload	1,146	6,018	11,633	4,604	4,410	899	-80%
Peakload	1,220	2,210	1,064	1,492	140	105	-25%
Volumes (TWh)							
Total	**6.3**	**33.4**	**55.0**	**41.1**	**32.3**	**5.1**	**-84%**
Baseload	5.0	29.8	52.3	36.7	32.2	5.0	-84%
Peakload	1.3	3.7	2.7	4.4	0.1	0.1	22%
Number of combinations							
Total	**360**	**665**	**953**	**342**	**500**	**252**	**-50%**
Baseload	177	478	884	136	488	239	-51%
Peakload	183	187	69	206	12	13	8%
Share of OTC volumes							
Total	**0%**	**5%**	**45%**	**81%**	**43%**	**0%**	**-43 p.p.**
Baseload	0%	6%	45%	90%	43%	0%	-43 p.p.
Peakload	0%	1%	46%	0%	29%	0%	-29 p.p.

Tab. 2.2.13 – MTE: liquidity of trades by duration and delivery distance

Tab. 2.2.13

2014	Monthly				Quarterly					Yearly	
Advance	M + 3	M + 2	M + 1	Totale	Q + 4	Q + 3	Q + 2	Q + 1	Totale	Y + 1	Total
Contracts (MW)	0.0%	2.6%	13.1%	**15.8%**	0.0%	0.7%	0.5%	4.5%	**5.7%**	**78.5%**	**100.0%**
Volumes (TWh)	0.0%	0.3%	1.2%	**1.5%**	0.0%	0.2%	0.1%	1.3%	**1.6%**	**96.9%**	**100.0%**
Number of combinations	0.2%	3.8%	16.8%	**20.8%**	0.0%	1.2%	1.0%	5.2%	**7.4%**	**71.8%**	**100.0%**
Share of OTC contracts	0.0%	0.0%	0.0%	**0.0%**	-	0.0%	0.0%	4.7%	**3.7%**	**44.3%**	**43.0%**

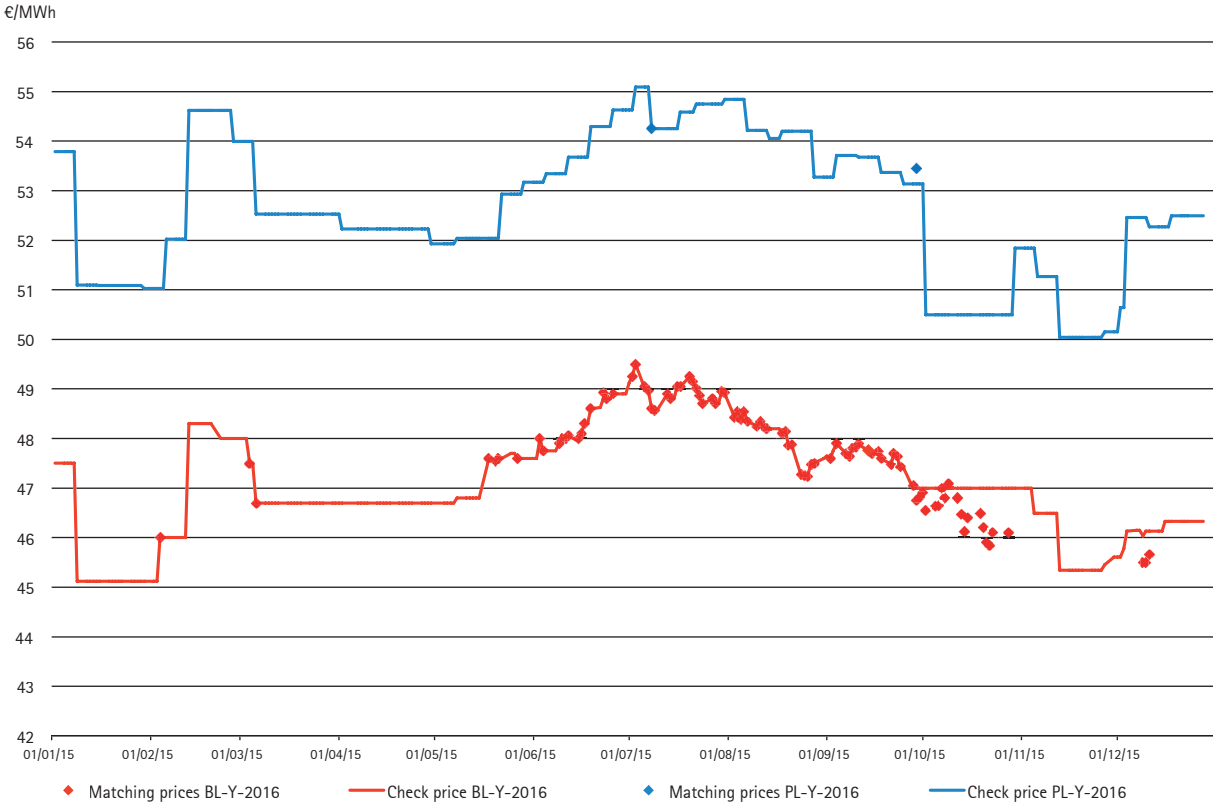
2015	Monthly				Quarterly					Yearly	
Advance	M + 3	M + 2	M + 1	Totale	Q + 4	Q + 3	Q + 2	Q + 1	Totale	Y + 1	Total
Contracts (MW)	1.5%	5.5%	21.9%	**28.9%**	0.5%	3.0%	11.5%	4.0%	**18.9%**	**52.2%**	**100.0%**
Volumes (TWh)	0.2%	0.7%	2.7%	**3.7%**	0.2%	1.3%	3.8%	1.6%	**6.9%**	**89.4%**	**100.0%**
Number of combinations	1.2%	4.4%	16.7%	**22.2%**	0.4%	2.4%	3.6%	3.2%	**9.5%**	**68.3%**	**100.0%**
Share of OTC contracts	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	**0.0%**	**0.0%**	**0.0%**

The trend during the year in the prices of annual products traded in the MTE reveals a progressive decline in the second half of the year, consistent with what was observed in the spot market and the prices quoted by the leading brokerage platforms and other regulated markets. The annual product with delivery 2016 ends its trading period with a price of 46.33 €/MWh for baseload and 52.49 €/MWh for peakload and an overall open position of 4.2 TWh (Fig. 2.2.20).

Forward prices are aligned on the regulated markets with further downward expectations

MTE: check and matching prices of the annual product in 2016

Fig. 2.2.20



2.3 GAS MARKETS

After four years of continued decline in domestic natural gas demand, mainly due to lower thermal power consumption, 2015 is characterized by a trend reversal with alignment to the values recorded in 2013. In particular, the growth in demand has been supported by the thermal and electrical and domestic consumption, while the industrial sector continued to record a negative change. The course followed by the exploitation of commodity in the course of the year, however, show a trend in the gradual and steady decline, reflecting the strong bearish trend in oil, as recorded both at the national hub (with an average price of the trades in the PSV down by about 5%), and among the main European hubs, where the average variation was around -6%.
In this context, it is confirmed an increase in the volumes traded in the balancing platform of the PB-GAS, mainly driven by increased extra-balancing movements recorded in sector G+1, in conjunction with the increased use by the Head of the balance to the sector G-1, with the consequent indication of a condition of shortage of storage resource more frequently than the past year. The growth of the PB-GAS sectors has also been accompanied by greater use by the participants of the sessions for the intra-day delivery of the MI-GAS, as announced by the first recordings of trades observed at the end of 2014.

2.3.1 Gas Balancing Platform (PB-GAS) - G+1 sector

In calendar year 2015, the segment G+1 of the PB-GAS shows an increase of about 6% of the total volumes traded (namely 41 TWh), returning in this way on a value in line with that recorded in 2013, compared to the slight fall of 2014 with 39 TWh. This increase is recorded based on a need of volumes for the purpose of balancing by the TSO (i.e. SCS[17]) substantially constant compared to 2014 (about 28 TWh), thus highlighting the extra-balancing handling by the remaining participants as the main driver of the increase in the volumes traded in the platform. This share in 2015 accounts for about a third of the total movement (13 TWh, corresponding to 31% of the market share compared to 27% in 2014), an even more significant change when compared with the figure reported in 2013, where the exogenous movements compared to operations of the TSO just represented 15%. Similarly to what already observed for 2014, the presence of the trade exceeding the balancing was recorded in over 90% of the sessions (94% in 2015 compared to 92% in 2014), evidence in support of a growing market liquidity.

Slightly increasing volumes, with a growing extra-balancing percentage

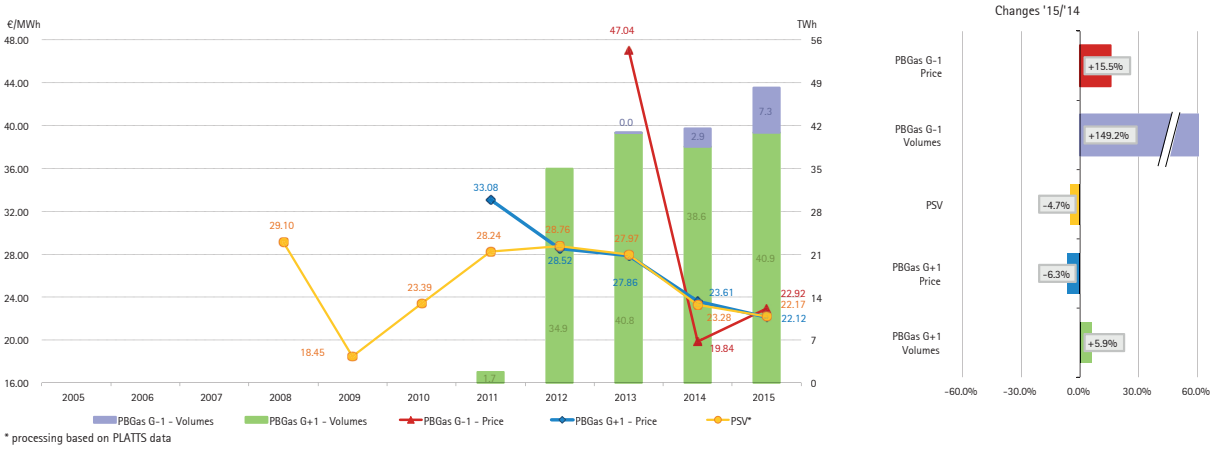
The operations analysis in the sector by the balancing Head (RdB) shows, for the same total volumes traded to balance the system than last year, a higher asymmetry between the volumes procured in order to balance a short system (16 TWh than 13 TWh in 2014, corresponding to 57% of the total submitted SCS) and those offered to rebalance a long system (12 TWh than 15 TWh in 2014), with a differential between the two movements due to greater frequency of the presence of Snam Rete Gas (SRG) on the purchase side in the sector (56% of the total sessions, +4 p.p.), but also in terms of average offer submitted by the TSO on each side (about 80 GWh for purchase compared to 74 GWh on the sales side). Just on the purchase side, it was submitted the highest absolute value of SCS, amounting to 402 GWh in April, although, on a monthly basis, the highest number of offers on this side is registered in the months of January, July and October. It's confirmed a sustained volatility of the SCS value required by SRG to balance the system, with

17 Overall unbalance of the system (SCS).

120 side inversions between one session and the next one (corresponding to 33% of the total sessions, +2 p.p.), among which, however, the number of the relevant inversions[18] is constant compared to 2014 (8 sessions, 2% of the total ones). In particular, it is highlighted a greater variability of the TSO operations in the segment, both in terms of number of side inversions and in terms of incidence of significant inversions, during the months of February and March, therefore close to the passage between the supplying period and that of injection (the so-called "shoulder" period). In this phase, they were observed side reversals in 48% of the sessions, 17% of which involved a volumes differential offered more than 100 GWh (8% of total sessions). Finally, it's confirmed, compared to 2014, what was observed on the forecasting difficulty of the system imbalance, quantified by analyzing the sign discrepancies between the value of early SCS from the publications of this estimate in the course of the gas day[19] and the actual value offered by the TSO in the sector. In particular, in 23% of gas days anticipation of 15:00 of the SCS was inversely with respect to what is actually offered in the sector by the SRG, the value only improved marginally with the approach of the end of the gas day (with reference to 17:00 anticipations, side inversion features the 21% of the sessions, +3 percentage points compared to 2014).

Trend of the average price and volumes in the PB-GAS

Fig. 2.3.1



18 They are referred to as "relevant" the side inversions from one session to the next one characterized by an SCS differential more than 100 GWh.

19 Pursuant to Article 6 of AEEGSI's Resolution 137/02, the largest company of public transportation updates at appropriate intervals on its website (i.e. 15:00, 17:00, and 20:00) the estimation of the expected SCS for the gas day term.

Lack of the typical price seasonality

The average annual price of the segment, amounting to 22,12 €/MWh down by 6% compared to 2014, is substantially aligned with the dynamic drop recorded by all the major European hubs. It's particularly clear the alignment with the listing of the commodity at the Italian hub, with the average annual value of PSV amounting to 22.17 €/MWh (-5% compared to 2014), and the subsequent determination of the minimum differential between two average prices since the launch of the sector (0.02 €/MWh compared to 0.37 €/MWh last year). The homogeneity of the discount recorded on the main European hubs involves a substantial stability in the differentials between the Italian exploitation of gas and the reports in the remaining European platforms. To confirm this, it should be noted that, considering the average value at the Dutch TTF hub, this proves too competitive than the PSV of 2.34 €/MWh, unchanged from a differential in 2014 amounting to 2.32 €/MWh.

The peculiarity of the year 2015 is highlighted by the analysis on a monthly basis of the performance of the price of the segment, which highlights the absence of the typical curve linked to the seasonality of the gas commodity, characterized by smaller valuations during the summer and an appreciation in the winter months. The year 2015 is instead characterized by a substantial trend, steady decline in all months of the year, except for a slight appreciation of the average value of the price in the summer months of the third quarter (i.e. July to September), where, however, the change was less than 1%. The year ends then with an average value in December amounting to 18.06 €/MWh, the minimum value of the year, with a gap of -6.75 €/MWh compared to the month of February[20]. This result is in contrast with what was recorded in 2014, where the difference between the same two months was equal to +0.33 €/MWh. The absence of a trend related to the seasonality of the monthly price, instead of a steady decline that leads to the formation of the minimum annual rate in December, is also confirmed by the price at the PSV (annual minimum value in December amounting to 18.80 €/MWh) and TTF (annual minimum value in December amounting to 15.96 €/MWh). The inclusion in the analysis of the first quarter of 2016 also confirms what was observed for 2015, with a marginal price of the segment to its all-time low in February (13.67 €/MWh) and an average quarterly value of 14.28 €/MWh compared with a value in the same quarter of 2015 amounting to 23.63 €/MWh (-40%) and in 2014 to 25.47 €/MWh (-44%).

Tab. 2.3.1

Scale of extra-balance trade and impact on total sittings

	Snam purchases		Snam sales		Total	
Year	Trades between participants	Sittings %	Trades between participants	Sittings %	Trades between participants	Sittings %
2012	1,046,293	47.1%	762,452	52.9%	1,808,745	51.6%
2013	2,448,583	46.8%	3,498,887	53.2%	5,947,470	80.8%
2014	5,913,022	49.0%	4,469,909	51.0%	10,382,930	92.3%
2015	7,079,914	56.0%	5,616,824	44.0%	12,696,738	94,0%

Tab. 2.3.2

Average level of the PB-GAS prices compared to the PSV and TTF (€/MWh)

	Snam purchases			Snam sales			Total			
Year	PB-Gas G+1	PSV	TTF	PB-Gas G+1	PSV	TTF	PB-Gas G+1	PB-Gas* G+1	PSV	TTF
2012	29.29	29.18	25.34	28.14	28.48	24.74	28.52	28.61	28.76	24.98
2013	28.28	28.23	27.55	27.52	27.67	26.40	27.86	27.93	27.97	27.03
2014	24.03	23.79	21.10	23.21	22.69	20.71	23.61	23.65	23.28	20.92
2015	22.25	22.14	19.76	21.94	22.23	19.93	22.12	22.13	22.17	19.83

* average PB-GAS G+1 price calculated based on the days on which prices at the PSV are available

20 These months are referenced as being due in 2014 to the months of maximum share price of the segment price.

Average volatility of the PB-GAS prices compared to the PSV and TTF

Tab. 2.3.3

	Snam purchases			Snam sales			Total			
Year	PB-Gas G+1	PSV	TTF	PB-Gas G+1	PSV	TTF	PB-Gas G+1	PSV	TTF	TTF
2012	1.33%	3.79%	3.10%	2.29%	1.55%	2.60%	2.19%	2.46%	2.58%	2.52%
2013	1.41%	1.82%	2.21%	2.25%	2.61%	2.91%	1.39%	1.49%	1.25%	1.96%
2014	1.80%	2.61%	3.07%	2.81%	2.90%	3.50%	1.52%	1.79%	2.08%	2.73%
2015	1.36%	1.99%	1.60%	1.80%	2.65%	1.90%	1.10%	1.32%	2.42%	1.67%

* Volatility calculated based on the days on which prices at the PSV are available

The growing importance of extra-balance movements in the sector results in a further weakening compared to 2014 of the correlation between marginal price and extent of SCS[21], except in specific and isolated cases of significant price variations[22], concentrated in the months of February, March and December, where the presence of a particularly relevant SCS has favored the formation of a balance price that can reflect a particular contingency system. However, it is worth noting how these price change in 2015 have never exceeded 5% deviation from the value of the previous day. For the same reasons mentioned above, Tab. 2.3.2 shows how it is also reduced the gap between the average marginal price of the segment formed in conjunction of the two offer sides of the balance Head (in 2015 amounting to 0.31 €/MWh compared to 0.82 €/MWh in 2014).
The presence of a constant downward trend throughout the year is further confirmed by the volatility (Tab. 2.3.3), which reaches the minimum valuation from 2012 (1.10% compared to 1.80% in 2014). The trend followed by the marginal price of the segment during the year is always more closely related to that of the TTF (93% compared to 87% in 2014) with which the average differential is equal to +2.30 €/MWh, which therefore strengthens the role of driver the Italian price, compared to that of the PSV (90% compared to 97%) even with the average smaller gap (0.55 €/MWh). However, comparing the gas days characterized by a significant gap between the marginal price and the PSV price[23], it should be noted that for most of these days it has been activated concomitantly also the G-1 segment of the market (58% of cases), and as in particular the scarcity of resources has mainly resulted in changes in the PSV price rather than the marginal price of the G+1 segment, as discussed further in Section 2.3.2.

Concentration of the sector and key participants

In 2015, 75 participants were active, two less than in 2014 (-3%), with a level of concentration in the market basically unchanged (HHI index[24] amounting to 2,997 compared to 3,011 in 2014). The increase of the volumes traded and, in particular, of the extra-balancing ones, therefore, stresses as the least number of participants has moved individually larger volumes. Tab. 2.3.4 shows how the balancing Head appears increasingly the dominant participant[25] in the sector, with a market share of 69%, but decreased by 4 p.p. compared to 2014, and a session role that is basically the same even taking into account separately the sessions where it works while purchasing and those where it works on the other side. This aspect is different than in 2014, where the share of the SRG differed by about 9 p.p. bin system cases longer than operations to balance a short system. Looking at the remaining participants, it is evident that EDISON, while continuing

21 This correlation, equal to 14% in 2014, amounts in effect to 12%.

22 Absolute price changes more than 3% compared to the previous day price corresponding to approximately 4% (-3 p.p. compared to 2014) of the total sessions.

23 This gap is greater than 5% in the PSV compared with an average gap of 2.5% (compared to 3.0% in 2014). This series includes about 15% of the gas days, where there are prices, concentrated in the months of February, August and December.

24 Herfindahl - Hirschman Index determined on the basis of the shares of participants active on the opposite side of the market to the one on which SGR acts, on the total traded volumes.

25 Market share is over 50%.

to be the second participant in the sector with an average market share of 18%, loses about 4 p.p. compared to 2014, also losing the role of main counterparty of SRG in the short system cases, exceeded by about 4 p.p. by SHELL. Just that participant is characterized by the increase by a factor of 2 of its market share compared to 2014 (16% compared to 7%) and the tripling of its share considering only the extra-balancing volume (Tab. 2.3.5). Finally, Tab. 2.3.5 shows how the progressive decline observed from 2013 of impact of ENI among extra-balancing participant in 2015 has determined the output among the top 10 participants.

Top 10 participants active on the PB-GAS G+1, market shares by side and frequency of acceptance

Tab. 2.3.4

	Long system		Short system		Total			Acceptance share		
Market Participants	Purchases	Sales	Purchases	Sales	Purchases	Sales	Total	Purchases	Sales	Total
SNAM RETE GAS	-	67.8%	69.8%	-	40.0%	28.9%	68.9%	100.0%	100.0%	100.0%
EDISON S.P.A.	16.3%	3.7%	5.3%	10.8%	10.0%	7.8%	17.8%	16.6%	23.2%	19.0%
SHELL ENERGY EUROPE LIMITED	9.1%	6.3%	2.8%	13.6%	5.5%	10.5%	16.0%	2.2%	4.0%	3.1%
ENOI S.P.A.	10.2%	0.8%	2.7%	5.8%	5.9%	3.7%	9.6%	9.0%	5.0%	6.9%
ESTRA LOGISTICA SRL	9.6%	0.8%	2.1%	3.9%	5.3%	2.5%	7.8%	12.2%	15.8%	13.2%
ENET ENERGY SA	3.3%	1.1%	1.6%	3.1%	2.3%	2.3%	4.6%	12.0%	11.2%	11.6%
KOCH SUPPLY & TRADING SARL	6.5%	2.6%	1.5%	6.0%	3.6%	4.5%	8.2%	12.9%	18.5%	15.5%
ELECTRADE S.p.A	2.6%	1.3%	1.2%	2.1%	1.8%	1.8%	3.6%	21.6%	23.5%	22.5%
GRUPPO OPENLOGS S.R.L.	3.4%	0.5%	1.0%	1.4%	2.1%	1.0%	3.1%	17.3%	14.2%	16.1%
ENOVA S.R.L.	3.0%	0.7%	1.0%	2.5%	1.9%	1.7%	3.6%	11.3%	7.8%	9.3%
Others	35.9%	14.3%	11.0%	50.8%	21.6%	35.3%	56.9%	-	-	-
Volumes (MWh)	**23,431,476**		**17,431,804**		**40,863,280**					
%	**57.3%**		**42.7%**		**100.0%**					

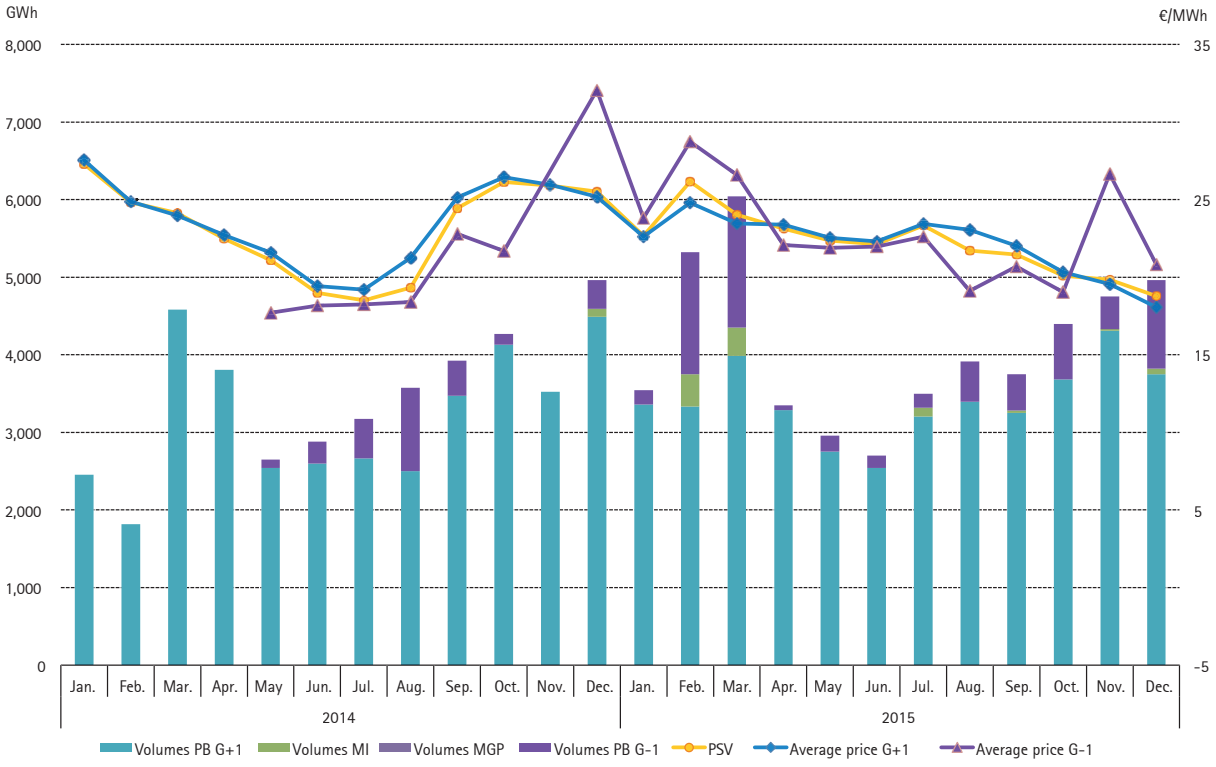
Market shares of participants exceeding balancing in the G+1 segment

Tab. 2.3.5

Market Participants	Purchases	Sales	Total
EDISON S.P.A.	17.6%	11.6%	14.9%
SHELL ENERGY EUROPE LIMITED	9.2%	19.7%	13.8%
KOCH SUPPLY & TRADING SARL	4.9%	8.1%	6.3%
ENOI S.P.A.	9.1%	2.4%	6.1%
ESTRA LOGISTICA SRL	6.8%	2.4%	4.9%
ENET ENERGY SA	5.4%	3.5%	4.5%
ELECTRADE S.p.A	4.1%	4.1%	4.1%
GDF SUEZ ENERGIA ITALIA S.p.A.	1.5%	6.2%	3.6%
DUFENERGY TRADING SA	1.5%	5.6%	3.3%
ENOVA S.R.L.	3.3%	2.3%	2.9%
Others	36.6%	34.1%	35.5%

Average PB-GAS G+1 price compared with the PSV fees and the PB-GAS and M-GAS volumes

Fig. 2.3.2



2.3.2 Gas Balancing Platform (PB-GAS) - G-1 sector

2015 was characterized by an increased use by SRG of the sector for the *ex-ante* G-1 balancing, activated for a number of double occurrences compared to 2014 (88 times compared to 45 in 2014) for a total volume traded amounting to 7.3 TWh (+4.3 TWh compared with the previous year). Unlike 2014, the frequency of activation of the sector G-1 by the balancing head has been distinguished by a greater homogeneity compared to 2014, with 42 sessions where SRG has operated on the purchase side during the injection period, and 46 on the sales side in the supplying summer period[26], spread in all months of the year, actually handling more purchase volumes (about 5.0 TWh, representing 68% of segment volumes) and sale volumes (2.3 TWh, equal to the remaining 32%). The increased need to balance a particularly short system during the winter months was also particularly highlighted by the failure to meet the demand of SRG in 6 sessions (about 7% of those activated), to be compared to the only similar situation occurred in August (injection period). On such occasions, in accordance with current regulation, the segment has returned a particular resource scarcity through the formation of a regulated price, as will be described later.

Growth of the sector with homogeneous activations in the year

The increased use by the balancing Head of the *ex-ante* segment was also accompanied by better forecasting capacity of the system imbalance in G-1 (the so-called SPS[27]). This amount, which corresponds to the offer of SRG in the segment, has been confirmed in terms of type of imbalance (i.e. prior to a long or short system) in 55% of activated sessions, as shown in the graph in Fig. 2.3.3 as the SRG offer side cases concordant in G-1 and G+1 segments in reference to the same gas day. This value is higher compared to 2014 (+6 p.p.), and demonstrates that in most cases the operation of SRG in the segment G-1 has resulted in a balancing of the system in the correct direction, albeit through handling based on a conservative estimate. The analysis of the cases is particularly significant where the balancing Head has operated in G+1 offering greater volumes and on the opposite side with respect to what moved in G-1, then completely compensating its *ex-ante* operation. Such cases affect at a lesser extent the set of activated sessions of G-1 (15% compared to 18% in 2014), and have lower volumes (for cases of total compensation, the average offer in G+1 amounts to 126 GWh compared to 162 GWh for the same size in 2014). The remaining 29% of the sessions (-4 p.p. compared to 2014) is due to cases of adjustment in G+1 of what moved *ex-ante* in G-1, with offers by the balancing Head on opposite sides but lower in G+1.

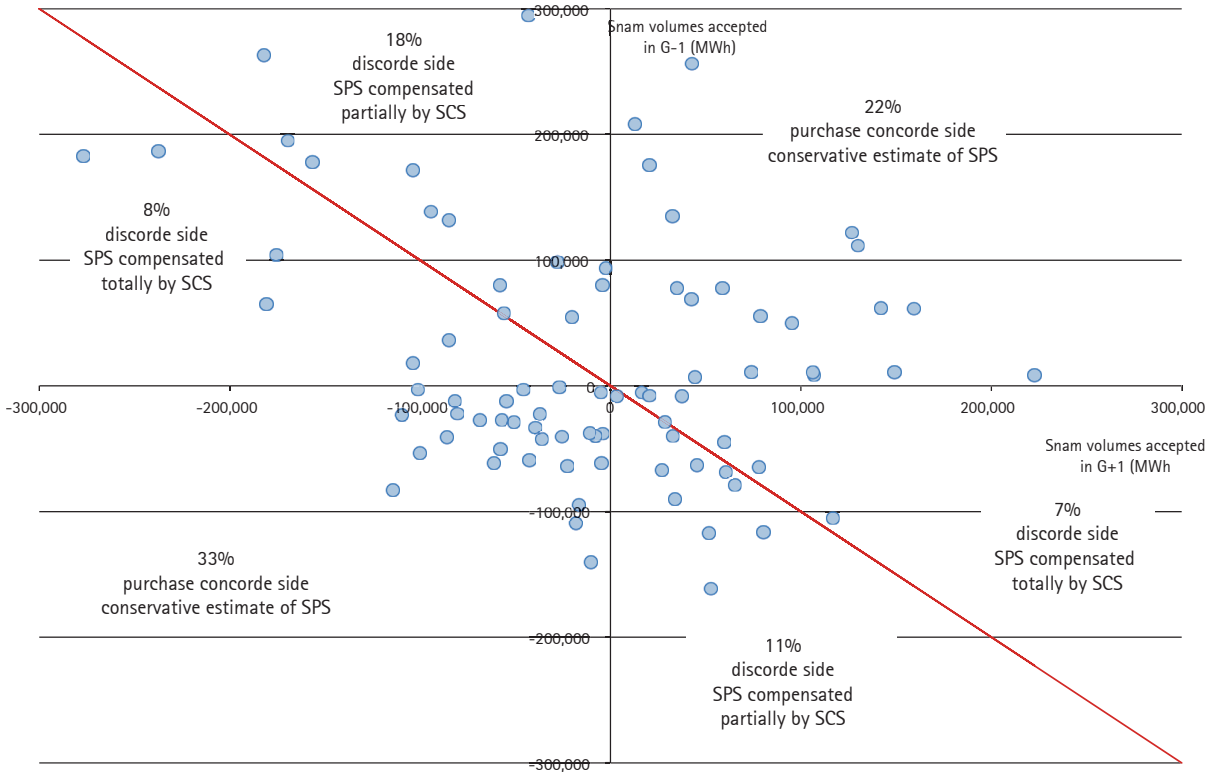
Improved estimation of the SPS than the actual system imbalance

26 According to the Grid Code, SRG operates only for sales during the injection period (April to October) and only for purchases during the withdrawal period (November to March), thus enabling the segment with its own supply when the projected imbalance system (the so-called SPS) is negative (long system, SRG for sale) or positive (short, SRG for purchase), respectively. Pursuant to Resolution ARG/gas 45/11, the SPS value is substantially determined by the differential between the injection and withdrawal programs communicated by users on the gas day G-1 compared to delivery/injection capacity of the storage systems provided that there is a period of forecast error.

27 Forecasting System Unbalance - SPS.

Comparative analysis between the interventions of the SRG in the G-1 and G+1 segments

Fig. 2.3.3



Shifting the analysis on the types of resources, among the 6 available in the segment[28], which contributed to a greater extent to meet the needs of balance expressed by SRG in the activated sessions of G-1, it's confirmed the predominant role of the offers submitted on *Stogit* resources (57% of the total offered volumes, in line with the 58% in 2014), a predictable result given the accessibility of the resource for almost all of the participants active in the segment (49 participants out of 50 compared to 44 in 2014). In reference to the accessibility of the remaining resources, it is worth noting the growing number of participants active on Import resources (19 participants, +6 compared to 2014) and *Edison stoccaggio* (5 participants compared to 2 in 2014). The zonal distribution of the accepted session volumes substantially reflects that observed on the offers side, with a predominant use of Stogit resources both during injection (about 1.1 TWh, equivalent to 46% of the volume traded at this stage) and in the supply phase (1.9 TWh corresponding to 38% of the volume traded at this stage). However it's highlighted the widespread presence in the different sessions activated, and whatever the amount of the offer submitted by the balancing Head, of accepted volumes also on Import resources (21% of share both in the injection phase and in that of supply, for a total of 1.5 TWh) and LNG, whose contribution is particularly significant in the process of injection (27% share, amounting to 633 GWh compared to 12% in the supply phase relative to 580 GWh). The use of *Linepack* and *Reintegro Stogit* resources, underlying the zone G+1 and G+N is instead concentrated in just the first quarter of 2015, while in the last two months of the year there has been a small contribution, but more frequently than the *Edison stoccaggio* resource.

Increased use of resources different from Stogit

28 In segment G-1, it's possible to submit offers/bids with underlying gas related to resources from Stogit storage sites, from Edison storage sites, Import gas, gas from LNG sites and afferent linepack gas resources and to reintegrate storage sites.

The peculiarity of the design of the segment G-1, aimed at being enabled only upon the occurrence of specific conditions such as not enough to estimate only the available storage resources in sector G+1 for the proper balancing of the system, promotes reduced occurrence of the sessions. For this reason, despite the presence of a larger number of activations in the year 2015, it is considered more meaningful a separate analysis of the segment prices between the period of delivery and the injection period, rather than a comprehensive analysis on an annual basis.

Adjusted price incidence in the segment price

During the delivery, the average price of the segment amounted to 25.54 €/MWh, resulting mainly higher than the price for the same gas day in the segment G+1, whose average price during the same period amounted to 22.14 €/MWh. The difference between the two prices is on average equal to 3.40 €/MWh, with precise values that, however, recorded peaks between 8 €/MWh and 12 €/MWh concentrated in the months of February, March and November. The maximum gaps between the marginal price of the two segments were recorded mainly (86% of cases) at the formation of the segment G-1 of a regulated price[29], for construction with a particularly off-market valuation (specifically, between 31 €/MWh and 37 €/MWh compared with an average price in the segment G+1 equal to 22.20 €/MWh). Excluding these special days, it emerges that in the period of delivery the price G-1 has been on average higher than the G+1 of about 1.84 €/MWh, with a decrease of 10% compared to the differential in 2014, and with a value average equal to 22.82 €/MWh.

During the injection, the average price of the *ex-ante* segment was 20.52 €/MWh, a discount of about 1.49 €/MWh compared to the price in the same day of the sector G+1, with a single peak of nearly 23 €/MWh in correspondence of the sole day with a price adjusted in G-1 (in August). Excluding this singularity, the average differential between the price of the two sectors amounted to 1.02 €/MWh, about half of that recorded in 2014.

In the injection phase, it is confirmed, compared to what was observed in 2014, as the offers submitted by participants have mainly used as a reference price for offers on *Stogit* resources, the PSV listing for the same gas day, with an average absolute gap between the two valuations of 0.87 €/MWh. Offers submitted in the same period on *Import* resources presented valuations more in line to the TTF, with an average absolute difference between the two prices of 0.70 €/MWh compared with a differential with PSV prices on average about twice (1.44 €/MWh).

The PSV is the main reference for Stogit resources

In the supply phase, if, on the one hand, offers the sale of *Stogit* resources are aligned to the PSV prices for the same gas day, with an average absolute differential consistent with what was observed in the injection phase (about 0.89 €/MWh), there was basically a difference between the offers submitted on the *Import* resource and TTF price, which is on average lower than the highest accepted prices offered on the resource of about 4.62 €/MWh. The differential between the prices associated with the offers on *Import* resource and the PSV is less than with the TTF (1.60 €/MWh), however it is interesting to note that in the months below the supply period, the prices offered for the Import resource are on average more expensive than the *Stogit* resource for about 2.15 €/MWh.

29 Under the AEEG's Resolution ARG/gas 45/11, in case of failure to meet in the segment G-1 the offer submitted by the balancing head, the marginal price is set equal to the price offered by the RdB. In the period of delivery, this value is equal to the increased TTF listing of 14.40 €/MWh, while in the injection period the offer for sale of the RdB is submitted at zero price.

Together with the increased frequency of the activations and the main movements by the Head of the balance, in the segment there is an increase in the number of active participants (50 instead of 31 in 2014), accompanied by a decline in the degree of segment concentration (HHI index equal to 4,029, -13% compared to 2014). This decline, rather subdued, confirms the higher concentration of the sector compared to G+1 albeit to a lesser extent than in 2014 (+34%, a decrease of 20 p.p. with respect to 2014).

Increased number of active participants

In the injection phase (RDB for sale), the main SGR counterparty is EDISON, distinguished with a market share of 30% and the maximum number of resources offered with accepted volumes (equal to 3), including the main LNG with a percentage of 92%. The remaining two thirds of the market are divided between KOCH (10% of market share) and another 28 participants, whose average share is 2.2%. In the supply phase (SRG for purchase), ENI, EDISON and SHELL appear to be the main participants with market shares substantially balanced between them and allocating about half of the accepted volumes for sale. Excluding ENI, having accepted offers/bids for the only *Import*, the remaining two participants are "multi-zonal", with accepted volumes for 5 different resources. In general it should be noted that 75% of participants with accepted purchase side offers has operated on a single bidding area (typically the *Stogit* resource), while on the sales side only 36% of participants has accepted offers for a single zone, even because of the possibility at this stage of submitting offers for the resources "G+1" and "G+N" – inhibited in the injection phase - on which 20 out of 33 (about 61%) participants are active.

2.3.3 Other gas markets

2015 is not different from past years in terms of trading in gas markets managed by GME and different from the balancing platform. Ruling out the intra-day market, which deserves another in-depth analysis, the remaining markets included in the M-GAS and the three segments of the P-GAS platform are characterized by a total lack of liquidity except from certain sporadic orders mainly determined, where required, by the obligatory bid/offer.

Increased liquidity of the intra-day market

The one that in the GME 2014 Annual Report[30] was referred to as "flame" of the intra-day market, determined by the 43 combinations in 3 sessions in the month of December 2014, was in fact a forerunner of a real market activation, which reported in 2015 33 active sessions for a total of 598 combinations. This activity had an underlying volume of approximately 1 TWh (compared to 0.1 TWh in 2014), 74% of which was traded in the first quarter of the year (Fig. 2.3.2). Since the activations were recorded in just six months of the year and still distributed unevenly, it's not significant an analysis of the annual average price.

An accurate analysis of the session prices and the distribution of the different market activations show that 55% of sessions with combinations of the MI-GAS has taken place at the activation, for the same gas day, of the balancing segment G-1. The average matching price is more in line with that of the segment G-1, when activated, and consistent with the limitations on the price level expected by the market rules[31], while for the remaining days, gas products were traded with average absolute price differentials than the PSV and the segment G+1 of the previous gas day rather than the content and respectively of 0.67 €/MWh and 0.12 €/MWh.

30 See GME, 2015, Annual Report 2014, p. 63.

31 The "Rules of the natural gas market" provide the ability for the participant to offer in the MI-GAS within a certain band centered on control market price, as described in the Technical Rules 7 and 13 MGAS.

The activities in this market are characterized by the presence, in all SRG participant sessions, which is one of the two counterparts in 594 combinations (corresponding to over 99% of cases). The participant places mainly on the sale side (81% of combinations and 77% of traded volumes), where it has a market share of 75%. The second participant standing out in terms of volumes traded in the market in 2015 is DUFENERGY, with 472 GWh distributed in 265 combinations, 88% of which concluded when purchasing (85% of volumes handled by the participant). With the exception of one session in late September, characterized by combinations concluded by almost all participants active in the market during the year (22 out of 29 active participants), in 82% of the sessions it was observed the presence of a single participant for sale, while in 58% of the sessions there was a single participant for purchase.

2.4 ENVIRONMENTAL MARKETS

2.4.1 Green Certificates (CV): Market and Bilaterals Platform

In 2015, in the Green Certificates Market (MCV), the weighted average price of the certificates traded, regardless of the type and the reporting period, amounted to 96.96 €/MWh (+4.6% than 2014), showing, however, a slowdown in the upward trend than the previous year, which resulted in steady growth from 2012.

Average prices are still rising in the face of slightly increasing volatility

In Bilaterals Platform of Green Certificates (PBCV) the average price, following a trend slightly stronger than the market, registered an increase of 6.3% than the previous year, reaching 89.39 €/MWh.

Excluding the volumes of transactions recorded at a price equal to zero, corresponding to approximately 4% of the total volumes traded bilaterally in 2015, the average price of trading in the PBCV amounts to 92.79 €/MWh. The difference between the average market price and the price of bilateral transactions (pc>1.00 €/MWh) amounts to 4.17 €/MWh Tt (Fig 2.4.1).

CV – Average prices

Fig. 2.4.1

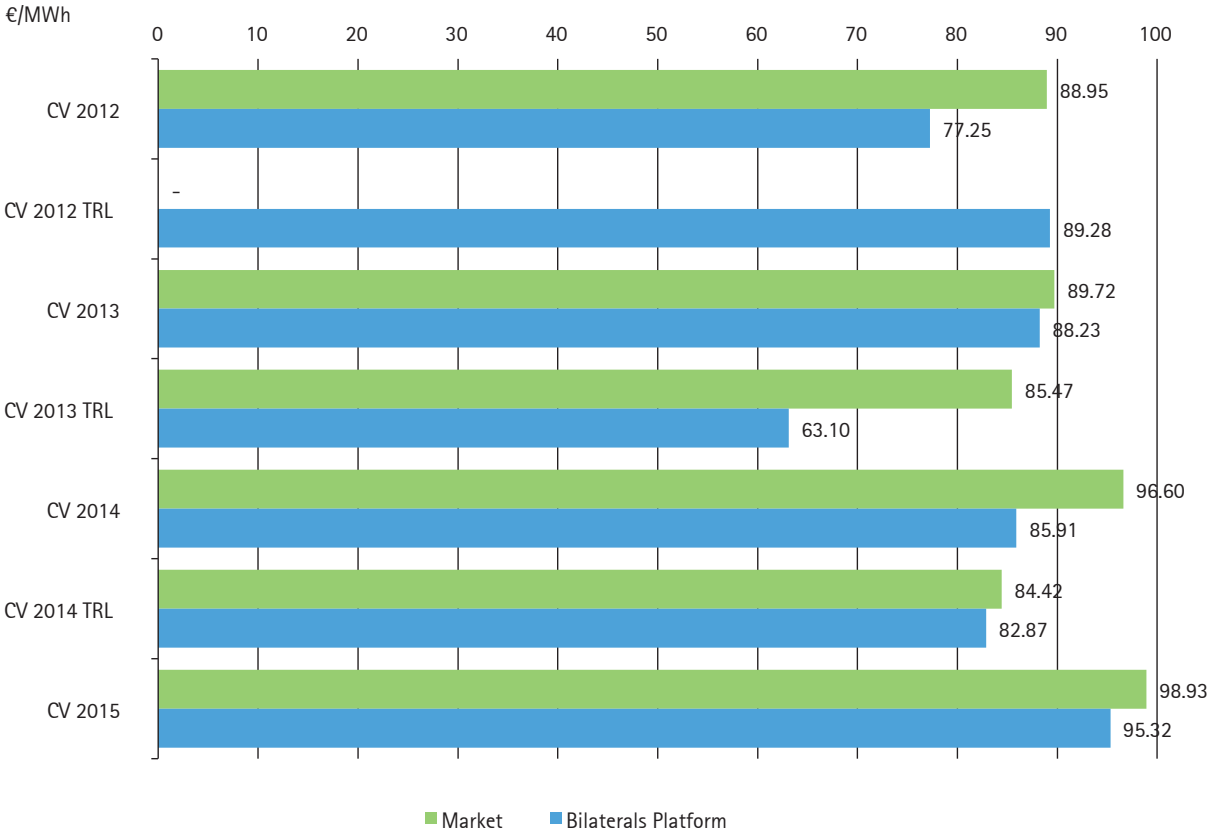
* Bilateral data are available as of 1 January 2009, when entered into force the disclosure obligation of the price and quantity of bilateral transactions following approval of Ministerial Decree of 18 December 2008.

The review by type and reference period of the certificates traded in the regulated market (MCV) shows prices around 85-89 €/MWh for the types 2012 and 2013, while the type CV_TRL 2014 records the minimum average price in the platform (84.42 €/MWh) prices even higher than 96 €/MWh, however, for the types relating to 2014 and 2015 (98.93 €/MWh). It should be noted the absence of exchanges of CV_TRL 2012 in the market platform (Fig 2.4.2).

In the PBCV prices amount to 80 and 90 €/MWh for all types except for the Green Certificate 2012, which recorded an average price of 77.25 €/MWh, for Green Certificates_TRL 2013 and Green Certificates 2015 that recorded respectively the minimum average price (63.10 €/MWh) and the highest average price (95.32 €/MWh) of the year bilaterals.

CV – Prices by type and reference period. Year 2015

Fig. 2.4.2

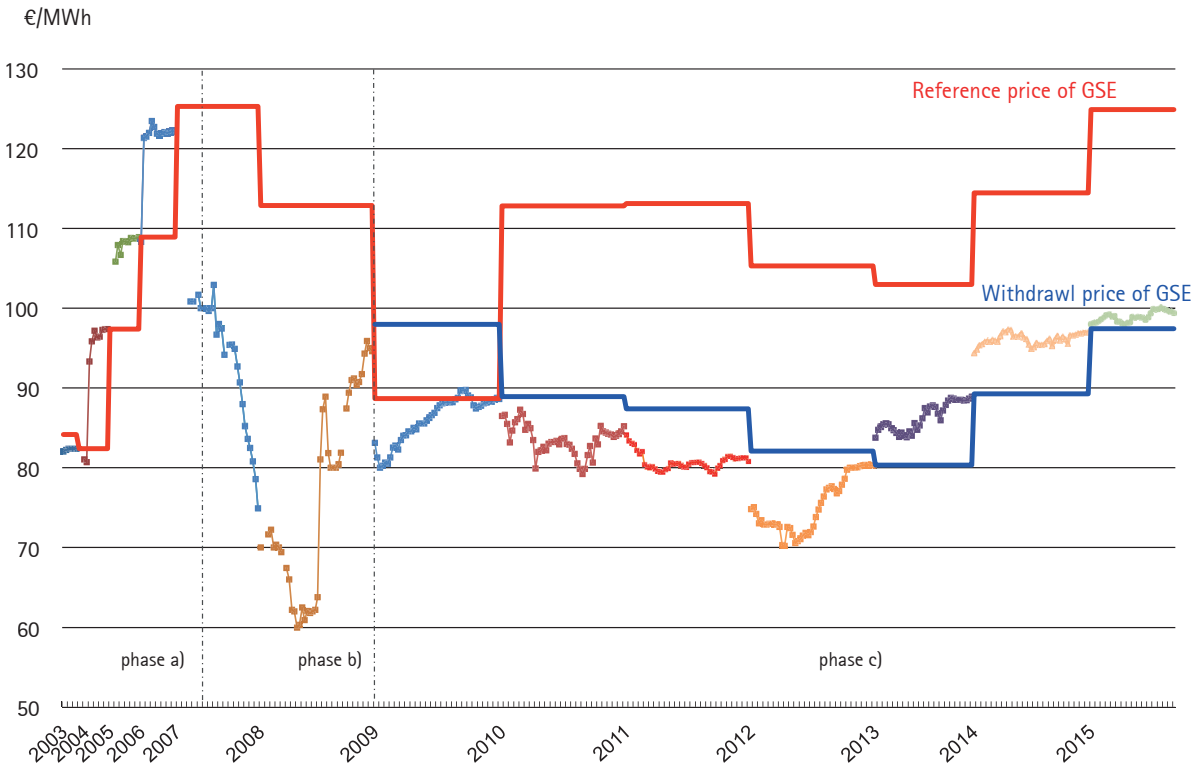


Prices of green certificates recorded in market sessions were placed below the withdrawal price[32] (97.42 €/MWh), with the exception of those with the reference year 2015, which are positioned, however, almost in line, by a margin of +2.05%, compared to the withdrawal price, probably because of the effect of the quarterly withdrawal on productions in 2015 (Fig. 2.4.3).

32 Since 2009, with the introduction of Ministerial Decree of 18 December 2008 *"Promotion of electricity production from renewable sources, in accordance with Article 2, paragraph 150, of Law no. 244 of 24 December 2007"*, GSE, acting as buyer has been able to fully absorb the excess supply, thus ensuring a perfect balance of the market. The Legislative Decree no. 28 of 3 March 2011 also establishes that the withdrawal price of the GC in excess for generation of the years 2011 to 2015 will be equal to 78% of the reference price of the GSE's GC. The latter is equal to the difference between € 180 and the average selling price of electricity for the year preceding the withdrawal one, as calculated by AEEGSI. In 2015, the reference price for the green certificate market for the year 2015 amounted to 124.90 €/MWh, from which the withdrawal price of the released green certificates for generation from renewable sources of the year 2014 amounted to 97.42 €/MWh.

CV – Trend of market prices vs. buy-back price

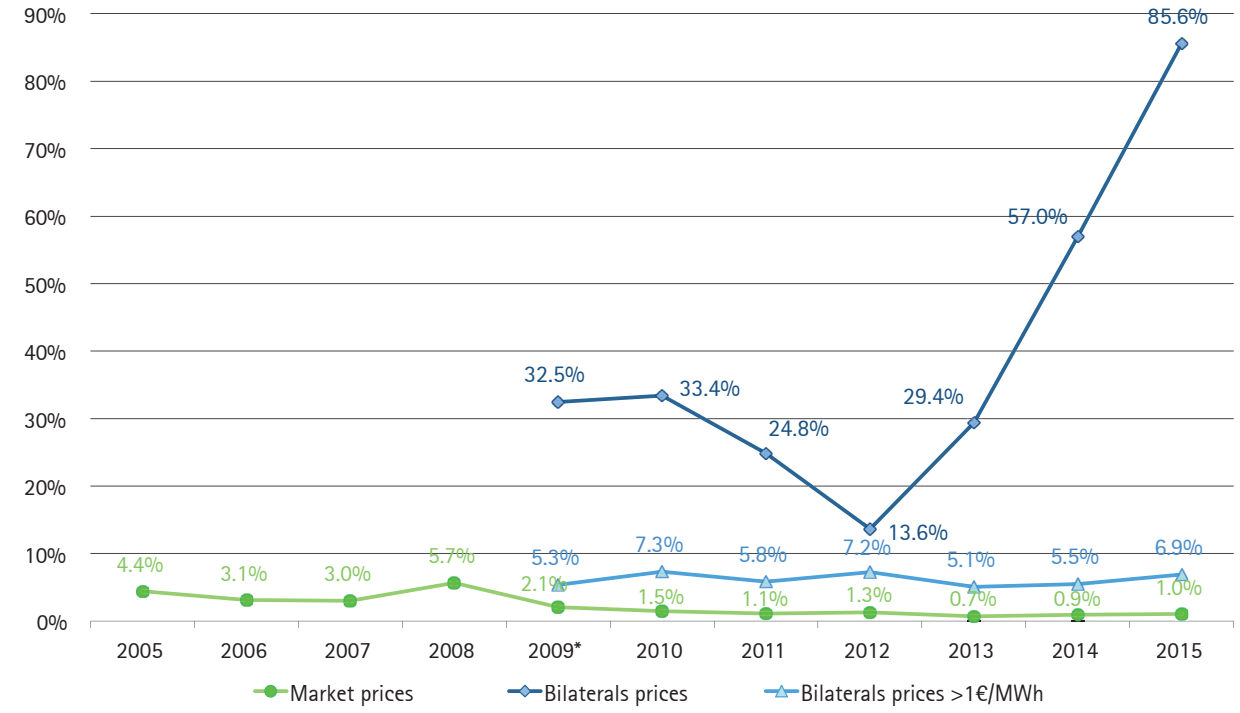
Fig. 2.4.3



In the face of rising prices from 2013, market volatility, remained at fairly low values, reaches, however, 1.0%, a slight increase compared to 2014. On the contrary, volatility in prices is recorded in the PBCV, confirming higher levels than the regulated market, in 2015 shows a further vigorous surge reaching 85.6% (+50.2 p.p. over the previous year). Even net of transactions recorded with price lower than 1 €/MWh, the volatility in prices recorded in the PBCV shows an increase over the previous year (+25.5 p.p.), still remaining higher than that of the regulated market (Fig 2.4.4).

CV – Price volatility

Fig. 2.4.4



* Bilateral data are available as of 1 January 2009, when entered into force the disclosure obligation of the price and quantity of bilateral transactions following approval of Ministerial Decree of 18 December 2008.

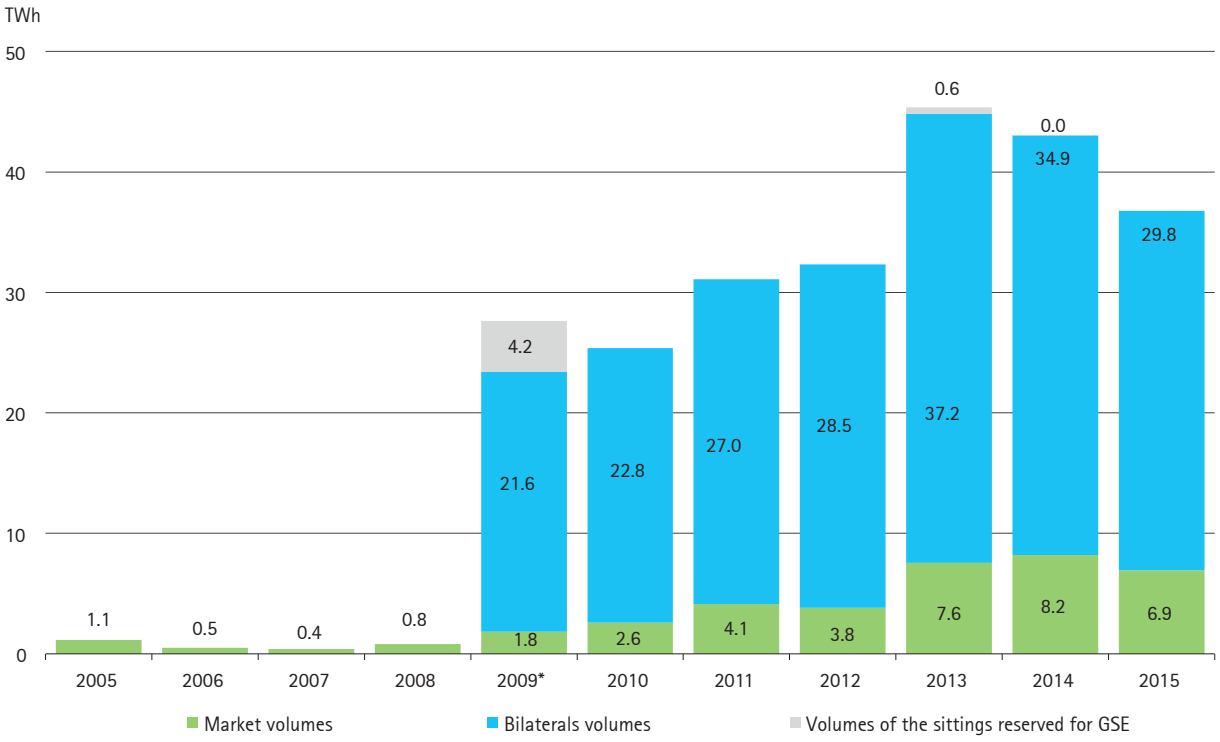
Reduced liquidity of the regulated market and the bilateral platform

In 2015, the volumes traded in the MCV show, for the first time, a decrease of 15.24% over the previous year, as the volumes traded in the PBCV, which, already in decline since last year, even down to 29.8 million MWh (-14.39%), although remaining at much higher levels of the market (Figure 2.4.5). Therefore, even if the PBCV still records higher volumes than the market, it is reported the decrease of trade in both platforms of approximately 14-15%, compared to last year. The liquidity of the regulated market (MCV) is, in 2015, in line with the 19%, over the previous year.

In 2015 it was also organized a market session dedicated to GSE and reserved for obligated parties, pursuant to Art. 20, paragraph 5 of Ministerial Decree of 6 July 2012, during which they were not awarded the 561,548 Green Certificates 2014 of the Third Quarter, offered at a price equal to that of withdrawal (97.42 €/MWh).

CV – Volumes traded

Fig. 2.4.5

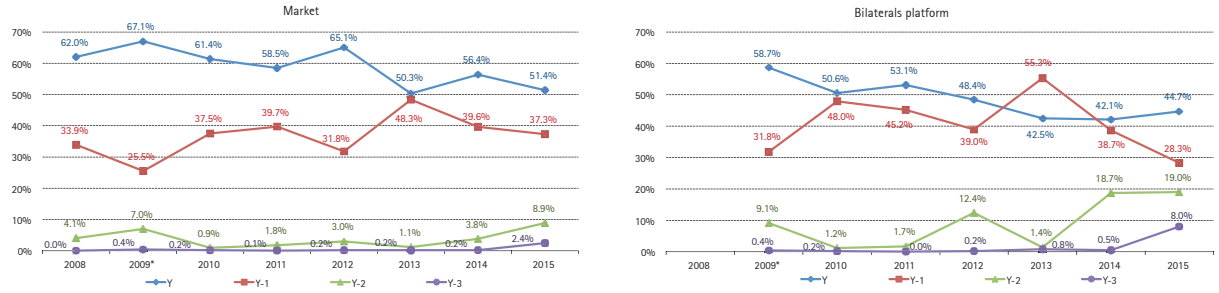


* Bilateral data are available as of 1 January 2009, when entered into force the disclosure obligation of the price and quantity of bilateral transactions following approval of Ministerial Decree of 18 December 2008.

From an analysis of the volumes of the year 2015, it is confirmed that the more exchanged certificates, both in the regulated market and in the bilateral platform, are the new ones issued, with the reference production period equal to the trading year. It should be recalled that the obligation quota for producers and importers of conventional sources of electricity produced from renewable sources to be supplied to the grid must be reduced under Article 25, paragraph 3, of Legislative Decree no. 28 of 3 March 2011, linearly from 2013, to zero for 2015. The green certificates issued in 2015 represent 51.4% of the market trading and the Green Certificates 2014 represent 37% of trades. The residual percentages of 8.9% and 2.4% refer to the volumes of the Green Certificates 2013 and Green Certificates 2012 traded in the market in 2015 based on the total number of certificates in the exchange platform. The percentages of the volumes traded in the Green Certificates bilateral platform are similar to those of the market volumes, thus reflecting, however, participants preference for trading concerning old issues, which increases both in the previous year and compared to trades in the market (Fig 2.4.6).

CV – Volumes traded by reference period

Fig. 2.4.6



Y is the reference year of the CVs whose injection year coincides with the first year of trading
* Bilateral data are available as of 1 January 2009, when entered into force the disclosure obligation of the price and quantity of bilateral transactions following approval of Ministerial Decree of 18 December 2008.

The structure of the regulated market (MCV) has, over the previous year, an increase in market share, on the demand side, of the major producers of electricity from traditional sources subject to obligation, while they are in line with last year the share of participants of the market, on the supply side, represented by a number of producers from renewable sources.

Increased concentration on the demand side in the face of increased fragmentation on the supply side

In particular, the percentage share of the market concentration of the first three participants (Concentration Ratio 3) shows, on the purchase side, an increase of 9.52 p.p. over the previous year, reaching 46.6%, while the RA 10, with 91% of volumes, is back to all-time highs.

On the sale side, however, it should be noted the recovery of the market fragmentation with the decrease of concentration of the market shares of the top three participants to 20.6%, which drops to 4.5 p.p. over the previous year, while the CR10 is equal to 43.4% (Figure 2.4.7).

CV – Market: participants shares

Fig. 2.4.7

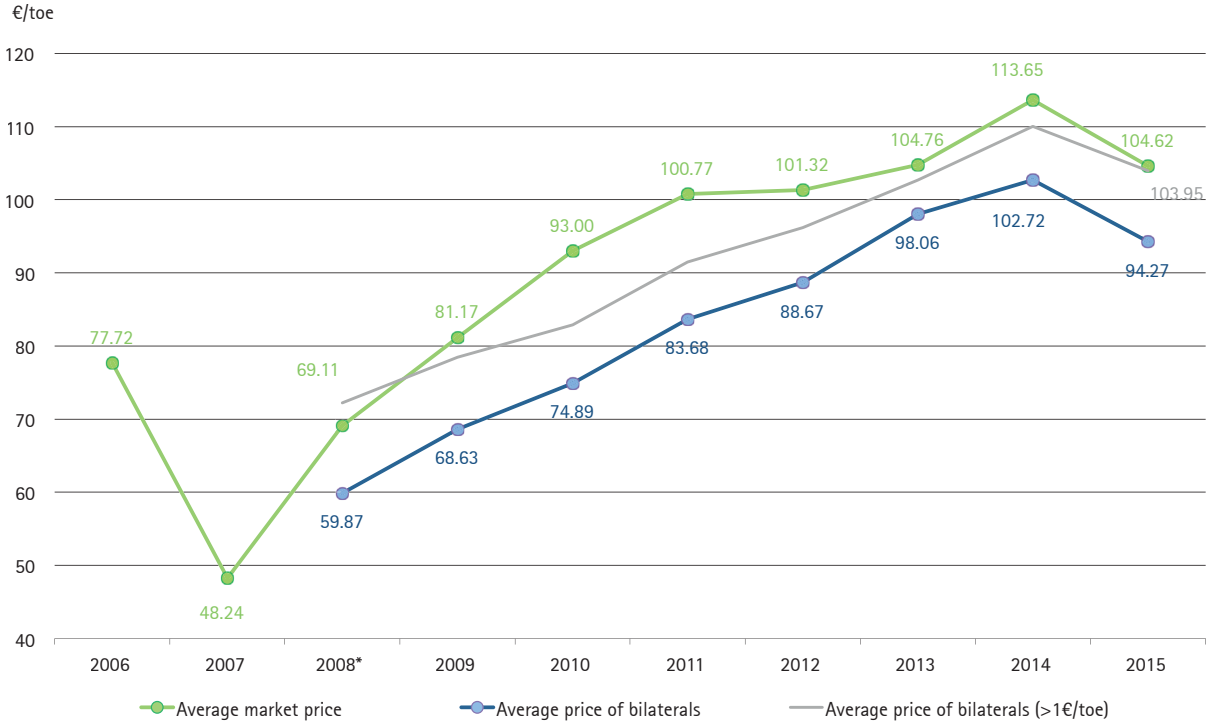
2.4.2 Energy Efficiency Certificates (TEE): regulated market and bilateral trades

In 2015, in the market, the average annual price of the TEEs, regardless of the type, has decreased by 8%, reaching a total of 104.62 €/toe. Although the average prices of bilateral trading in analogy to what happened in the market, record the same decline over the last year, reaching 94.27 €/toe. Excluding the transaction volumes registered at a price equal to zero, corresponding to 9.2% of total volume traded bilaterally in 2015, the average price of trading in the bilateral platform amount to 103.95 €/MWh, while minimizing the historical difference between the average market price and the price of bilateral transactions, amounting to 0.67 €/MWh (Fig. 2.4.8).

Rising prices in the market and in the bilateral TEE platform

TEE – Average prices

Fig. 2.4.8

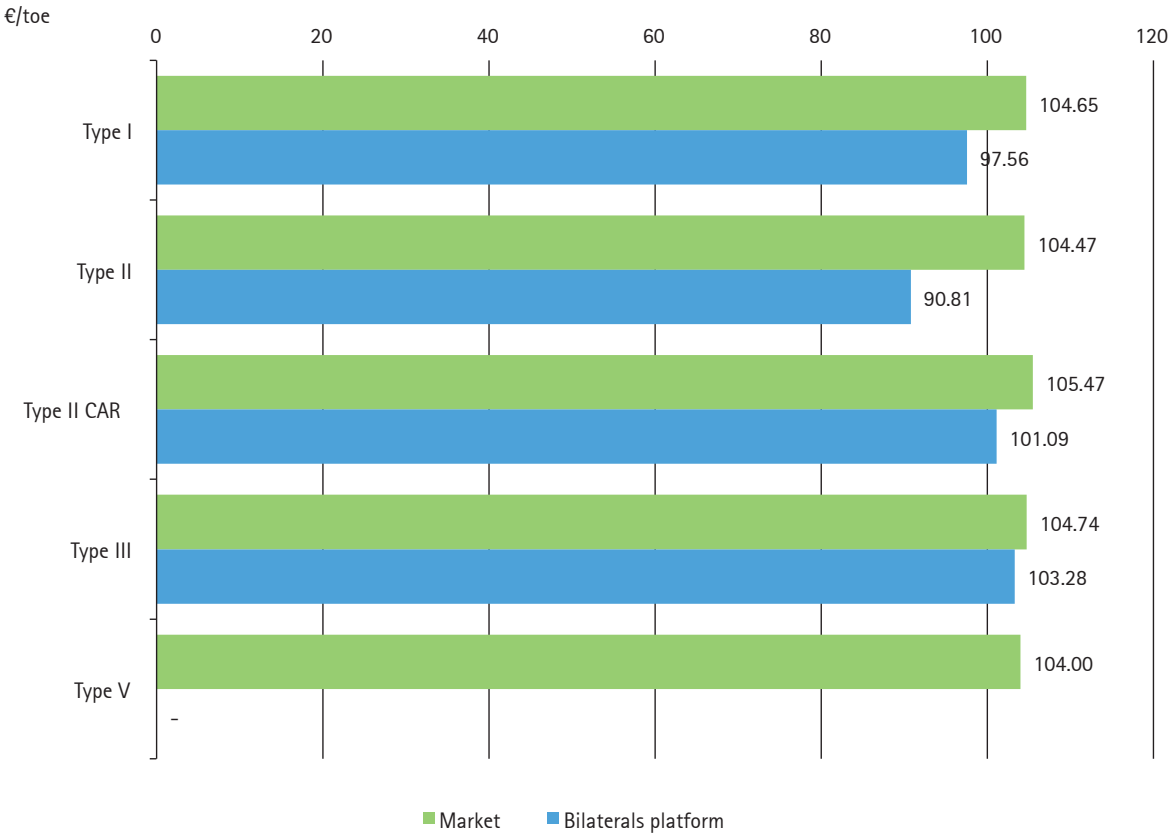


* Data on bilateral prices are available starting from 1 April 2008, when entered into force the price disclosure requirement of bilateral transactions through the TEE Register managed by GME, introduced by AEEG's Resolution no. 345/07

The analysis by type of TEE in the regulated market reveals a substantial alignment of the prices of almost all types around 104 €/toe; higher average prices record only for certificates of the *Type II CAR* (105.47 €/toe). Bilateral transactions record, however, more weighted average prices of all types, ranging between 90.81 €/toe of *Type II* certificates and 103.28 €/toe of *Type III* certificates. Finally, it should be noted that there are no trades on the bilateral platform of *Type V* certificates (Fig 2.4.9).

TEE – Prices by type. Year 2015

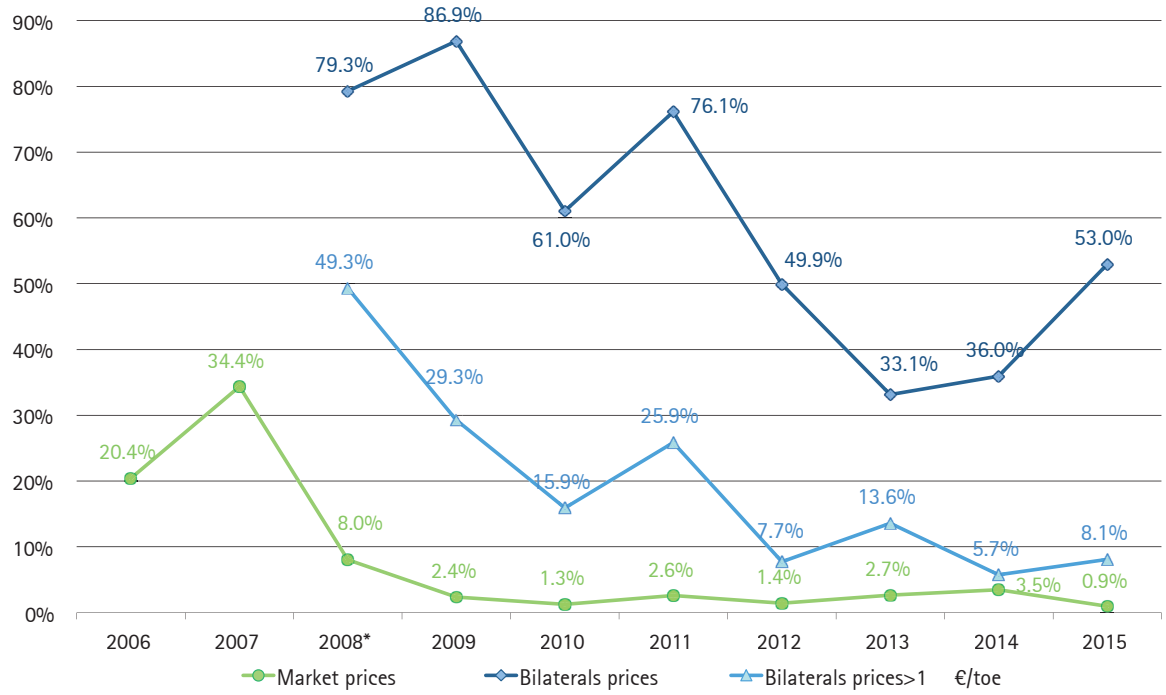
Fig. 2.4.9



Price volatility in the regulated market (0.9%) marks the first setback after three consecutive years. The decrease of the variability reflects the trend from the quotations during 2015: in fact, in the first part of the year the prices have reached peaks closed to 108 €/toe, up to down in the middle of the year where they reached lower values (103 €/toe) and then ended the year with prices around 106 €/toe. Much higher than the market is the volatility of the bilateral prices, influenced by the zero price adjustments, net of which the same indicator places on much lower values (8.1%), which, confirming a fluctuating trend over the years, marks a slight increase over the previous year (2.4 p.p.), thus increasing the differential with the market (7.2 p.p.) (Figure 2.4.10).

TEE – Price volatility

Fig. 2.4.10



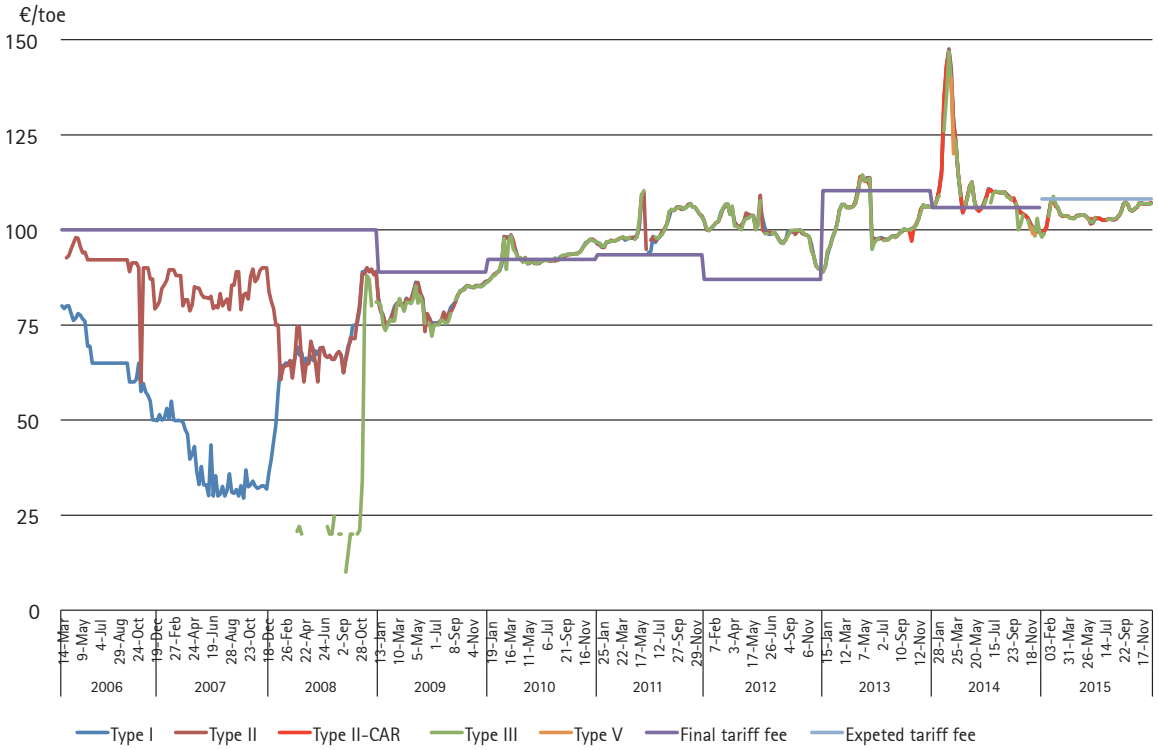
* Data on bilateral prices are available starting from 1 April 2008, when entered into force the price disclosure requirement of bilateral transactions through the TEE Register managed by GME, introduced by AEEG's Resolution no. 345/07

AEEGSI's Resolution 13/2014/R/efr introduced new rules for the calculation of the tariff contribution, leading to the recognition of part of the costs incurred by the participants obliged to achieve the energy savings targets.

The final tariff contribution for the year 2014 was set at 105.83 €/toe, down on the preventive value (about 5 €/toe), directly influenced by the decrease in market prices as of the end of 2014, for all 2015, except for the peak in February. The single preventive tariff contribution, however, for the obligation year 2015, expiring in May 2016, is equal to 108.13 €/toe. The average price level in the period from January to September of 2015 was lower than the reimbursement value, while from September to December it was almost aligned (Fig. 2.4.11).

TEE – Market prices and tariff reimbursements

Fig. 2.4.11



The incentive system through the TEE mechanism is characterized by an excess of demand of those liable than the supply; this scarcity is the difference between the number of certificates issued, representing the volumes, expressed in Oil Equivalent Tons, spared by the participants, and the certificates necessary to fulfill the obligations.

To achieve the 2015 targets expiring in May 2016, the obligated parties have to cover 60% of the 7.75 million TEEs related to the 2015 obligation to be compliant. It follows that the minimum cumulative amount of TEEs necessary to cover the basic needs of obliged distributors is at least about 37 million TEE, a value obtained by reducing 40% of the obligation related to 2015 (7.75 million TEEs) from the cumulative total of the necessary certificates for the fulfillment of all the years up to 2015 (42.12 million TEEs).

TEE – Certificates needed for compliance. Values cumulated

Tab. 2.4.1

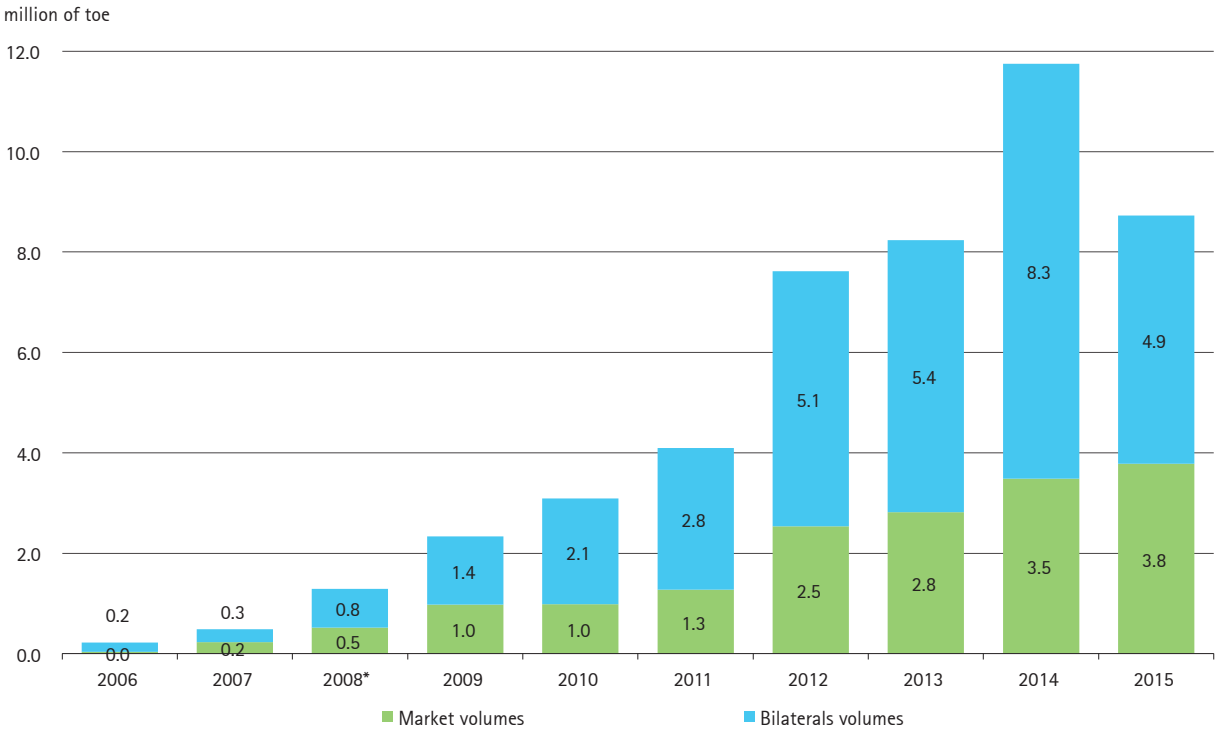
Obligation year	Actual obligations of the Electricity Distributors	Actual obligations of the GAS Distributors	Cumulative total for the fulfillment	Certificates released from the mechanism beginning
	(Mtoe/a)	(Mtoe/a)	(Mtoe/a)	(Mtoe)
2005	0.10	0.06	0.16	-
2006	0.19	0.12	0.47	-
2007	0.39	0.25	1.11	1.26
2008	1.20	1.00	3.31	2.60
2009	1.80	1.40	6.51	5.23
2010	2.40	1.90	10.81	8.02
2011	3.10	2.20	16.11	11.44
2012	3.50	2.50	22.11	17.23
2013	3.03	2.48	27.62	23.99
2014	3.71	3.04	34.37	32.27
2015	**4.26**	**3.49**	**42.12**	**37.73**

In 2015, the Energy Efficiency Certificates traded in the regulated market and in the bilateral negotiations, declined, despite the gradual increase in obligations for distributors, thus regressing to a level just above 2013, for a total of almost 9 Mtoe. The volumes of the TEE traded in the market involve an increase of 9% over the previous year, and lead to 3.8 Mtoe, while those traded in bilateral contracts are characterized by a decrease of 41%, amounting to 4.9 Mtoe. Faced, then, with a slight increase in the volume of exchange, it is evident the strong contraction of the bilateral negotiations, compared to the historical peak of 2014 (8.3 Mtoe) (Fig 2.4.12).

Drop in the volume traded In both TEE platforms

TEE – Volumes traded

Fig. 2.4.12

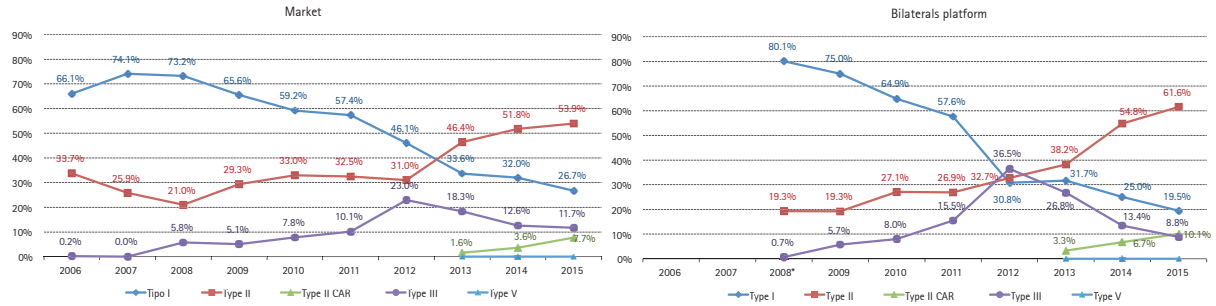


* Data on bilateral prices are available starting from 1 April 2008, when entered into force the price disclosure requirement of bilateral transactions through the TEE Register managed by GME, introduced by AEEG's Resolution no. 345/07

As for the different types, it continues the positive trend in volumes of *Type II* certificates that are principally traded in the regulated market (51.8% in 2014 and 53.9% in 2015) as well as in bilateral trades (rose to 61.6%, +6.8 p.p.) and of *Type II CAR* certificates (+4,1p.p), while the remaining types are decreasing. These developments are related to the greater spread of savings projects in the gas sector (Figure 2.4.13).

TEE – Structure of volumes traded

Fig. 2.4.13



* Data on bilateral prices are available starting from 1 April 2008, when entered into force the price disclosure requirement of bilateral transactions through the TEE Register managed by GME, introduced by AEEG's Resolution no. 345/07

It reverses the downward trend of the last three years, which was characterized by the rise of market competitiveness on the demand side, while, on the supply side, the market values are, on the whole, relatively stable.

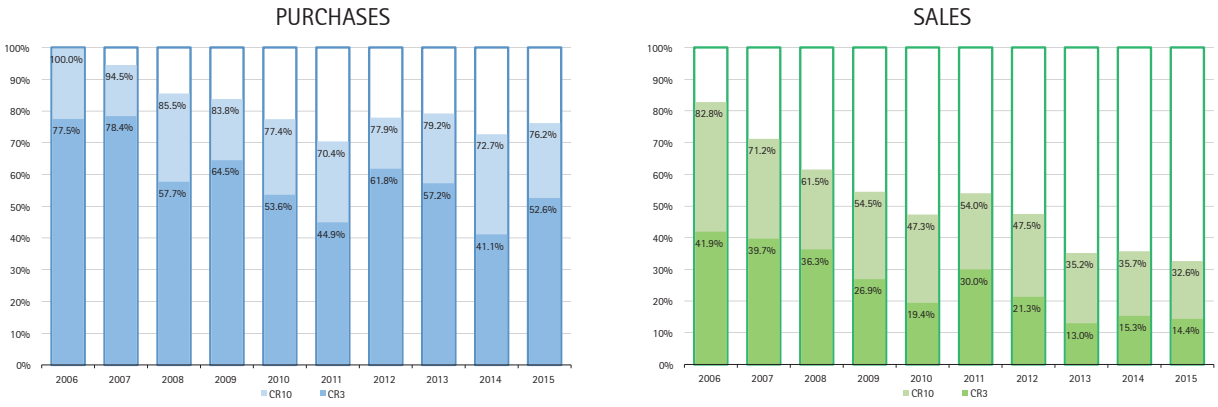
Analysis of the concentration on the supply side and the demand side

In this context, there is an increase in the degree of concentration on the buy side, while it is slightly increasing the fragmentation on the sales side, with a decline in concentration units, compared to last year.

The percentage of the first three participants on the demand side (CR3), in fact, in 2015 mark an increase of 52.6% (+11.5 p.p.) ranking among the historically established values on the platform, above 50%. This development is accentuated when it's taken into account the share of top ten participants (+3.5 p.p.). On the supply side, however, the competition looks less stable in comparison with the previous three years (CR3 was 14.4%, CR10 was 32.6%) (Figure 2.4.14).

TEE – Market: participants shares

Fig. 2.4.14



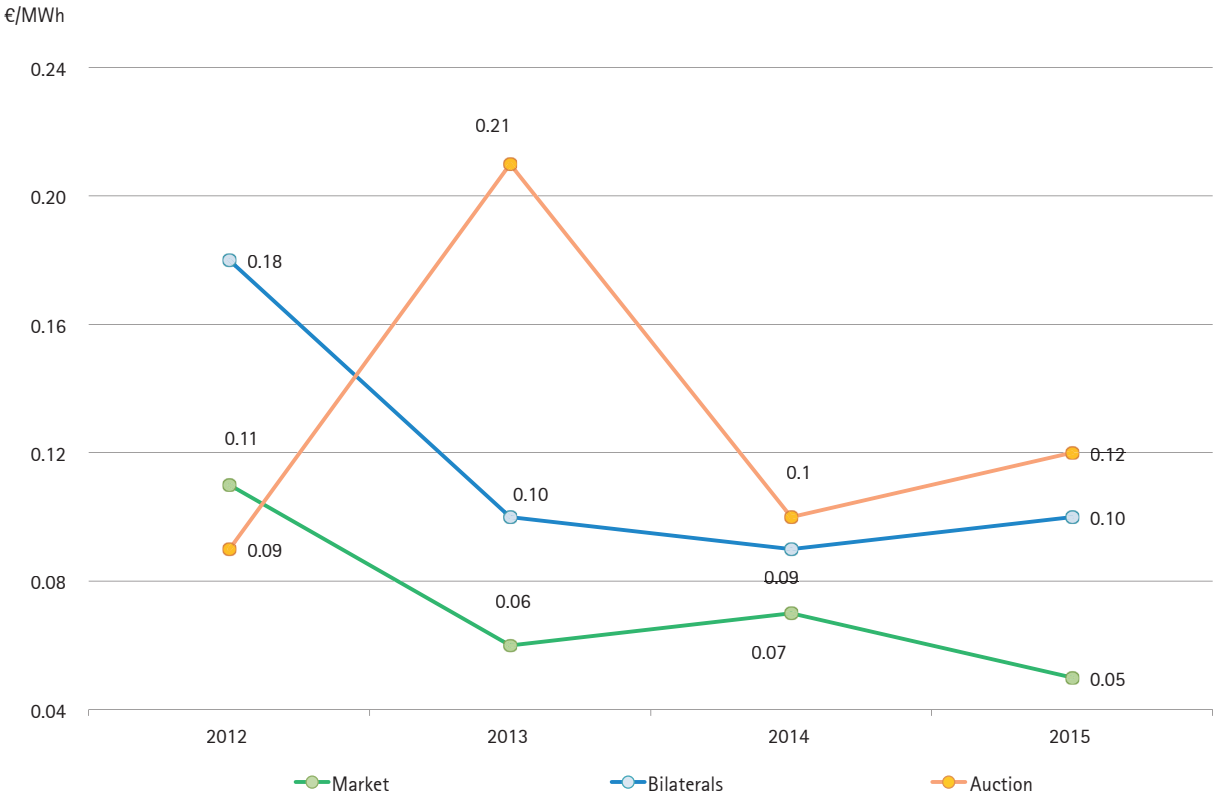
2.4.3 Guarantees of Origin (GO): Market, Bilaterals Platform and GSE's auction

2015 was the second year of full operation of the system of Guarantees of Origin (GO), pursuant to Art. 31, para. 1 of Ministerial Decree of 6 July 2012. The average weighted price recorded in the M-GO, regardless of type, was 0.05 €/MWh, a decrease of 0.02 €/MWh than 2014. The trend in the Bilaterals Platform of GO (PB-GO) is contrasted, in fact, here the prices have increased of 0.01 €/MWh, amounting to 0.10 €/MWh and standing on the highest levels of the market, with respect to which they have increased spread (0.05 €/MWh). Up, however, are the prices of GO allocated through the auctions of GSE reaching 0.12 €/MWh (+0.02 €/MWh) and linked to the base auction price offered by GSE (2.4.15).

Prices decrease in the regulated market and rise in the bilaterals platform and auctions

GO – Average prices

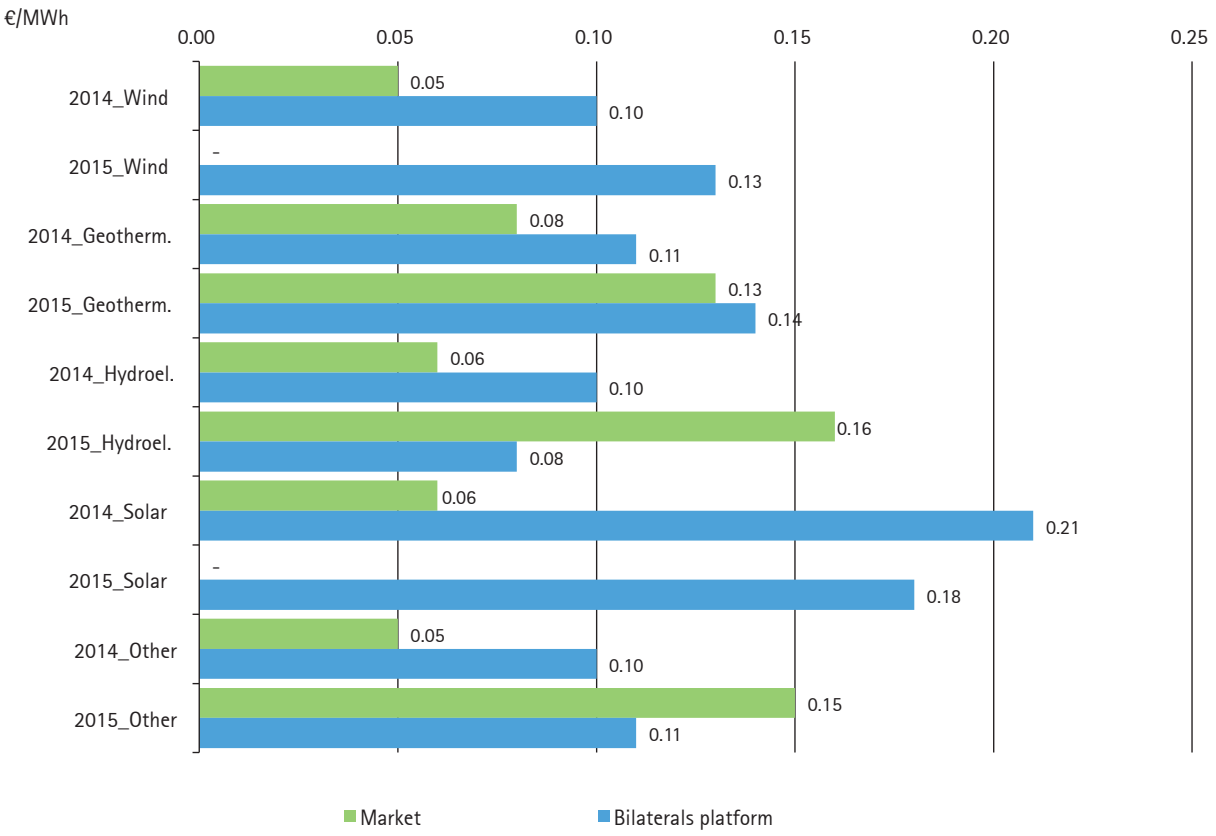
Fig. 2.4.15



The analysis by prices shows the lowest prices in the market for certificates with the year of generation in 2014, which reached 0.05 to 0.08 €/MWh. Certificates with 2015 as generation year are placed, instead, between 0.13 €/MWh for Geothermal guarantee and 0.16 €/MWh for the Hydroelectric one. It should be noted that the market shows no Wind and Solar types for the generation year 2015. Also the PB-GO shows lower prices for those certificates referring to the generation of 2014, included between 0.08 and 0.18 €/MWh, and higher prices for that of 2015, with the exception of the maximum price of 0.21 €/MWh for the guarantee 2014_Solar (Fig 2.4.16).

GO – Prices by type and year of generation. Year 2015

Fig. 2.4.16

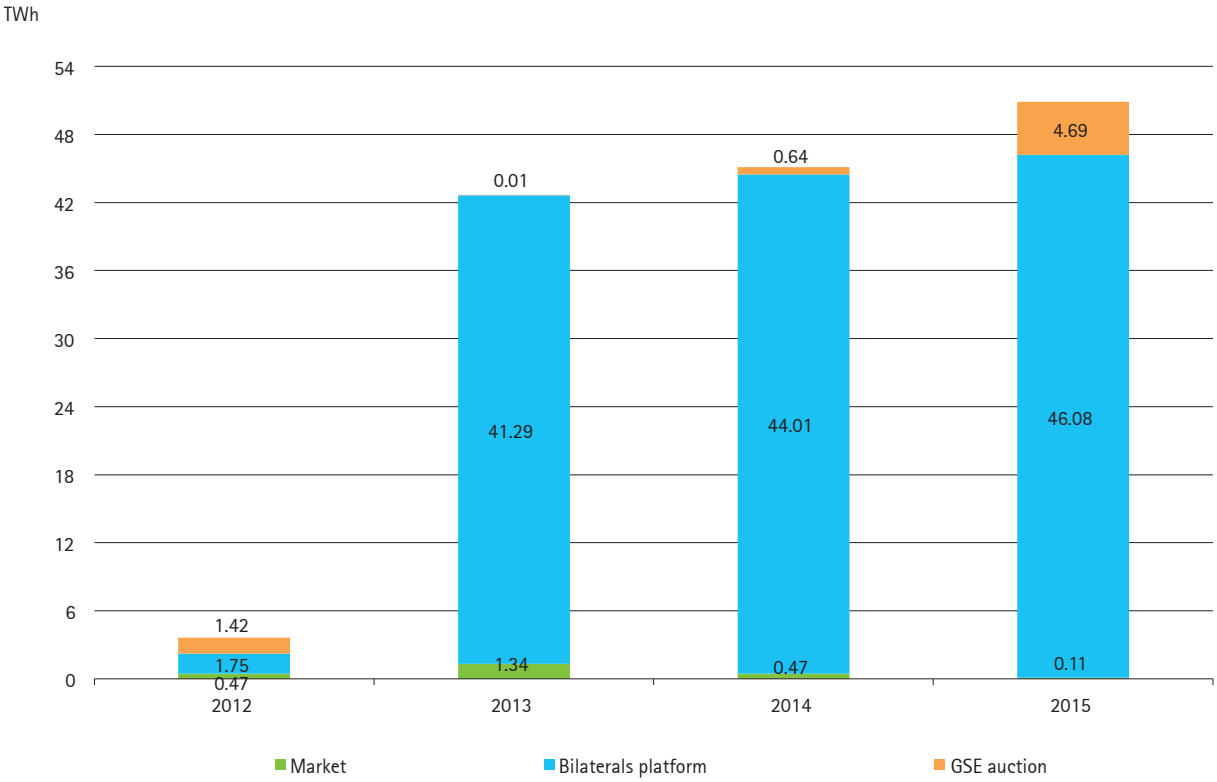


In 2015, 105,203 MWh have been traded in the market, down of 78% compared to the already the volumes of 2014. The countertrend trades in the PB-GO confirm their expansion and rise to 46.0 million MWh (+5%), net of the intercompany ones, which amount to 1,024,378 MWh. Therefore, the trend already observed in the transition from COFER to the GO of an incentive system almost exclusively marked on bilateral trading, strengthens. To support this condition, there is also the growth in the year of the volumes allocated through auction, amounting to 4,686,000 MWh, despite the increase in the tender price. It should be noted the increased quantities offered by GSE, passing from 30 million MWh in 2014 to about 86 million MWh in 2015 (Figure 2.4.17).

Declining volumes in the market, predominance of bilateral trading

GO – Volumes traded

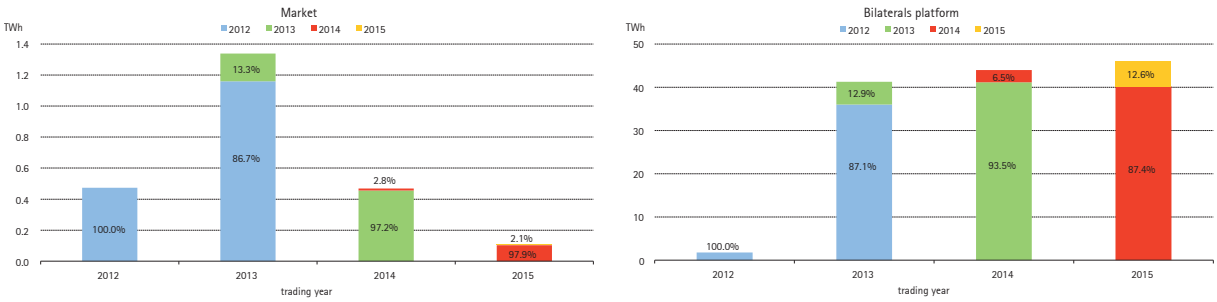
Fig. 2.4.17



In 2015 in the regulated market and in the bilaterals platform, trades have focused on the guarantees for the year of generation 2014 (98% and 87%, respectively), only negotiable by March 31, the date by which the interested parties (sale companies) must submit their guarantees to GSE for the cancellation. This type is also the most traded in the three years of activity, totaling 40 million MWh in the more liquid PB-GO.

GO – Structure of volumes traded by year of generation

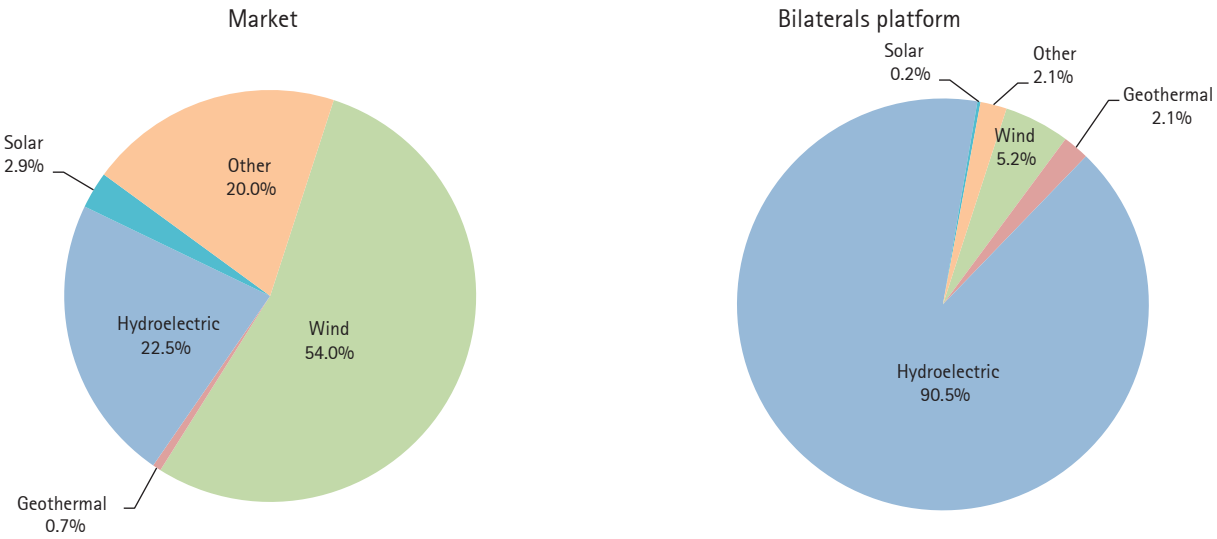
Fig. 2.4.18



If we consider only the type of plant to which the guarantee applies, regardless of the year of generation, the most traded guarantee in the regulated market was the Wind, with 56 TWh (54.0% of the total), followed by *Hydroelectric* that accounted for 22.5%. In Bilaterals Platform, however, the trades are focused on the *Hydroelectric* type with 42 million MWh, namely 90.5% of the total (Fig. 2.4.18).

GO – Structure of volumes traded. Year 2015

Fig. 2.4.19



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