



SPANISH ENERGY REGULATOR'S NATIONAL REPORT TO THE EUROPEAN COMMISSION 2016

16th July 2016

Table of contents

1.	Foreword	4
2.	Main developments in the gas and electricity markets	7
2.1.	Main developments in the electricity markets	7
2.2.	Main developments in the gas markets	8
3.	Electricity	12
3.1.	Network regulation	12
3.1.1.	Unbundling	12
3.1.2.	Technical functioning	14
3.1.3.	Network tariffs for connection and access	18
3.1.4.	Cross-border issues	19
3.1.5.	Compliance	24
3.2.	Market Functioning	26
3.2.1.	Wholesale markets	26
3.2.2.	Retail market	35
3.3.	Security of supply	41
3.3.1.	Monitoring balance of supply and demand	41
3.3.2.	Monitoring investment in generation capacities in relation to SoS	44
3.3.3.	Measures to cover peak demand or shortfalls of suppliers	48
4.	Gas	49
4.1.	Network regulation	49
4.1.1.	Unbundling	49
4.1.2.	Technical functioning	52
4.1.3.	Network tariffs and economic system	55
4.1.4.	Cross-border cooperation and implementation of European gas network codes	56
4.1.5.	Compliance	59
4.2.	Market functioning	60
4.2.1.	Wholesale markets	60
4.2.2.	Retail market	73
4.3.	Security of supply	81
4.3.1.	Monitoring origin and mix of gas imports	81
4.3.2.	Evolution of gas demand and gas demand scenarios	83
4.3.3.	Capacity of infrastructures and new investments	84
4.3.4.	Security of supply obligations and safeguard measures	90

5.	REMIT	92
6	Consumer protection and dispute settlement in electricity and gas	94
6.1	Consumer protection.....	94
6.2	Dispute settlement	98

1. Foreword

2015 has been a likewise exciting and intense year for CNMC in terms of regulatory activity. The Spanish Authority has overcome a transitional period after a merger occurred in 2013, and now we are better prepared to face the great challenges we all share, better perform our duties and deliver more benefits to consumers.

During 2015, important regulatory developments have taken place in both electricity and gas markets.

After the approval of the Electricity Act 24/2013, the Spanish electricity market is moving forward in parallel to the new EU strategy of the electricity market design.

The regulatory scheme for electricity generation based on RES put in place some years ago is gradually improving the system sustainability, and the electricity market reform is reaching its aim: the sector's costs and revenues are back in balance and the accumulated debt should gradually be repaid over the next 15 years.

At regional level, Spain is also working in progress to further integrate both the electricity and gas markets with the neighboring countries.

The launch of coordinated FTRs in the Portuguese-Spanish interconnection and the successful launch of market coupling in May 2014 (between MIBEL and North-West Europe through the Spanish-French interconnection) was an important step towards the integration of the European electricity market.

In 2015, CNMC moved forward approving the EU Harmonised Auction Rules for long-term capacity allocation in both IPE (interconnection Portugal-Spain) and IFE (interconnection France-Spain), the Shadow Auction rules to be applied as fallback for day-ahead market coupling in IFE and the "IFE rules version 4" that regulates intraday capacity allocation in IFE. These important landmarks will contribute to bring together prices in different markets and promote a more efficient use of cross-border capacity.

However, the process of energy price convergence is intrinsically linked to the development of cross-border infrastructures, as a prerequisite to make the internal energy market work properly and to link the remaining energy islands to the main electricity and gas networks.

After having signed on 4 March 2015 the Madrid Declaration, all relevant stakeholders have been working together to better connect the Iberian Peninsula to the rest of the EU energy market.

In October 2015, the Santa Llogaia – Baixàs power line doubled the interconnection capacity between France and Spain at a maximum commercial capacity of 2,708 MW in the direction

France to Spain and 2,392 MW in the direction Spain to France. The project has received the EU support under the European Energy Programme for Recovery.

Regarding the gas interconnections, the progress made at the Spain – France interconnection during the last years has been also remarkable. In 2013, the interconnection capacity at Larrau was increased up to 5,5 bcm/year in both directions. In addition, by the end of 2015 the capacity at Irun was increased in 2 bcm/year in the Spain-France direction, reaching 7,5 bcm/year once the compression station of Biriadou was commissioned.

All these important milestones in the right direction confirm the statement that a truly integrated and competitive internal energy market not only needs a common regulatory framework but also significant development of energy transmission infrastructure, in particular cross-border interconnections between Member States.

Transparency is a growing area too. The regulation on wholesale energy market integrity and transparency (REMIT) helps to create transparency across Europe and entitles NRAs to monitor, investigate and act against anyone who abuses – or attempts to abuse – in the energy market. In this regard, in 2015 CNMC approved the creation of the Spanish Register of market participants in the wholesale Energy market, complying with article 9 of REMIT.

Concerning the gas market, important regulatory developments have also taken place in 2015, when the creation of MIBGAS -the Iberian gas hub- has been fulfilled and the Commission Regulation (EU) nº 312/2014 (the so-called Balancing NC) has been implemented into the Spanish regulatory framework by the Circular 2/2015, issued by CNMC in July 15th.

The harmonization and construction process of MIBGAS has been developed gradually and with mutual agreement between Spain and Portugal, with an underlying active contribution of both countries in achieving a European market for natural gas. The MIBGAS' shareholders will include the TSOs of Spain and Portugal (ENAGAS and REN), and the Electricity Market operators from both countries (OMEL and OMIP)

The gas exchange is functioning since 15 December 2015 for gas products delivered at the Spanish Virtual Balancing Point. In order to foster liquidity, the regulation also established that ENAGAS will buy the operational gas through daily purchases in the MIBGAS. In the near future, MIBGAS exchange will include trading products at the Portuguese balancing point.

The Circular CNMC 2/2015 sets forth this regime by regulating the imbalance calculation methodology for gas transmission network, including procedures for calculating imbalances and their surcharges, the operating balance of the transmission network as well as the rules for nominating the use of infrastructures and procedures for providing users information related to their balance. The new balancing regime established by Circular 2/2015 will be fully implemented in Spain by October 2016.

The creation and development of the Iberian Natural Gas Market is of particular relevance to consumers and suppliers of both countries. Taking into consideration the significant demand in

the Iberian Peninsula for liquefied natural gas (LNG) in the European and global contexts, we foresee the Iberian gas hub (MIBGAS) to become a reference market on an international level in the coming years.

In 2015, CNMC has also sought to increase and ease consumer engagement with the energy market through a deep reform of retail markets. The so-called “voluntary price for small consumers”, which is available for electricity customers below 10 kW, allow these consumers to own a smart meter to adapt their behavior and to be billed according to hourly spot market prices. This mechanism provides a dynamic price signal to small customers and, consequently, a way to implicitly allow them to participate in the market by shifting consumption to the hours of the day where energy is cheaper.

As mentioned, international cooperation and the regional integration of electricity and natural gas markets, namely in the Iberian Peninsula, are priorities in the governance of both sectors and in the actions undertaken during the year, aimed at ensuring better conditions for producers/operators and consumers. The coming year will be for sure as challenging as the previous one, but I am confident that our regulatory actions, in cooperation with our European counterparts, will let us deliver significant benefits to energy consumers throughout Spain and Europe.

Jose Maria Marin-Quemada
President

2. Main developments in the gas and electricity markets

2.1. Main developments in the electricity markets

- Regulatory changes

In 2015, for several reasons, no major changes to the high level regulation of the power sector were approved. However, a significant number of detailed regulations were published. Among these, the following are the most significant:

Royal Decree 1074/2015, of 27th November modified several provisions of different regulations of the power sector.

Royal Decree 413/2014 of 6th June regulating electricity generation based on renewable energy, cogeneration and waste was complemented throughout 2015 with several detailed regulations. The Royal Decree 900/2015 of 9th October established the economic and technical conditions of self-consumption (regulation applies also to non-renewable based self-consumption). Furthermore, the Resolution of 18 December 2015, of the Secretary of State for Energy established the criteria for allowing the participation of generation based in renewables, cogeneration and waste in balancing markets.

In the context of the implementation of the CACM GL (Regulation (EU) 2015/1222), the Ministerial Order IET/2732/2015 designated OMIE as NEMO for Spain. The day-ahead and intraday market rules were updated by Resolution of 23 December of the Secretary of State for Energy.

The Resolution of 30 July 2015 of the Secretary of State for Energy approved the auction rules for interruptible demand service.

As regards, transmission and distribution, the following Ministerial Orders were approved: Order IET/2660/2015 approved the reference distribution asset types and reference values for investment, operation and maintenance; Order IET/2659/2015 approved the reference transmission asset types and reference values for investment, operation and maintenance; and Order IET/2209/2015 approved the National Network Development Plan.

- Market developments

Significant progress was achieved in 2015 with regard to cross-border trade thanks to the commissioning of the new interconnector Santa Llogaia – Baixas between Spain and France which has doubled the exchange capacity. This increase allows the day-ahead market price differential to diminish slightly but still the situation is quite far from full price convergence. Furthermore, cross border balancing exchanges between Portugal and Spain, and between Spain and France under the BALIT platform increased in 2015 thus increasing the efficiency of the balancing market in the region. As regards long term cross-border capacity allocation, in

November 2015, CNMC approved¹ the EU Harmonised Auction Rules for long-term capacity allocation in both IPE (interconnection Portugal-Spain) and IFE (interconnection France-Spain).

As regards the wholesale market venues, in 2015, the weighted average market price was 62.87 €/MWh (higher than previous year). In the year, there were not significant changes as regards competition indicators. The aggregated volumes negotiated in long term markets have decreased significantly in particular in the OTC market. This reduction can be related to several factors: (i) change in the profile of the agents participating in the long terms markets², by increasing the market share of agents with hedging targets (with market conservative positions in terms of volume); (ii) the leaving of international financial entities and other agents with speculative purposes; or (iii) the potential impact of MiFID II in terms of requirements to energy trading companies.

As regards the retail market, the PVPC (voluntary price for small consumers³) system launched in 2014 was further refined in 2015: Customers equipped with smart meters can be billed based on their hourly consumption and hourly spot market prices. The first bills based on hourly metering were issued on October 2015. Switching rate in the electricity retail market stays high (above 11%). The number of customers supplied under the PVPC regime by reference suppliers is steadily decreasing (below the threshold of 10 kW) and at the end of 2015 was 12,491.802 (48% of the consumers entitled).

Finally, as regards security of supply, the levels of generation available and demand remained stable in 2015. In the short and medium term, the expectation is that enough resources will be available to cover demand.

2.2. Main developments in the gas markets

In 2015, the Spanish gas demand increased a 4,2 %, up to 314.278 GWh, though since 2008, the gas demand has felt a 30,1%, mainly for the decrease in gas consumption for electricity generation. It should be noted that, in 2015, gas consumption for electricity generation increased a 16,7%, driven mainly by the decrease of hydroelectric production, an increase of electricity demand and more use of combine cycles in summer due to several heat waves. In this year, the industrial consumption of gas increased a 1%, mainly as a result of a recovery of industrial activity. Finally, the household consumption increased a 3,4% in 2015, as a result of lower temperatures in the first quarter of 2015 and the increase of 53.500 new gas consumers.

Gas import prices decreased along 2015 following the drop in oil prices that took place from the second half of 2014. A majority of long term contract are oil-indexed and gas prices track oil with a time lag of several months, so their effects are further observable in 2015. It is worth mentioning the significant decrease in LNG re-exports from Spanish LNG terminals: 12 operations performed accumulated a total of 16 TWh, which was near four times less than the

¹ See report [INF/DE/114/15](#).

² Influenced by the abandonment of the CESUR auctions and the reliance on the day-ahead spot market by reference retailers selling under the PVPC regime.

³ This supply model is available for electricity customers below 10 kW.

previous year. The Asian Spot LNG price also declined at the end of 2014 and kept close to European markets during 2015, thus making Spanish LNG re-exports less attractive. At retail market, household prices also remain stable in 2015, and the switching rate decreased slightly, but stays above 10%.

Regarding the regulatory aspects, the main developments in the Spanish gas markets in 2015 were the creation of a gas exchange and the implementation of European network codes.

- Creation of a gas exchange (MIBGAS)

Law 8/2015, dated May 21st, amending Law 34/1998, dated October 7th, of the hydrocarbons Sector, establishes the implementation of a gas exchange and appoints MIBGAS S.A. as the Iberian gas market operator. The MIBGAS' shareholders will include the TSOs of Spain and Portugal (ENAGAS and REN), and the Electricity Market operators from both countries (OMEL and OMIP)

In October 2015, was approved the Royal Decree 984/2015, which regulates the principles of the gas exchange, where users can buy and sell gas through free and anonymous transactions. In development of this Royal Decree, Decision of the Ministry of energy, dated 4th December 2015, approved the detailed rules of functioning of the gas exchange.

Finally, trading activity at the MIBGAS gas exchange started on December 16th, 2015

Based on the principles of the Gas Target model, MIBGAS has a platform for trading gas products to be delivered at the Spanish Virtual Balancing Point (PVB) for different time horizons. All shippers, distributors, retailers and big consumers may buy or sell gas via these products according to their commitments and needs. Likewise, and pursuant to the code on the balancing network, the Technical Manager of the Gas System is able to participate in MIBGAS market in order to purchase or sell the gas required to enable it to perform its balancing actions and ensure the viability of the grid.

Trade in the market is organised into Trading Sessions, with the possibility of trade one or more products at each Session. In turn, a session may involve two types of trading: auction or continuous market. Each session's details are specified by means of a Market Resolution. There are currently two types of sessions:

- Daily Trading Session, with trade in Daily Product, Month-Ahead Product and Balance of Month Product.
- Intraday Trading Session, with trade in Intraday Product.

In order to foster liquidity in the Spanish gas market, the Secretary of State for Energy, also approved a Decision, dated December 23rd, which develops the procedure to buy operational gas, establishing its acquisition through daily purchases of gas in the MIBGAS market.

In the near future, MIBGAS exchange will include also trading products at the Portuguese balancing point.

- Implementation of European Gas Network codes

CNMC approved the Circular 2/2015, dated 22th July, establishing balancing rules in the transmission network of the gas system.

This Circular regulates the balance methodology for gas transmission networks, including procedures for calculating imbalances and their charges, as well as the rules for nominating the use of infrastructures and procedures for providing users information related to their balance.

The new balancing regime established by Circular 2/2015 will be fully implemented in Spain by October 2016.

In 2014, in the context of the early implementation of the CAM NC, auctions in the South Gas Regional Initiative (including France, Spain and Portugal) have allocated capacity for the first time at all interconnections between entry-exit systems in the whole region, via VIPs between Portugal, Spain and France. Capacity at these VIPs was allocated via PRISMA in 2014.

According to the roadmap, different auctions for the different time horizons products were gradually introduced since March 2014, in decreasing order until getting day-ahead and daily products in 2015. The full implementation of the CAM NC was reached on November 2015.

Also related to CAM NC, in November 1, 2015, Spain adopted the new gas day for transmission network established by Commission Regulation (EU) n° 984/2013, changing the gas day from 0 to 24 hours to 6 to 6 hours. Resolution of MINETUR, dated 16 October 2015, also approved the treatment of Gas Day the 31st October 2015, which needed to be considered as a day of 30 hours.

During 2015, the South Gas Regional Initiative continued working on a coordinate implementation of CMP procedures among regional TSOs (Enagas, REN, TIGF and GRTgas) and NRAs (CNMC, ERSE and CRE), including the discussion of the over-subscription and buy-back procedures. A TSOs Proposal of the Oversubscription and Buy Back methodology for the Region was submitted to public consultation until 30 October 2015.

- Other regulatory reforms

The Royal Decree 984/2015 introduced also changes regarding the access rules:

- Enagas-GTS will develop a single platform to contract capacity to the Spanish system (not applicable to interconnections with Europe)
- Access contracts will adapt to standard capacity products (annual, quarterly, monthly, daily, intra-day), all throughout the system

- New guarantees system will be developed for imbalances and access contracts. The market operator (MIBGAS) will manage all the gas system guarantees

The implementation of the changes requires the approval of more detailed rules, which is expected during 2016.

In 2015, CNMC approved Circular 1/2015 of 22 July, which develops the regulatory information on costs relating to the regulated activities of transmission, regasification, storage and technical management of the system of natural gas, as well as transmission and operation of the electricity system.

- TSO certification

Spain has already finished the certification process of TSO unbundling. The certifications have been issued and duly notified to the European Commission by CNMC.

- Enagas Transporte S.A.U., the main TSO in Spain, with more than 90% of the Spanish transport pipelines, has been certified under the ownership unbundling model (OU).
- Enagas Transporte S.A.U. has also been certified under Independent System Operator (ISO) model for primary gas transport trunk networks owned by SAGGAS and by Enagas Transporte del Norte.

Finally, Reganosa was certified by CNMC in February 2014 under ownership unbundling model (OU). The CNMC resolution limits the voting rights and the appointment of members to the supervisory board of Reganosa for two shareholders from vertically integrated undertakings (Gasifica and Sonatrach).

3. Electricity

3.1. Network regulation

3.1.1. Unbundling

TSO certification

Law 3/2013 sets forth that CNMC will be in charge of the certification procedure as foreseen by the Directives. In Spain, there is a single TSO for electricity: Red Eléctrica de España (REE).

On 4th November 2011, REE submitted a notification requesting to be certified. The Spanish NRA dealt with the certification procedure and submitted a preliminary decision to the EC on 28th March 2012 proposing the certification of REE as an Ownership Unbundled TSO. REE was certified on 19th July 2012. Following the certification of the Spanish TSO, CNMC monitors the compliance with the certification requirements. In 2014, CNMC issued a monitoring report in order to assess the compliance with the conditions of the certification of REE as OU TSO.

Article 11 of Directive 2009/72/EC (certification with regard to third countries and the corresponding implications on security of supply) is not applicable since REE is not controlled by persons from a third country.

The current legislative framework set forth in the Act 24/2013 of the Power Sector represents the consolidation of the single TSO model in the Spanish System.

By Law, REE SAU is the subsidiary for regulated activities within the REE Group, the holding company being Red Eléctrica Corporación S.A. REE SAU cannot own any shares in companies involved in the generation of electricity or in supply. REE SAU is exclusively dedicated to system operation, management of the transmission grid and transmission. This subsidiary holds all the assets necessary to carry out the activities and assumes all related contracts. On top of the general legal and functional unbundling requirements between regulated and unregulated activities within the group, there are further functional unbundling and accounting separation requirements between SO activities, management of the transmission grid and other activities.

Furthermore, in order to guarantee the independence of the system operator, the Law limits share capital ownership in REE. These equity limits are applicable to the holding company that owns 100% of the regulated activities subsidiary.

Thus, a single person or society cannot, directly or indirectly, own more than 5% share capital or use more than 3% of voting rights. For electricity companies, the limit goes down to 1% of voting rights. The State, via SEPI, must hold at least 10% share capital.

At the date of preparation of this report, the significant shareholders of REC (RED ELECTRICA CORPORACION, S.A.) are those shown in the following table, according to public information of CNMV:

RED ELECTRICA CORPORACION, S.A. Significant shareholders	% Direct shareholding	% Indirect Shareholding
Sociedad Estatal de Participaciones Industriales (SEPI)	20,00	
CAPITAL RESEARCH AND MANAGEMENT COMPANY		3,025
DEUTSCHE BANK, AG	3,465	
FIDELITY INTERNATIONAL LIMITED		1,019

*Table 1. Relevant stakeholders in RED ELECTRICA CORPORACION S.A.
Source: CNMV*

DSO unbundling

Article 12 of the new Act of the Power Sector (Act 24/2013, of 26th December) (former article 14 of repealed Power Sector Act, Law 54/1997), sets forth unbundling requirements for DSOs in line with the Directive 2009/72.

Most of the unbundling requirements were introduced in the Spanish legislation in 2010. DSOs are permitted to belong to a group that undertakes other activities including: power generation, electricity recharging services (for electric vehicles) and selling electricity provided that a separate company performs the regulated activities (the so-called legal unbundling).

In addition, functional unbundling for DSOs is required. This includes management separation and measures relating to effective decision-making rights, in accordance with the 2003 and 2009 Directives.

Between 2010 and 2015, vertically-integrated companies have implemented their compliance programmes (code of conduct for unbundling activities) and submitted required reports on the unbundling measures to the Spanish NRA and to the Ministry.

Law 3/2013 has introduced an explicit and clear function for CNMC consisting of monitoring the functional unbundling among the activities of generation, transmission, distribution and supply in the electricity sector.

Since 2008 CNMC is monitoring the implementation of unbundling measures, including those foreseen in the Royal Decree-Law 13/2012:

- The appointment of the compliance officer of the Distribution System Operator;
- Those measures taken to ensure vertically integrated distribution system operators shall not, in their communication and branding, create confusion in respect of the separate identity of the supply branch of the vertically integrated undertaking and;

- Those measures taken to ensure that staff responsible for the management of distribution system operator does not participate in the company structures of the integrated electricity undertaking which is responsible for the day-to-day operation of transmission of electricity.

3.1.2 Technical functioning

Balancing services

Setting the methodology for the provision of balancing services has been entitled to CNMC by Law 3/2013. In Spain, balancing is a market-based activity comprising secondary reserve (both regulation of capacity and energy), tertiary reserve (energy), load-generation deviations management and constraints management.

The cost recovery for balancing services is designed in a way that provides appropriate incentives for market participants to balance their scheduled injection and consumption. Market participants (including renewable generators) that are imbalanced have to cover the costs incurred to balance the system on the basis of a dual imbalance charge.

SYSTEM ADJUSTMENT SERVICES IN THE SPANISH PENINSULAR ELECTRICAL SYSTEM (GWh)

	2014		2015		Δ % 2015/2014	
	Upwards	Downwards	Upwards	Downwards	Upwards	Downwards
Supply guarantee constraints ⁴	3.260	-	-	-	-	-
Technical constraints ⁵	9.571	110	6.283	178	-34,35	61,44
Additional Upward Power Reserve ⁶ (GW)	4.279	-	2.109	-	-50,72	-
Secondary reserve availability ⁷ (MW)	677	502	685	511	1,25	1,83
Secondary reserve usage	1.746	995	1.366	1.193	-21,75	19,94
Tertiary reserve	3.066	1.765	3.126	1.627	1,94	-7,85
Deviation management service	1.865	571	2.214	549	18,70	-4,00
Real time constraints ⁸	556	1.274	519	1.152	-6,62	-9,61

Table 2. System Adjustment Services in the Spanish Peninsular Electrical System (years 2014-2015)

Source: REE

⁴ In application of Royal Decree 134/2010, as modified by Royal Decree 1221/2010; purveyors of this service are plants burning indigenous coal.

⁵ Technical constraints applied to 'Base Functioning Programme' as established by system Operational Procedure 3.2 (P.O.3.2).

⁶ Total annual additional upward reserve, in GW.

⁷ Average available hourly capacity, in MW.

⁸ Includes energy re-dispatches through the submarine DC interconnection between Peninsular and Balearic Electrical Systems.

Network security and reliability rules

CNMC reports on 'Operational Procedures' (O.P.'s) dealing with security and reliability rules, specifically the ones included in 'Series 1' (1.1 to 1.6, thus establishing criteria on admissible loads, voltage / reactive power control, frequency / regulation capacity reserve, black-start capabilities, etc.)

Law 3/2013 entitled CNMC to monitor the compliance with network security and reliability rules. As for transmission service quality index, their measured values and reference limits are determined by Royal Decree 1955/2000, namely: non-supplied energy (ENS), mean interruption time (TIM, equal to ENS over average load in the system) and grid availability index (ID). The following table shows last available data regarding TIM and ENS, for the peninsular system and for Canary and Balearic Islands.

	ENS (MWh)			TIM (minutes)		
	Peninsula	Balearic Islands	Canary Islands	Peninsula	Balearic Islands	Canary Islands
2008	574	7	1.043	1,15	0,64	58,94
2009	437	39	1.679	0,91	3,41	96,89
2010	1.571	9	4.090	3,17	0,77	241,68
2011	280	39	17	0,58	3,54	1,02
2012	133	7	10	0,28	0,68	0,61
2013	1.156	81	3	2,47	7,50	0,18
2014	204	13	64	0,44	1,21	3,94
2015	53	7	29	0,11	0,64	1,76

*Table 3. ENS (energy not supplied) and TIM (average interruption time in minutes).
Source: REE*

The following figures show the evolution of ENS and TIM since 2003 in the peninsular system.

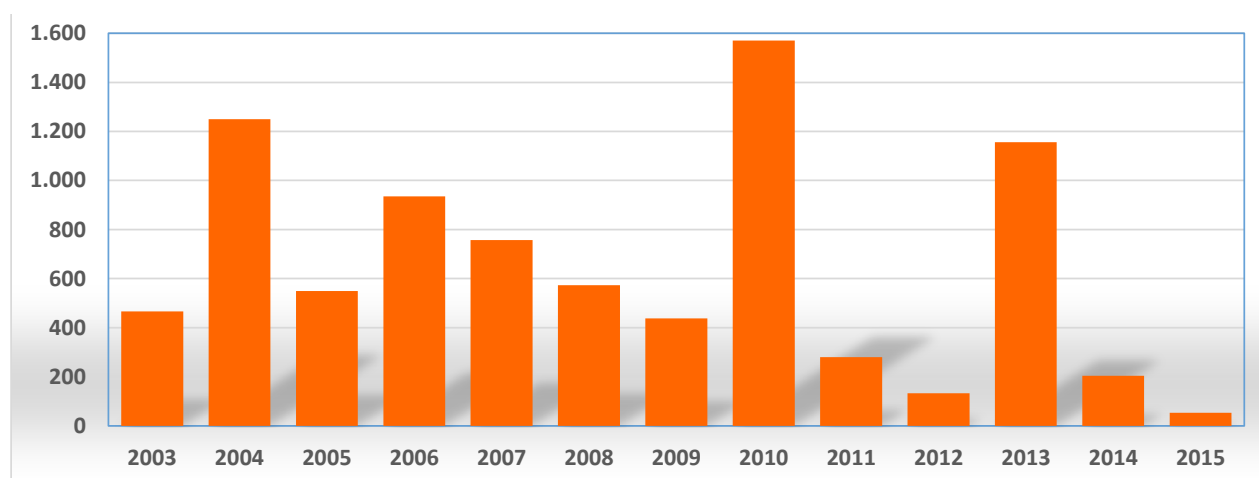


Figure 1. ENS (energy not supplied) due to events in the transmission network until 2015 (MWh).

Source: REE

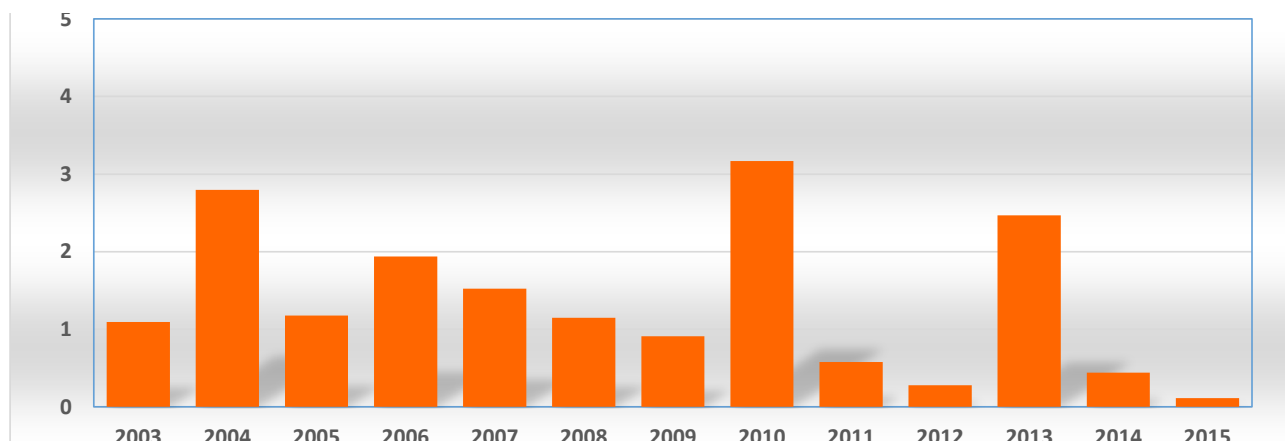


Figure 2. TIM (minutes) due to events in the transmission network until 2015

Source: REE

Regarding grid availability index (ID), the value for the peninsular system was 97.94% in 2015. In the Canary and Balearic Islands ID was 96.76% and 96,88%, respectively.

Act 24/2013 of the Power Sector (article 14) lays down the foundations for the remuneration system for various activities aimed at the supply of electricity. It establishes that the remuneration for the activities will be set by regulations based on objective, transparent and non-discriminatory criteria that provide incentives to increase the efficiency of the management, the economic and technical efficiency of the activities and the quality of the electricity supply.

In this sense, one of the objectives of Royal Decree 1048/2013 is to establish the methodology for determining the amount of remuneration to be paid to companies engaged in electricity distribution activities in order to guarantee the suitable provision of the service, while providing incentives to improve the quality of supply and to reduce losses on the distribution grids with uniform standards throughout the country and at a minimum cost for the system. On May 19th, 2016, the CNMC Regulatory Chamber approved the report about the proposal of remuneration to be paid to companies engaged in electricity distribution activities, including an incentive to improve the quality of supply according to the methodology established in Royal Decree 1048/2013. That incentive is calculated taking into account quality of service standards in distribution through two main indexes, TIEPI and NIEPI, which measure, respectively, the time and number of supply interruptions (in terms of equivalent power interrupted).

Monitoring time taken to connect and repair

This monitoring duty has been assigned to CNMC by Law 3/2013.

As regards the “time to connect”, this is regulated by Royal Decree 1955/2000 (article 103); maximum allowed time varies depending on voltage level and on whether network extensions are needed in order to accomplish the connection. The shortest deadline is five days for low voltage supplies that do not need network extension. According to DSOs’ data, the average actual time taken to connect domestic consumers was 4.15 days. Furthermore, in the case of consumers that have been previously disconnected due to fraud or non-payment, reconnection should be effective the day after the payment of the amount due is effective.

For the next distribution regulatory period (2016-2019), new information requirements for reporting and monitoring times taken to connect and repair are currently under discussion. New information will be required to DSOs concerning network equipment and periods during which it is out of service due to connections, repairs or outages.

In relation to the transmission grid, the System Operator is obliged to declare the time that their facilities are out of service on an individual basis. These data are audited by independent firms which certify the adequacy of the information reported with respect to the collection in the databases of the TSO or companies with transmission assets.

Monitoring safeguard measures

The legal provisions set up by Law 3/2013 reinforced the competences of the Government in this regard and entitled CNMC to ensure the compliance of duties by owners and managers of the transmission and distribution networks.

Throughout 2015, no safeguard measures were taken.

Renewable energies regulatory framework

The Power Sector Act (24/2013) abolished the distinction between Special and Ordinary Regimes. Therefore these concepts disappeared from the Spanish regulation. Renewables, cogeneration and waste participate in the market like any other technology, and complementary revenue will be granted in order to compensate for their higher costs. This complementary revenue is computed in a way that would allow for an appropriate rate of return in a so-called ‘reference facility’, taken as an epitome for each type of plant, taking into account technology and commissioning date and, in some cases, location, fuel, storage capability, etc. According to the Power Sector Act, renewables keep priority access and priority dispatch (all market conditions being equal and subject to technical requirements for the safe operation of the system). Furthermore, renewables remain responsible for their imbalances.

The Royal Decree 413/2014 of 6 June regulates the new remunerative scheme for electricity generation based on RES, cogeneration and waste: the complementary revenue’s main driver is capacity installed. The ‘investment remuneration term’ (R_{inv}) is therefore defined in (€/MW)

and is aimed at providing for the part of capital expenditure (CapEx) deemed not recoverable via income from energy sale at market prices. For those technologies where market price is deemed also insufficient so as to cover regular operational expenditure (OpEx), an 'operation remuneration term' (Ro) defined in (€/MWh) is also provided. Plants located in non-peninsular territories, where conventional production costs are substantially higher than in mainland Spain, are eligible for an additional 'investment incentive term' (linv), again in (€/MW), proportional to expected savings with regard to present average production costs in that particular territory.

'Full (and half) regulatory periods' are defined to last six and three years, respectively. Only regulatory lifetime (in years) and standard investment rate (in €/MW) are established once and for all for each 'reference facility'. Adjustments linked to the evolution of power market prices departing from their expected average values are fine-tuned every three years (in the case of cogeneration and waste, assumed fuel prices reviewed at least once a year). The rest of parameters —included the above mentioned remunerative terms and the estimated rate-of-return, which is linked to the 10-year sovereign bond plus 300 basis points— are subject to revision every full regulatory period (i.e. every six years).

The Ministerial Order IET/1045/2014 of 16 June establishes the remunerative parameters for the more than 1.300 'reference facilities' the order itself defines. This disposition, combined with the Royal Decree 413/2014 and the Royal Decree-law 9/2013, has economic effects since July 2013.

The Royal Decree 900/2015 of 9 October established the economic and technical conditions of self-consumption (regulation applies also to non-renewable based self-consumption). Since a number of system costs are paid in proportion to energy consumed (the so-called *volumetric* component of the tariff), the Decree foresees a charge on energy instantaneously self-consumed to recover such costs. Two types of self-consumption are defined: 'type 2' applies whenever the generator is independently registered as a stand-alone producer, although its production is injected via a consumer's private, internal grid; 'type 1' applies if just a consumer exists (which happens to have an adjoining generation facility). Type 1 self-consumers are not allowed to sell surplus energy, although exemptions are granted to those with contracted power up to 10 kW or located in off-shore (non-peninsular) systems⁹.

3.1.3 Network tariffs for connection and access

The Spanish Power Sector Act, 24/2013, dated December 26th, modifies the access tariff system, previously determined by the former Power Sector Act 54/1997. In line with the provisions of Directive 2009/72/EC, the new framework establishes a differentiation between network tariffs, aimed at recovering transmission and distribution costs, and those charges recovering the rest of regulated costs, such as subsidies to renewables and cogeneration.

⁹ A reduced charge is applied to Mallorca-Menorca subsystem in the most expensive Time-of Use period (out of the existing six ones).

According to Law 24/2013, article 16 defines that CNMC is responsible for elaborating the methodology for the calculation of transmission and distribution network tariffs, in accordance with transparent, non-discriminatory and cost-reflective criteria and the Government will elaborate a methodology relating to the other charges mentioned in the previous paragraph.

However, the above, fourth additional transitory provision of Law 24/2013 establishes that until the Spanish Government develops the methodology of charges, these will be paid by consumers through the access tariffs.

In July 2014, CNMC approved the methodology for electricity transmission and distribution network tariffs. This methodology is based on the efficient allocation of transmission and distribution costs to electricity consumers and producers. The network tariff structure is the result of the allocation methodology.

Law 32/2014, of 22 December, on Metrology, modifies the Power Sector Act, 24/2013, setting that the legal authority to establish the structure and conditions applicable to the access tariffs for transmission and distribution networks corresponds to the Government.

In this way, Royal Decree 1054/2014 introduced a new voltage division for access tariffs for six periods determined in Royal Decree 1164/2001, of 26 October, establishing tariffs for accessing the electricity transmission and distribution networks, such that the 6.1 tariff, which covered voltages from 1 kV to those less than 36 kV, was divided into a first level for voltages greater than or equal to 1 kV and less than 30 kV and another level for voltages from 30 kV to less than 36 kV.

The regulatory changes introduced by Law 32/2014 mean that the CNMC methodology passed in July 2014 is not in force currently.

3.1.4 Cross-border issues

Access to cross-border infrastructure, including the procedures for the allocation of capacity and congestion management

Law 3/2013 set forth that CNMC will approve the methodologies establishing the terms and conditions for access to cross-border electricity infrastructures according to the criteria set forth by regulation. The Order IET/107/2014, which reviews the electricity access tariffs for 2014, abolished Order ITC/4112/2005, which regulated cross border exchanges (except its article 5). Accordingly, CNMC approved on 12th March 2014 the methodology establishing the terms and conditions for access to cross-border electricity infrastructures and the methodology for cross border balancing exchanges (Circular 2/2014 of CNMC).

This framework facilitates the implementation of the target models for long term, day-ahead and intraday cross-border capacity allocation connecting the Iberian market (Spain and Portugal) with the rest of Europe. The methodology considers long term capacity allocation through a European platform, day-ahead market coupling and balancing exchanges (performed through

the BALIT platform). Pursuant to this new framework, CNMC approves the rules for capacity allocation (in the previous framework, these rules were approved by the Ministry).

In November 2015, CNMC approved¹⁰ the EU Harmonised Auction Rules for long-term capacity allocation in both IPE (interconnection Portugal-Spain) and IFE (interconnection France-Spain), the Shadow Auction rules to be applied as fallback for day-ahead market coupling in IFE and the “IFE rules version 4” that regulate intraday capacity allocation in IFE.¹¹

• French-Spanish interconnection (IFE)

An important increase in interconnection capacity across the Pyrenees became operational in October 2015, which can be observed in the following figure. The maximum hourly commercial capacity in 2015 was 2,950 MW in the direction France to Spain and 2,750 MW in the direction Spain to France.

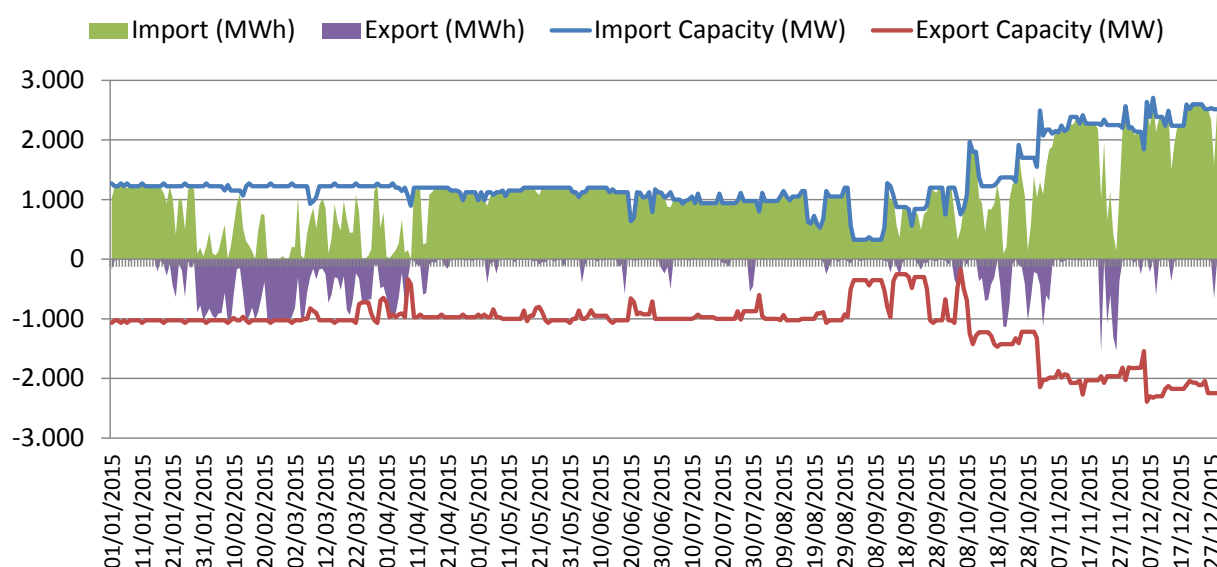


Figure 3. Commercial exchange capacity (daily average) and market matched energy between Spain and France in 2015.

Source: CNMC

In the context of the South-West Europe (SWE) region of the ACER Electricity Regional Initiative, the following developments took place in the French-Spanish interconnection:

- **Long term capacity allocation:** A new version of the Harmonised Auction Rules of CASC with some enhancements, including the interconnection France-Spain, were approved and published towards the end of 2014. These rules of CASC were applied to the annual and monthly capacity auctions of IFE with delivery in 2015. As stated above, in

¹⁰ See report [INF/DE/114/15](#).

¹¹ http://www.cnmc.es/LinkClick.aspx?fileticket=4A-E_D-TAEw%3d&tabid=872&portalid=0&mid=2369&language=es-ES

November 2015, CNMC approved the EU Harmonised Auction Rules for long-term capacity allocation in IFE (annual and monthly capacity auctions).

- Day-ahead capacity allocation: On 13th May 2014, the SWE region launched the full coupling with NWE. The combined day-ahead markets of the NWE and SWE areas (so called Multi Regional Coupling) cover 17 European countries. This achievement was a stepping stone towards a common day-ahead electricity market in the EU. As stated above, in November 2015, CNMC approved the Shadow Auction rules to be applied as fallback for day-ahead market coupling in IFE.
- Intraday capacity allocation: In line with the target model, implicit continuous allocation will be implemented in the French-Spanish interconnection in the context of the so-called XBID project, where the Iberian NEMO (Nominated Electricity Market Operator), which is the Iberian Electricity spot Market Operator (OMIE) participates. The go live of this platform is foreseen by late 2017. The parties of this project are adapting to the new framework set forth by the CACM GL Regulation which entered into force on 14 August 2015.

• Portuguese-Spanish interconnection (IPE)

In this interconnection, all the physical cross-border available capacity is implicitly allocated day-ahead and intraday by means of a market splitting mechanism within MIBEL. The degree of congestion in the Portuguese-Spanish interconnection has followed a downward trend. While in 2007 the interconnection was congested around 80% of the time, in 2015 market splitting was applied hardly 2% of the time (i.e. 212 hours over 8.760 hours). It is worth mentioning that the maximum import capacity in 2015 reached 3.700 MW while the export capacity reached 3.200 MW.

In the context of MIBEL and the SWE region of the ACER Electricity Regional Initiative, the following developments are highlighted for the Portuguese-Spanish interconnection:

- Day-ahead capacity allocation: In line with the target model, day-ahead implicit allocation (market splitting) has been applied in the IPE since 2007. The Day-ahead Gate Closure Time was shifted to 12.00 CET in order to pave the way to the implementation of the European common matching algorithm (EUPHEMIA) and coupling with NWE. As mentioned in the previous section (about IFE), on 13th May 2014 the SWE region launched the full coupling with NWE.
- Intraday capacity allocation: Currently, there is market splitting mechanism on the basis of six intraday implicit auctions a day. There is a proposal by OMIE to combine intraday implicit continuous allocation with intraday implicit auctions in the MIBEL respecting the provisions of the CACM GL. As an interim step, the number of intraday auctions a day may increase thus reducing the time lapse between the gate closure time of each intraday auction and real time (i.e. moment of delivery of the energy).

- Long term capacity allocation: Under the MIBEL Council of Regulators context, the Spanish and Portuguese NRAs (CNMC and ERSE respectively) agreed on the general regulatory framework of the coordinated mechanism for issuing FTR-options. On the Spanish side, on 17 March 2014 the already mentioned Circular 2/2014 of CNMC, of 12 March, was published in the Spanish Official Gazette, establishing the methodology for cross border infrastructure access, including the procedures for capacity allocation and congestion management, as well as the methodology for the provision of equilibrium services between systems managed by different System Operators. This Circular contains a specific Chapter II dedicated to the interconnection between Spain and Portugal which includes the principles of the coordinated mechanism for the long term management of this interconnection. The primary issuers in these auctions are the TSOs from Spain (REE) and Portugal (REN). The net revenues –discounting the amounts derived from the settlement of the auctioned products– resulting from the allocation of interconnection shall be used for only the two following purposes: (a) guaranteeing the actual availability of the allocated capacity; and/or (b) maintaining or increasing interconnection capacities through network investments, in particular in new interconnectors. The first joint auction of electricity interconnection capacity between Spain and Portugal took place on 25th March 2014. Since then, quarterly and annual auctions of fully firm FTR-options take place in the OMIP-OMIClear platform.

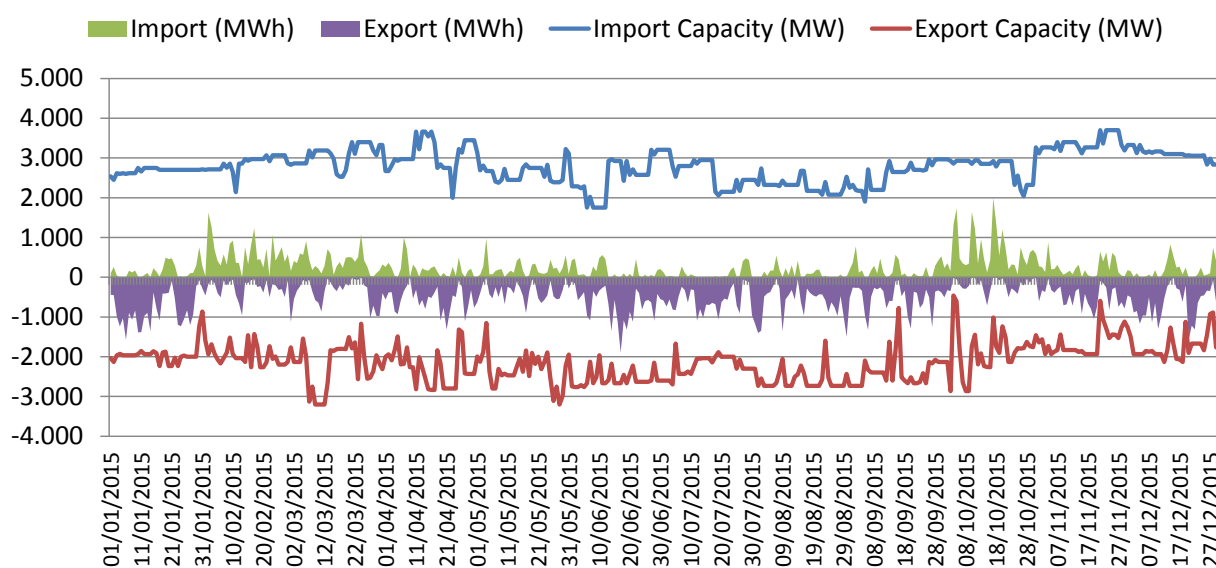


Figure 4. Exchange capacity and market matched energy between Portugal and Spain in 2015.

Source: CNMC

Cross-border balancing exchanges

The exchanges under the BALIT platform were successfully extended to Portugal and Spain as from June 2014. Under this platform, bilateral TSO-TSO exchanges of balancing energy between neighboring systems (i.e. Portugal – Spain or Spain – France) are carried out. The

volumes exchanged have increased in 2015 considerably compared to the volumes exchanged in the second half of 2014 (since go-live of the mechanism).

	(from/to) Portugal	(from/to) France
Import (MWh)	37.350	15.650
Export (MWh)	109.600	128.150
Total exchanged energy (MWh)	146.950	143.800

Table 4. Balancing energy exchanged with neighbouring systems in 2015 (MWh).

Source: REE

Monitoring technical co-operation between European Union and third-country TSOs

This monitoring has been incorporated as a new duty for CNMC by means of Law 3/2013. In this regard, CNMC monitors exchanges between the Spanish and Moroccan systems in accordance to the existing provisions included in the Spanish legislation. It is worthy to note that Morocco is synchronized to the continental European transmission system through the interconnection with the Spanish system.

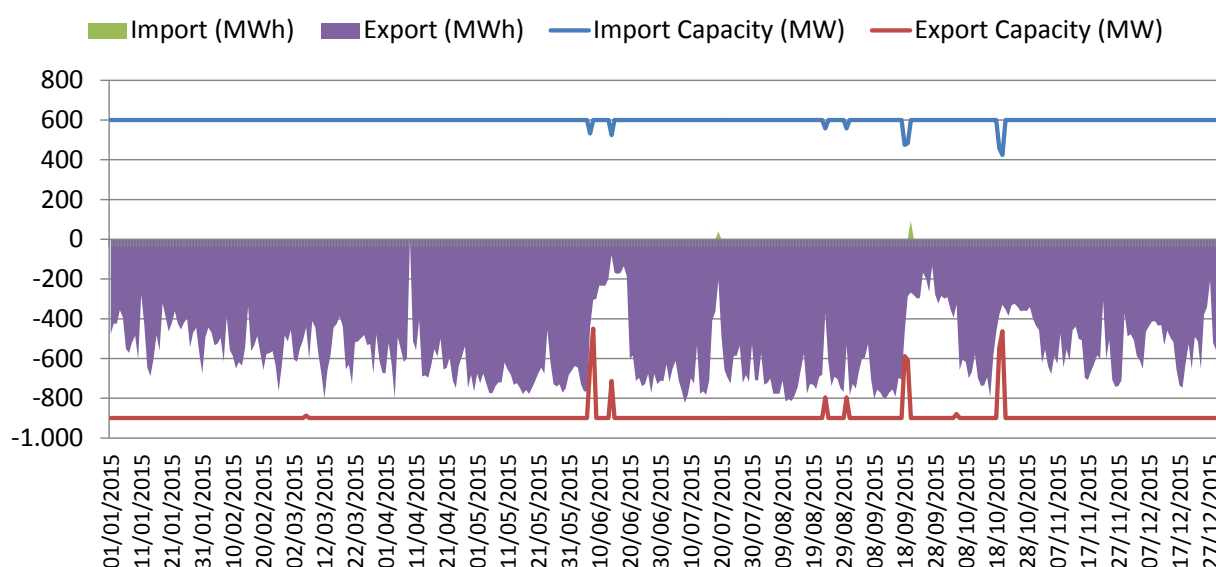


Figure 5. Exchange capacity and market matched energy between Spain and Morocco in 2015.

Source: CNMC

Monitor TSO investment plans in view of TYNDP

This competence has been transposed by Law 3/2013. However, the Spanish NRA already monitored the investment plan of the TSO on a regular basis.

The Act 24/2013, of the Power Sector, establishes the basics of electricity planning incorporating tools to link the level of investment to the situation of the economic cycle, and the principles of economic sustainability. Annual investment limits are established in addition to the possibility of a special review of it from unexpected events affecting the efficiency, security and safety; as well as the necessary coordination of network planning with urban planning.

In addition, the Royal Decree 1047/2013, in its Articles 11 to 14, provides quantification and monitoring of these annual investment plans and their consistency with the National long term Plan.

As regards the connection between the EU and national long term network development plans, an assessment of consistency between the EU-wide TYNDP 2014 and the Spanish national plan was carried out in the framework of ACER. In addition, CNMC participated in the ACER Opinion on the TYNDP 2014 which includes considerations concerning Spain.

The national long term network development plan currently in force was subject to CNMC's report on April 2015 and covers the period 2015-2020, as well as some investments with a longer lead time (2022) in order to encompass the infrastructures included in the TYNDP 2012 and 2014.

Cooperation

Law 3/2013 has incorporated this duty as one of CNMC's objectives. CNMC has a firmly established cooperation with the NRAs of France and Portugal on cross-border issues, especially in the context of the MIBEL and the SWE region. Besides, CNMC cooperates with all NRAs of the EU in the context of CEER, the ACER Regulation as well as other relevant Regulations such as REMIT and the Network Codes.

3.1.5 Compliance

Compliance of regulatory authorities with binding decisions of the Agency and the Commission

Royal Decree-Law 13/2012 obliges the Spanish NRA to comply with and put into practice those pertinent and binding decisions issued by ACER and the EC. Throughout 2015, there weren't any binding decisions issued by the EC or ACER towards the Spanish NRA.

Compliance of transmission and distribution companies, system owners and electricity undertakings with relevant Community legislation, including cross-border issues

CNMC ensures compliance of transmission and distribution system operators and, where relevant, system owners, as well as of any electricity undertakings, with their obligations under Royal Decree-Law 13/2012, the Act 24/2013 of the Power Sector or any other legal provision, including cross-border issues.

Following the certification of the Spanish TSO (the final decision was issued on 19 July 2012) CNMC monitors the compliance with the certification requirements. As far as NC/GL compliance is concerned, CNMC is working on the formal implementation of CACM GL provisions together with the rest of the NRAs and monitors the obligations of the Spanish TSO and the NEMO designated in Spain in this context.

3.2 Market Functioning

3.2.1 Wholesale markets

3.2.1.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

The duties contained in article 37(1)(i) and (j) of Electricity Directive have been transposed by the Law 3/2013.

Spot market

The wholesale (spot) market in Spain is made up of an organised part and a non-organised part. The organised market is structured around a day-ahead market followed by six intraday auctions. The day-ahead spot market is coupled with Portugal since July 2007 and with the NWE region since 13th May 2014. 175.97 TWh were sold in the Spanish zone of the organised day-ahead spot market in 2015 while in the intraday market, 28.32 TWh were sold in the Spanish zone. The non-organised part consists of physical bilateral contracts, whose economic terms and conditions are agreed between the signing parties (which are not known by CNMC but whose nomination has to be notified to the Market Operator). During 2015 bilateral contracts represented 30% of the sold energy in the daily programme (PBF: Functioning Base Programme).

- Prices

In 2015, the weighted¹² average market price was 62.87 €/MWh (higher than previous year). The daily market price has represented in Spain 82% of the final price, the capacity payments a further 8%, and the solution to technical restrictions, the secondary regulation and other technical operation processes accounted for 7%, while payments to demand-side management (interruptible demand) accounted for 3%.

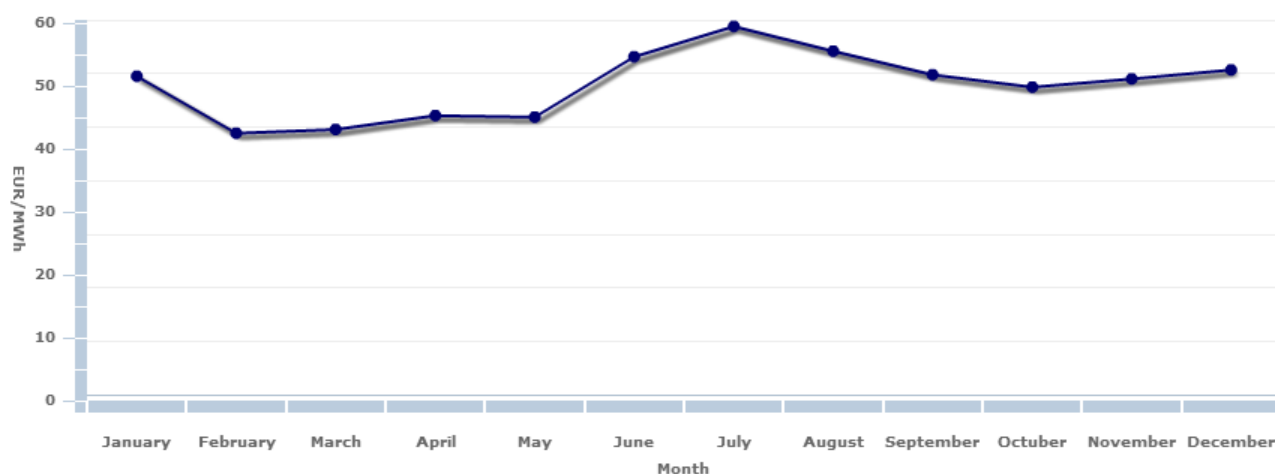


Figure 6. Spanish electricity day-ahead spot market prices in 2015 (monthly average).

¹² Including different market sessions, plus balancing and reserves costs.

Source: OMIE

- Transparency

Spot market prices (day-ahead and intraday) are published at OMIE website (www.omie.es) a few hours after the auctions are finished. Three months later, the names of the suppliers are published.

- Effectiveness of competition

The Iberian spot market is very liquid; it gathers 930 agents. Competition can be analysed through several indicators. In the case of Spanish day-ahead market, prices in 2015 were higher than the average European spot market prices. This is due to several factors, namely the G-charge (0.5 €/MW) and national taxes imposed on generation which are internalised by market participants in their sell bids.

The level of competition is higher in the day-ahead and intraday markets than in balancing and technical constraints markets. However, in 2015 a new regulation allowing the participation of generation based in renewables, cogeneration and waste in balancing markets was approved. Therefore, since February 2016, more generators (in particular wind generators) have qualified to participate in balancing markets which is positive for competition since the new generators qualified belong to both, incumbent companies and new entrants.

In the last years, coal and hydro power plants are usually the marginal technologies that set the price in the day-ahead market. Combined cycles are only setting the price in moments of high demand. Finally, the fact the interconnection capacity with France has been doubled as from October 2015 has a positive effect on competition, in particular for the day-ahead market.

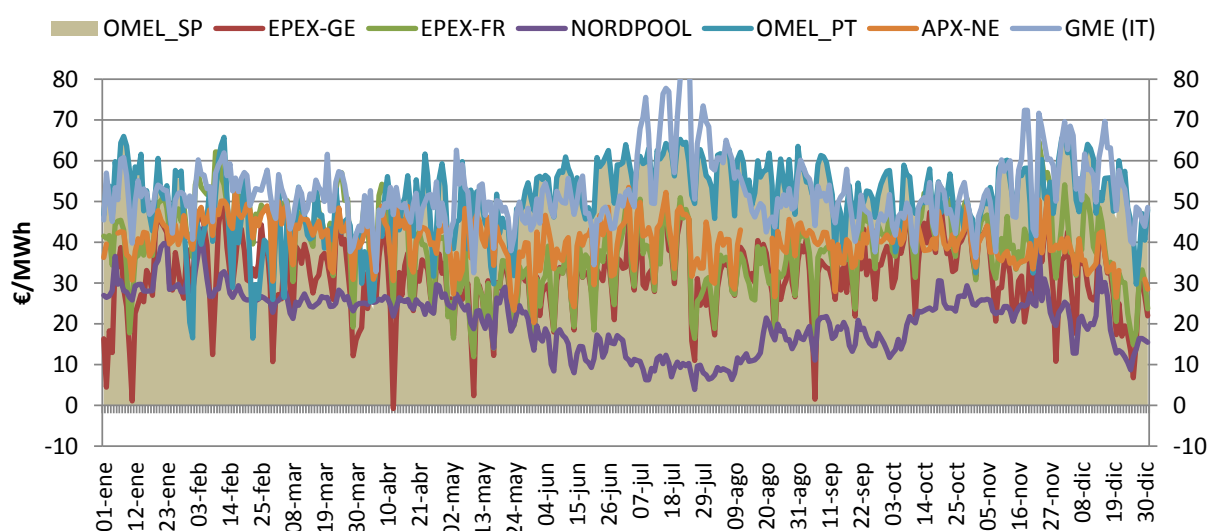


Figure 7. European electricity day-ahead market prices in 2015.

Source: European PX

Balancing market

As for concentration in the balancing market, the tables below show the evolution of market shares by company for secondary reserve (regulation capacity), tertiary reserve and deviations management (both up- and downwards, respectively):

	2012	2013	2014	2015
Endesa	32,9%	34,2%	32,2%	34,5%
Iberdrola	22,0%	25,0%	24,9%	22,8%
Gas Natural Fenosa	17,7%	21,2%	21,9%	17,6%
EDP	13,8%	8,3%	8,0%	9,6%
Viesgo	7,2%	6,0%	7,9%	7,2%
Others	6,5%	5,3%	4,9%	8,3%

Table 5. Secondary reserve (regulation capacity) market shares (years 2012-2015)

Source: CNMC, REE

	2012		2013		2014		2015	
	Downwards	Upwards	Downwards	Upwards	Downwards	Upwards	Downwards	Upwards
Endesa	21,2%	32,6%	28,5%	28,2%	29,8%	30,3%	35,2%	31,1%
Iberdrola	24,7%	25,3%	38,5%	34,7%	37,7%	32,3%	34,3%	28,4%
Gas Natural Fenosa	12,2%	21,5%	12,5%	22,9%	11,5%	23,1%	8,0%	24,5%
EDP	6,6%	6,7%	4,9%	4,8%	4,1%	4,4%	4,8%	4,8%
Viesgo	11,5%	7,7%	11,0%	6,6%	13,6%	6,4%	14,2%	7,7%
Others	23,7%	6,2%	4,5%	2,9%	3,3%	3,4%	3,5%	3,5%

Table 6. Tertiary reserve plus deviation management market shares (years 2012-2013-2014-2015)

Source: CNMC, REE

The dominant OTC market

The OTC traded volumes in 2015 (140 TWh) decreased 50.6% compared to 2014 (283.2 TWh). Figure 8 shows the evolution of the OTC traded volumes since year 2007. This significant reduction can be related to several factors like the abandonment of the CESUR auctions and the reliance on the day-ahead spot market by reference retailers selling under the PVPC regime, or the potential impact of MiFID II in terms of requirements to energy trading companies.

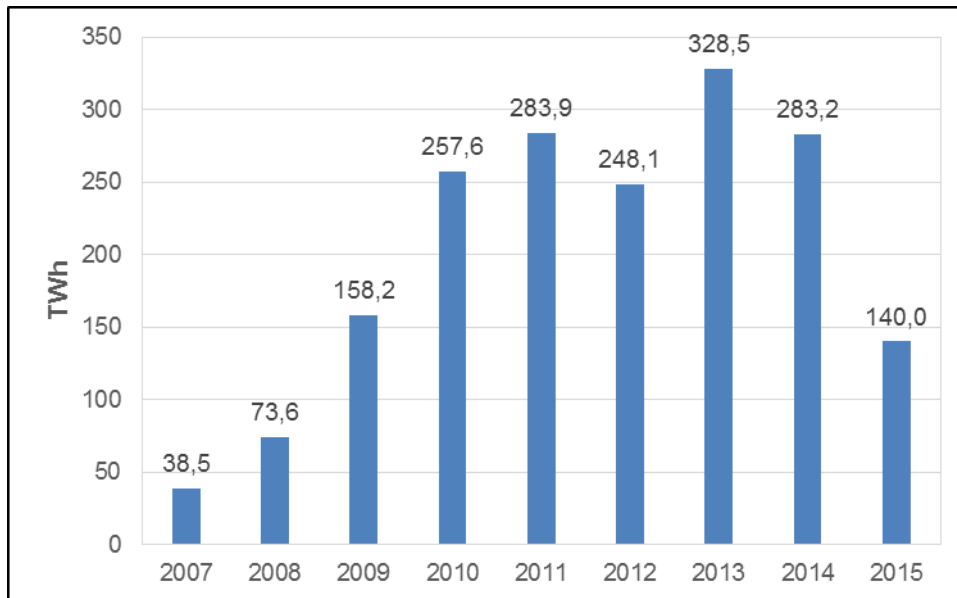


Figure 8. Accumulated OTC volume traded in one year (TWh) (2007 to 2015)
Source: CNMC with data from brokers

- Prices

The Spanish OTC market (“Over The Counter”) is a non-organized bilateral market, in which traders (usually by means of a broker), trade forward contracts with cash settlement. Hence, according to article 2.3 of the Securities Market Law, they have to be considered as financial instruments. In the Spanish market, the supervision of the financial contracts traded in the OTC market is under the scope of the MiFID II and MiFIR¹³ and the Securities Market Law¹⁴, and thus of the Spanish Securities Markets Commission (*Comisión Nacional del Mercado de Valores, CNMV*).

Therefore, it is necessary to focus the supervision of this market with a coordination perspective between CNMV and CNMC. In this sense, the Directive 2009/72/EC indicates in its recital 39 the necessary cooperation between energy market regulators and financial market regulators in order to enable each other to have an overview over the markets concerned.

In the scope of the cooperation between regulatory agencies, Regulation (EU) N° 1227/2011, of 25 October 2011, on Wholesale Energy Market Integrity and Transparency (REMIT) states explicitly as necessary in its Recital 29 that “*national regulatory authorities, competent financial authorities of the Member States and, where appropriate, national competition authorities*

¹³ MiFID II: Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

MiFIR: Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012.

¹⁴ Law 24/1988.

should cooperate to ensure a coordinated approach to tackling market abuse on wholesale energy markets which encompasses both commodity markets and derivatives markets”.

The improvement of the supervision of the OTC market is also under the scope of application of REMIT. This Regulation, aiming to improve the market integrity and transparency of the wholesale energy markets, specifies that the wholesale energy markets “*encompass both commodity markets and derivative markets*”, that “*include, inter alia, regulated markets, multilateral trading facilities and over-the-counter (OTC) transactions and bilateral contracts, direct or through brokers*”, and that the “*price formation in both sectors is interlinked*”.

Although CNMC has limited information over OTC power transactions (volumes and transaction prices, through the information voluntarily submitted by the main brokers), by means of the Collaboration Agreement between the Spanish NRA and the Spanish Securities Market Commission (CNMV), signed on 3 July 2012, CNMC can ask CNMV data about OTC transactions regarding the supervision of wholesale energy markets in the context of investigations into potential market abuses¹⁵.

CNMC has access to all data traded/registered in OMIP-OMIClear, by means of the existing cooperation procedures between the members of the MIBEL Regulatory Council.

Under REMIT, CNMC will have access to relevant information held by ACER which it has collected in accordance with paragraph 1 (transactions, including orders to trade) of Article 8. In this sense, according to article 12.2 of Commission Implementing Regulation (EU) N° 1348/2014, on 7 October 2015 started data reporting of contracts executed at organised market places¹⁶, including matched and unmatched orders. Details of contracts concluded outside an organised market places started on 7 April 2016.

- Transparency

CNMC publishes monthly supervisory reports of the electricity forward markets in Spain with aggregated data from all the existing forward market mechanisms and trading venues (i.e. OTC market, the futures market managed by OMIP, and the cleared volumes in the clearing houses (OMIClear, BME Clearing and EEX-European Commodity Clearing (ECC)¹⁷).

¹⁵ This was possible by the Sustainable Economy Act, whose 5th final disposition modified the Securities Market Law, enabling the information exchange between CNMV and the entities composing the MIBEL Regulatory Council.

¹⁶ According to article 2.4 of Commission Implementing Regulation (EU) N° 1348/2014, “organised market place” or “organised market” include electricity and gas exchanges, brokers and other persons professionally arranging transactions, and trading venues as defined in Article 4 of Directive 2014/65/EU of the European Parliament and of the Council (MiFID II).

¹⁷ Since the beginning of 2014, the base load futures whose underlying price is the Spanish spot price (“FTB” contracts), with financial settlement, can be registered, cleared and settled in EEX-European Commodity Clearing (ECC). Likewise, the base load futures whose underlying price is the German/Austrian spot price and the base load futures whose underlying price is the French spot price, with financial settlement, can be registered, cleared and settled in OMIP-OMIClear. Also since 15

- Effectiveness of competition

So far there has been limited information available regarding the considerable volume of transactions conducted in OTC markets, as well as for the physical bilateral contracts (particularly contracts between companies of the same group).

According to Commission Implementing Regulation (EU) N° 1348/2014, the NRAs will have access to transactions, including orders to trade, to be submitted by the market participants (as previously commented, data reporting of traded data on organised market places, and capacity and use of electricity and natural gas facilities, started on 7 October 2015), as well as financial data, the latter by means of the MoU ACER-ESMA¹⁸. This will allow CNMC to perform an integrated supervision.

The power futures market managed by EEX

Since 15 February 2015, Spanish power futures and options can be traded in the European Energy Exchange (EEX).

The energy traded in the continuous market of the European Energy Exchange (EEX) during year 2015 amounted to 0.6 TWh. The OTC volumes cleared and settled by EEX-European Commodity Clearing (ECC) amounted to 21.7 TWh in 2015, much larger than in the previous year (1.4 TWh in 2014).

The power futures market managed by OMIP

In the context of the MIBEL Regulatory Council, Spanish NRA supervised the futures market managed by OMIP¹⁹, in co-ordination with the other members of the MIBEL Regulatory Council. Such a market started on 3rd July 2006. The rules of this market are registered on the Portuguese Securities Market Commission (Comissão do Mercado de Valores Mobiliários, CMVM).

The energy traded in the continuous market of the MIBEL futures market managed by OMIP during year 2015 amounted to 15.4 TWh, lower than in the previous year (37.5 TWh in 2014)²⁰.

February 2015, Spanish power futures and options can be traded in the European Energy Exchange (EEX).

¹⁸ MoU ACER-ESMA concerning the consultation and cooperation regarding their regulatory responsibilities in relation to EU wholesale energy markets, signed on 18 July 2013.

¹⁹ *Operador do Mercado Ibérico de Energia SGMR, S.A.* (Iberian Energy Market Operator, Portuguese side).

²⁰ Additionally, 5.7 TWh were traded through OMIP auction mode for selling special regime production in Portugal, 8.8 TWh for selling FTR-options (auction of electricity interconnection capacity between Spain and Portugal) and 0,3 TWh for buying Mini Swap SPEL Solar Products. In particular, on 24 March, 24 June, 22 September and 15 December 2015, auctions in which the Portuguese last resort supplier (EDP Serviço Universal, S.A.) sells special regime production in Portugal (known PRE auction, “Produção em Regime Especial”) were performed. On the other hand, on 18 March, 9 June, 17 September and 10 December 2015, coordinated auctions in which TSOs from Spain (REE) and Portugal (REN) sell FTR-

The OTC volumes cleared and settled by OMIP clearing house (OMIClear) decreased also in 2015 (31 TWh) compared to 2014 (49.6 TWh).

Figure 9 shows the trading evolution (in terms of energy traded) in the MIBEL futures market (OMIP auctions and OMIP continuous market), the volumes traded in the OTC market, and the part of such volumes registered in OMIP and cleared and settled by OMIClear²¹ (OMIP clearing house, central counterparty and managing entity of the settlement system).

Additionally, other clearing houses, BME Clearing and European Commodity Clearing (ECC) are active. BME Clearing is active since 21 March 2011 for OTC clearing of Iberian power derivatives and EEX-ECC is active since the beginning of 2014. The accumulated cleared volume during year 2015 in BME Clearing reckons 23.1 TWh, lower than in the previous year (32.1 TWh in 2014) and in European Commodity Clearing (ECC) increased to 21,7 TWh (1,4 TWh in 2014).

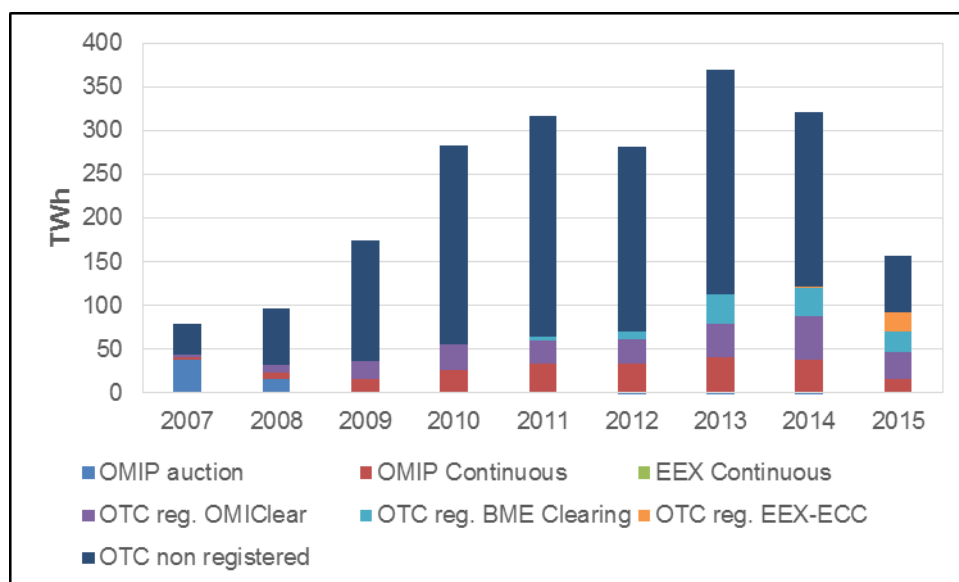


Figure 9. Evolution of accumulated traded volumes per year in OMIP auctions and continuous market, and OTC volumes registered in OMIClear, BME Clearing and EEX-European Commodity Clearing (ECC) (TWh)

Source: Brokers, OMIP-OMIClear, Bolsas y Mercados Españoles (BME) and EEX-ECC

- Prices

Figure 10 shows the daily evolution of the Spanish electricity spot (day ahead) and futures prices during 2015. For the spot price, the daily average published by OMIE is considered. For

options were performed. Alongside with the Solar Product, OMIP managed an auction on 29 September, in which ENDESA, the auction promoter, bought Mini Swap SPEL Solar Products. These products allow solar producers to reduce the risk by hedging the energy price.

²¹ Sociedade de Compensação de Mercados de Energia

the futures prices, settlement prices published by OMIP are used. The prompt month, quarter and year contracts (“M+1”, “Q+1” and “Yr+1” respectively) for the base load futures whose underlying price is the Spanish spot price (“FTB” contracts) are shown. The volatility of the spot prices is much larger than the volatility of the futures prices, due to the strong renewable penetration. The annual average price for the spot price in 2015 (50.32 €/MWh) is larger than the average settlement prices for the futures contracts whose underlying price is the Spanish spot price in 2015 in their whole trading horizon (47.80 €/MWh for the prompt month contract, 47.96 €/MWh for the prompt quarter contract and 50.06 €/MWh for the prompt year contract). The futures contracts showing larger volatility in the next figure are the monthly contracts, fluctuating between 28.75 €/MWh and 56.43 €/MWh.

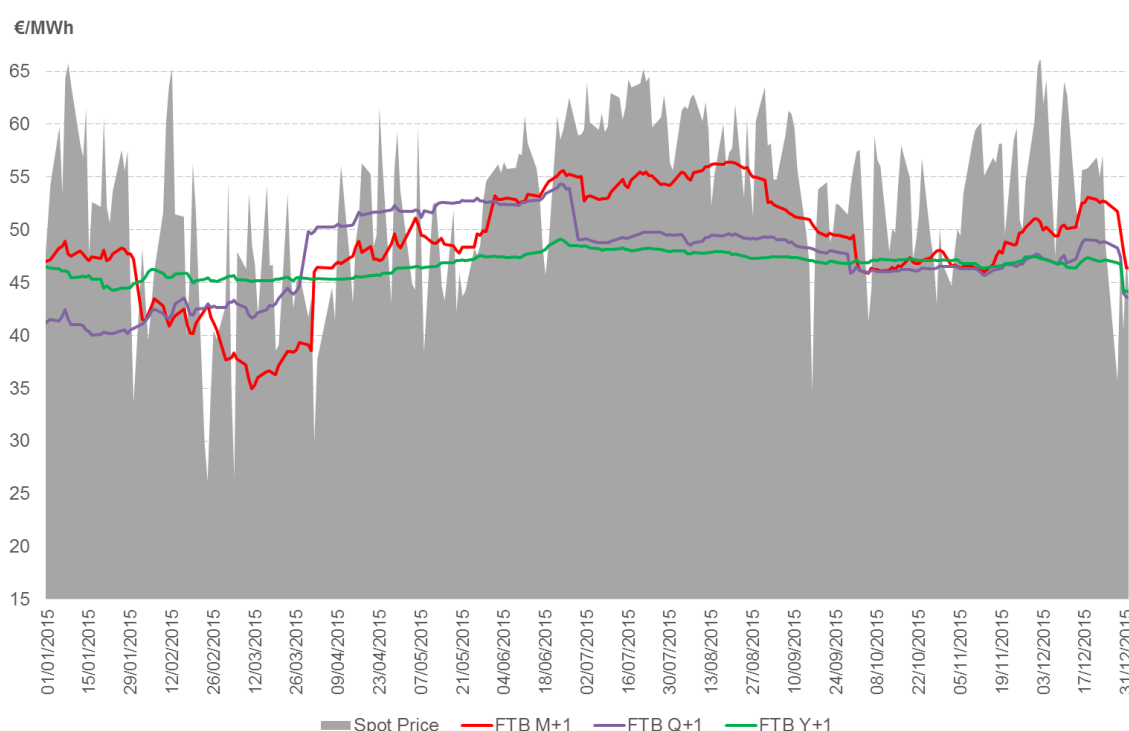


Figure 10. Evolution of daily spot prices and prompt month, quarter and year (“M+1”, “Q+1” and “Yr+1” respectively) futures prices (€/MWh) during year 2015.

Source: OMIE and OMIP-OMIClear

• Transparency

The following sources provide information regarding post-trade transparency. They are available by the existing clearing houses and the power futures market operator:

- Historical aggregated data per contract regarding settlement prices, best bid and offer, traded and cleared volumes, and open interest by OMIP-OMIClear, as well as daily market bulletins with the key statistics of the trading sessions and information of any special event (e.g. market maker agreements, new trading member, special regime

auctions in Portugal, FTR auction related to the Portugal-Spain electricity interconnection, etc.).

- Historical aggregated data per contract regarding settlement prices, cleared volumes and open interest by BME Clearing.
- Historical aggregated data per contract regarding settlement prices, cleared volumes and open interest by EEX-ECC.
- Effectiveness of competition

The amount of registered members in OMIP, in BME Clearing and EEX-ECC grow steadily, in the third case at a faster pace.

At the end of 2015, there were 63 trading members registered in OMIP (55 trading members in 2014) and 109 (81 trading member in 2014) in BME Clearing. EEX attracts trading participants from all over Europe to trade on its platform. In total, 76 participants are admitted to trading Spanish Power at EEX, including 66 customers that are based outside Spain.

Regarding OMIP general highlights in year 2015: (i) launch of Mini Swap SPEL Solar Products; (ii) launch of Spanish and Portuguese Day Ahead Products (offering to its clients the possibility of trading directly on the screen all the forward curve beginning from the shortest maturity).

Regarding OMIP Trading highlights in year 2015: (i) OMIP reached a total screen trading (i.e. auction and continuous) volume of 29.9 TWh²², representing an decrease of 65,7% facing 2014; (ii) monthly record in continuous trading last December with 2.2 TWh; and (iii) monthly record in Call Auction in September 2015 with 4.8 TWh.

Regarding OMIClear highlights in year 2015: (i) OMIClear reached a total cleared volume of 60.9 TWh²³ (-40.6% compared to 2014: 102.4 TWh); (ii) records in terms of OTC registration (monthly records in December –around 9.8 TWh–).

Regarding Market Making highlights in OMIP: a new Market Maker for Options products (Endesa Generación S.A.U) in 2015. Total Market Makers in OMIP in 2015: EDF Trading, Xpco Iberia and Endesa Generación S.A.U.

Regarding BME Clearing highlights in year 2015: (i) increase in number of participants (+38%) and registered operations (-39,1%) versus year 2014; (ii) fourth complete year for MEFF Power, registering 23,1 TWh in 3,378 operations (32,1 TWh in 5,082 operations in 2014); (iii) new 30 participants in year 2015, operating 88; and (iv) open interest at the end of 2015: 8,5 TWh, +224% above 2014.

²² 15.4 TWh in OMIP continuous market and 14.5 TWh in OMIP auction (5.7 TWh were traded through OMIP auction mode for selling special regime production in Portugal and 8.8 TWh for selling FTR-options).

²³ Auction, continuous and OTC cleared.

Regarding EEX-ECC highlights in year 2015: (i) the energy traded in the continuous market of the European Energy Exchange (EEX) during year 2015 amounted to 0.6 TWh; and (ii) the OTC volumes cleared and settled by EEX-European Commodity Clearing (ECC) amounted to 21.7 TWh in 2015, much larger than in the previous year (1.4 TWh in 2014).

Monitoring the occurrence of restrictive contractual practices

The Royal Decree-Law 13/2012 reinforced this duty. As a consequence, CNMC is entitled to analyse specific cases following a complaint of the affected party. Furthermore, CNMC can address this issue on its own initiative as competition authority.

Respecting contractual freedom with regard to interruptible supply contracts and with regard to long-term contracts

Law 3/2013 have incorporated this duty as one of CNMC's functions. CNMC intervenes after the receipt of a complaint as regards breaches of contractual freedom. This activity is performed under the framework of market monitoring activities.

In case some demand has to be curtailed, there is a regulated service provided on a voluntary basis by some consumers called "interruptible demand". The revenue regime for this service was revised in 2013 by Order IET/2013/2013, of 31st October. This revision took place considering the low demand and high penetration of renewable generation.

In the new regime, the service providers' selection and the revenue level are fixed through an auctioning mechanism. The first auction, for 2015, took place in November-December 2014. 3.020 MW of interruptible demand were assigned, with a total cost of 508 million €.

3.2.2 Retail market

In 2008, the Government approved the Substitution plan for all Spanish residential meter (up to 15 kW contracted power) for new smart metering devices before the end of 2018.

The Act 24/2013 of the Power Sector and the Royal Decree 216/2014 modified the regime of the last resort supply and introduced the so called "voluntary price for small consumers" (known by the acronym in Spanish: PVPC) for consumers below 10 KW. As from 1st January 2014, the last resort regulated tariff for small consumers disappears. Instead, small consumers can opt to be supplied at the voluntary price for small consumers. According to this new regulation, as from 1st April 2014, last resort tariffs are only available to: i) vulnerable consumers and ii) consumers that not having the right to be supplied under the regime of voluntary price for small consumers, do not have a free market supply contract in force.

The mentioned Royal Decree establishes the methodology for calculating the voluntary price for small consumers. These prices include the energy cost (price resulting in the spot market and

ancillary services during the period), the applicable access tariffs and other charges such as the margin of the reference supplier²⁴. The “reference suppliers” have the obligation to apply these prices to the small consumers that wish to be supplied with a variable price. Additionally, the reference suppliers must offer a (not regulated) fix price for one year. The idea is that some consumers may wish to have an ex-ante fix price instead of an ex post variable price.

The Resolution of 2nd June 2015 of the Secretary of State for Energy approved the Operational Procedures necessary to start issuing bills to customers equipped with smart meters based on hourly consumption and hourly prices. The first bills of this kind were issued on October 2015. This model provides a dynamic price signal to small customers and consequently, a way to implicitly participate in the market by shifting consumption to the hours of the day where energy is cheaper.

The number of customers supplied under the PVPC regime by reference suppliers is steadily decreasing (below the threshold of 10 kW) and at the end of 2015 was 12,491.802 (48% of the consumers entitled).

3.2.2.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

As mentioned in 3.2.1.1, the duties contained in article 37(1)(i) and (j) of Electricity Directive have been incorporated as functions of CNMC by Law 3/2013.

- Prices

At retail level, CNMC monitors retail prices through the commercial offers that are published in CNMC’s price comparison tool and through the “Circular” CNE 2/2005. By this Circular, suppliers are officially requested to submit a declaration of the average invoice charged to each type of customer (according to the access tariff group). The results of this monitoring are published in CNMC’s retail electricity market report which is published regularly²⁵.

CNMC price comparison tool aims to improve the transparency of retail markets. In this web-based price comparison tool, suppliers’ public commercial offers for low voltage consumers are disclosed. CNMC monitors the conditions of the offers included in the comparison tool and the results are published in an annual report.

Besides the ex-officio monitoring performed by CNMC, these duties can also be executed following a complaint from a customer on an ad-hoc basis.

- Transparency

²⁴ The margin of the “reference suppliers” (those providing PVPC) is regulated. CNMC has the mandate to perform a study to establish this regulated margin.

²⁵ See “Informe de supervisión del mercado minorista de electricidad año 2014” published the 8th of October, 2015.

The duty contained in article 37(1)(u) of Electricity Directive has been transposed in the Spanish legislation. CNMC has been granted the power to impose all reasonable measures necessary to attain the objective of ensuring a high quality of service and the compatibility of the exchange data processes needed to switch suppliers (amongst other objectives set forth by the law).

Pursuant to the third transitional provision of the Act 24/2013 of the Power Sector, since the 1st of July, 2014, the CNMC functions on switching include, among others, promotion and monitoring of switching data flows among distribution and supplier companies, proposal of improvements on switching procedures, data analysis of switching data, access to Data Bases of supply points from Distribution Companies and deliver copy of these Data Bases to the suppliers companies.

The Law 24/2013, in line with the Directive 2009/72, introduced a general timeframe of 21 days for the switching process in electricity. According to this new piece of legislation, future specific regulations will establish the switching mechanisms and conditions to bill the supplies. In general the deadline of 21 days for switching is met by the large majority of the switching requests. In 2015, more than 98% of the activated switching requests complied with this legal deadline. This law establishes as well the final closure account following any change of electricity no later than 42 days after the change has taken place. Furthermore, the Royal Decree 216/2014 establishes that when interventions in the user's facilities are not needed, the consumer may request the switching process to be completed within 15 days, when the meter is read or by a specific date chosen by the consumer.

During 2014, 1.7 million consumers abandoned the regulated price (PVPC) in favour of the free market. In 2014, the switching rate decreased with respect to 2013 to a value of 12.12%. Although switching values in free market increases, reduction on the total number of consumers abandoning the regulated price reduces the total switching rate.

During 2015, around 1.7 million consumers abandoned the last resort supply (taking into account data collected from the five major Spanish distribution companies) in favour of the free market. In 2015, the subscriber switching maintains high rates, almost 11.2% where 4.8% of which belongs to switching from the last resort supplier to free market.

As shown in the table below, the evolution of the switching rate during 2009-2015 has followed an increasing trend, topping 13.0% in 2013, and as seen before decreasing slightly in 2014 and 2015. The number of failed switches rises in 2014, after a five year decreasing trend.

ELECTRICITY SWITCHING DATA 2009 – 2015^{26*}

²⁶ The calculated switching rates reflect the number of realized switches as a percentage of customer number during the analysed period. In accordance with CEER 2010 GGP on Retail Market Monitoring Indicators, a switch is defined as *“any change of supplier resulting from the customer choice”*.

	2009	2010	2011	2012	2013	2014	2015
Domestic switching rate	4.39%	6.61%	10.04%	11.63%	12.56%	11.75%	10.72%
Nº domestic customers	26,280,450	26,555,315	26,645,921	26,740,386	26,844,788	27,976,345	28,090,488
Total switching rate	5.23%	7.42%	10.61%	12.07%	12.96%	12.12%	11.12%
No. all customers	27,113,874	27,406,461	27,505,927	27,593,863	27,684,136	28,825,462	28,937,000
% failed switches	8.79%	8.20%	5.98%	5.48%	5.23%	6.44%	8.24%

Table 7. Electricity Switching 2009-2015

Source: CNMC, OCSUM.

- Effectiveness of competition

The Act 3/2013 granted CNMC the power to supervise the degree of competition in the energy markets at wholesale and retail level.

During 2015, following the path initiated in previous years, the degree of concentration of the retail market continued its slightly decreasing tendency shown in the past.

At the end of 2015, and based on the information provided by the five biggest Spanish distribution companies, the markets shares of the largest companies were as follows:

- Market share of the three largest companies in the whole retail market by volume: 69.90%
- Market share of the three largest companies in the non-household sector by volume: 59.81%
- Market share of the three largest companies in the market for households by metering points: 92.00%

Monitoring the occurrence of restrictive contractual practices

The Royal Decree-Law 13/2012 reinforced this duty. As a consequence, CNMC is entitled to analyse specific cases following a complaint of the affected party. Furthermore, CNMC can address this issue on its own initiative as competition authority. CNMC also provides guidance to suppliers and consumers through a set of recommendations regarding contractual practices.

Respecting contractual freedom with regard to interruptible supply contracts and with regard to long-term contracts

Law 3/2013 has incorporated this duty as one of CNMC's functions. CNMC intervenes after the receipt of a complaint as regards breaches of contractual freedom. This activity is performed under the framework of market monitoring activities.

2009-2013 data include data collected from the five major Spanish distribution companies. 2014 and 2015 data include also data from distribution companies under 100.000 customers

3.2.2.2. Recommendations on supply prices, investigations and measures to promote effective competition

Recommendations on supply prices

CNMC has the power to issue recommendations on supply prices according to Law 3/2013. In 2015, there was not any recommendation on this topic.

Furthermore, pursuant to article 3 of the Directive 2009/72, *“Member States may impose on undertakings operating in the electricity sector, in the general economic interest, public service obligations which may relate to security, including security of supply, regularity, quality and price of supplies and environmental protection”*.

As explained at the beginning of section 3.2.2, as from 1st April 2014, the system of end-user price regulation has changed. The Royal Decree 216/2014 establishes the methodology for calculating the so-called “voluntary price for small consumers”, which reflects spot market prices during the consumption period and includes the applicable access tariffs and other charges. The “reference suppliers” have the obligation to apply these end-user prices. For more information on public service obligations, see chapter 5.

Report on investigations carried out, main results and possible measures adopted

CNMC launched in May 2014 an investigation on electricity suppliers for potential anticompetitive behaviour, in particular on communication campaigns to consumers and advertisements that may be confusing or biased with the aim to influence consumer decisions with regard to the different modalities of electricity supply.

CNMC is investigating certain suppliers for different reasons, such as non-compliance with market and system operation rules or non-compliance with customer protection provisions established by the Law.

As a result of the above measures, penalties have been imposed on electricity suppliers, having been resolved in 2015 a total of eleven procedures, eight of them from 2014, and have been a total amount of 1,361,800 €.

Report on tariff deficit

From 2000 to 2013, the revenues in the Spanish Electricity System have not been sufficient to cover system’s costs. Accordingly, a subsequent deficit has arisen (the “Tariff Deficit”).

The origin of the electricity tariff deficit, the evolution of access cost and tariffs and the financial mechanisms are detailed in the National Report 2012. In 2013 the Government carried out an integral reform of the Electricity System in Spain, with the aim of correcting the electricity tariff deficit and guaranteeing electricity supply at the lowest possible price for the consumer.

As a result of the reform, the sector's costs and revenues are back in balance and the year 2014 ended with a surplus of 550.3 million

The electricity system's total debt up to the 31st December 2015 is EUR 25.1 billion. This includes 2013 tariff deficit securitization that was performed in December 2014. 79.2% of the total debt (EUR 19.8 billion) has been securitized through FADE, having the bonds issued by FADE being guaranteed by the Kingdom of Spain. The remaining 21% has been assigned to banks and securitization vehicles (SPV). There are no longer tariff deficit credit rights in the utilities balance sheets.

3.3 Security of supply

Implementation of safeguard measures

No safeguard measures had to be taken throughout 2015.

3.3.1 Monitoring balance of supply and demand

Monitoring of security of supply

CNMC follows up of the available generation capacity in order to know if demand coverage problems are possible in the electricity and gas sectors. In this context, we can conclude that there is enough generation capacity available to cover the peak demand in the coming years.

The electricity consumption on the Spanish peninsular system was 248,025 GWh in 2015, 1.8% higher than in 2014. Discounting the effects of temperature and labour patterns, the annual growth was 1.6%, compared to a decrease of 0.1% registered in 2014 and the fall of 2.2% registered in 2013 for the same concept.

The evolution of overall annual growth of consumption, from 2011 to 2015, is shown below:

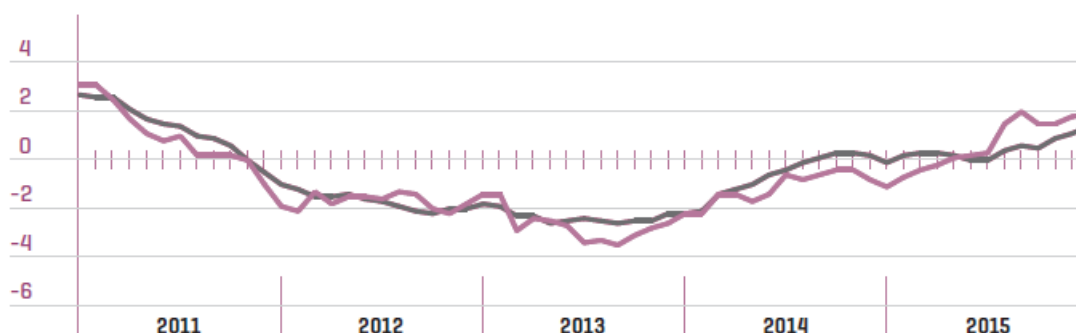


Figure 11. Rolling annual consumption growth in %
(purple: non-adjusted; grey: labour-and-temperature adjusted)

Source: REE

The yearly maximum for hourly average demand was reached on 4th February with 40,324 MWh. This value was 10.1% lower than the historical maximum registered in 2007.

Installed capacity in generating facilities on the peninsular system showed a slight growth of 0.4% during 2015 compared to the previous year, reaching a total of 100.97 GW. Most of the newly installed capacity corresponded to a hydroelectric power plant of 850 MW, which has been partially offset by the closure of the last mainland existing plant of fuel-gas of 520 MW. Variations in other technologies have been null or not very significant.

Current generation fuel mix and expected developments

The following chart and table show the shares by technology of installed generation capacity in the Spanish national system (mainland and extra-peninsular) in 2015.

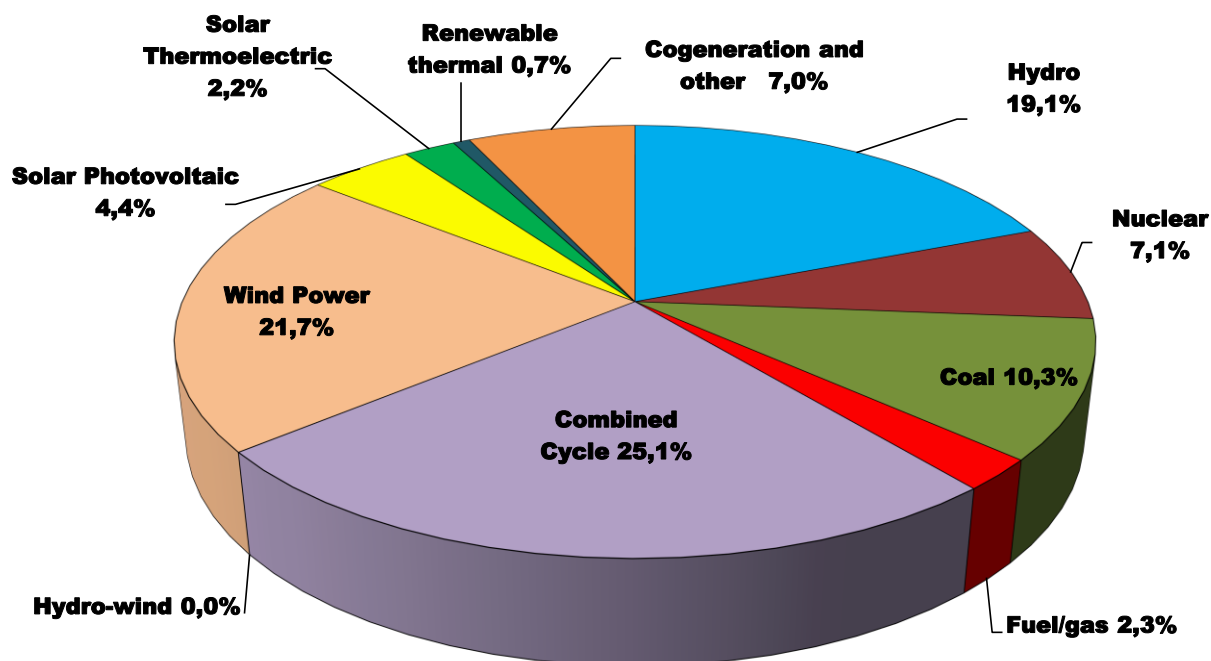


Figure 12. Installed generation capacity in the Spanish national system at the end of 2015
Source: REE

Tecnology/Generation capacity (MW)	2014	2015	Δ % 2015/2014
Hydraulic	19,457	20,325	4.5%
Nuclear	7,573	7,573	0.0%
Coal	10,936	10,936	0.0%
Fuel+gas (conventional)	2,996	2,490	-16.9%
Combined Cycle (CCGT) ⁽¹⁾	26,670	26,670	0.0%
Hydro-wind	11	11	0.0%
Wind power	22,997	23,003	0.0%
Solar Photovoltaic	4,646	4,667	0.5%
Solar Thermoelectric	2,300	2,300	0.0%
Renewable thermal	989	747	-24.5%
Cogeneration and other	7,219	7,466	3.4%
TOTAL	105,792	106,187	0.4%

(1) Includes operation in open cycle mode.

Table 8. Installed generation capacity structure in the Spanish national electricity system
Source: REE

In 2015, total demand of power generation (including mainland and extra-peninsular demand) increased around 1,8% reaching 262.905 GWh, which was covered as follows:

Balance of Spanish electric energy system (GWh)	2014	2015	Δ % 2015/2014
Hydraulic (large)	35,459	30,812	-13.1%
Nuclear	54,870	54,755	-0.2%
Coal	43,320	52,789	21.9%
Fuel+gas (conventional) ⁽¹⁾	6,257	6,497	3.8%
Combined Cycle (CCGT) ⁽²⁾	25,075	29,357	17.1%
Hydro-wind	1	9	698.3%
Hydraulic (small) ⁽³⁾	7,073	0	-100.0%
Wind power	51,031	48,106	-5.7%
Solar Photovoltaic	8,208	8,221	0.2%
Solar Thermoelectric	4,959	5,085	2.5%
Renewable Thermal	4,729	4,626	-2.2%
Cogeneration and other	25,886	25,108	-3.0%
Waste ⁽⁴⁾		2,196	
Net production	266,867	267,558	0.3%
Pumped storage consumption	-5,330	-4,520	-15.2%
International Exchanges ⁽⁵⁾	-3,406	-133	-96.1%
Total demand	258,131	262,905	1.8%

(1) Generation from auxiliary generation units is included in the Balearic Islands' electricity system.

(2) Includes operation in open cycle mode.

(3) Includes all those units with capacity installed below 50 MW that do not belong to a 'hydro management unit' (UGH). In 2015 "Hydraulic (small)" is included in "Hydraulic".

(4) Until 2014 is included in "Renewable Thermal" and "Cogeneration and other"

(5) Positive value: importer balance; negative value: exporter balance.

Note: Consumption in generation corresponding to hydro, nuclear, coal, fuel/gas and combined cycle production has been netted in each of the corresponding amounts incorporated in the table above.

Table 9. Balance of the Spanish electricity system.

Source: REE

3.3.2 Monitoring investment in generation capacities in relation to SoS

Duties and powers of the regulatory authority

The Spanish regulator follow-up the coverage of demand in the electricity and gas sectors, including the investment on new generation capacities (as well as decommissioning).

In this context, the installed power capacity on the peninsular system remained virtually unchanged from the previous year and closed 2015 at 100,966 MW, 394 MW (0.4 %) more than in December 2014. The largest variation recorded was that of hydraulic, which increased its contribution by more than 850 MW, besides fuel/gas technology, which disappeared from peninsular system by closure of Foix power station. The remaining technologies had no power variations or the variations were little significant in 2015.

Operational network security

This reporting on operational network security is done in the context of the so-called 'Framework Report', which is a joint gas & electricity adequacy report, by CNMC.

The System Operational Procedures 1.1. to 1.6 and 2.1. to 2.5 are dedicated to operational network security uses.

Investment in interconnection capacity for the next 5 years or more

- Interconnection with France

On 20 February 2015, the Santa Llogaia – Baixàs power line, which doubles the interconnection capacity between France and Spain, was commissioned. It became operational in October 2015. INELFE, the company jointly and equally owned by Red Eléctrica and its French counterpart, RTE, finalised the construction of the 400 kV electricity interconnection between Spain and France (Santa Llogaia - Baixàs) across the Eastern Pyrenees. In the section which crosses the border, approximately 70 km in length, the line is underground and operated in Direct Current, which required the construction of converter stations, one at each end of the line.

The construction of this new interconnection, classified as a top priority by the European Union, allows the interconnection capacity between both countries to be increased from 1,400 to 2,800 MW (around 6% of the maximum Spanish electricity demand), and it will permit the integration of a higher volume of renewable energy production. Similarly, this new line will guarantee the power supply in the province of Gerona.

Furthermore, a new subsea interconnection through the Gulf of Biscay has been selected as a PCI too. Furthermore, this project is mentioned as a key project for security of supply in the EC communication "European Energy Security Strategy" published on 28th May 2014.

The Presidents of Spain and France through a joint declaration (Madrid, 4th March 2015) affirmed their commitment to increase the French-Spanish interconnection in order to reach the 10% interconnectivity target (as far as Spain is concerned) by 2020. For that purpose, the

French and Spanish TSOs made proposals for new projects through the Pyrenees which are being analysed.

- Interconnection with Portugal

The cross border capacity between Portugal and Spain reached 2.400 MW in 2012 and 2.700 MW in May 2014. The objective of reaching a commercial exchange capacity equivalent to 3.000 MW with Portugal is getting closer. The interconnection project between Northern Portugal and Spain has been selected as a PCI.

More complementary projects will be completed in the coming years.

- Interconnection with the Balearic Islands

The power interconnection HVDC-250 kV between mainland Spain and the Balearic Islands started to operate on the 14 of August 2012. It involves a high voltage submarine interconnection composed of three cables (one of them being a return cable) 237 km in length. In 2015 this cable has transmitted 23% of total demand of the Balearic islands (1.33 TWh). Also in 2015 the first circuit of the new Mallorca-Ibiza interconnection was laid down; it's an alternate current cable at 132 kV with a 118 km underwater section.

Expected future demand and envisaged capacity for the next 5 years and 5-15 years (Article 7 Directive 2005/89/EC)

Based on the expectations contained in the National Network Development Plan, for the period 2015-2020 there is a high uncertainty about the evolution of the expected demand. However, due to the demand reductions in the last years and a suitable installed capacity, no demand coverage problems are expected.

The expected Spanish Mainland peak demand for 2020 under different conditions is as follows:

Year	Electricity consumption (TWh)		
	Lower Scenario	Central Scenario	High Scenario
2020	273,1	277,7	284,9

Table 10. Expected evolution of consumption (TWh) for the Spanish Mainland for 2020.

Source: Ministry of Industry, Energy and Tourism and REE.

Below is shown the energy balance of the mainland electricity system expected for 2020, corresponding to the upper scenario of evolution of demand, with average hydrological situation, for the analysed generation scenario and considering an average wind power output.

Balance of Spanish electric peninsular system (GWh)	2020
Hydraulic (large)	30,220
Nuclear	59,670
Coal	44,690
Fuel+gas	0
Combined Cycle (CCGT)	49,790
Hydraulic (small)	6,620
Wind power	61,310
Solar Photovoltaic	9,840
Solar Thermoelectric	6,560
Renewable Thermal	7,310
Cogeneration and other	35,350
Total production	311,360
Consumption in generation	-7,920
Pumped storage consumption	-6,020
International Exchanges ⁽¹⁾	-12,500
Total demand	284,920

⁽¹⁾ Including Peninsula-Balearic Islands' link

Table 11. Balance of Spanish electric peninsular system (GWh) for 2020.
Source: Ministry of Industry, Energy and Tourism and REE.

Peak demand (MW)	Winter		Summer	
	Lower Scenario	High Scenario	Lower Scenario	High Scenario
2019	46,300	47,900	42,600	44,000
2020	47,300	49,000	43,600	45,100

Table 12. Expected Peak Demand (MW) for the Spanish Mainland in the period 2019-2020, according to National Network Development Plan 2015-2020.

Source: Ministry of Industry, Energy and Tourism, REE and CNMC.

As regards the envisaged capacity to be installed, main additions are expected among RES-based technologies, mainly wind and solar PV, with another circa 4.8 GW and 1.4 GW respectively, by 2020. On the other hand, the generation groups in the “20.000 hours of functioning plan”²⁷ have carried out the actual disconnection of the electrical system in 2015, as had been committed. Besides, in 2016 it will be necessary for large combustions units (coal) to

²⁷ According to art 4.4 a) of the Large Combustion Plant Directive, the existing plants may be exempted from their inclusion in the national emission reduction plan if the operator of the plant undertakes, in a written declaration to the competent authority, not to operate the plant for more than 20 000 operational hours starting from 1 January 2008 and ending no later than 31 December 2015.

make the necessary investments to comply with Directive 2010/75/UE of the European Parliament and of the Council on industrial emissions. Consequences are unpredictable but some of them could be decommissioned.

In the following table the expected installed generation capacity for Spanish Mainland in the period 2019-2020, according to National Network Development Plan 2015-2020, is shown:

Generation capacity (MW)	2019	2020
Hydraulic (large)	15,288	15,288
Pumped hydro	3,770	3,770
Nuclear	7,865	7,865
Fuel+gas (conventional)	-	-
Coal ⁽¹⁾	10,270	10,270
Combined Cycle (CCGT)	19,272	19,272
Hydraulic (small)	2,267	2,300
Wind power	26,850	27,650
Solar Photovoltaic	5,790	5,790
Solar Thermoelectric	2,300	2,300
Renewable thermal	1,201	1,254
Cogeneration and other	7,340	7,390
TOTAL INSTALLED CAPACITY	102,213	103,149
Winter available capacity	51,710	51,860
Summer available capacity	52,420	52,540

⁽¹⁾ Power Plant ELCOGAS included

Table 13. Expected installed and firm available capacity installed in winter and summer (period 2019-2020), according to National Network Development Plan 2015-2020.

Source: Ministry of Industry, Energy and Tourism and REE.

Note that expected available capacity does not match expected installed capacity since, for security reasons, some restrictive assumptions about the availability of installed capacity are taken into account in order to calculate reserve margin rate.

For the assessment of the reliability of demand coverage has been used traditionally as a parameter the Demand Coverage Index, calculated as the ratio of the net power available from the generator equipment and the average hourly peak demand provided, in winter and summer respectively (not considered international exchanges in the peak demand). A minimum of 1,1 is accepted as a figure that adequately guarantees coverage of the system demand in extreme situations, given the need to have operating reserves, possible restrictions on the transmission network, errors in forecasting or additional risks. Therefore, under the assumptions made in the analysis by the TSO, it does not provide any additional power to meet peak demand in the high demand scenario considered, as shown in the following tables.

Reserve margin rate Winter	2019		2020	
	Lower demand scenario	High demand scenario	Lower demand scenario	High demand scenario
Winter available capacity	51,710	51,710	51,860	51,860
Peak demand (MW)	46,300	47,900	47,300	49,000
Coverage Demand Index (IC)	1.12	1.08	1.10	1.06

Reserve margin rate Summer	2019		2020	
	Lower demand scenario	High demand scenario	Lower demand scenario	High demand scenario
Summer available capacity	54,340	52,420	52,540	52,540
Peak demand (MW)	42,600	44,000	43,600	45,100
Coverage Demand Index (IC)	1.28	1.19	1.21	1.16

Table 14. Expected reserve margin rate in winter and summer. Period 2019-2020, according to National Network Development Plan 2015-2020.

Source: Ministry of Industry, Energy and Tourism and REE.

The above Demand Coverage Indices are calculated without taking into account the effect of the interruptible demand, since this service would be guaranteed only the following year; if it were considered, this Index would increase.

3.3.3 Measures to cover peak demand or shortfalls of suppliers

Monitoring of security of supply

In case some demand has to be curtailed, there is a service provided by some consumers called "interruptible demand". In 2015, demand coverage in Spain did not experience any relevant problem, therefore no interruptible demand had to be curtailed.

The revenue regime for this service was revised in 2013 by Order IET/2013/2013, of 31st October. This regime was reviewed in the context of other measures included in the electricity sector reform, which addressed the various activities and cost items of the electricity system, with the aim to ensure the correspondence between revenues and costs.

In the new regime, the service providers' selection and the revenue level are fixed through an auctioning mechanism. The first auction, for 2015, took place in November-December 2014. 3,020 MW of interruptible demand were assigned, with a total cost of 508 million €. The auction for 2016 took place in September 2015. 2,890 MW of interruptible demand were assigned, with a total cost of 503 million €.

4 Gas

4.1 Network regulation

4.1.1 Unbundling

Designation and certification of transmission system operators

Law 3/2013 sets forth that CNMC will be in charge of the certification procedure as foreseen by the Directives. The Hydrocarbons Law establishes two possible models for gas TSO unbundling:

- The unbundling model, adopted for the main TSO (Enagas Transporte S.A.U.), with more than 90% of national transport pipelines) is “Ownership unbundling”.
- Small gas TSOs in Spain can opt between the Ownership unbundling model and the ISO model.

Spain has already finished the certification process of TSOs. The certifications have been issued and duly notified to the European Commission by CNMC.

- Enagas Transporte S.A.U., the main TSO in Spain, has been certified under the ownership unbundling model (OU).
- Enagas Transporte S.A.U. has also been certified under Independent System Operator (ISO) model for the primary gas transmission networks owned by SAGGAS and by Enagas Transporte del Norte.
- Finally, Reganosa was certified by CNMC, in February 2014, under ownership unbundling model (OU). The CNMC resolution limits the voting rights and the appointment of members in the supervisory board of Reganosa to the two shareholders from vertically integrated undertakings (Gasifica and Sonatrach).

Following the certification of the Spanish TSO, CNMC is monitoring the compliance with the certification requirements.

TSO certification process

Regarding the main TSO, ENAGAS, requested the certification as a Transmission System Operator on 4th November 2011. The Board of the Spanish NRA, by 19th April 2012, issued a preliminary certification decision of ENAGAS according to article 63 bis of Hydrocarbons Act (Act 34/1998, of October 7th), amended by Royal Decree-Law 13/2012. Pursuant to the mentioned article 63 bis, the NRA notified the preliminary decision on the certification of ENAGAS as TSO, to the European Commission; On June 15th 2012, the EC sent its opinion on this preliminary decision. The NRA drafted its final decision on the 26th July 2012 and issued the definitive certification for ENAGAS subject to the fulfilment of certain conditions. The definitive certification was also notified to the EC.

In its meeting dated 18th April 2013, the Board of the NRA monitored the compliance of the conditions set in the definitive certification decision, resolving that ENAGAS had adopted the measures needed to fulfil the unbundling requirements. This decision adopted by 18th April 2013 was also notified to the EC.

In order to guarantee ENAGAS's independence, the Spanish law limits the share capital and the voting rights in ENAGAS. Thus a single person or society cannot, directly or indirectly, own more than 5% share capital or use more than 3% of voting rights. This limit does not apply to State ownership.

Reganosa requested the certification under the Ownership unbundling model on 31st July 2012. In its preliminary decision, the Spanish NRA, in its meeting held on 13th December 2012, rejected the certification identifying certain measures to be adopted by Reganosa to comply with ownership unbundling requirements. On February 2013, the European Commission sent its favourable opinion on this preliminary decision. Eventually, the Board of the NRA in its meeting dated 4th April 2013, issued its final decision rejecting the certification under the ownership unbundling model. Once adopted the proposed measures to comply with unbundling requirements, Reganosa requested again the certification under the Ownership unbundling model on 27th June 2013. After having issued the CNMC preliminary decision and the CE favourable opinion, the Board of CNMC issued its final decision on 4th February 2014. The definitive certification was notified to the EC. Finally, on February 2015, Reganosa was authorized and appointed as natural gas transmission system operator by Ministerial Order IET/241/2015.

Enagás Transporte, S.A.U submitted an application to be certified as Independent System Operator (ISO) of the primary gas transmission networks owned by Saggas and by Enagás Transporte del Norte, S.L. (ETN) on 21st May 2013. The Board of the Spanish NRA in its meetings dated 18th July and 31st July 2013 respectively, issued the preliminary certification decisions of ENAGAS Transporte S.A.U and proceeded to notify them to the European Commission. After CE favourable opinions, the Board of CNMC issued its final decision on 14th and 26th November 2013, respectively, for Enagás Transporte S.A.U as ISO of the primary gas transmission networks owned by Saggas and by ETN respectively. The definitive certifications were notified to the EC. Finally, on January 2015, Ministerial Orders IET/20/2015 and IET/21/2015 approved appointment of Enagás Transporte, S.A.U. as ISO of the primary gas transmission networks owned by ETN and Saggas respectively.

DSO Unbundling

Article 63 of the Hydrocarbons Act states the current legal unbundling regulatory framework for DSOs, in line with the Gas Directive 2009/73. Most of the DSO unbundling requirements were introduced in the Spanish legislation in 2007, by the act 12/2007.

DSOs are allowed to belong to a group that undertakes supply activities, provided that a separate company performs the regulated activities (the so-called legal unbundling).

In addition, functional unbundling for DSOs is required. This includes management separation and measures relating to effective decision-making rights.

Article 63 of the Hydrocarbons Act sets forth that an annual report, setting out the internal code of conduct and the measures taken by each regulated company in order to implement the unbundling requirements should be sent to the NRA and the Ministry for approval, and shall be published.

Since 2008, vertically integrated DSO have implemented their compliance programs and submitted the required reports, on the unbundling measures they have adopted, to the Spanish NRA and to the Ministry. The process is monitored by the NRA.

The requirements to separate the identity of the supply branch from the vertically integrated undertaking, with a view to avoid confusion in their communication and branding, was transposed by Royal Decree-Law 13/2012.

The main DSOs are Gas Natural Distribución Group (69% supply points) and EDP group (12%), both vertically integrated with supplying activities. It should be mention the creation of 2 new ownership unbundled DSOs since 2010: Madrileña Red de Gas, with 848.900 supply points (11%), and Redexis Group, with 522.000 supply points (7%), in both cases as the result of a disinvestment in DSO grids from Gas Natural and Endesa.

Vertically integrated DSO have not been rebranded in Spain: DSOs generally use the group name but adding “distribution” as a reference to the activity of the unbundled company. CNMC is now monitoring the compliance of the rebranding obligations, analysing the relevant information regarding this issue sent by them. As a result of this analysis, CNMC may request companies to rebrand, in case it concludes those obligations are not being fulfilled.

Law 3/2013 has introduced an explicit and clear function for CNMC consisting of monitoring the functional unbundling among the activities of the gas sector.

Hence, CNMC is monitoring the implementation of unbundling measures, including those foreseen in the Royal Decree-Law 13/2012:

- The appointment of the compliance officer of the Distribution System Operator;
- Those measures taken to ensure vertically integrated distribution system operators shall not, in their communication and branding, create confusion in respect of the separate identity of the supply branch of the vertically integrated undertaking and;
- Those measures taken to ensure that staff responsible for the management of the distribution system operator does not participate in the structures of the integrated undertaking.

4.1.2 Technical functioning

Network code and Spanish Gas System Operator (ENAGAS GTS S.A.U.)

The network codes and technical functioning of the system is set by the System Operation Network Code (Normas de Gestión Técnica del Sistema - NGTS), approved by the Government.

The Hydrocarbons Act designated ENAGAS as the Spanish Gas System Operator, in order to be responsible for the operation and technical management of the network, and to ensure the continuity and security of natural gas supply and the correct coordination between access points, storage, LNG terminals, and transmission and distribution companies, with the supplying companies.

Act 12/2011 modified the Hydrocarbons Act and required ENAGAS to split the transport activity and the role of Spanish Gas System Operator into two different companies within the group. In 2012, ENAGAS approved the segregation of the company in two new companies, namely, ENAGAS TRANSPORTE, S.A.U., as TSO, and ENAGAS GTS, S.A.U., as Spanish Gas System Operator. ENAGAS GTS, S.A.U. had to implement separate accounts and functional unbundling for other activities (regasification, transmission and storage) and its staff had to sign a code of conduct to guarantee its independence from all other activities.

Network Balancing

According to Law 3/2013, the CNMC is in charge of approving the methodology regarding the balancing rules.

Currently, the balancing regime is set by the rule 9 of the System Operation Network Code (NGTS). This provision establishes the obligation for all users to be balanced in the network, and introduces economic penalties to those users incurring in imbalance.

In 2015, CNMC approved the Circular 2/2015, dated 22nd July, to establish network balancing rules, implementing Commission Regulation (EU) n° 312/2014. This Circular regulates the imbalance calculation methodology for gas transmission network, including procedures for calculating imbalances and their surcharges, the operating balance of the transmission network as well as the rules for nominating the use of infrastructures and procedures for providing users information related to their balance.

The Circular 2/2012 modifies some aspects of imbalance calculation methodology for gas transmission network that interact with other regulatory aspects which must be necessarily consistent with the content of the Circular and need to be adapted.

The new balancing regime established by Circular 2/2015, will be fully implemented in Spain by October 2016.

A working plan was established to implement the Circular; some functions and actions are needed to carry out the implementation:

- Provision of information and nominations regime implementation since November 2015
- approval of the procedure for users qualification (approved in March 2016)
- monitoring of the selection process for balancing services
- approval of the incentive regime for improving the selection and use of balancing actions
- approval of the methodology for calculation of the imbalance charges (approved in May 2016)
- approval of the methodology for flexibility services in gas storage.

Since 1st March 2015, balancing penalties at the balancing point (AOC) have been increased, encouraging traders to be in balance at the end of the day.

The Law 8/2015 of 23 May 2015, amending Law 34/1998 on the hydrocarbons sector, establishes the implementation of an organized gas market, and gas exchange is functioning since 15 December 2015, enabling network users to balance their portfolio.

Security and reliability standards, quality of service and supply

General security of supply provisions and safeguard measures, applicable to the Spanish gas system, are explained in point 4.3 of this report.

Security of supply and quality of service standards for customers are set by the Royal Decree 1434/2002.

The customer has the right to get accessible information (guide) on correct installation handling, including safety measures, for the gas installation. As a part of maintaining safety, DSOs have the obligation to inform customers connected to their gas distribution grid every 5 years the necessity to perform a safety inspection of their gas installation.

Royal Decree 984/2015, dated 30th October has established the procedure of periodic inspections of gas reception facilities introducing some changes to promote competition. It allows doing the inspection of the gas facilities not only to DSOs but also to authorized gas fitters. The inspection process consists in checking three main safety aspects:

- Check that the installation has no gas leaks.
- Check that the gas installation has correct ventilation and correct evacuating exhaust of combustion product.
- Check that the gas installation has a correct combustion (without production of carbon monoxide) in the boiler.

To ensure that customers can use natural gas in a secure way, the DSO have also the obligation to have a telephone number and a comprehensive 24-hour attention system to cover any gas emergency, not only in the gas distribution grid, but also covering gas emergencies at the customer' premises.

Regarding service standards, the compensation payments to customers in case of interruptions of gas supply are established in article 66 of Royal Decree 1434/2002, and range from 10% to 50% of the monthly access tariffs gas bill, depending on the duration of the interruption.

Connections to the grid

The Royal Decree 1434/2002 established the deadline to respond to a customer request of connection when major works are needed. The distribution company has 6 days when no specific project is needed and 15 days when such a kind of project is required.

The detailed estimated price offer for a new gas connection is provided between 6 and 15 days. In the case of connection below 4 bar, the payment is established by regulation depending on the meter needed, the connections and the consumption of the new customer. If the connection is above 4 bars, a budget is provided.

As far as no major work is required, the Royal Decree 1434/2002 sets that once the supply request is received (from the supplier of the customer), the DSOs has a maximum deadline of six working days to start the delivery of gas (connections with minor works).

Connections with minor works include only checking the documentation (if needed), installing the gas meter, checking the security of the gas installation by the DSO and start the delivery of gas. The DSO connection tariff is set by the regulation and it is billed by the supplier.

Monitoring access to storage

According to article 7 of Act 3/2013, the CNMC monitors the access to storage. The access model to underground storage is a fully regulated-TPA.

The Order ITC/3862/2007, the Order ITC/3128/2011 and the Order IET/849/2012 established a yearly mechanism for the allocation of underground storage capacity for each annual period, from the 1st April of the current year, to the 31st March of the following one.

These are the criteria for underground storage capacity allocation:

- Firstly, the capacity is allocated to the supplying companies in proportion to their final sales in the previous year (up to 20 days of average gas demand) in order to comply with the strategic reserves imposed by law.
- The remaining capacity is allocated through an auction mechanism.
- In case there is still capacity left, it is allocated according to the agents' capacity requests communicated to the System Technical Manager under "first-come-first-served" criteria.

The general rules of the auction procedure are established by Resolution of 14 March 2008, which outlines certain aspects relating to the management of underground storage facilities of the basic network and lays down the rules for auctioning their capacity. The conditions and

specific rules of the yearly auction are established every year in a Resolution of the General Directorate of Energy Policy and Mining of the Ministry of Industry, Energy and Tourism. CNMC is the supervisory body for these auctions and the Spanish power exchange (Operador del Mercado Ibérico de Energía, Polo Español, S.A. -OMEL)²⁸ is the institution responsible for organising them.

The following table summarises the results of the auctions held in 2009, 2010, 2011, 2012, 2013 and 2015. During year 2014, no remaining capacity was available after the primary allocation process and therefore no auction was held.

	Auction for the allocation of underground storage capacity of natural gas					
Type	Multi-round ascending-price, electronic mechanism					
Date	30 March 2009	25 March 2010	29 March 2011	27 March 2012	26 March 2013	24 March 2015
Allocates capacity (GWh)	4,257	7,397	8,874	3,822	960	1,409
Supply period	1 April 2009 - 31 March 2010	1 April 2010 - 31 March 2011	1 April 2011 - 31 March 2012	1 April 2012 - 31 March 2013	1 April 2013 - 31 March 2014	1 April 2015 - 31 March 2016
Capacity price (TPA rate added)	6,603 €/GWh per year	3,932 €/GWh per year	832 €/GWh per year	4,932 €/GWh per year	4,932 €/GWh per year	4,932 €/GWh per year

Table 15. Auctions for underground storage of natural gas: results of auctions between 2009 and 2015

Source: Auction administrator and the Spanish NRA

4.1.3 Network tariffs and economic system

TPA tariffs.

In Spain, the Government is currently the responsible for setting access gas tariffs; CNMC issues an opinion by means of a non-binding report to the Government before each update or tariff revision. Afterwards, access tariffs are published in the Official Spanish Journal.

The Ministerial Order IET/2445/2014 established the rates, tolls and fees for third-party access to gas installations applicable in 2015, maintaining same TPA tariff applicable in 2014 for all services, with the exception of TPA tariffs for households (group 3), than increase 0,047353 cts/kWh .

The tariff model for transmission applied in Spain is the entry-exit model with a single balancing area. In addition regulated tariffs for LNG terminals and underground storage are set.

According to Law 3/2013, the CNMC is responsible for elaborating the methodology to calculate rates, tolls and fees transmission and distribution, regasification, storage and tank truck fill-up, in accordance with transparent, non-discriminatory and cost-reflective criteria.

The Law 8/2015 sets that the legal authority to establish the structure and conditions of the tolls and fees corresponds to the Government. Therefore, the CNMC has no competence to

²⁸ Through its subsidiary OMEL Diversificación S.A.U. from year 2009.

establish the remuneration of the regulated activities and the structure and conditions applicable to the access tariffs.

The Ministerial Order IET/2736/2015 established the rates, tolls and fees for third-party access to gas installations applicable in 2016 according to the Law 18/2014 with a rate of return of 5.06%.

Regulatory information on costs of regulated activities

In 2015, CNMC approved Circular 1/2015 of 22 July, which develops the regulatory information on costs relating to the regulated activities of transmission, regasification, storage and technical management of the system of natural gas, as well as transmission and operation of the electricity system.

Though this Circular, CNMC will receive information on costs of the regulated activities. Its main purpose is to get systematic information regarding the costs to consider as necessary for the proper performance of the regulated activities, both for investments in facilities with individualized remuneration (regulated assets) as to the operation and maintenance (O & M) activity. The information system will be also useful to carry out the monitoring of unbundling of activities and, in particular, accounts unbundling, to avoid cross-subsidies between these activities, as well as to calculate unit values of reference for investment and operation and maintenance of regulated assets, in order to update and compare these values among different companies or at different locations within the same company including comparison with external references considered as good practices.

Every year before 1st July, companies must send requested information concerning regulated activities in the previous year. The information corresponding to the year 2014 had to be sent on January 2016.

4.1.4 Cross-border cooperation and implementation of European gas network codes

The implementation of European Network codes is considered to be a crucial step towards the completion of the gas internal market.

CNMC, in cooperation with other regulators, is working in a number of areas according to the priorities defined in the Work Plan for the South Gas Regional Initiative (SGRI).

The CNMC has already approved the CMP and CAM mechanisms and also approved the balancing code, to be fully implemented by October 2016.

Balancing network code

CNMC approved the Circular 2/2015 dated 22nd July 2015, establishing balancing rules in the transmission network of the Spanish Gas System.

This Circular regulates the imbalance calculation methodology for gas transmission network, including procedures for calculating imbalances and their surcharges, the operating balance of the transmission network as well as the rules for nominating the use of infrastructures and procedures for providing users information related to their balance.

The Circular 2/2012 modifies some aspects of imbalance calculation methodology for gas transmission network that interact with other regulatory aspects which must be necessarily consistent with the content of the Circular and need to be adapted.

The new balancing network code established by Circular 2/2015, according to the European Network Code on Gas Balancing of Transmission Networks (Commission Regulation 312/2014), will be fully implemented in Spain by October 2016.

Capacity allocation mechanisms

The European regulation has been transposed in Spain, France and Portugal resulting in a set of harmonized rules for capacity allocation in all borders.

In this regard, CNMC approved the Circular 1/2014, dated 12th February, establishing capacity allocation mechanisms (CAM) to be applied at international connections by pipeline with Europe.

In the context of the early implementation of the CAM NC, auctions in the South Gas Regional Initiative (including France, Spain and Portugal) have allocated capacity for the first time at all interconnections between entry-exit systems in the whole region, via VIPs between Portugal, Spain and France.

Capacity at these VIPs was allocated via PRISMA in 2014.

According to the roadmap, different auctions for the different time horizons products were gradually introduced since March 2014, in decreasing order, until reaching day-ahead and daily products in 2015: the first coordinated mechanism to allocate capacity products pursuant to the CAM NC took place in March 2014. Nevertheless, the full implementation of the CAM NC was reached on November 2015:

- In November 2015, all the auctions included in the CAM NC have been implemented.
- A joint nomination procedure for bundled capacity providing registered network users with the means to nominate the flows of their bundled capacity via a single nomination has been implemented from November 2015 onwards in both VIP (two borders).
- Since November 2015, auctions for daily and within-day standard capacity products are offered.

Interoperability network code

In 2015, it has been approved Commission Regulation (EU) 2015/703 of 30 April 2015 establishing a network code on interoperability and data exchange rules. This Regulation establishes a network code which sets out rules regarding interoperability and data exchange as well as harmonised rules for the operation of gas transmission systems.

Adjacent transmission system operators must ensure that a minimum of terms and conditions detailed in Articles 6 to 12 of the code are covered by an interconnection agreement in respect of each interconnection point: rules for flow control, measurement principles for gas quantities and quality, rules for the matching process, rules for the allocation of gas quantities, communication procedures in case of exceptional events, settlement of disputes arising from interconnection agreements and amendment process for the interconnection agreement.

In December 2015, ENTSOG approved the Interconnection Agreement Template, which covers the default terms and conditions for the minimum mandatory content of an interconnection agreement. TSOs of Spain, Portugal and France are still working in their Interconnection Agreement that is going to be finalised by mid-2016, once reviewed the current agreements..

Cross-border Cooperation. CMP harmonisation in the South region

CNMC, in cooperation with ACER, NRAs and European Commission, is working on promoting the creation of a competitive, secure and sustainable internal energy market as well as the effective opening for all customers and suppliers in the Community, ensuring appropriate conditions for the effective and reliable operation of gas networks, taking into account long-term objectives.

TSOs and NRAs have worked in a coordinated way on the CMPs harmonisation in the South region. The rules for the implementation of the three mechanisms already in force (over-subscription and buy-back OSBB, capacity surrender and long term use-it-or-lose-it) have been developed.

Once approved the legislation by the French, Portuguese and Spanish regulators, developed in a coordinated way, the work for 2015 has been focused on the adoption of a common OSBB methodology in the region.

The three TSOs involved have proposed the OSBB detailed rules which have been submitted to Public Consultation²⁹ in September-October 2015. The specifications of communication, timelines for the additional capacity offer, calculation of trigger values, buy back process, split of costs between TSOs for the buyback procedure as well as the use of PRISMA are defined in the scheme.

²⁹ http://www.acer.europa.eu/Gas/Regional_%20Initiatives/South_GRI/Public_Consultations/Pages/-Public-Consultation-on-the-proposal-for-the-Oversubscription-and-Buy-Back-scheme-in-the-Region.aspx

After the evaluation of responses received, the scheme is adopted to enter into operation in May 2016.

Apart from the progress on CAM early implementation, it is also remarkable specifically the progress made by SGRI on issues such as increase interconnection capacity with the rest of Europe, increase transparency, implementation of the Directive and development of gas markets.

4.1.5 Compliance

Compliance of regulatory authorities with binding decisions of the Agency and the Commission

The Spanish NRA has to comply with and put into practice those pertinent and binding decisions issued by ACER and the EC. Throughout 2015, there weren't any binding decisions issued by the EC or ACER towards the Spanish NRA.

Compliance of transmission and distribution companies, system owners and natural gas undertakings with relevant Community legislation, including cross-border issues

CNMC ensures compliance of transmission and distribution system operators and, where relevant, system owners, as well as of any gas undertakings with the relevant Community legislation, including cross-border issues.

CNMC is entitled to monitor the level of transparency and competitiveness (including of wholesale prices), and the level and effectiveness of market opening and competition at wholesale and retail levels; CNMC has the power to carry out investigations and to impose legally binding decisions.

CNMC has powers to request any information from gas undertakings. In this regard, CNMC shall issue the so-called "Circulars" that must be published in the Official State Journal, detailing and specifying the content of the information to be requested.

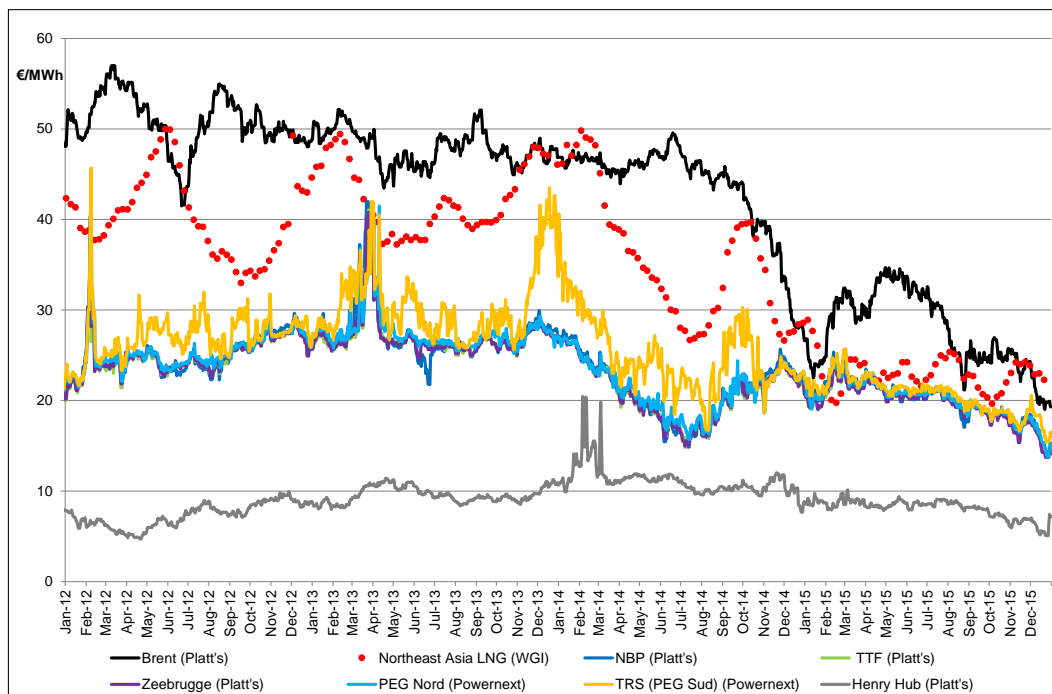
4.2 Market functioning

According to the Act 3/2013, CNMC is in charge of monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition at the Spanish gas markets.

4.2.1 Wholesale markets

4.2.1.1 International gas markets

One of the most notable elements of the gas market developments since 2010 is the large price differential between regional gas markets.



*Figure 13. Evolution of natural gas spot prices (€/MWh) (Jan 2012 - Dec 2015)
Source: Platts, Powernext & World Gas Intelligence*

In the US market the new production technologies have sharply reduced the costs of production of unconventional gas, lowering gas prices and decoupling gas prices compared to oil. The Japan market, whose supply is only possible through LNG, has increased its imports of LNG for electricity production from March 2011 (the tsunami crippled its nuclear power plants), thus increasing the cost of supply. In addition, several emerging countries in Asia (China and India) and South America (Brazil, Argentina, Chile) have begun to import LNG, contributing to the increase in international market prices of LNG. However, during 2015 gas prices has decreased in the whole world, and the prices in Europe and Asia has converged in the first half of the year.

In Europe, with intermediate price levels, the existence of a network of highly interconnected gas transportation hubs allows northern and central Europe show a remarkable convergence of prices, and some decoupling on the price of oil. The less liquid markets have a higher price

differential, although the trend is towards convergence of prices, as has happened with the Italian market.

In 2015, international gas markets suffered major changes:

- Spot oil prices increased from 55 dollars/barrel in January to 66 dollars/barrel in May 2015, but in the second half of the year prices dropped to 35 dollars/barrel by the end of the year. Main attributed reasons are weaker global oil demand, US rising domestic production, competitive response from Saudi Arabia to keep market share and US Dollar appreciation.
- In addition, the price of Asian LNG continued decreasing at the beginning of 2015 due to several factors: lower than expected demand in Japan, Korea and China; growing supply competition from new commissioned liquefaction capacity in Australia (and soon to be made on US); and falling oil prices diminishing oil-indexed LNG long-term contract charges. The price reduction registered in Asian LNG reduced the gas price-spread with the European market the first half of the year, although this spread increased the second half.
- In Europe, gas consumption totalled 4.604 TWh in 2015, a significant 4% increase compared to 2014 values. Despite this increase in gas consumption, prices have dropped constantly until the end of the year 2015.

4.2.1.2 Spanish Gas import prices

Spain imports most of the gas it consumes, since its gas production is minimal, and a majority of long term contract are oil-indexed. Another relevant factor that influences gas price in Spain is the importance of LNG in gas procurement (see chapter 4.3 Security of supply). The ability to arbitrage in the global LNG market makes the Spanish consumer more exposed to international prices and has suffered in recent years higher prices than in northern Europe, as Spain was influenced by high LNG Asian prices.

In order to provide a price reference for gas in Spain, CNMC has developed an index of natural gas border prices, from gas imports data, which is available at CNMC website³⁰ based on the data provided by Customs of the Spanish Tax Agency (AEAT).

Gas import prices decreased drastically in the first half of 2015. A majority of long term contract are oil-indexed, but the lowering oil prices took place from the second half of 2014 and gas prices track oil with a lag of several months, so their effects are further observable in 2015.

The following figure shows the evolution of natural gas prices from January 2002 to December 2015 at the border (according to this index), including LNG and natural gas introduced to Spain through pipelines from Morocco, Algeria and France.

³⁰ <http://www.cnmc.es/es-es/energ%C3%ADa/hidrocarburos-gaseosos/mercado-mayorista.aspx>

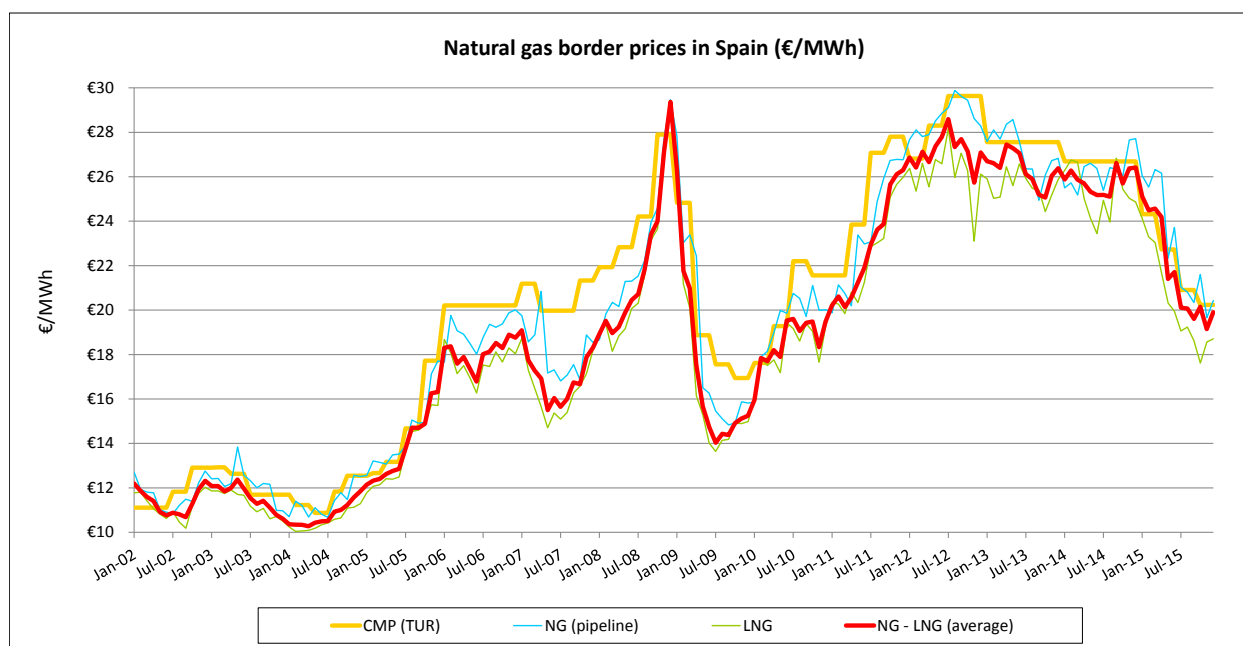


Figure 14. Evolution of natural gas border prices in Spain (€/MWh) (Jan 2002 - Dec 2015)
Source: AEAT and CNMC

In 2015, natural gas border price has decreased from 26 €/MWh in January, until levels around 20 €/MWh in December 2015. The table below shows the monthly evolution of these prices in 2015 (in €/MWh), indicating that LNG imports were more competitive than pipeline imports during all the year:

(€/MWh)	Natural gas (pipeline)	LNG	Average import price
Jan 2015	26,06	24,13	25,11
Feb 2015	25,53	23,29	24,49
Mar 2015	26,32	23,04	24,57
Apr 2015	26,15	21,66	24,19
May 2015	22,34	20,31	21,40
Jun 2015	23,72	19,95	21,71
Jul 2015	21,04	19,06	20,11
Aug 2015	20,81	19,24	20,07
Sep 2015	20,34	18,63	19,60
Oct 2015	21,60	17,62	20,15
Nov 2015	19,66	18,56	19,14
Dec 2015	20,43	18,71	19,90

Table 16. Natural gas border prices in Spain, 2015.
Source: AEAT and CNMC

4.2.1.3 Spanish Wholesale markets

a) Spanish OTC gas market (Enagas MS-ATR Platform)

Most of the gas traded in the Spanish market is negotiated in bilateral OTC transactions. The volume of gas traded on the OTC market is communicated to the system operator, in order to register the transfer of ownership, through the ENAGAS “MS-ATR platform”.

There are 67 active traders in this platform.

The entry of new competitors in the market is very dynamic, and the number of traders registered in Spain has continued increasing since the beginning of liberalization. In 2015, 19 new traders have been registered.

This includes the incorporation of companies involved in international gas trading as Statoil, ENI, Vitol, Koch, Gunvor, Alpic, Gasela, Merrill Lynch, Morgan Stanley and Goldman Sachs or Gazprom, although most of them are not operating in the retail market (not making sales to final customers).

At the moment, gas is actively traded in Spain across eight balancing points: the six LNG terminals; the virtual balancing point (so called AOC) and the virtual storage point comprising the four Spanish underground storage sites in operation (Serrablo, Gaviota, Marismas and Yela).

The volume of gas traded stood at 444.354 GWh in 2015, a 16,7% decrease from 2014, and is a 40,7% higher than the demand for this year, with more than 8.000 transactions per month. Many of the trades are temporary swap, as the OTC market is mainly used as a tool to manage the stocks of LNG and gas balance.

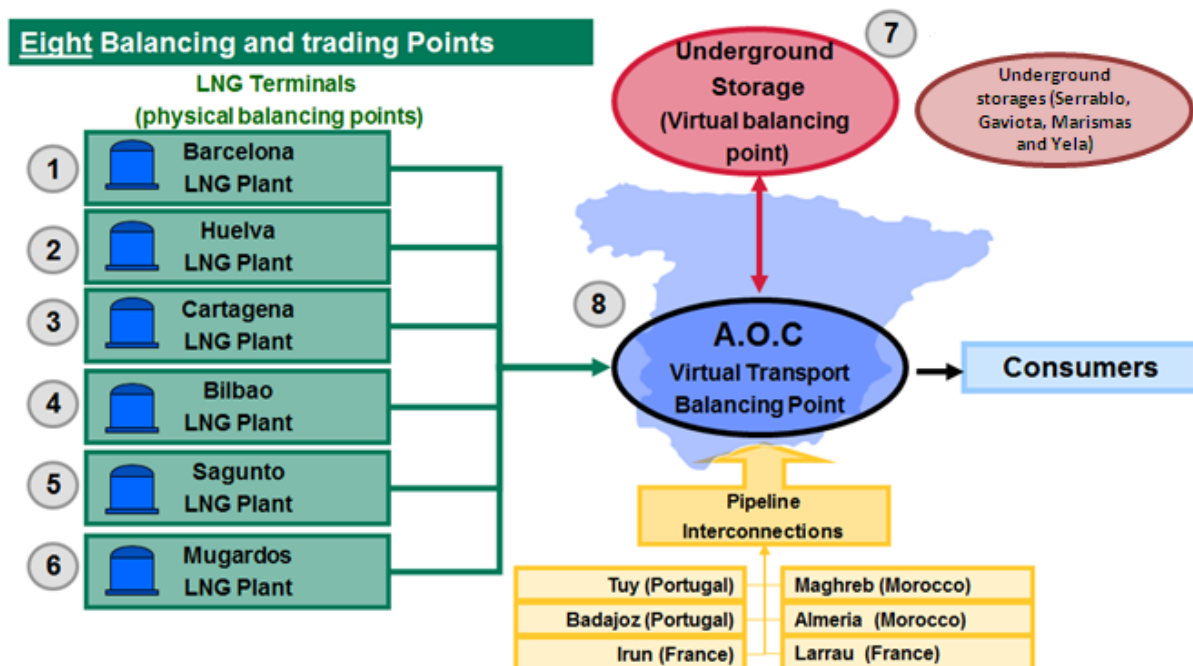


Figure 15. Balancing and trading points.
Source: CNMC.

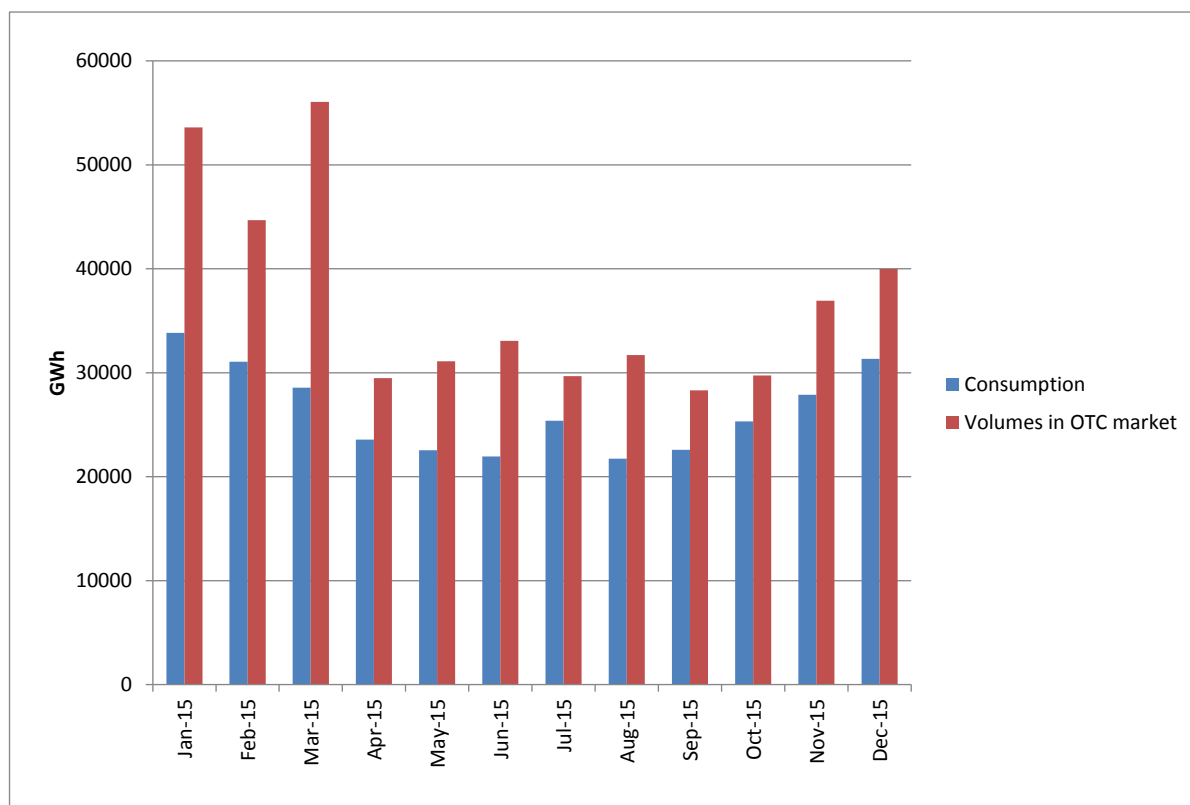


Figure 16. Spanish OTC gas market v. consumption 2015 (GWh/month)
Source: ENAGAS and CNMC

Liquidity lies mainly on the LNG terminals, which accounted for 64,2% of all OTC trade in 2015. Barcelona LNG terminal was the main trading point with 21,9% of gas trade. The AOC, which

could look like an attractive virtual trading point, decreased its operations since last year and it drew 34,4% of OTC trade in 2015.

Balancing point	Traded gas 2015 (GWh)	Production (GWh)	Churn rate	Number of active traders	Market share of 3 main traders
Barcelona LNG Terminal	97.454	35.448	2,7	39	55%
Huelva LNG Terminal	46.617	29.429	1,6	33	50%
Bilbao LNG Terminal	59.432	21.479	2,8	20	66%
Cartagena LNG Terminal	9.186	15.641	0,6	18	58%
Mugardos LNG Terminal	9.826	16.524	0,6	15	84%
Sagunto LNG Terminal	62.611	22.673	2,8	30	61%
Total LNG	285.126	141.194	2,0	52	37%
Underground storage	6.215			17	63%
Transmission balancing point (AOC)	153.013	173.790	0,9	49	30%
Total Spain	444.354	314.984	1,4	67	33%

Table 17. Main features – OTC
Source: ENAGAS

Transactions in the Spanish OTC market in 2015 represented globally 1,41 times natural gas demand.

Next figures show the monthly evolution of gas traded and of the number of transactions – around 96.500 – registered in the Spanish OTC market in 2015.

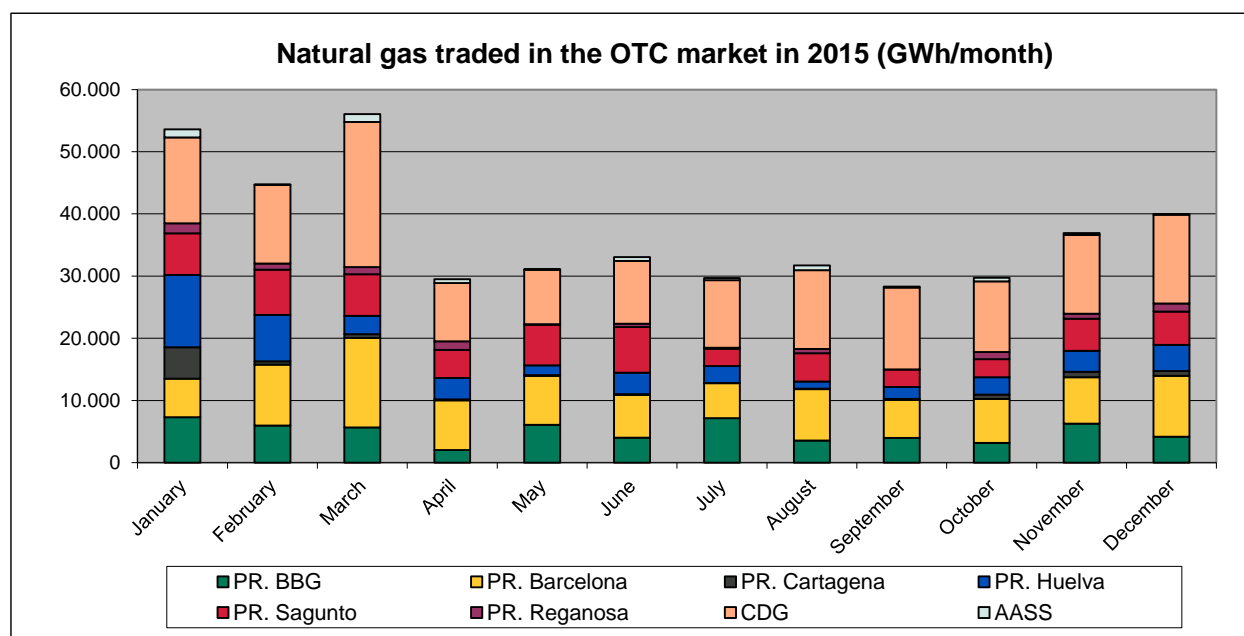


Figure 17. Gas traded in the OTC market during 2015
Source: ENAGAS

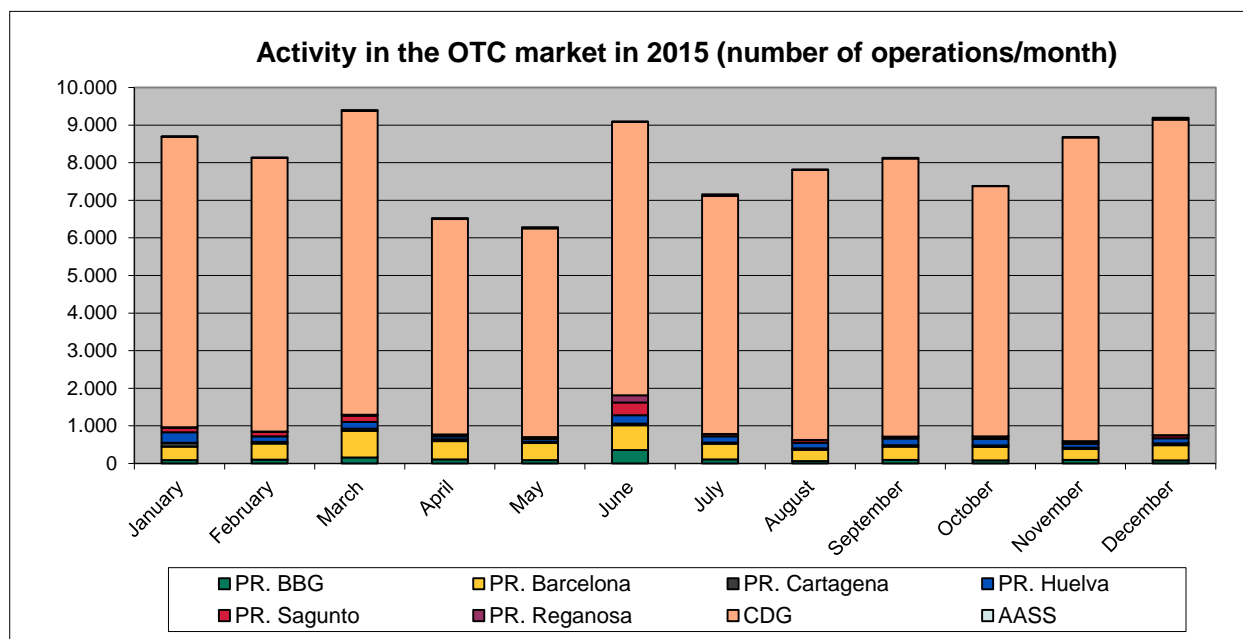


Figure 18. Gas transactions in the OTC market in 2015 (nº Transactions/month)
Source: ENAGAS

The figure below shows the market sharing-out in the OTC gas market for 2015 in terms of purchases of energy.

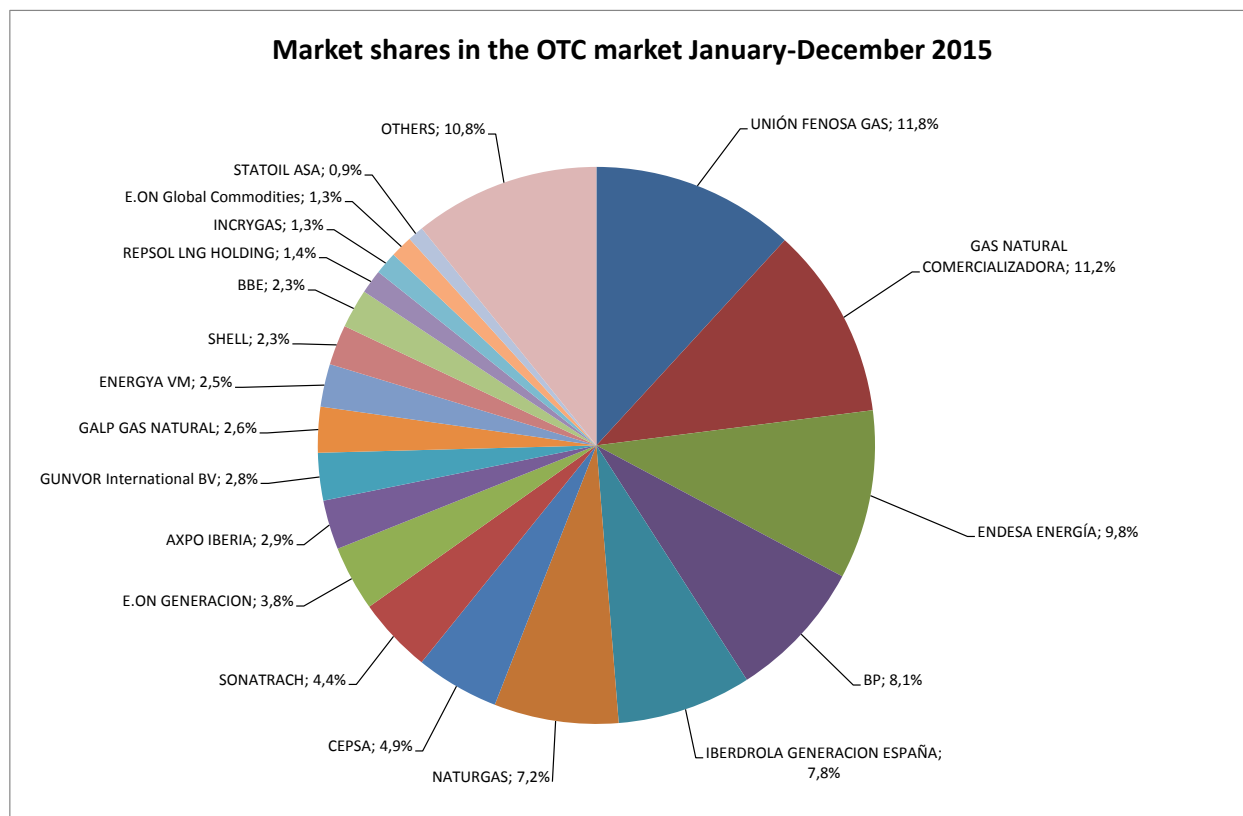


Figure 19. Market share (purchases) in the OTC market in 2015
Source: ENAGAS and CNMC

Given that the OTC platform MS-ATR allows free trading through direct gas exchanges (without a price) there is no public information available on OTC prices.

b) Starting of a gas exchange in Spain (MIBGAS)

The Law 8/2015, amending Law 34/1998 on the hydrocarbons sector, establishes the implementation of a gas exchange, and nominates MIBGAS as the independent market operator. The gas exchange allows users to purchase and sell natural gas in the virtual point of balance of the gas system, with physical products with a horizon of delivery until the last day of the following month.

In October 2015, it was approved the Royal Decree 984/2015, which regulates the principles of the gas exchange. In development of this Royal Decree, Decision of the Ministry of energy, dated 4th December 2015, approved the detailed rules of functioning of the gas exchange.

Trading activity at the MIBGAS exchange started on December 16, 2015, with the negotiation of six different products for the Spanish market: Within Day, Day-Ahead (D+1, D+2, D+3), Balance of Month and Month-Ahead.

The activity of the gas market during December 2015 was not very representative, with low liquidity and a minimum number of transactions: there were only 10 transactions in the 15 sessions of the month, for a total of 3.300 MWh interchanged. There were 19 registered agents by the end of December 2015.

In order to increase the liquidity in the market, it was approved a new Decision on December 23, 2015, which establishes the procedure for the acquisition of operational gas in the daily product (D+1). According to this Decision, the System Operator (Enagas) started buying natural gas in the organised market since January 15, 2016, in the daily opening auction for the product D+1.

In the next figures there can be seen the evolution of the prices for the product D+1 and the volumes interchanged in the different products, for the month of December and the first quarter of 2016. It can be seen regular trading activity since January 16, 2016, due to the beginning of the acquisition of the operational gas:

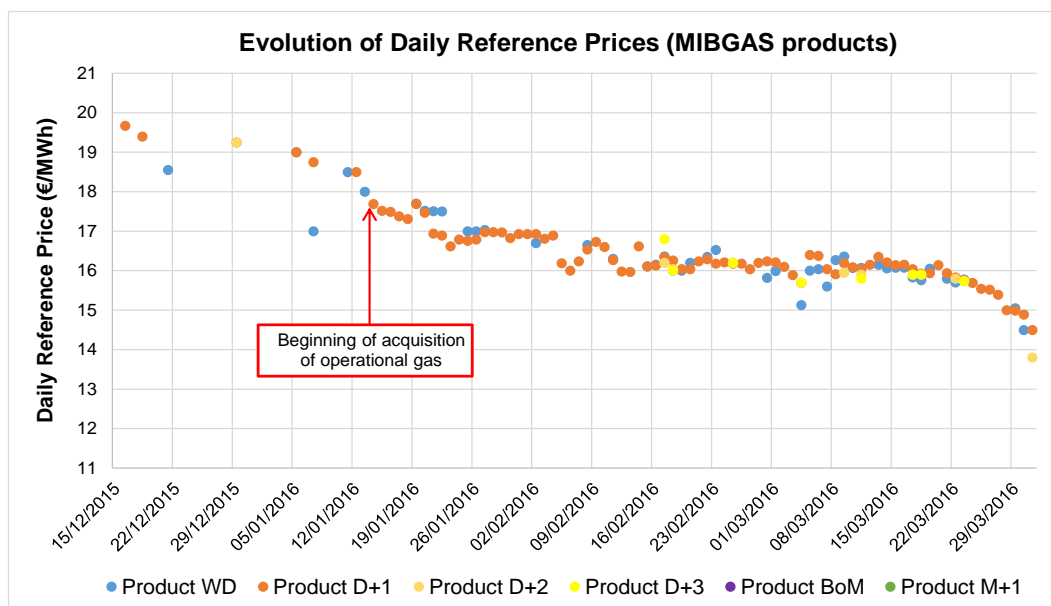


Figure 20. Evolution of Daily Reference Prices (MIBGAS)

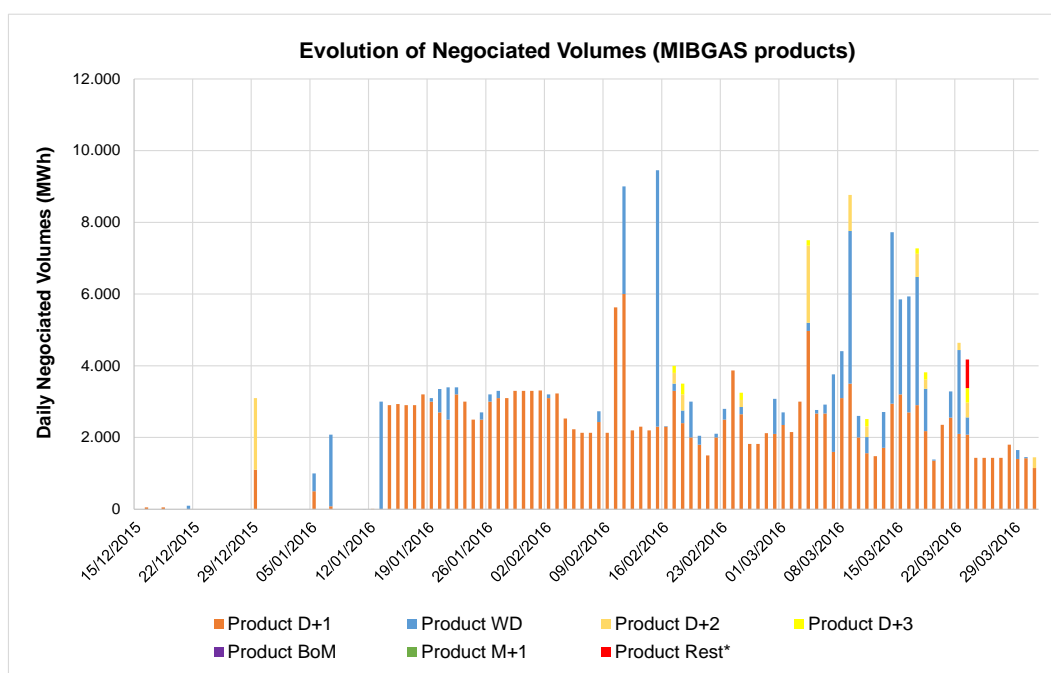


Figure 21. Evolution of Negotiated Volumes (MIBGAS)

The market prices started on December around 19-20 €/MWh, and since January 16, 2016, the product D+1 that varies from 17,5 to 14,5 €/MWh at the end of March 2016. The volumes in December were very low, and there is a regular negotiated volume since January 16, 2016, with a daily average negotiated volume of 3.250 MWh in the first quarter of 2016. By the end of May 2016 there were 32 registered agents at MIBGAS.

In comparison with other European markets, MIBGAS started with a difference of 3-4 €/MWh in relation with the French (PEG Nord) and Dutch (TTF) markets. In the next figure it can be seen

that the difference decreased by the beginning of April 2016, and at the end of that month the three markets got closer and the differences reduced to less than 0,5 €/MWh.

Spot market prices are published at MIBGAS website (www.mibgas.es) in a daily base.

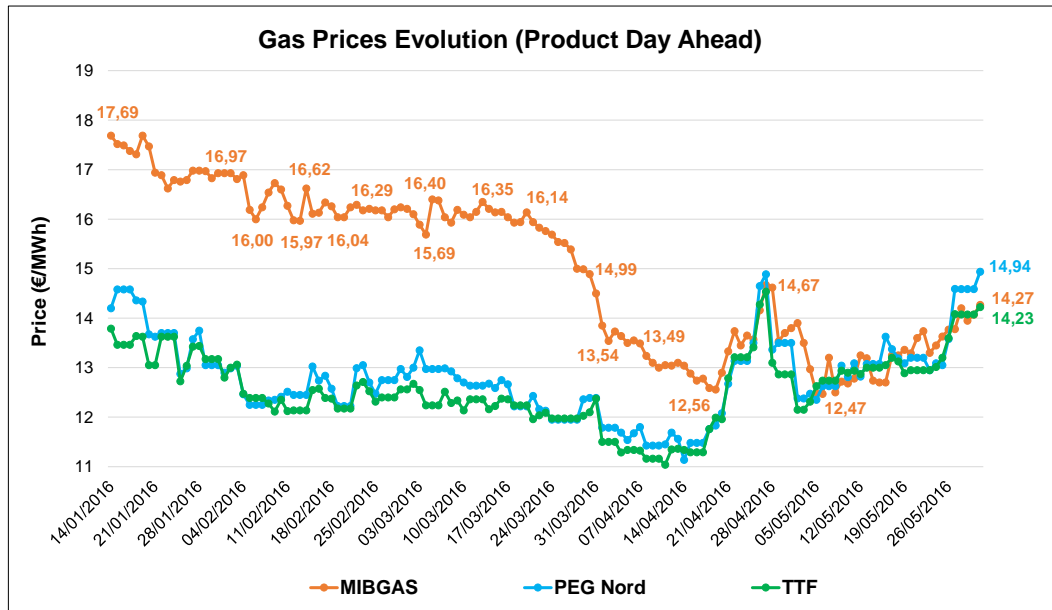


Figure 22. Evolution of European gas prices

c) Auctions for the procurement of gas for TSO needs and regulated tariffs

During 2015 there were still public auctions at different horizons for the procurement of gas for the TSOs needs (operational gas and cushion gas) and for the procurement of gas for the regulated tariffs (the buyers at the auctions are the last resort suppliers). These auctions are run by OMIE, the electricity market operator, and are monitored by CNMC.

- Auctions to buy operational gas for TSOs

The Order IET/2812/2012, which lays down the charges associated with access by third parties to gas facilities and remuneration of the regulated activities, established that TSOs and LNG system operators must purchase every year the gas they need for their own consumption (operating gas) and for the minimum filling level of their assets (minimum filling level gas) by means of an annual auction procedure covering the acquisition of the gas needs from the 1 July of the current year to the 30 June of the following one. The general rules of the auction procedure are established by Resolution of 19 May 2008, which lays down the auction procedure for the acquisition of natural gas for use in operation and the minimum level of the transmission, regasification and underground storage facilities. The specific rules of the yearly auction are established every year in a Resolution of the General Directorate of Energy Policy and Mining of the Ministry of Industry, Tourism and Trade. CNMC is the supervisory body of

these auctions and the Spanish power exchange (Operador del Mercado Ibérico de Energía, Polo Español, S.A. -OMIE)³¹ is the institution responsible for organising them.

Article 15 of Order IET/2446/2013, of 27 December 2013, establishes the possibility to hold more than one auction per year. During year 2015, one auction was held (on May 26th 2015). In this case auction was held for the acquisition of operational gas from 1st July 2015 to 30th September 2015, according to the planned starting date of operation of the organized market, where operational gas could be bought.

The auction is based on a mechanism of multi-round descending clock price. The following table summarises the results of the auctions held in 2011, 2012, 2013, 2014 and 2015.

	Auction for the acquisition of natural gas for own consumption (operating gas) and for the minimum filling level of gas pipelines of the transport network and regasification plants					
Type	Multi-round descending-price, electronic mechanism					
Date	24 May 2011	29 May 2012	28 May 2013	27 May 2014	18 Nov 2014	26 May 2015
GWh operating gas	1.504,9	1.961,2	1.927,5	914,8	963,5	648,6
GWh min. Filling level	89,4	59,9	23,2	98,9	0,0	0,0
GWh total	1.594,3	2.021,1	1.950,7	1.013,7	963,5	648,6
Supply period	1 July 2011 - 30 June 2012	1 July 2012 - 30 June 2013	1 July 2013 - 30 June 2014	1 July 2014 - 30 June 2015	1 January 2015 - 30 June 2015	1 July 2015 - 30 Sept 2015
Auction price	26,16 €/MWh	32,31 €/MWh	34,85 €/MWh	29,70 €/MWh	28,45 €/MWh	21,60 €/MWh

Table 18. Auctions for operating and minimum filling level gas³²: results of the auctions held in 2011-2015

Source: auction administrator and CNMC

- Auctions for the acquisition of the natural gas whose price will be used as a reference for establishing the last resort tariff (TUR)

The Ministerial Order ITC/863/2009, approved on 2 April 2009, regulated the auction procedure for the acquisition of the natural gas whose price will be used as a reference for establishing the last resort tariff (TUR).

Two auctions have to be celebrated each year for the “base load gas” product and one for the “winter gas” product³³.

The products subject to auction during year 2015 were: (i) the base load gas at a pre-established monthly amount for the period 1 July 2015 – 31 December 2015 and for the period

³¹ Through its subsidiary OMEL Diversificación S.A.U. from 2009.

³² In the auctions of years 2011, 2012 and 2013 no minimum filling level gas was actually auctioned, being the 100% corresponding to operating gas. The operating gas correspond to “full requirement”, therefore the final amount supplied can slightly deviate from the indicative figure in the table.

³³ According to article 5.4 of Order ITC/1660/2009 establishing the calculation methodology for the Last Resort Tariff of natural gas, by means of the redaction given by Order ITC/1506/2010.

1 January 2016 – 30 June 2016; and (ii) the winter gas for pre-established monthly amounts for the period November 2015 – March 2016.

A multiple-round descending-clock price mechanism was used for the two auctions celebrated during year 2015, and their results were the followings:

	Auction for the acquisition of natural gas for the last resort tariff	
Type	Multi-round descending-price, electronic mechanism	
Date	16 Jun 2015	27 Oct 2015
Monthly base load gas (GWh)	1.200 GWh (200 GWh/month) for second half of year 2015	1.200 GWh (200 GWh/month) for first half of year 2016
Winter gas (GWh)	1.910 GWh (November 2015 - March 2016)	-
Supply period	1 July 2015 - 30 June 2016	
Auction price for base load gas	21,79 €/MWh	20,25 €/MWh
Auction price for winter gas	23,67 €/MWh	-

Table 19. Auctions for natural gas for last resort supply: results of the auctions held in 2015³⁴

Source: Auction administrator and CNMC

- Auctions to buy cushion gas for the new underground storage facilities

On 30 June 2015 the third auction for the procurement of cushion gas for the new underground storage facilities took place. The main regulation related to that auction is:

- Resolution of the State Energy Secretariat (SEE) of 17 April 2012, establishing the auction procedure, taking into account the amendments from Resolution SEE of 7 May 2013.
- Resolution of the General Directorate of Energy Policy and Mining (DGPEM) of 28 May 2015, establishing the operational rules for the development of the auction for the purchase for the period 1 August to 31 November 2015 of the natural gas needed to fill the minimum level of the basic underground storage “Yela”. The maximum amount to be auctioned was fixed in 1.234 GWh.

The total matched amount was 1.234 GWh, allocated between the 5 winners. The deliveries were arranged in two periods: the first period from 1 August 2015 to 31 October 2015, and the second period from 1 November 2015 to 30 November 2015. These electronic auctions are arranged according to the sealed-bid method and, in particular, they employ the “pay-as-bid” mechanism, i.e. there is not a single equilibrium price.

³⁴ In the auction held on 18 June 2013, the matched quantities were 50% and 40% of the base load and winter gas, respectively, of the auctioned amounts shown in Table 5.

4.2.1.4 Wholesale market monitoring and effectiveness of competition

Market monitoring

The Spanish NRA develops its monitoring functions of market opening and competition in wholesale and retail markets by periodic reports (monthly reports for wholesale markets and quarterly reports for retail markets).

Furthermore, in the monthly monitoring report on wholesale market it is followed up the evolution of the prices in the international markets in order to compare with the domestic prices of gas.

Wholesale market indicators

The following table summarizes the main indicators of the wholesale gas market in Spain in 2015:

Wholesale market indicators	Year 2015	
National Gas Production	770 GWh/year	
Gas Consumption	314.278 GWh	+4,2%
Import by pipeline and LNG	58% Pipeline / 42% GNL	
Main origin of gas suppliers	Algeria (60%)	
Number of origins of gas supplies.	9	-2
Number of registered traders in Spain	135	25 new traders registered in 2015 (10 unregistered)
Number of traders bringing gas to Spain	26	-1
Market share of the largest entity bringing natural gas	45,4% (Gas Natural Fenosa)	45,2% in 2014
HHI for gas imports ³⁵	2385	2295 in 2014
Number of traders active in the wholesale market (OTC)	67	-3
Number of traders registered in MIBGAS exchange	19 (end 2015)	(0 in 2014)
Trading volume in the OTC gas market	444.354 GWh/year	-17%

³⁵ Calculated on the base of the gas importing companies (not calculated on the base of market share of the international gas producers, like Sonatrach)

Number of transactions in the OTC	8.000 trades/month	+14%
Gas import prices to Spain (2015 average)	21,70 €/MWh	-4,10 €/MWh
Spot gas price	19,44 €/MWh	Average price for December 2015

Table 20. Main Wholesale market indicators. Source: CNMC

4.2.2 Retail market

Retail market structure

In 2015, the Spanish gas demand increased an 4,2%, to 314.278 GWh. Since 2008, the gas demand has felt a 30,1%, mainly for the decrease in gas consumption for electricity generation.

It should be noted that the increase in gas demand is different in every sector: the increase in electricity generation with natural gas (+16,7%) was driven by the decrease of hydroelectric production, an increase of electricity demand and more use of combine cycles in summer due to several heat waves; the industrial consumption of gas increased a 1,0%, mainly as a result of a recovery of industrial activity. Finally, the household consumption increased a 3,4% in 2015, as a result of lower temperatures in the first quarter of 2015 and the increase of 53.500 new gas consumers.

The figure below shows the share of supplies in the Spanish market in 2015 by company, in terms of energy volume:

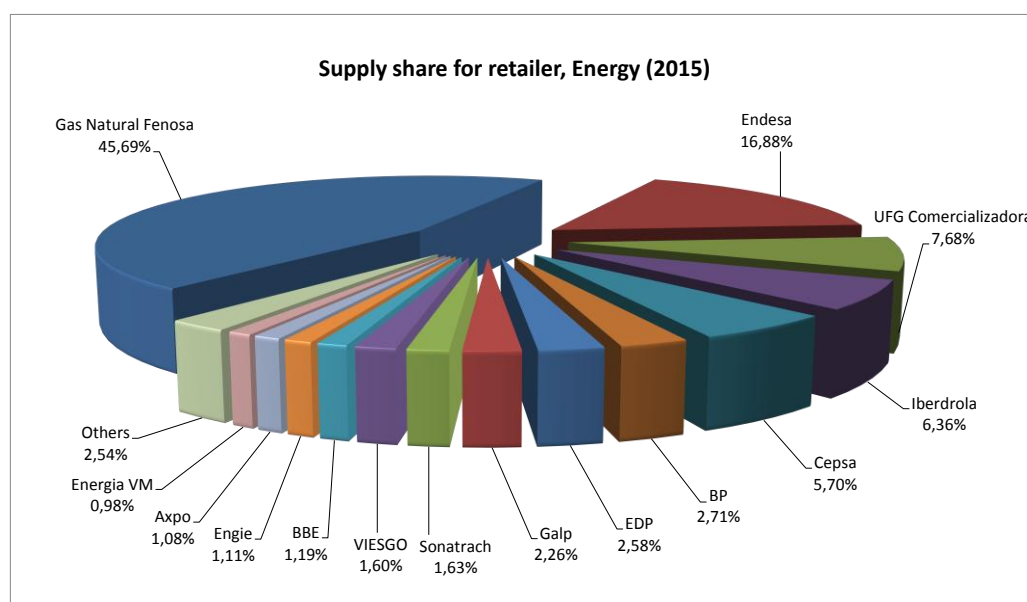


Figure 23. Share of natural gas supplies by company (in energy volume). Source: CNMC

In December 2015, the total number of gas consumers was 7.585.830 (+53.500 consumers with regard to December 2014).

In terms of number of customers, the sharing-out of supplies at 31 December 2015 is showed in the next figure:

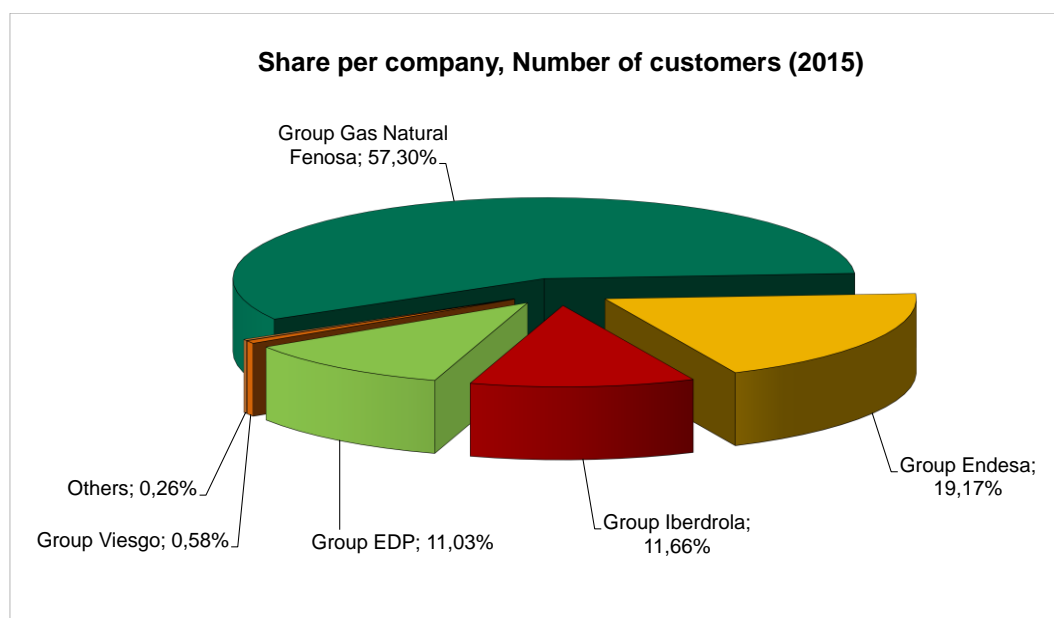


Figure 24. Share of natural gas supplies by company (in energy volume). Source: CNMC

The natural gas consumption by end-use sectors in 2015 was as follows:

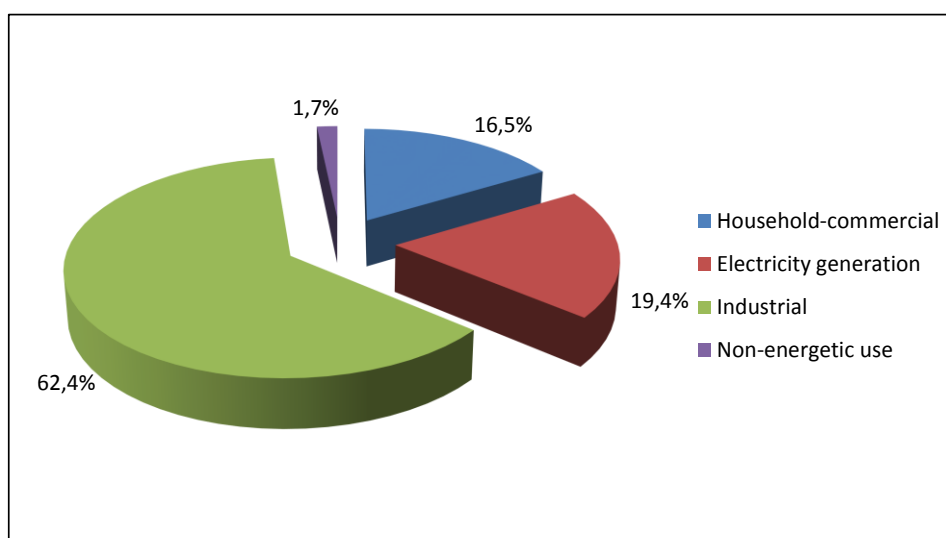


Figure 25. Consumption of natural gas by sectors (2015). Source: Sedigas

The evolution of this segmentation shows a very remarkable decrease in the share of gas dedicated to electricity generation, reaching a percentage of 19,4% in 2015 from a 40% in year 2009. During the last five years, there has been a decrease in the use of gas in electricity generation due to the reduction in consumption due to the crisis and the increase of production

with renewable energies, although in the year 2015 there has been a significant increase (+16,7%) due to the increase in industrial activity.

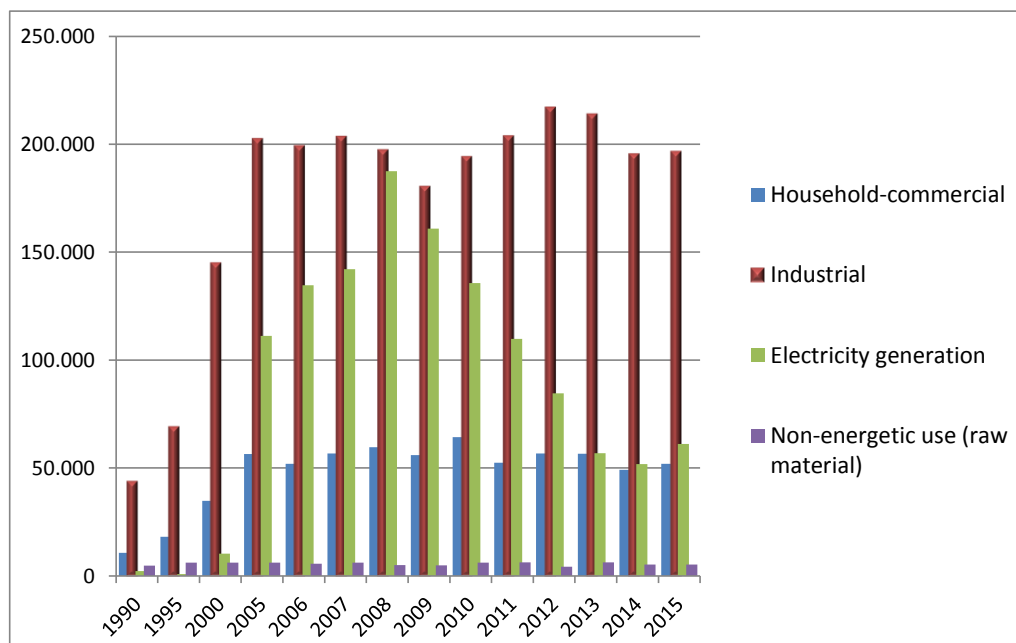


Figure 26. Natural gas sales in Spain (GWh). Source: Sedigas

Consumption groups (Pressure range and annual consumption)	MWh	Number of Consumers (31 Dec 2015)
Group 1 (Pressure >60 bar)		
1.1: Consumption <= 200 GWh/year.	2.777.576	31
1.2: Consumption > 200 GWh/year <= 1.000 GWh/year.	21.935.760	36
1.3: Consumption > 1.000 de GWh/year.	92.889.514	47
TOTAL Group 1	117.602.850	114
Group 2 (Pressure >4 bar and <= 60 bar)		
2.1: Consumption <= 500.000 KWh/year.	255.297	732
2.2: Consumption > 500.000 KWh/year <= 5 GWh/year.	2.981.461	1.386
2.3: Consumption > 5 GWh/year <= 30 GWh/year.	13.186.147	1.064
2.4: Consumption > 30 GWh/year <= 100 GWh/year.	18.758.185	391
2.5: Consumption > 100 GWh/year <= 500 GWh/year.	46.072.890	250
2.6: Consumption > 500 GWh/year.	35.871.042	33
TOTAL Group 2	117.125.021	3.856
Group 3 (Pressure <=4 bar)		
3.1: Consumption <= 5.000 kWh/year	10.180.985	4.280.940
3.2: Consumption > 5.000 kWh/year <= 50.000 kWh/year.	27.673.608	3.223.293
3.3: Consumption > 50.000 kWh/year <= 100.000 kWh/year.	1.507.542	26.703
3.4: Consumption > 100.000 kWh/year <= 1 GWh/year	14.362.052	47.420
3.5: Consumption > 8 GWh/year.(night consumption)	9.288.161	2.788
TOTAL Group 3	63.012.349	7.581.139
Group 4 (Interruption)		
(Pressure > 60 bar)		
4.1:Consumption <= 200 GWh/year.		
4.2:Consumption ia 200 GWh/year.<= 1000 GWh/year.		
4.3:Consumption > 1000 GWh/year.	1.620.709	2
(Pressure >4 bar and <= 60 bar)		
4.4:Consumption <= 30 GWh/year.	25.620	0
4.5:Consumption > 30 GWh/year <= 100 GWh/year.		
4.6:Consumption > 100 GWh/year <= 500 GWh/year.		
4.7: Consumption > 500 GWh/year.		
TOTAL Group 4	1.646.329	2
Non-energetic use (raw material)	5.621.620	4
LNG satellite plant for a single consumer	9.269.380	710
TOTAL GENERAL	314.277.548	7.585.830

Table 21. Natural gas consumption and number of consumers in 2015. Source: CNMC

The previous table shows the gas consumption in the Spanish market, broken down by levels of pressure and consumption, according to the different tariff groups existing in the Spanish gas system for the characterisation of consumers.

Evolution of gas market shares

At the end of 2015, there were 135 companies registered as retailers in the Spanish gas market. The share of retailers in the liberalised market could be seen in the next figure:

Evolution of the number of companies registered as natural gas retailers		
Date	Number of natural gas retailers	Variation
December 2009	40	
December 2010	49	9
December 2011	61	12
December 2012	76	15
December 2013	88	12
December 2014	120	32
December 2015	135	15
Total increase from 2009		95

Table 22. Number of companies registered as retailers in Spain. Source: CNMC

45 of the 135 natural gas retailers have expressed their intention to operate exclusively in wholesale and capacity markets, but not to operate supplying gas to final costumers.

Only 47 of the 90 retailers that performs sales to final customer declared sales in 2015. In the industrial market, the number of active companies has increased to 27 gas marketers in 2015, while the number of active competitors for householders raised to 32 retailers, four more that the last year.

The market share of the retailers in the liberalised market is shown in the next figure:

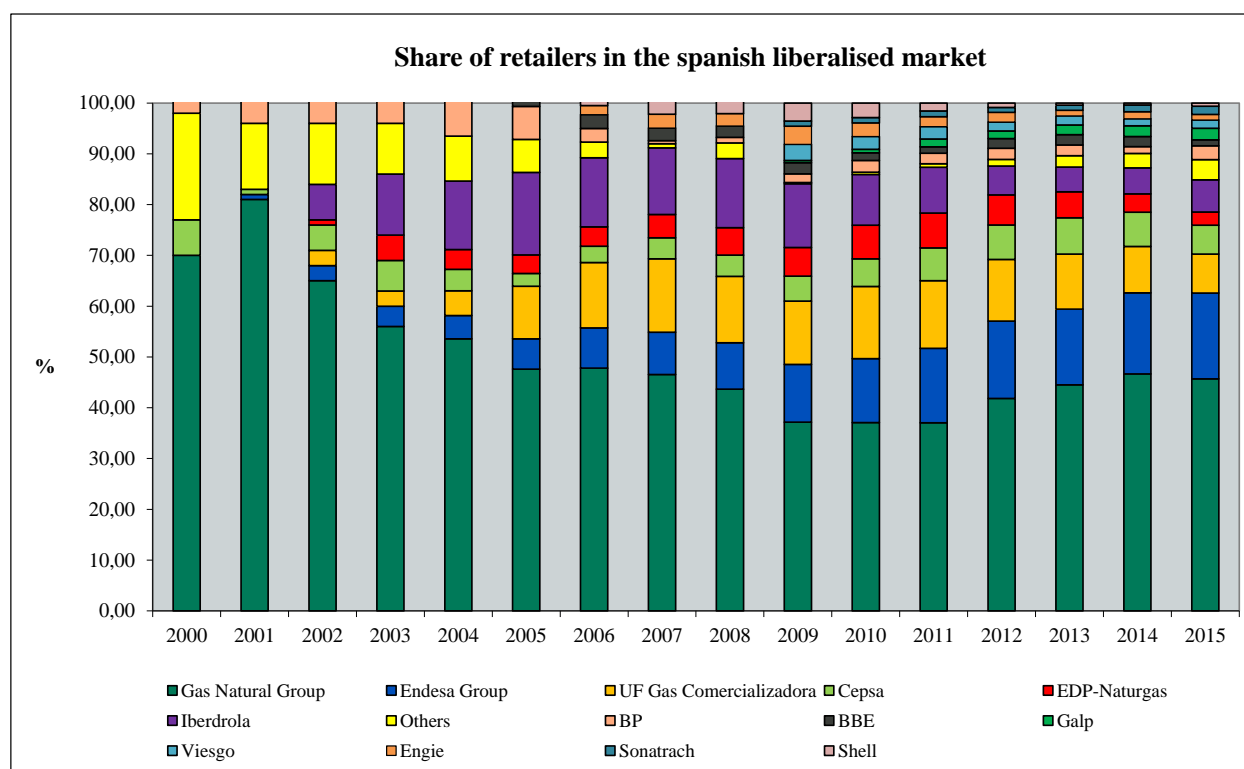


Figure 27. Spanish retail gas market. Sharing-out in terms of energy. Source: CNMC

This difference may be due to the high entry cost of the retail activity (commercial cost to contract new customers), the existence of economies of scale in managing retail customers, which benefit incumbents, and the lack of a liquid gas market, that makes difficult the entry of retailers without international gas procurement activity.

Switching rate and cuts for non-payments

The Royal Decree-Law 13/2012, of March 30th, introduced a general time limit of three weeks for the switching process in gas.

In 2011 and 2012, consumer activity gathered momentum and recorded a very high switching rate, but after that, switching rate has remained stable.

With respect to total changes supplier of natural gas, in 2015 was 866.000 changes, equivalent to 11,21% of gas customers in Spain, similar to the figure of 2014 (867.000 changes).

Gas Switching Data 2011-2015					
	2011	2012	2013	2014	2015
Domestic switching rate	19,56%	19,36%	11,78%	9,95%	11,15%
Number of domestic customers	7.207.431	7.323.988	7.396.840	7.498.055	7.567.319
Total switching rate	19,54%	19,32%	11,83%	9,99%	11,21%
Number activated supplier's changes	1.395.148	1.394.644	890.103	754.167	846.571
% failed switches	6,08%	4,46%	6,62%	11,21%	10,33%

Table 23. Gas switching data 2011-2015. Source: CNMC, OCSUM

The number of natural gas supply interruptions for non-payment in 2015 was approximately 58.000 cuts (representing 0,77 cuts every 100 customers in the domestic market), with a decrease of 11,5% over 2014 values.

DSOs

The main DSOs are Gas Natural Distribución Group (69% supply points) and EDP group (12%), both vertically integrated with supplying activities. It should be mention the creation of 2 new ownership unbundled DSOs since 2010: Madrileña Red de Gas, with 849.000 supply points (11%), and Redexis Group, with 522.000 supply points (7%), in both cases as the result of a disinvestment in DSO grids from Gas Natural and Endesa. Other small DSOs are Gas Extremadura (1%) and Gas Directo (0,1%).

Regulated tariffs

Since July 2008, regulated tariffs for end-users (last resort tariff, TUR) only apply to residential consumers consuming less than 50.000 kWh/year and connected to a network at a pressure

under 4 bar. There are four suppliers designated as suppliers of last resort, which supply all consumers submitted to the last resort tariff.

The number of customers supplied at regulated tariff continues the decreasing trend.

By 31 December 2015, the number of consumers supplied at a free price was 5.841.785 (77,01% of all consumers), while the number of consumers supplied at the last resort tariffs was 1.744.045 (22,99% of the consumers). In volume, consumers supplied at last resort tariff represent only 2,75% of the Spanish gas market. With respect to 2014, the number of customers in the last resort tariff has been reduced by 168.200.

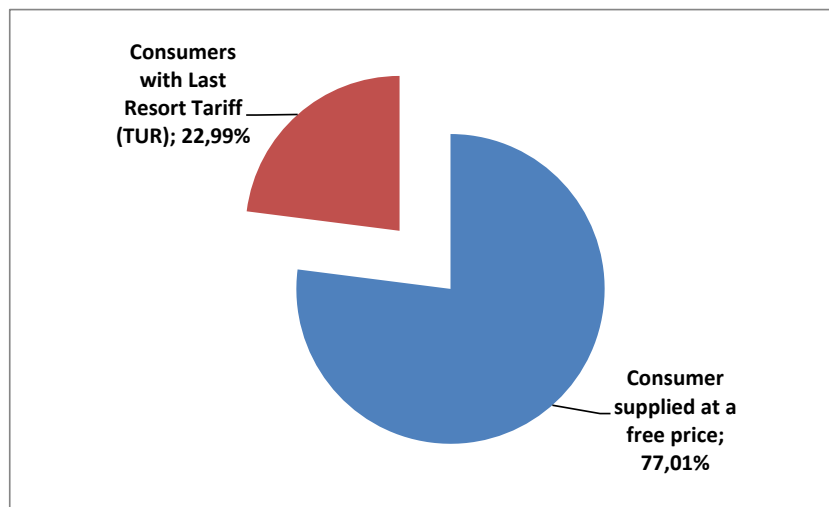


Figure 28. Consumers at the Last Resort Tariff vs consumers at free market price
Source: CNMC

Retail prices

At retail level, CNMC monitors retail prices through the commercial offers that are published in the CNMC's price comparison tool.

There is an obligation for the suppliers to communicate to CNMC all public offers of gas or electricity, including any change in tariffs to the price comparison tool. The suppliers are responsible for the data presented, as they have to send updated information.

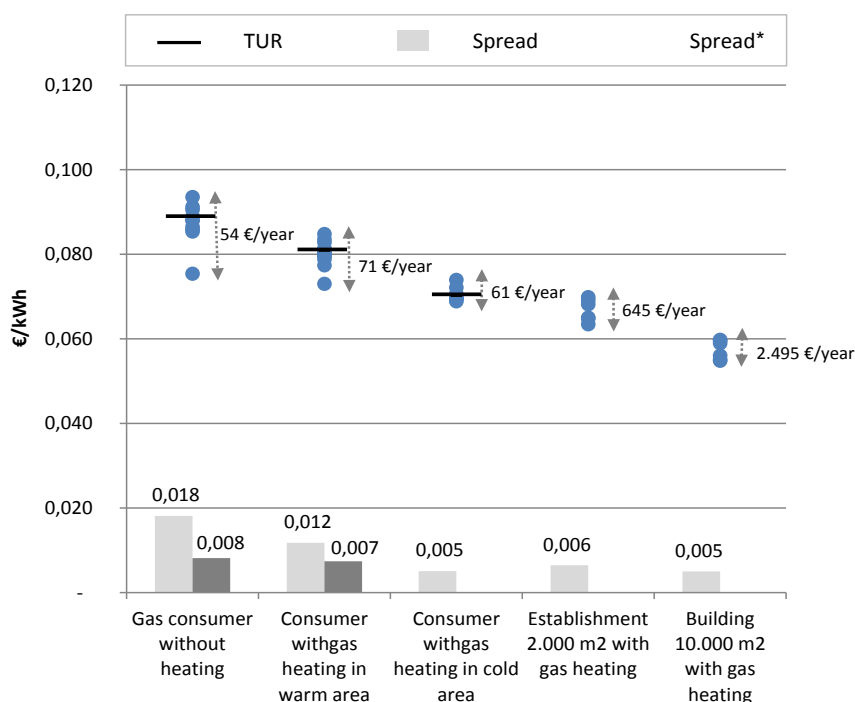


Figure 29. Spanish retail gas market. “Spread” between maximum and minimum offer for different natural gas -household and commercial- consumers, “Spread*” without considering offers significantly out of rank (June, 2015). Source: CNMC

Regarding the offers for households (those with right to TUR, the last resort tariff), the spread between the maximum and the minimum gas offer pose a difference in turnover of between 54 €/year and 71 €/year depending on the type of consumer.

4.2.2.1 Retail market monitoring and effectiveness of competition

Market monitoring

The Spanish NRA develops its monitoring functions of market opening and competition in wholesale and retail markets by periodic reports (monthly reports for wholesale markets and quarterly reports for retail markets).

Retail market indicators

The following table summarizes the main indicators of the retail gas market in Spain in 2015.

Retail market indicators	Year 2015	Δ 2015/2014
Gas Consumption	314.278 GWh	+4,1%
Number of natural gas customers	7.585.830	+37.176
Number of registered gas marketers	135	+15
Number of retailers with sales to customers	41	=
Number of retailers with market shares >5%	5	=
Number of retailers with customer shares > 5%	4	=
Switching rate	11,8%	+25 bps
Customers under regulated tariff	23%	-200 bps
HHI in terms of sales	2.537	-65
HHI in terms of customers	3.909	+14
Number of supply cuts by non-payment	58.130	-11,5%
Evolution of the price of gas for an average consumer (9000 kWh / year), TUR-2, tax excluded	505,52€/year (-54,64€/year) Unitary cost 5,62 cent€/kWh	-9,7%
Number of gas offers at Price Comparison Tool (December 2015)	87	+15

Table 24. Main Retail market indicators. Source: CNMC

4.3 Security of supply

4.3.1 Monitoring origin and mix of gas imports

Domestic gas production

The domestic production of Spanish fields is marginal and reaches only 769 GWh, 0,21% of Spanish gas demand in 2015. This production comes from four gas fields. Three of them are close to depletion and they could be used as underground storages in the future. Another one, Viura, started operating in February 2015. The rest of the gas consumed in Spain is imported.

Origin and mix of gas imports

In 2015 Spain received natural gas from a total of eight different countries. Algeria was the main supplying country, with 59,9% of the gas imports, followed by Nigeria (11,8%), Qatar (9,1%), Norway (8,8%) and Trinidad & Tobago (3,5%).

The figure below shows the mix of gas supplies to the Spanish system in 2015.

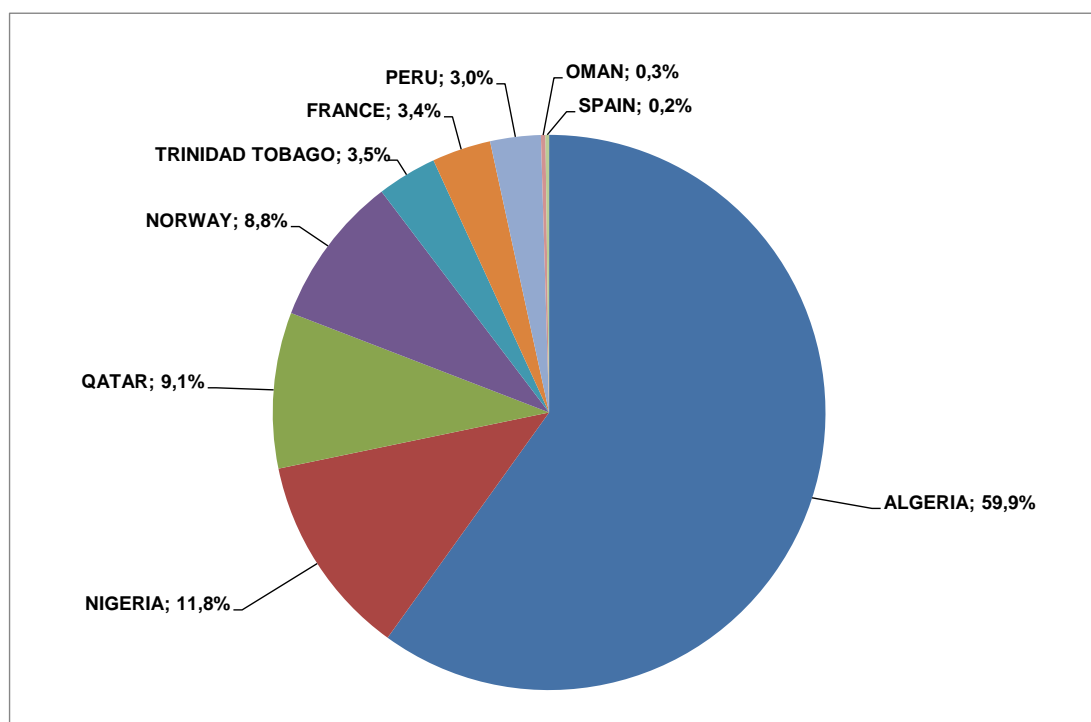


Figure 30. Sources of gas imported to Spain in 2015

Source: CNMC

This diversification in gas supplies contributes very significantly to security of supply in the Spanish system, representing a natural risk-hedging against a possible disruption of gas from a source, due to problems in infrastructure, geopolitical issues or any other reason.

Another relevant factor that influences positively security of gas supply in Spain is the importance of LNG in gas procurement (41,7% in 2015):

	2014 (GWh)	2015 (GWh)	Annual variation (%)
Pipeline	229.673	213.129 (58,3%)	-7,2%
LNG	180.091	152.361 (41,7%)	-15,4%
Total	409.764	365.490	-10,8%

Table 25. Gas imports in Spain 2015 vs 2014.

Source: ENAGAS

LNG high presence provides the Spanish system with a high level of flexibility, favouring the access to new upstream gas sources. LNG is also functions as back-up for renewable sources.

4.3.2 Evolution of gas demand and gas demand scenarios

Evolution of gas demand

In 2015, the Spanish gas demand increased 4,2%, to 314.278 GWh. Since 2008, the gas demand has fell 30%, mainly for the decrease in gas consumption for electricity generation.

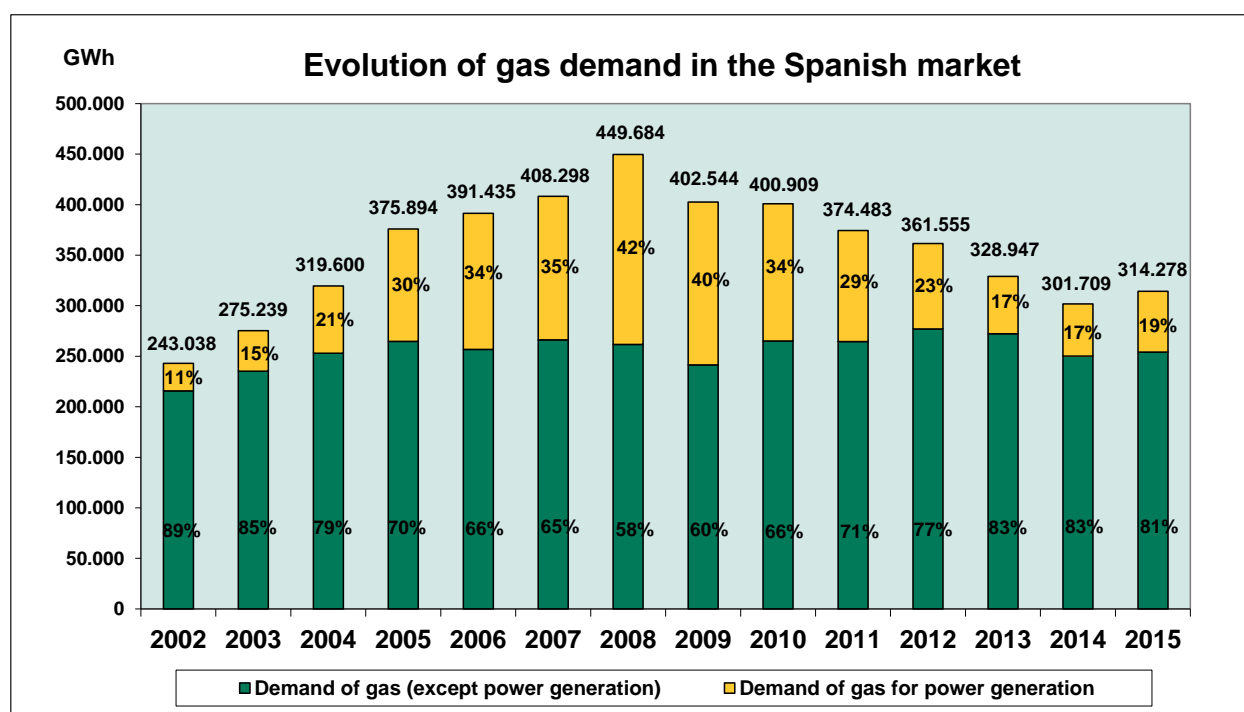


Figure 31. Evolution of gas demand in the Spanish market (2002 - 2015)

Source: ENAGAS, CNMC

It should be noted that, in 2015, gas consumption for electricity generation increased a 16,7%, driven mainly by the decrease of hydroelectric production, an increase of electricity demand and more use of combine cycles in summer due to several heat waves. In this year, the industrial consumption of gas increased a 1%, mainly as a result of a recovery of industrial activity. Finally, the household consumption increased a 3,4% in 2015, as a result of lower temperatures in the first quarter of 2015 and the increase of 53.500 new gas consumers.

The next table shows the evolution of gas demand in the Spanish market in 2015.

	2014 (GWh)	2015 (GWh)	Annual variation (%)
Demand of gas (except power generation)	250.074	254.029	+1,6%
Demand of gas for power generation	51.634	60.248	+16,7%
Total demand in Spain	301.709	314.278	+4,2%

Figure 32. Gas demand in Spain in 2015 vs 2014
Source: CNMC

Gas demand scenario

It is expected a stabilization of the gas demand with regard to the current value, with a slight increase of conventional demand and the demand for electricity generation, largely because of increases in renewable sources, mainly wind power. Nevertheless, regarding demand for power generation, it is remarkable that is difficult to forecast, as it can be affected by several annual circumstances: coal versus gas prices, generation with hydro power (depending on the level of reserves of water for hydroelectric power) and the amount of electricity produced renewable sources.

CNMC's demand forecast for the period 2016-2020 in Spain is detailed in the following table:

Energy Demand (TWh)	2015 (Real)	2016	2017	2018	2019	2020
Gas demand (except power generation)	254	259	262	265	269	274
Gas demand for power generation	61	50	50	52	56	59
Total gas demand in Spain	315	309	312	317	326	333

Table 26. Forecast of annual gas demand 2016-2020. Source: CNMC. Report on the Forecast of the evolution of different items of income and cost of natural gas system for the period 2016-2020

It is important to underline that expected gas demand in 2020 is still expected to be below 2005 levels, so there is no need for new internal transmission infrastructures.

4.3.3 Capacity of infrastructures and new investments

Six LNG import terminals are operational in the Spanish gas system, and one has been mothballed.

Spain has international gas pipeline connections with Morocco, Portugal and France, and a direct connection with Algeria (Medgaz).

While LNG terminals represent around 61 bcm/year of entry capacity to the transmission network, the connection from Algeria through Morocco represents 12 bcm/year of import capacity (8 bcm/year to Spain and 4 bcm/year to Portugal), the direct connection with Algeria (Medgaz pipeline) adds 8 bcm/year and the connection with France at Larrau, 5,5 bcm/year importing capacity (also 5,5 bcm/year exporting capacity).

a) Capacity of LNG import terminals

In Spain there are six LNG regasification plants. All of them are subject to regulated TPA, allowing the access to new capacity by the new entrants, which has favoured the development of gas competition in Spain.

The capacity use rate in 2015 was only 25,0% in average for the LNG plants, varying from 11% (the minimum, at Cartagena), to 36% (maximum, at Mugardos). In addition to that, there is a LNG terminal in Gijón (Musel) that is mothballed, as there is no need for this plant to be in operation with the current gas demand.

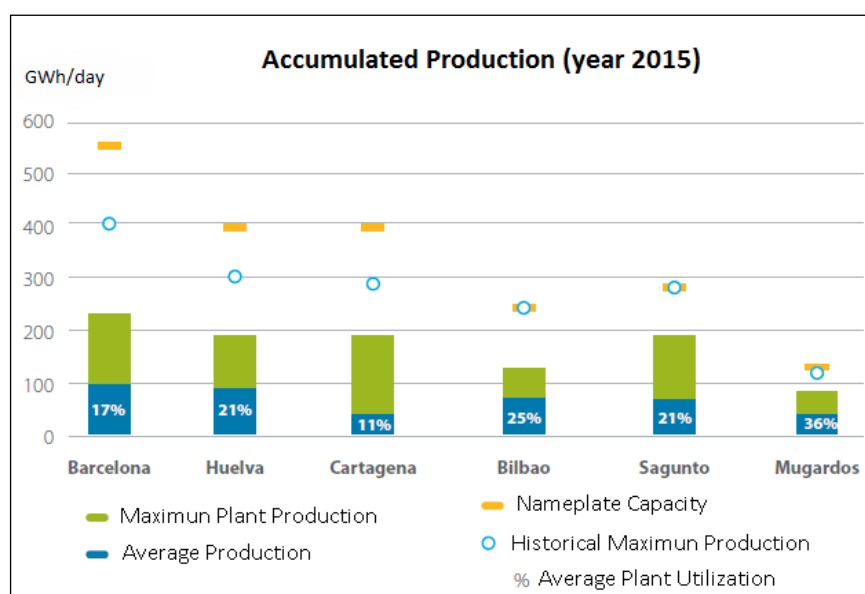


Figure 33. Use rate of LNG terminals in 2015
Source: ENAGAS

The following table shows the LNG storage and send-out capacity of each one of the six terminals:

LNG Terminal	LNG storage capacity (m ³)	Send-out capacity (m ³ (n)/h)
Barcelona	760.000	1.950.000
Huelva	619.500	1.350.000
Cartagena	587.000	1.350.000
Bilbao	450.000	800.000
Sagunto	600.000	1.000.000
Mugardos	300.000	412.800
TOTAL	3.316.500	6.862.800

Table 27. Capacity of LNG terminals at Dec, 31 2015.
Source: ENAGAS

b) Capacity of international pipeline interconnections

Spain has several international gas pipeline connections to other countries: to Algeria through Morocco (Tarifa) and Almeria (Medgaz), to Portugal through Tuy and Campo Maior (Badajoz), and to France through Larrau and Irún.

In November 2015 there was an increase in the gas pipeline capacity through Almeria, reaching an import/export capacity of 270 GWh/day.

The current capacities of international interconnections are the following:

Interconnection	Capacity (GWh/day)
VIP. Pirineos (ES->FR)	225
VIP. Pirineos (FR->ES)	165 (Winter) / 175 (Summer)
VIP. Ibérico (ES->PT)	144
VIP. Ibérico (PT->ES)	80
Tarifa (MO->ES)	444
Almería (AL->ES)	270

Table 28. Interconnection physical capacities at Dec, 31 2015.
Source: ENAGAS

c) Storage capacity

There are four underground storage facilities in Spain: Serrablo, Gaviota, Marismas and Yela, these two last entered in operation in 2012.

- The Serrablo gas field is located between in the province of Huesca, near the Pyrenees.
- Gaviota is an off-shore facility located near Bermeo (Vizcaya).

- Yela Underground Storage Facility is located at Guadalajara, in the central area of Spain, and is connected to Enagas' basic network by three different gas pipelines.
- Marismas, that entered in operation in 2012, is located in Huelva.

It is interesting to compare this capacity with the storage potential of the other facilities namely, LNG tanks and the marginal storage capacity of the transmission network (linepack):

	Maximum storage capacity (GWh)
Underground storage	28.579
Tanks in LNG terminals	22.084
Linepack	1.000
TOTAL	51.663

*Table 29. Storage capacity in Spain: underground storages, LNG tanks and pipelines
Source: ENAGAS*

d) Booked and available capacity

At the end of 2015 there was available capacity in all LNG terminals. Booked TPA capacity at LNG terminals was 25% throughout the year. Contracted capacity ranges from a minimum value of 12% in Cartagena up to 41% in Mugardos.

In the pipeline interconnections, there was available capacity with Portugal in both directions. The two interconnections with Portugal (Tuy and Badajoz) are booked thought a single virtual interconnection point.

In the Maghreb pipeline, importing gas from Algeria through Morocco, the capacity was booked around 77% throughout the year. In Medgaz pipeline, capacity booked was 92%.

There was only 6% of free capacity at the connection with France, with 94% of average import capacity booked during 2015 (single virtual point)

The following table shows the situation at all these pipelines interconnections, in terms of average rates of booked and available capacity during 2015:

Entry (or exit) point		Contracted capacity in 2015 (%)	Available capacity in 2015 (%)
Barcelona LNG terminal		24,0%	76,0%
Sagunto LNG terminal		28,0%	72,0%
Cartagena LNG terminal		12,0%	88,0%
Huelva LNG terminal		26,0%	74,0%
Mugardos LNG terminal		41,0%	59,0%
Bilbao LNG terminal		32,0%	68,0%
<i>TOTAL LNG TERMINALS</i>		25,0%	75,0%
Maghreb pipeline (import)		77,0%	23,0%
Medgaz (import)		92,0%	8,0%
Francia (Larrau+Irun)	Import (F=>E)	94,0%	6,0%
	Export (E=>F)	52,0%	48,0%
Portugal (Badajoz+Tuy)	Import (P=>E)	0,02%	99,98%
	Export (E=>P)	83,0%	17,0%

Table 30. Contracted and Available capacities in 2015 (LNG terminal and Interconnections).
Source: ENAGAS

e) New investments in infrastructure

New infrastructures in 2015

This new infrastructures have entered into operation in 2015:

- Pipeline to Mariña Lucense, second branch (14 km, 16 inches), which enhances the Galicia's transport system in Lugo's coast.
- Son Reus-Inca-Alcudia pipeline (46 km, 10 inches), which connects those towns to the Mallorca's transport system.
- Compression station in the Euskadour interconnection, which increased the capacity between Spain and France.

Future investments

The large investments made in the gas sector in recent years and the decrease in demand have already created a surplus on capacity, and an imbalance between revenues and costs, albeit much lower than the past imbalances in the electricity sector.

The Royal Decree Law 13/2012 contains some measures in order to prevent further non needed expansion: (i) a moratorium on new regasification plants; (ii) a moratorium on

administrative authorisations for new gas transport pipelines and metering stations. Also, the new LNG terminal of Gijón is mothballed. Infrastructures that can still be developed are the island gas infrastructures and gas interconnections with Europe.

Due to the actual surplus in transport and LNG infrastructures in Spain, the focus should be in developing DSO gas grids, connecting new customers to the grid and facilitating new gas uses, like marine transportation with LNG or compressed gas in vehicles, in order to facilitate the recovery of the gas demand.

Spain – France interconnections

It is remarkable the progress made at the Spain – France interconnection during the last years

- The capacity at Larrau interconnection was increased up to 5,5 bcm/year in 2013 in both directions.
- The capacity at Irun/Biriatou interconnection was increased in 2 bcm/year in the Spain-France direction, reaching 7,5 bcm/year, by the end of 2015, with the compression station of Biriatou.

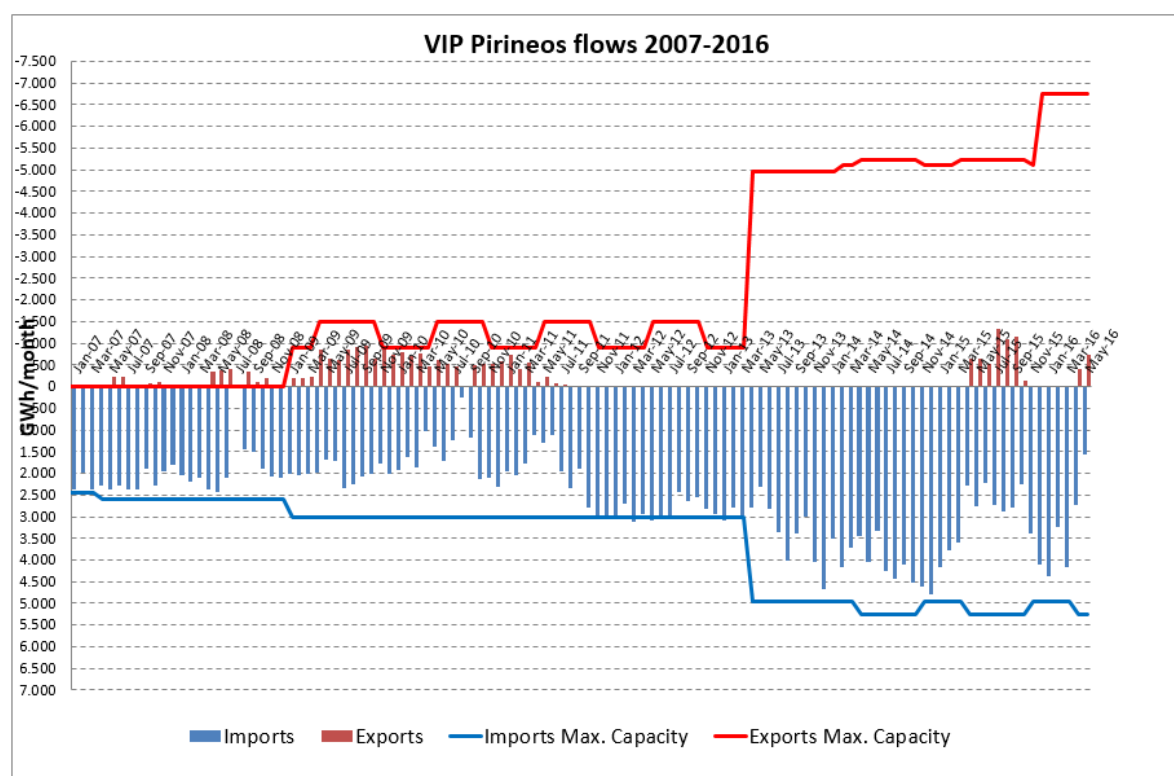


Figure 34. Interconnection capacity between Spain and France.
Source: CNMC and ENAGAS

Monitoring investment plans and assessment of consistency with Community wide network development plan

CNMC monitors the investment plans of the transmission system operators with regard to the TNYDP approved by the Spanish Government. Moreover, regarding the consistency with the Community-wide network development, CNMC participates in the selection of the Projects of Common Interest, PCI process: ENTSOE Cost Benefit Analysis methodology, JRC ranking methodology, preliminary results.

CNMC, inside ACER and through the regional initiative, participates in the different gas infrastructures task forces. The evaluation of PCI will continue during the year 2015. During the process room for improvements are being detected.

4.3.4 Security of supply obligations and safeguard measures

Due to the growing importance of natural gas within the Spanish energy supply and virtually total external dependency in the supply of natural gas, the Hydrocarbons Act introduced certain measures for the security of supply of gas in order to cover hypothetical events of big shortfalls at international production or interconnections facilities. For this purpose, it established the obligation of maintenance of minimum safety stocks of gas and included the need for diversification of external supplies.

These measures were developed through Royal Decree 1716/2004, and current obligations are the following:

- Suppliers and direct consumers in the market have the obligation to maintain a minimum strategic safety stock and a minimum operational stock, equivalent to 10 days of their firm sales in the previous calendar year each, 20 equivalent days.
- If all the natural gas supplies intended for national consumption coming from the same country are over 50% of total supplies, suppliers and direct consumers in the market who provide supplies for a percentage above the 7% of total supplies in the preceding calendar year, must diversify their portfolio so that their own supplies from the largest supplier country to the domestic market are less than 50%.

The peak demand can be easily supplied by an increase in the production of the six regasification plants, as they have a large excess of regasification capacity.

Safeguard measures for emergency situations

Article 101 of the Hydrocarbons Act states that the Government shall lay down the conditions for emergency situations in which the strategic reserves of natural gas may be used by those under the obligation to maintain such reserves. For this purpose, Royal Decree 1716/2004 states emergency situations shall be those cases where due to circumstances that are out of control of one or all agents intervening in the gas system, there is a risk of shortage or scarcity

of supply with regard to firm gas supplies as well as whenever the safety of people, equipment or installations may be affected or the integrity of the gas network.

Monitoring on security of supply

The competent authority to monitor the security of supply according with article 5 of Directive 2009/73/EC is the Ministry of Industry, Energy and Tourism. CORES also monitors the strategic safety stock and diversification of supply.

The Ministry of Industry, Energy and Tourism has published on 31 July 2012 the 1st report outlining the findings resulting from the monitoring of security of supply, according with article 5 of Directive 2009/73/EC, available here:

http://www.minetur.gob.es/energia/gas/legislacion/2012/470_resolucion_informe_seguridad_su_ministro_gas.pdf

On December, 19th 2012 the Ministry of Industry, Energy and Tourism has published a Preventive Action Plan and an Emergency Plan for the Spanish Gas System for the period 2012-2014, according with ER 994/2010.

On October, 5th 2015, these plans have been updated, and the new version is available here:

http://www.minetur.gob.es/energia/gas/Legislacion/2015/730_Plan_Preventivo_Y_Emergencia.pdf

5. REMIT

Article 46.I of the Act of the Power Sector (Law 24/2013, of 26

December) allows the Ministry of Industry, Energy and Tourism, CNMC, and the European Commission to access during at least 5 years to the data of all the transactions of the electricity supply contracts, as well as the electricity derivatives concluded with the wholesale customers and the Transmission System Operators.

Regarding the scope of Regulation (EU) No 1227/2011 on Wholesale Energy Market Integrity and Transparency (“REMIT”³⁶), CNMC participates actively in the CEER and ACER Market Integrity and Transparency (MIT) Working Groups and related Task Forces³⁷ to coordinate the implementation process.

In particular, Article 7 of the Law 3/2013 establishes the functions that the Spanish NRA shall carry out for supervising and controlling the proper functioning of the electricity and natural gas sectors. In this regard, CNMC will ensure compliance by the electricity and natural gas market participants of the provisions stated on in the European Union regulation, monitor the adequate price formation and supply conditions to end users, and guarantee the transparency and competition in the electricity sector and the gas sector. Article 27 (Inspection faculties) states that CNMC civil servant staff, duly authorized by the corresponding Director, will have the “authority agent” status and is empowered to perform inspections to enterprises for the right application of Law 3/2013. Article 29 (Sanctioning power) states that CNMC will exert its power regarding inspection and sanctioning according to the Electricity and Gas Laws. For the exercise of the sanctioning power, the due functional split between the instruction phase and the resolution phase will be guaranteed. The instruction phase will correspond to the Energy staff, and the resolution phase will correspond to the Board.

On the other hand, the provisions related to inspection, infringements, and sanctioning regime are developed in Title X of the Act 24/2013, of 26 December, of the Power Sector, and in Title VI of the Act 34/1998, of 7 October, of the Hydrocarbons Sector. In particular, infringements of REMIT are considered as a serious infringement according to article 65 of the Act 24/2013, of 26 December, of the Power Sector, and article 110 of the Act 34/1998, of 7 October, of the Hydrocarbons Sector. The sanctioning faculty corresponds to CNMC.

In addition to the market monitoring tasks performed by CNMC, market oversight reports with aggregated data and no commercially sensitive information covering both spot and derivatives markets are published.

³⁶ REMIT entered into force on 28 December 2011 and the prohibitions to market participants regarding insider trading and market manipulation, as well as the obligation to publish inside information, apply to both electricity and natural gas wholesale markets.

³⁷ The CMIT WG has a Task Force called “Wholesale Energy Market” (WEM TF). The AMIT WG has three Task Forces called “Market Monitoring Governance” (MMG TF), “Wholesale Market Surveillance” (WMS TF), and “REMIT IT Management and Governance” (RITMG TF).

The duty contained in article 37(1)(u) of the Directive 2009/72/EC is considered within the framework of regional cooperation. In the electricity market, compatible data exchange with France and Portugal (and beyond) between TSOs and PXs happens on a regular basis. One example of that are the data submitted by REE to be published at ENTSO-E Transparency Platform website (<https://transparency.entsoe.eu/>).

According to article 9.2 of REMIT *“Not later than 3 months after the date on which the Commission adopts the implementing acts set out in Article 8(2), national regulatory authorities shall establish national registers of market participants which they shall keep up to date. (...)”*

Commission Implementing Regulation (EU) N° 1348/2014 on data reporting implementing Article 8(2) and Article 8(6) of Regulation (EU) No 1227/2011 of the European Parliament and of the Council on wholesale energy market integrity and transparency, was adopted on 17 December 2014. As a previous step for the transaction reporting to ACER, in order to facilitate such a process, article 9 REMIT establishes the obligation for market participants entering into transactions which are required to be reported to ACER to register with the NRA in the Member State in which they are established or resident or, if they are not established or resident in the Union, in a Member State in which they are active.

On 8 January 2015, CNMC approved the Resolution creating the Spanish Register of market participants in the wholesale Energy market, complying with article 9 REMIT. The Spanish Register started operations on 15 January 2015.

In the first four months of the Spanish Register, the number of market participants registered with CNMC was reduced (around 25). Therefore, on 7 May 2015, CNMC approved the Agreement encouraging market participants active in organised wholesale energy market places to apply in advance for their registration in the Spanish Register. According to article 12 of Commission Implementing Regulation (EU) N° 1348/2014, the registration obligation with the national regulatory authority must be done prior to 7 October 2015, if the market participants trade on organised market places (or prior to 7 April 2016 if they operate exclusively out of organised market places and such operations are subject to data reporting obligation to ACER).

On December 2015, 277 market participants were registered with CNMC and the Spanish NRA has been resolved 1,200 questions related to REMIT or the registration process.

On 7 October 2015 data reporting of contracts executed at organised market places started, including matched and unmatched orders, and information in relation to the capacity and use of facilities for production, consumption and transmission of electricity, and to the capacity and use of facilities for transmission of natural gas, including planned and unplanned unavailability of these facilities. On 7 April 2016 started data reporting for transactions concluded outside organised market places and the rest of information related to the capacity and use of electricity and natural gas facilities.

6 Consumer protection and dispute settlement in electricity and gas

6.1 Consumer protection

The general framework for consumers' protection is included in both, electricity and gas sectors.

In the case of electricity the Law 24/2013 introduces important provisions on customers, some of them derived from the Third Package and others proposed by the Spanish NRA. Related to natural gas sector, Law 13/2012 introduces the Annex I of the Directive 73/2009, and also the Law 3/2014 revising the text of General Act of Consumer Protection and transposing into the Spanish law the Directive 2011/83/EU of 25 October on Consumer Rights.

This new legal provision obliges traders to adopt the new set of contractual guidelines as from June 13, 2014. In this regard, it is important to mention that the legal provisions are also applicable to electricity and gas contracts. In particular, the Act 3/2014 has introduced new measures in switching for gas and electricity, setting up clear procedures when desisting from a switching request and procedures in case of non-requested switches.

Likewise, it is worth mentioning the strengthening of the information that must be provided to consumers before the execution of contracts. In particular, such information shall be provided in distance and off-premises contracts.

Moreover, the legal provisions on customer service, additional payments and charges for the use of certain means of payment have been also modified in this new draft of the Consumers Act.

Monitoring that consumers give effective consent to the switching of supplier is included among the tasks assigned to the Commission by the Law 3/2013. As a consequence of the supervision programs developed by this Commission three sanctions (financial penalties) were imposed during 2015 to suppliers related to improper switching behaviour.

Consumers' tools

Concerning electricity and gas markets, additional measures have been introduced by Law 3/2013, including the Ministry taking over responsibility for information and complaint handling, although the NRA remains in charge of other protective functions, such as handling the web-based gas and electricity price comparison tool: <http://comparadorofertasenergia.cnmc.es/>

As of 30 June 2015, the comparison tool counted 462 active offers of gas, electricity or dual supply from about 55 different companies.

Suppliers shall inform clients about their rights and establish a procedure in the case of complaints. Free customer information services must be made available, including free phone lines. Additionally, the Electricity Act (Law 24/2013) provides that CNMC will monitor the

effectiveness and application of consumer protection measures and may issue legally binding resolutions aimed at their fulfilment.

The latest monitoring report of the retail market gas and electricity offers listed in the CNMC price comparison tool includes a leaflet with some recommendations or advices to suppliers and consumers³⁸ to take into account in the process of hiring of the supply of gas or electricity.

The main advice for consumers is to compare the prices and services that offer several different companies and always read the contract carefully before deciding on a new offer. It also advises consumers to use applications like the CNMC comparison tool if they find difficult to understand or compare the gas or electricity offers.

CNMC has also developed a tool for simulating the bills of those consumers eligible to opt for the Voluntary Price for the Small Consumer (for those with contracted power below 10 kW, having into account whether a recently deployed smart meter is already remotely managed or not) and the ones to be invoiced by last resort suppliers to vulnerable consumers.

Public service obligations

Spain maintains public service obligations through Reference Suppliers in the case of electricity and through Last Resort Suppliers in the case of gas.

a) Electricity

Small electricity customers (below 10 kW) have the right to be supplied by Reference Suppliers under the modality called “Voluntary Price for the Small Consumer” as developed by Royal Decree 216/2014. This category of customers can also choose a regular supplier in the free market.

As explained in chapter 3.2, the Voluntary Price for the Small Consumer (PVPC) changes the method whereby the price of power is calculated on the bills received by small end-consumers: whereas this price was previously set by a quarterly auction, bills are now be based on the price of electricity in the spot market.

Red Eléctrica de España, as Spanish TSO, is responsible for managing some aspects of the “Voluntary Price for Small Consumer” (PVPC). This price is calculated daily by the Spanish TSO based on the energy prices per hour in the spot market and applying the average consumer profile.

To this end, it has developed an IT information service through which the small consumer can be fully informed of the price of electricity that will be applied in accordance with this Royal

³⁸ These recommendations and advices are available at the CNMC Website: http://cnmc.es/Portals/0/Ficheros/Energia/Consumidores/1501808_Diptico%20recomendaciones.pdf.

Decree. This new system let end users change their consumption patterns and improve the management of their electricity consumption.

The prices that the system operator will publish through the “Voluntary Price for Small Consumer” IT service will apply only to those consumers whose contracted power capacity does not exceed 10 kilowatts (kW) and choose this system. These prices will be applied to the electricity consumption (variable energy charge - kWh consumed) of the bill that the system operator calculates using the new approved methodology.

In this way, Red Eléctrica offers consumers who have opted for PVPC, the ability to see the financial impact of their electricity consumption depending on the access costs plan chosen between the general tariff, the night tariff or the super-valley tariff (electric vehicle).

The total of the electricity bill is completed by the inclusion of a fixed charge proportional to the power contracted by the user as well as the taxes established by current legislation.

These prices can be applied to all small consumers, whether they have smart meters with hourly metering or not. In the latter case, prices are based on the profiles that Red Eléctrica establish with the new methodology approved by the Government and is published and updated weekly on Red Eléctrica’s “eSios” website.

b) Gas

Since July 1st 2009 only consumers connected to gas pipelines with a pressure equal to or smaller than 4 bar and annual consumption of less than 50.000 kWh may be supplied at last resort tariffs in the gas natural sector.

In December 2015, the following last resort suppliers are appointed:

- Endesa Energía XXI, S.A.U
- Gas Natural SUR SDG, S.A.
- Iberdrola Comercialización de Último Recurso, S.A.U.
- EDP Comercializadora Último Recurso, S.A.U.

According to Royal Decree 104/2010, customers without any energy supply contract and not eligible to be supplied at TUR, are allowed to be supplied by last resort suppliers at the regulated tariff (TUR) during one month

The Law 12/2007 establishes the principles to be used in the calculation of last resort tariffs, which are the following:

- Single tariff for the whole country.
- Cost reflective (incomes enough to cover expenses).
- Additive structure: energy costs, access tariffs and commercialization costs.

The energy component of the last resort tariff is calculated every 3 month, using a formula including the crude oil quotation, the prices of natural gas at the TTF and NBP markets, and a commercial margin.

Vulnerable customers definition

The concept of vulnerable customers has only been established so far for electricity customers.

The Law 24/2014 defines the vulnerable customers as the customers that fulfil social characteristics relating with his consumption and purchasing power. These customers have to pay last resort tariff instead of the voluntary price for small customers.

The above mentioned Law defines the social bonus as the difference between the last resort tariff and the voluntary price for small customers. The Royal-Decree 216/2014, dated March 28th sets up the social bonus as the 25% of the voluntary price for small customers.

Until the government develops the provision relating with vulnerable customers, the consumers (less than 1 kV) with contracted demand lower than or equal to 3 kW, a pensioner older than 60 years with a minimum pension, families where all members are unemployed and large families are considered vulnerable.

The social bonus has the consideration of public service obligation pursuant to Directive 2009/72/EC and is financed by the parent group of companies or, where applicable, companies which develop simultaneously the activities of production, distribution and sale of electricity.

As of December of 2015, 2,441,364 customers have social bonus subsidies.

Compliance with Annex 1 of the Directives 2009/72 and 2009/73

Consumer's right (from Annex 1) have been introduced in the Gas Act by the Law 13/2012, and have been introduced in the Electricity Act by the Law 24/2013. According to the new Acts:

- Consumers have the possibility to participate directly in the market.
- A deadline of 21 days for switching supplier (free of charge) is set up.
- There will be a dispute resolution procedure managed by the Ministry of Industry, Energy and Tourism. This procedure will be transparent, simple and free of charge. Furthermore, there is the possibility of alternative resolution (arbitration) by consumer authorities.
- CNMC will monitor the effectiveness and implementation of consumer protection measures and will be competent to issue binding enforcement resolutions.
- The contractual conditions will be equitable and transparent with clear and understandable language. Customers will be protected against abusive or misleading sales procedures.

- There is the possibility to choose among different payment methods, which do not unduly discriminate between customers.
- Transparent information on energy costs shall be ensured in the bill.
- Consumption data will be available for the consumer and data can be transferred to suppliers, under consumer agreement.
- The customer will receive a settlement of the former supplier's account not later than 42 days following a switch of supplier.
- Suppliers and distribution companies will facilitate a customer service telephone number free of charge for the consumer.
- The supplier will inform the customer about the origin of the energy supplied as well as environmental impacts related.
- An electricity "Social bonus" will be a public service obligation as set forth by Directive 2009/72/CE.
- Essential supply points (including domestic consumers that need continuity in the supply for running medical equipment) cannot be disconnected.

6.2 Dispute settlement

Duties and powers of the regulatory authority of dispute settlement in the electricity market

CNMC is responsible for dispute settlement related to access to the transmission and distribution grids. The deadline for issuing a decision is the same that required by the Directive (2 months) as set forth by Law 24/2013 (Article 33.3). The decision is binding for the agents involved in the dispute and could be appealed directly to the Court.

On the other hand, CNMC shall act as an arbitration body in any disputes that may be referred to it by agents carrying out activities in the electricity and hydrocarbon market.

In 2015, ten disputes concerning access to the network and thirty nine disputes related to the economic and technical management of the system were registered in CNMC. For the latter, almost half of the disputes were related to interruptible demand contracts.

Duties and powers of the regulatory authority of dispute settlement in the gas market

According to article 12 of Act 3/2013, the CNMC is entitled to solve disputes with regard to the contracts for third party access to the transmission and distribution networks on any terms that may be set in regulations. Moreover, CNMC is responsible for solving any disputes that may be

taken to it with regard to the economic and technical management of the system and transport, including connection facilities.

The decision is binding for the agents involved in the dispute and should be appealed directly to the Court.

Additionally, CNMC shall act as an arbitration body in any dispute that may referred to it by agents carrying out activities in the electricity and hydrocarbon market.

In 2015, CNMC settled 4 disputes (conflicts) in the gas market:

- Three conflicts referred to the disagreement with the TSO to several supplier requests for imbalances network.
- One conflict referred to the disagreement with the denied of TSO to supply request for fault in programming and denomination.

Customer complaints

According to article 7 of Act 3/2013, CNMC supervise and monitor the proper functioning of the electricity and natural gas sectors. Specifically, on paragraph 13 of article 7 it is established the duty of identify the members of electricity and natural gas sectors whose actions causes supply deficiencies, and the proposition of necessary measures to correct them. Also, on paragraph 15 it is established that the CNMC should monitored the claims raised by consumers of electricity or natural gas.

In the electricity sector, a total of 1,254,452 complaints were processed. Most complaints concerned the invoicing, billing and debt collection (35%), followed by metering (25%) and quality of supply (17%).

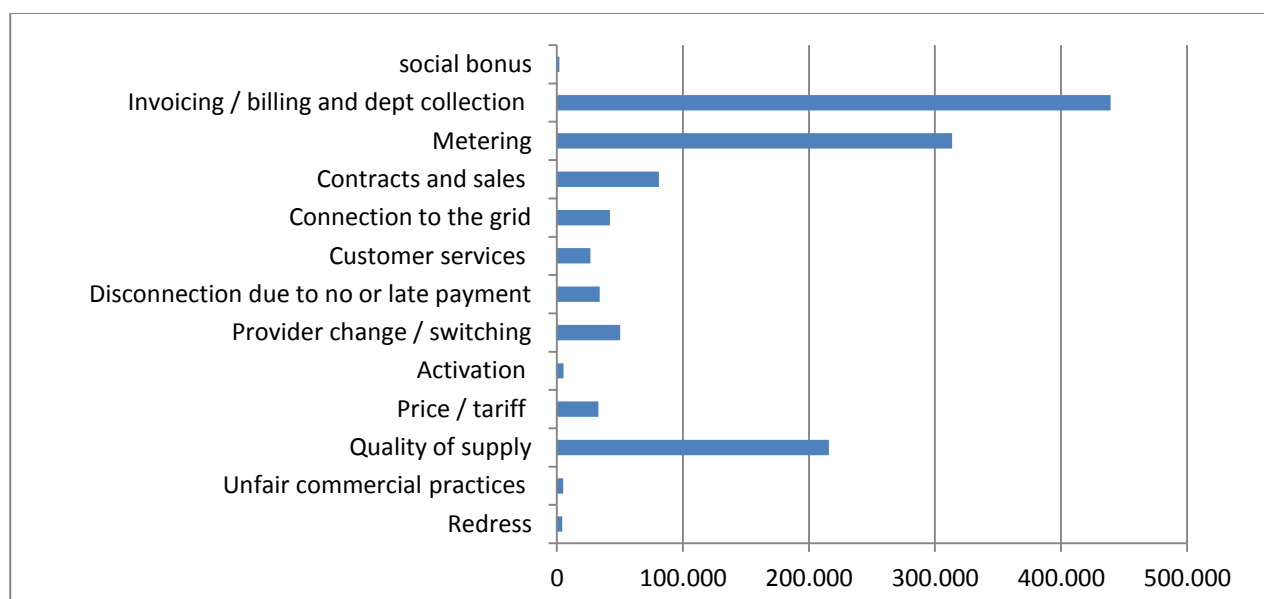


Figure 35. Classification of electricity final customer complaints. Source: CNMC

During 2015, a total of 449,293 complaints related to natural gas supply were processed and resolved, which implies 6 complaints per 100,000 consumers.

Most complaints concern the invoicing, billing and debt collection (52%), followed by Metering (12%).

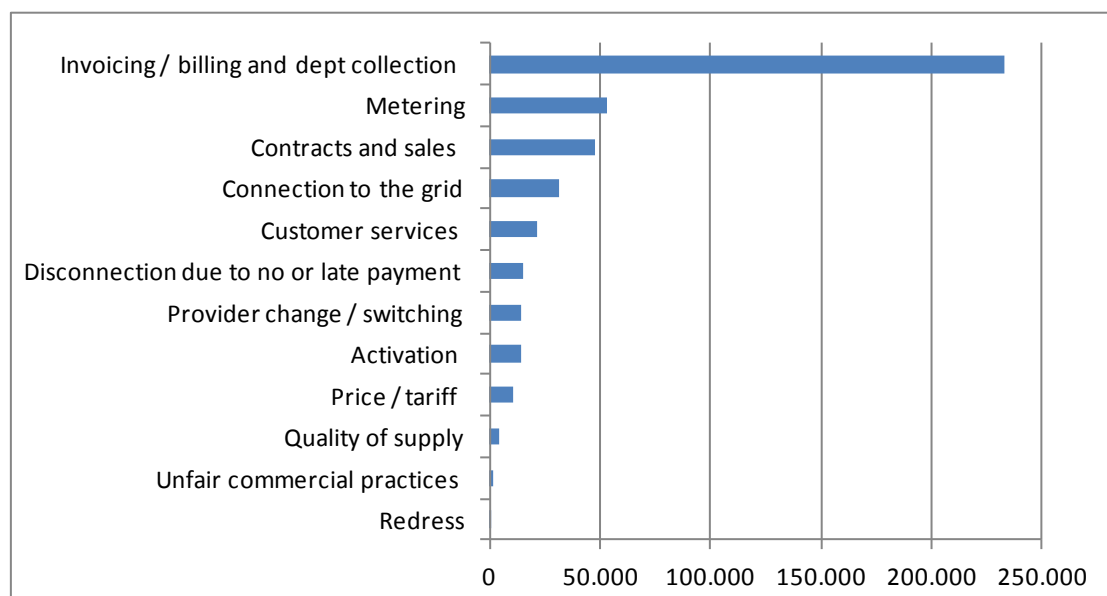


Figure 36. Classification of gas final customer complaints. Source: CNMC

Disaggregating the total number of claims, 310.350 complaints corresponds to retailing companies (69,08%), and 127.774 to distribution companies (27,10%). The rest of the complaints, 17.169 (3,82%) were handled by ADR and other entities.