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# **SPANISH ENERGY REGULATOR'S ANNUAL REPORT TO THE EUROPEAN COMMISSION 2010**

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## 1 FOREWORD

This National Report is the first one issued by CNE once the Third Package is formally adopted and published. In this new context, CNE stresses the importance of the National Reports as an effective tool to monitor and promote progress towards the creation of a well functioning Internal Energy Market in the EU.

On the other hand, 2010 will be the last year the European Regulators Group for Electricity and Gas (ERGEG) delivers its “Status Review of the Liberalisation and Implementation of the Energy Regulatory Framework”. In 2011, the new Agency for the Cooperation of Energy Regulators (ACER) will take this role and CNE renews its commitment to fully contribute to monitoring the internal electricity and natural gas markets. ACER reinforces and creates a more formal framework for the cooperation of national regulators and CNE is keen to actively contribute in this new institutional context.

Since 2005, representatives of the European Commission and ERGEG have been working on the structure of this report, which includes all the report requirements contemplated in the Directives. This report presents the agreed structure by the European Commission and European Energy Regulators for 2010 aiming to monitor electricity and gas markets in Spain last year.

2009 was an important year for the electricity and gas sectors in Spain and, in particular, for retail markets. On 1 July 2009 end-user regulated electricity prices disappeared. After more than 6 years in which Spanish consumers could choose between being supplied by distribution companies (through end-user regulated prices) or by retailers under free market conditions, distributor companies cannot retail electricity and gas to their clients anymore and a list of last resort suppliers is available for a 4 year term.

Therefore, since July 2009, just small consumers, below or equal to 10 kW for electricity and below or equal to 4 bar and below or equal to 50.000 kWh / year for gas, are allowed to stay under the last-resort-tariff scheme. In this new context, special provisions on vulnerable consumers (“social bonus”) have been established and a new body, the Office

for Switching Supplier has been created to oversee switching procedures (for both gas & electricity)

Related to wholesale markets, electricity and gas demands both decreased significantly in 2009 as a result of the downturn of the Spanish economy and, consequently, wholesale energy prices decreased too.

Last year CNE already welcomed the long-awaited agreement between France and Spain to build a new electricity interconnection through the Pyrenees. However, CNE emphasizes again the need of more physical interconnection between Spain and France towards the 10% goal established by European Council in 2002. Related to MIBEL, work is progressing well creating a good investment climate which is already delivering a remarkable decrease of congestion hours at the Spanish-Portuguese interconnection.

More physical interconnection is crucial if we want the EU Internal Energy Market happens but also CNE is leading work on better cross-border regulation in the ERGEG South-West Electricity Region aiming to improve the level of efficiency in the use and management of interconnections. In this regard, CNE strongly supports the implementation of implicit auctions for the allocation of day-ahead CB capacities between MIBEL and the Central-West (SW) region. In 2009, French and Portuguese energy regulators of ERGEG's South West Electricity Region welcomed the announcement made in October 2009 by three power exchanges (Nord Pool Spot, EPEX Spot and OMEL) to test the concept of Pan-European price coupling. They also stressed that it is necessary for the concerned transmission system operators, which are legally responsible for allocating transmission capacity, to be actively involved.

CNE is also leading work in the ERGEG South Gas Region and 2009 meant an important step forward aiming to develop new CB capacities in the Western and Eastern axes of the Pyrenees.

The binding phase of the 2013 Open Season (Western axis) and the non-binding phase of the 2015 Open Season (Eastern axis) were launched at the end of July 2009 and the process ended successfully with the positive French TSOs' decision of investing in the

infrastructures associated to 2013 capacities and capacity will be increased up to 5,5 bcm/year at Larrau interconnection as of March 2013.

In late 2009, CNE started working on how the Third Package and the Climate and Energy package are expected to impact on the Spanish energy regulation and recently CNE sent a report to the Spanish Ministry of Industry, Trade and Tourism aiming to give its advice in this regard. A wide range of proposals and recommendations are now submitted to the Spanish Government as a means to facilitate the proper transposition and implementation of all new EU requirements. Among other issues CNE emphasizes that, once the Third Package is in force, any decision by independent regulators in relation to their core duties should not be subject to review by the National Ministries as it is currently the case of CNE.

## **2 MAIN DEVELOPMENTS IN THE GAS AND ELECTRICITY MARKETS**

### ***2.1. New competences of the Spanish National Energy Commission (CNE).***

In 2009, new powers have been given to CNE. These new powers are mainly related to the liberalized markets of electricity and gas supply.

Under this scope of the supply markets, the new competences of CNE have the objective to guarantee transparency and an efficient market functioning. Specifically, CNE is entitled to publish in its web site, and update, the list of suppliers, to manage a price compare system, to oversee the changes of suppliers and the activity of the Change Supplier Office and to collaborate with the Change Supplier Office on promoting electronic contracting.

Law 25/2009 (dated 22nd December), that modifies Law 54/1997, on the electric power sector, and also modifies Law 34/1998, on the hydrocarbon sector, has abolished the prior administrative authorization that must receive electricity and gas retailers, and has also abolished the Administrative Register of Retailing Agents. This Law has replaced the prior authorization with a mere activity communication and has set up that CNE has to publish at its web page the lists of suppliers that have submitted the activity communication, to provide the consumers with their contact information.

Order ITC/3519/2009 (dated 28th December), regarding to electricity, and Order ITC/3520/2009, with regard to the natural gas sector, determine that CNE will manage a web system to compare retail prices for electricity and gas, for the benefit of all consumers, requesting the information of the prices from the retail agents.

The Royal Decree 1011/2009 (dated 19th June) disposed that CNE has to oversee the changes of supplier and the activity of the Office for Switching Supplier, and has to resolve the disputes between a distribution company and a retailing company about the information that must be furnished.

Recently, Royal Decree 104/2010 (dated 5th February) has determined that CNE has to collaborate with this Office for Switching Supplier on making a draft of procedure to promoting electronic contracting of gas supply.

There are also other powers that have been given to CNE in 2009:

Under Order ITC/1659/2009 (22th June), regarding the electricity sector, and Order ITC/863/2009 (2nd April), regarding the natural gas sector, CNE is entitled to oversee the auctions to calculate the estimated cost for the last resort tariff.

About consumer protection, Royal Decree-Law 6/2009 (dated 30th April) and Order ITC/1723/2009 (dated 26th June) have created and ruled a social tariff called “social bonus” for pensioners, larges families and the unemployed, to guarantee reasonable conditions for these groups. CNE is entitled to supervise the compliance with the regulation about this “social bonus”.

Concerning retribution of distribution networks, Order ITC/2524/2009 (dated 8th September) determines that CNE will propose the adjustment rates of the coefficient of losses of the distribution networks, for the different areas; this Order establishes that CNE has also to calculate and propose the amount of the incentive to decrease the losses of the networks for every distribution company. In this scope, under Order ITC/3519/2009 (dated 28th December), CNE will report to the Secretary of State for Energy the results of the application of the Network Reference Model in order to calculate some items of the retribution of the distribution companies.

According to the Royal Decree 134/2010 (dated 12nd February), CNE has to supervise and inspect the correct use of the national coal that the functioning program made by the system operator oversees in order to resolve restrictions for supply guarantee.



## **2.2 Main developments in the Electricity & Gas Markets**

### **2.2.1 Electricity markets in 2009**

#### **i) Wholesale market**

In 2009, total demand of power generation (including mainland and extra-peninsular demand) decreased to 266.874 GWh, which is 4,4% less than demand in 2008. This was due to the downturn of the Spanish economy, however, electricity production from renewable energy sources rose. These are some of the reasons that explain a significant reduction in wholesale prices. Weighted average monthly day-ahead prices ranged from 39 to around 56 €/MWh (in 2008, the range was 56 to 73 €/MWh).

Price convergence in the Iberian wholesale market (MIBEL) has increased. During 75% of the time, day-ahead spot prices in Spain have been equal to those in Portugal.

Even though the degree of concentration in the wholesale market has risen due to the merge Gas Natural Fenosa in terms of installed capacity, this has not been the case in terms of energy produced.

#### **ii) Retail market**

The electricity market in Spain is fully liberalized since 2003: All Spanish customers (including household) have been free to choose supplier since 1<sup>st</sup> January 2003. Since 1<sup>st</sup> July 2009, the old regulated retail market for end users disappeared completely. All consumers are now in the liberalised market. However, those consumers with contracted load capacity below or equal to 10 kW can be supplied at a “last resort tariff” if they wish so. In this end user tariff, the energy price is computed taking into account CESUR auctions. Five last resort suppliers have been appointed for this purpose.

In the rest of the retail market, concentration remains high: the market shares of the three biggest companies add up to 75% in energy and 90% in customers.

This new scheme, has resulted in an important increase in supplier switching, especially in the case of big consumers. In 2009, 216.624 consumers (at least) have changed supplier.

Furthermore, in 2009, the “Office for Switching Supplier” (OCSUM) started functioning. Its structure and functions are established in the Royal Decree 1011/2009, of 19 of June.

### iii) Public Service Obligations and Consumer Protection

In 2009, one of the most relevant facts as regards this topic is the so called “social bonus” which is in fact a social tariff which is granted to specific consumers subject to the fulfilment of several requirements established by law.

The last resort supply launched as well in 2009, available for consumers with contracted load capacity below or equal to 10 kW, is explained in detail in that section.

### iv) Infrastructure

During 2009, the works in interconnections have followed, especially in the Spanish-Portuguese interconnection where works are ongoing as planned. The objective is to reach 3.000 MW of interconnection capacity in 2014.

As far as the new line of the French-Spanish interconnection is concerned, the engineering project has been defined but the works on site have suffered delays. It is expected that in 2014, there will be around 2.000 MW from FR to ES and 1.000 MW from ES to FR.

While the level of interconnection capacity will be significant in the Spanish-Portuguese border, the Spanish-French one will remain under the target agreed by the European Council at the Barcelona summit of March 2002 (at least 10% of the production capacity installed in each Member State).

### v) Security of Supply

No threats are detected as regards security of supply as demand decreased and installed generation capacity increased in 2009. A further increase in renewables’ share is expected, especially wind and solar thermoelectric (concentrated solar power). CCGTs remains the only “ordinary regime” (non-renewable nor CHP) technology to grow, mainly at the expense of coal; their speed and efficiency makes them most complementary with steadily increasing RES.

vi) Regulation/Unbundling

In terms of regulation and competition an important issue in 2009 has been the end of the acquisition process of Unión Fenosa by Gas Natural on February 11<sup>th</sup> 2009.

Currently, the National Energy Commission is examining whether it is necessary to adopt any further measures in the field of unbundling in order to transpose Directive 2009/72/CE, of 13 July 2009, concerning common rules for the internal market in electricity.

Throughout 2009 different energy companies have presented to the National Energy Commission the codes of conduct for unbundling of activities elaborated by them, as well as the report that details the measures adopted during 2008.

In 2009, Endesa and Unión Fenosa have completed the sale of its share of 1 per cent in REE's share capital.

## **2.2.2 Gas markets in 2009**

i) Wholesale market

Total demand for natural gas in Spain reached 402,5 TWh in 2009, which means a decrease of 10,6% over the previous year. This reduction in gas demand was mainly driven by the economic downturn, and was more remarkable in gas for electricity generation (-14,2%) than in conventional consumption (-8,0%).

The imports basket of the Spanish gas system continued to be well diversified in 2009, receiving gas from 14 different countries. The main source was Algeria, with a share of 34,1% of all supplies, followed by Qatar (12,4%), Egypt (12,3%), Trinidad and Tobago (12,2%), Nigeria (12,0%) and Norway (9,4%).

Most of this gas was imported in the shape of LNG (74%) while the remaining 26% arrived via pipeline. Such a high proportion of LNG make Spain be the third main LNG destination in the world and the first one in Europe.

The natural gas prices at the Spanish borders<sup>1</sup> reached their peak values in December 2008, when they rose up to 29,37 €/MWh. This trend changed in 2009, with a decrease in prices of a 52% from December 2008 to July 2009, with a subsequent low increase of 8,7% in December 2009.

Most of the gas in the Spanish market is negotiated through bilateral OTC trading, by means of an electronic platform developed by ENAGAS (the so-called MS-ATR) with nearly 30 active traders, who can trade gas in eight different balancing points: the six existing LNG terminals; a virtual balancing point (AOC) and a virtual storage point.

The trend for negotiated energy in the Spanish OTC gas market has continued to grow in 2009, with up to 19.440 transactions registered on the MS-ATR. The volume of energy traded over the counter amounted to 714,4 GWh, which represented an increase of 26% over the previous year and more than 177% of total gas consumption in 2009. Around 95% of these volumes are traded in LNG terminals, and only 5% in the virtual balancing point or the virtual storage point.

## ii) Retail market

The gas market in Spain is fully liberalized since 2003. Up to 40 companies were registered as gas traders in the Spanish gas market at the end of 2009. They can perform either as shippers or traders, selling or buying gas in the wholesale market, or as retailers, selling gas to consumers in the retail market. Five of them are designated as Suppliers of Last Resort, and supply gas to those residential consumers who have choose to be supplied at the Last Resort Tariff.

The total number of gas consumers in 2009 surpassed 7 million in Spain, reaching precisely 7.054.348 customers at the end of the year, with 123.575 new ones this year. The switching rate in 2009 was quite remarkable, with a number of 390.437 clients having switched their supplier in the year.

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<sup>1</sup> The source of these prices is the Office of Economics and Export Control (AEAT).

The procedure for customer switching is regulated under the Royal Decree 1434/2002 of 27 December, with a maximum delay to switch of 15 days. In order to make easier the switching, an Office for Switching Supplier (Oficina de Cambio de Suministrador OCSUM) was set up. Its structure and functions are established in the Royal Decree 1011/2009, of 19 of June.

The retail market shows a low degree of concentration and more than 60% of market share, in terms of volume, is supplied by new entrants, which reveal a fairly high level of competition. In terms of number of consumers, the share of new entrants is lower, with a 72% of customers still supplied by the incumbent.

On 12 February 2009, the CNC Council (Spanish Competition Authority) granted its conditional approval to the concentration operation between Gas Natural and Unión Fenosa. The CNC Council Resolution accepts the commitments proposed by Gas Natural, consisting on the following conditions concerning the gas sector:

- i. Selling complete gas distribution networks accounting 600.000 distribution points (equivalent to 9% of the national total).
- ii. Selling a portfolio of 600.000 small gas clients.
  - Implementing measures in order to ensure that Unión Fenosa GAS may continue operating autonomously as a gas supplier in Spain.
  - Selling its stake in ENAGAS and reducing its ties with CEPSA, a competitor of REPSOL (participated by Gas Natural) in oil markets.

The sale of 600.000 distribution points more than offsets the size of the distribution network acquired by Gas Natural: the shedding of 600.000 customers – those connected to the networks to be sold – largely exceeds the gas customers acquired from Unión Fenosa (around 94.000 customers).

The operations issuing from these conditions are currently in progress.

### iii) Public Service Obligations and Consumer Protection

The calendar for applying last resort tariffs in the gas natural sector, it is established by the Law 12/2007. This calendar has been modified by the Order ITC/1251/2009, so from July 1<sup>st</sup> 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.

Royal Decree 104/2010 also defines the last resort tariff as the maximum and minimum (unique) price to be charged by last resort suppliers to consumers with right to be supplied at the TUR.

On the other hand, in 31 December 2009, the 47,4% of the consumers with the right to be supplied at the TUR were supplied by a last resort suppliers. It should be noted that in Spain the last resort suppliers can supply all customers, including consumers with or without right to be supplied at the TUR

#### iv) Infrastructure

Six LNG terminals are operational in the Spanish gas system and a new LNG terminal in Gijón (Asturias) is foreseen for the end of 2011. All LNG terminals are subject to regulated TPA, allowing the access to new capacity by new entrants.

Spain has several international gas pipeline connections to Algeria through Morocco, to Portugal through Tuy and Campo Maior, and to France through Larrau and Irún.

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 and the connection with France at Larrau, 3 bcm/year.

Regarding available capacity in the Spanish gas system, while there is available capacity in all regasification plants, but interconnection capacity to France is still scarce. This is why Spanish and French Administrations and Regulatory Authorities are currently working in an Open Season procedure for developing new capacities in this interconnection, in two axes (Western and Eastern axes) as of 2013 and 2015, respectively.

Sooner than that, a new connection with Algeria, MEDGAZ, is planned to be in operation before the end of 2010. The initial capacity will be 8 bcm.

v) Security of Supply

The Spanish regulatory gas framework includes several provisions oriented to preserve security of gas supplies, as provided by European Directives 2004/67/EC and 2003/55/EC. According to these provisions, suppliers procuring more than 7% of gas imports to Spain must diversify their portfolio in case supplies to the Spanish market coming from a single country reach 50% of all supplies. In addition, all gas retailers must keep gas stocks of 12 days of firm sales in the previous year, as well as 8 additional days at the beginning of the winter.

vi) Regulation/Unbundling

Recently, the Royal Decree- Law 6/2009, of April 30, designated ENAGAS as the only company to be owner of the main network of primary transmission of natural gas.

Directive 2009/73/EC establishes Member States shall unbundle transmission systems and transmission system operators. Member States should therefore be given a choice between ownership unbundling and setting up a system operator or transmission operator which is independent from supply and production interests. So, ENAGAS would already comply with Directive 2009/73/CE. In other vertically integrated companies developing transmission activities, it is necessary to examine whether these companies comply or not with the obligations set by the Directive

The Directive also requires that Member States shall designate distribution system operators or require undertakings which own or are responsible for distribution systems to do so. The distribution system operator shall be independent in legal terms from other activities not relating to distribution. Nowadays, the National Energy Commission is examining whether there is a need or not to introduce further changes to Spanish legislation in order to comply with the requirements set by the Directive 2009/73/CE in the field of unbundling.

The Directive 2009/73/CE does not modify the regime of separation of the distribution activity already established by previous Directive.

Finally, the directive 2009/73/CE establishes unbundling and transparency of accounts. So, natural gas undertakings shall keep separate accounts for all of their activities relating to the supply of gas, such as transmission and distribution.

### ***2.3 The new context after the Third Package***

This is the first National Report by CNE once the “Third Package” is formally adopted and all Member States are working on the its transposition. In this context, CNE highlights the importance of the proper implementation in due time of all the new package’s requirements into national legislation. In particular, CNE requests that those requirements related to the independence and powers of national regulatory authorities (NRAs) are transposed in line with the text and the concrete aim in this regard of the Third Package.

In July 2010, CNE sent a report to the Spanish Ministry of Industry, Trade and Tourism as its advice on how the third legislative package with regard to Internal Market and the Climate and Energy Package are expected to impact on the Spanish energy regulation. In this report, CNE stresses that any decision by independent regulators in relation to their core duties should not be subject to review by the National Ministries as it is currently the case of CNE.

Furthermore, CNE calls on the Spanish Administration to clearly transpose all the new provisions with regard to duties and competences for CNE. The new international dimension and in particular the cooperation with other NRAs at both regional and EU level, the ability to enforce binding decisions or to impose effective proportionate and dissuasive penalties on natural gas/electricity undertakings, the need of having competences on cross-border (CB) regulatory issues and more role in protecting energy consumers are, among others, core duties and competences to be reviewed in the Spanish case.



On the other hand, CNE is actively contributing through CEER/ERGEG to the setting up of ACER and its institutional architecture. In a 2003 Directives' framework, CEER and ERGEG have delivered good level of cooperation among regulators as well as a better understating of common problems and CB challenges.

In particular, regional cooperation by regulators has led to bring out concrete CB barriers which doubtless undermine an effective progress towards the EU Internal Energy Market but it has been clear that voluntary cooperation is not enough to remove these barriers in most of the cases. In the new Third Package's context, with the cross border regulatory framework it contains in the form of framework guidelines and network codes, will solve this regulatory gap and ACER is a key EU body of the new regulatory scheme.

Therefore, CNE underlines the need of having independent NRAs in line with the 3<sup>rd</sup> Package if we want ACER plays an effective role towards a better management and use of existing and future interconnections. ACER is mandated to decide on those CB regulatory issues which have not been agreed by the two concerned regulators in a six-month period of time. In this regard, it is worth mentioning that CNE has to be empowered first with appropriate competences on CB issues. Otherwise CNE will never be able to agree and adopt a common decision on interconnections' regulation with its neighboring regulators (ERSE in Portugal and CRE in France). In the case of the ERGEG South West electricity and the South gas regions, CNE is the only national regulator which still lacks these competences.

### **3 REGULATION AND PERFORMANCE OF THE ELECTRICITY MARKET**

#### ***3.1 Regulatory Issues [Article 23(1) except “h”]***

##### **3.1.1 Management and Allocation of interconnection capacity and mechanisms to deal with congestion**

In Spain, the relevant congestions appear in the cross-border links, especially in the French-Spanish border, while internal congestions are not structural and they are solved (as network constraints) when needed by means of specific markets (day-ahead and intraday security markets, managed by the System Operator).

The degree of congestion in the Portuguese-Spanish interconnection has decreased significantly compared to the previous year. Indeed, in the beginning of the full integration of Portuguese and Spanish wholesale markets (second half of 2007), the number of hours under market splitting stood close to 80%; more recently, in the second half of 2009, same indicator fell below 20% (average price spread just around 0,5 Eur/MWh), and has even decreased in the first months of 2010 so far. Behind this there are reasons linked to generation mix and economic juncture: gas-fired combined cycles have established as marginal technology on both price areas, and reserve margin has increased notably since demand has fallen in a humid, windy year,

On the other hand, across the Pyrenees interconnection sustains significant congestion. Given price sunk in Iberian market, since last months of 2009 congestion rents gathered from Spain to France, even though capacity is three times as small as in reverse direction, are several times greater than from France to Spain,

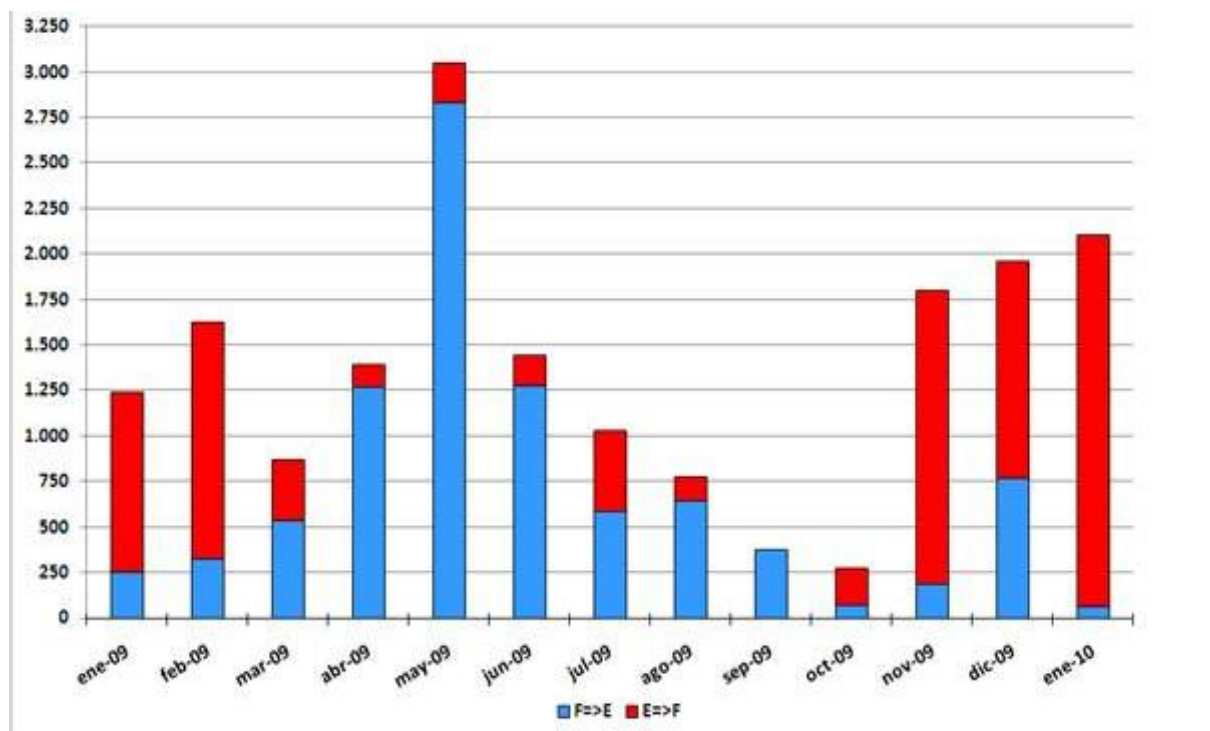


Figure 1. Monthly congestion rents in French-Spanish interconnection, in thousands of Euros, 2009 (Source: REE)

The rules governing cross-border electricity exchanges are the following<sup>2</sup>:

- Order ITC/4112/2005, of 30 December, setting forth the regime applicable for international exchanges of electricity (updated by Order ITC/843/2007, of March 28<sup>th</sup>).
- Orden ITC/1549/2009 of June 10<sup>th</sup>, updating Annex III (interconnection Portugal-Spain) of Order ITC/4112/2005.
- Operational Procedure 4.0 Management of international interconnections. Resolution of 17 March 2004.
- Operational Procedure 4.1 Congestion Management in the France-Spain Interconnection (including so-called “IFE rules version 3”). Resolution of 28 May 2009 (of the State Secretariat for Energy).
- Operational Procedure 4.2 Congestion Management in the Portugal-Spain Interconnection. Resolution of 26 June 2007 (of the Secretariat General for Energy).

<sup>2</sup> Published in: [http://www.ree.es/operacion/procedimientos\\_operacion.asp](http://www.ree.es/operacion/procedimientos_operacion.asp)

In the context of information according to Regulation EC/1228/2003 (including the annexed Congestion Management Guidelines), the Spanish TSO publishes relevant information in its website: [www.esios.ree.es/web-publica/](http://www.esios.ree.es/web-publica/) (now available in English too).

As anticipated in last year's report, current version of IFE (Interconnection France - Spain) rules came into force on 1<sup>st</sup> June 2009 regulating annual, monthly, daily and intraday Physical Transmission Rights. The main improvements achieved in this already third version of the rules include:

- New compensation scheme in case of capacity curtailment before nomination, based on the market spread, subject to certain capping provisions
- New compensation scheme in case of cancellation of daily auction, also market-spread based, relating to resale of long term capacities
- Secondary market: introduction of automatic resale of non-nominated capacities at daily auction, thus applying Use-It-Or-Sell-It principle (versus previously applied Use-It-Or-Lose-It principle)
- More precise definition of long-term products, with the introduction of both annual and monthly discontinuous products.
- Physical firmness for daily and intraday capacities is now granted (unless *force majeure*) from the very communication of auction results, instead of from programming authorizations.
- Improvement of transparency with new publications: capacity calculation and allocation details for different timeframes, as well as bid-ask curves for each auction.
- Clarification of TSOs' liabilities
- Increased financial security on bank guarantees

In the SW region of the ERGEG Electricity Regional Initiative, it is planned to progress towards implicit allocation of capacity in the French-Spanish interconnection (price coupling MIBEL-CWE).

As for the interconnection with Portugal, capacity is fully implicitly allocated day-ahead (and intraday) by means of a market splitting mechanism: Portugal and Spain are the two

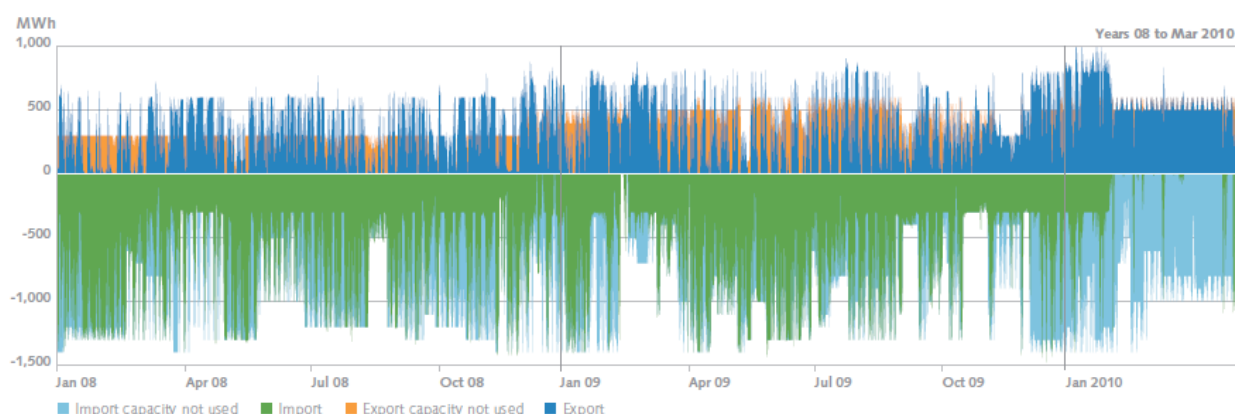
price areas into which the single electricity Iberian market (MIBEL) is split if congestion arises.

In the Portuguese-Spanish interconnection, as of July 1<sup>st</sup> 2009, a long-term transmission capacity product has been introduced by Order ITC/1549/2009, of 10 June, updating Annex III of Order ITC/4112/2005. It consists on auctions of financial hedging products. These financial products are export/import contracts for differences (both forwards and options), valued in accordance with observed hourly day-ahead market spread between Portuguese and Spanish zones. The first auction was held on June 29<sup>th</sup>, valid for forward contracts covering the second semester of 2009. The second auction took place on 18<sup>th</sup> December 2009, and two types of contracts were auctioned: one covering the whole year 2010 and another covering the first semester of 2010. The third auction was celebrated on 24<sup>th</sup> June 2010 and the contracts cover the second semester of 2010.

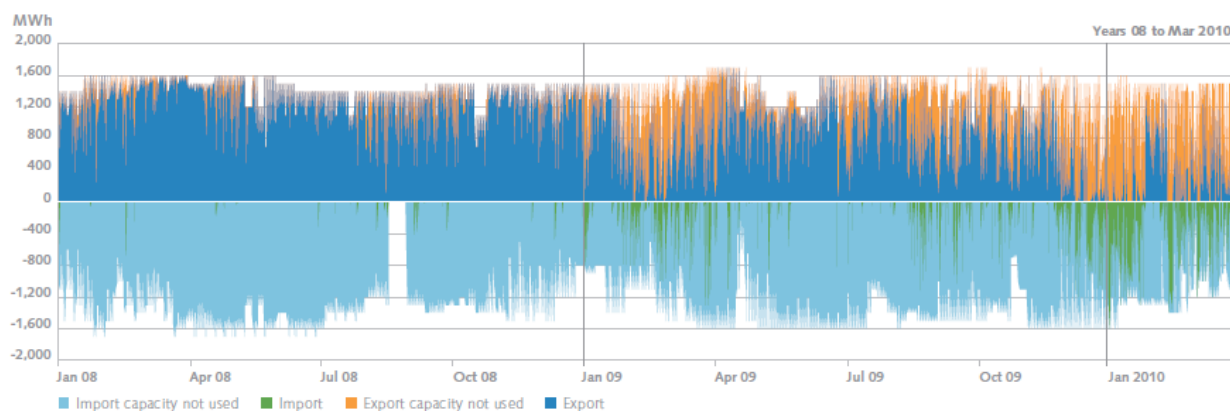
The MIBEL Board of Regulators has worked during 2009 and the first part of 2010 aiming to implement coordinated FTRs in MIBEL. In July 2010, the formal proposal was submitted to the Spanish and Portuguese Governments.

No relevant changes happened this year on computation of transmission capacity.

Interchange capacity with France and market matched energy + bilateral



Interchange capacity with Portugal and market matched energy + bilateral



Interchange capacity with Morocco and market matched energy + bilateral

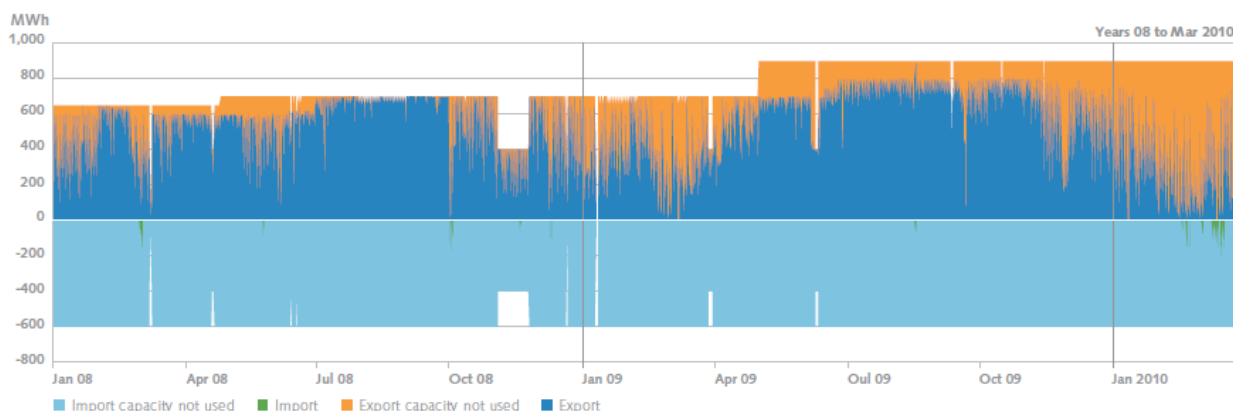


Figure 2. Exchange capacity and market matched energy, including bilaterals – France, Portugal and Morocco (Source: OMEL)

### 3.1.2 The regulation of the tasks of transmission and distribution companies

The Government approves the access tariffs (previously, the NRA issues a non-binding report) and publish them in the Spanish Official Gazette. The tariffs are unique throughout the entire Spanish territory. Royal Decree 485/2009, dated April 3<sup>rd</sup>, establishes that, as long as the tariff deficit exists, access tariffs may be reviewed every six months.

In order to obtain a basis for the reports on the draft electricity tariff Royal Decrees or Ministerial Orders the CNE requests from different agents in the sector the necessary information for estimating not only the system's costs but also the revenues corresponding to each period.

In particular, the requested information is the cost of the transmission and distribution facilities for each company, the facilities' characteristics, revenues and expense budgets from institutions whose remuneration is chargeable to the tariff, forecast demand in power plant bars and its coverage from the System Operator.

In order to calculate the system's revenue, information is requested from companies on their forecast billing variables (number of customers, consumptions and capacity) broken down by tariffication group, for both the end of the year in progress and the following year, in which the new tariffs will be applied. These data are compared with information available on this regulated activity settlement. Likewise, information is requested on forecast generation under the Special Regime (renewables energies and cogeneration), which is compared with the information gathered by the National Energy Commission from other sources.

In every tariffication exercise, determination is made of the variations to be applied in the access tariffs, so as to cover the regulated costs of the system.

Distribution costs are computed for each distribution company according to the Reference Network Model as established in article 8 of Royal Decree 222/2008. Remuneration scheme for distribution includes incentives that evaluate losses reduction and quality of service.

- Real, registered losses are yearly compared with an individual losses target set for each company in advance; the 80% of this positive or negative difference is valued at a loss-energy price and added to remuneration, with a cap of  $\pm 1\%$  vs. due global income.
- Quality is gauged through two main indexes, TIEPI and NIEPI, which measure, respectively, the time and number of supply interruptions (in terms of equivalent power interrupted). Both are calculated for up to four geographical categories: urban, semi-urban, rural and scatter rural areas; for each area, a specific quality target is set and used as reference. Quality incentive may turn in a bonus or penalty up to  $\pm 3\%$  of global income.

	2003	2004	2005	2006	2007	2008		
AUTONOMOUS REGION/ CITY	Total	Total	Total	Total	Total	scheduled	non-scheduled	Total
ANDALUCÍA	4,09	4,60	3,25	2,39	2,39	0,08	2,92	3,00
ARAGÓN	3,00	2,01	1,51	1,32	1,46	0,22	1,45	1,67
ASTURIAS	1,39	1,45	1,27	1,86	1,23	0,04	1,62	1,66
BALEARES	7,49	3,25	2,20	1,83	2,00	0,05	2,68	2,73
CANARIAS	4,38	2,57	9,25	1,38	1,12	0,06	1,66	1,71
CANTÁBRIA	1,67	2,16	1,56	1,60	1,35	0,02	1,15	1,16
CASTILLA-LEÓN	2,04	1,63	1,56	2,12	2,14	0,04	1,56	1,61
CASTILLA-LA MANCHA	2,61	2,24	1,99	2,61	2,38	0,06	2,30	2,36
CATALUÑA	3,01	1,84	1,57	1,79	1,67	0,07	1,30	1,37
EXTREMADURA	3,96	3,36	2,54	2,62	2,15	0,17	2,20	2,37
GALICIA	2,46	2,28	1,63	2,62	1,48	0,03	2,38	2,41
LA RIOJA	1,60	1,88	1,39	1,92	1,35	0,20	1,31	1,51
MADRID	1,20	1,21	1,07	1,26	0,91	0,00	1,26	1,26
MURCIA	2,92	2,28	2,21	3,56	3,56	0,13	3,10	3,23
NAVARRA	2,17	2,55	1,39	1,40	1,54	0,11	1,24	1,35
PAIS VASCO	1,59	1,36	1,54	1,89	1,56	0,13	1,15	1,28
C.VALENCIANA	2,76	2,54	2,15	2,40	2,94	0,10	2,72	2,82
CEUTA	0,47	5,04	3,34	9,14	5,95	0,19	7,54	7,73
MELILLA	10,66	29,30	7,33	4,20	5,35	0,46	8,14	8,60
<b>Nationwide</b>	<b>2,86</b>	<b>2,42</b>	<b>2,18</b>	<b>2,04</b>	<b>1,93</b>	<b>0,08</b>	<b>1,99</b>	<b>2,07</b>

Table 1. TIEPI (Interruption Time in terms of Equivalent Power Interrupted) in minutes, years 2003-2008, by region.

[Unfortunately, due to extraordinary supply disruption caused by extra-tropical cyclone “Klaus” (a windstorm crossing northern Spain and southern France, from Bay of Biscay to Gulf of Lion, around January 24<sup>th</sup>), delivery of 2009 quality of supply data has been delayed for several months, and were not available in time to be included in this report.]

For a more detailed explanation, please, refer to the National Report published in 2009.

As for transmission service quality indices, 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 system power) and grid availability index (ID). Last available data (for 2008) are: ENS, 574 MWh; TIM 1.15 minutes, and ID= 98.19%<sup>3</sup>.

<sup>3</sup> [http://www.ree.es/transporte/tiempo\\_interrupcion\\_medio.asp](http://www.ree.es/transporte/tiempo_interrupcion_medio.asp)  
[http://www.ree.es/transporte/disponibilidad\\_instalaciones.asp](http://www.ree.es/transporte/disponibilidad_instalaciones.asp)



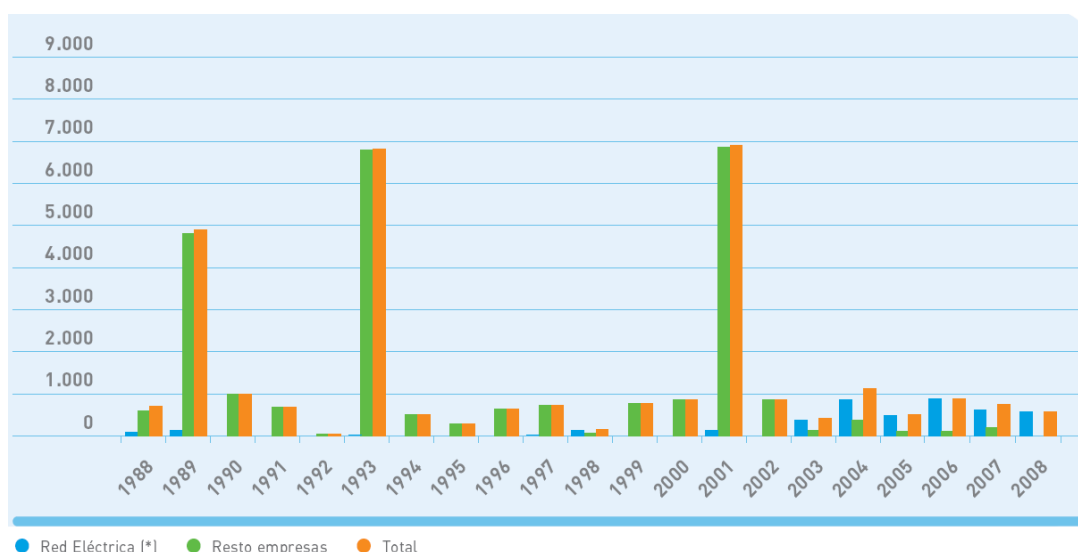


Figure 3. Energy Not Supplied (MWh). Years 1988-2008 – Source: REE

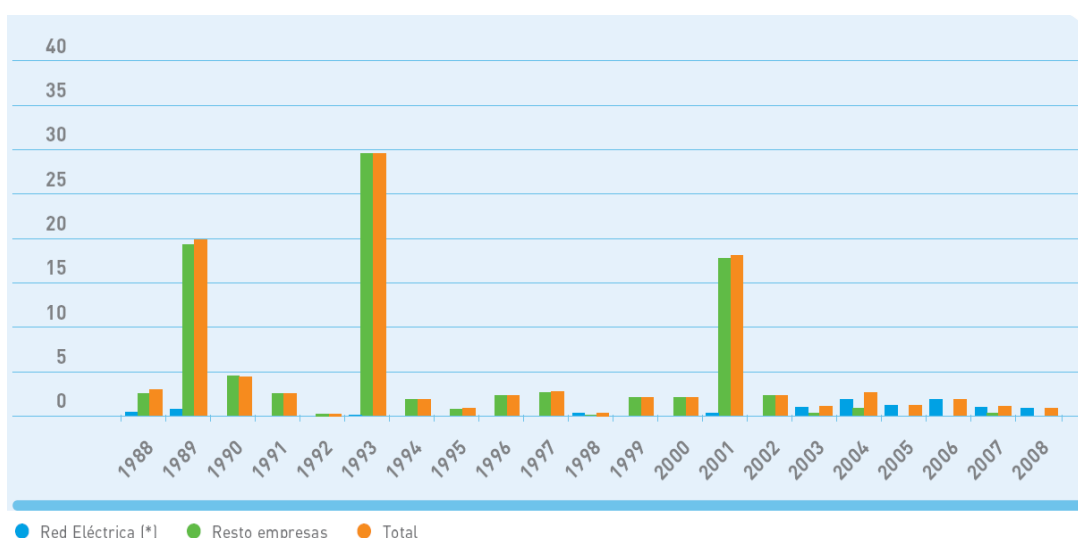


Figure 4. Mean Interruption Time (minutes). Years 1988-2008 – Source: REE

The Royal Decree 1955/2000, dated December 1<sup>st</sup>, establishes that distributors have to inform and advise consumers in the regulated market at the time of contracting about the most suitable tariff and capacity to contract according to their need.

In 2009, the Order ITC/3801/2008, dated December 26<sup>th</sup>, established the access tariffs from 1<sup>st</sup> January to 30<sup>th</sup> June 2009, and the Order ITC/1723/2009, dated June 26<sup>th</sup>, established the access tariffs from 1<sup>st</sup> July to 31<sup>th</sup> December 2009. The access tariffs (network charges) include transmission, distribution and distributors commercial management costs (attending connected consumers) in addition to other levies included in

the access tariff as per Spanish Electric Power Act 54/1997 and Royal Decree 1164/2001. G charge is not applied in Spain.

Access tariff group	Access tariff
Low volt (< 1 kV)	62,8
High volt 1 ( $\geq 1$ kV and < 36 kV)	27,6
High volt 2 ( $\geq 36$ kV and < 72,5 kV)	10,8
High volt 3 ( $\geq 72,5$ kV and < 145 kV)	08,6
High volt 4 ( $\geq 145$ kV)	07,5
Total	37,4

Table 2. Average electricity access tariffs for typical consumers (€/MWh). Year 2009

These tariffs usually have a fix load component (€/kW) and a variable energy component (€/kWh). Due to its complexity, the following tables show the average values that the access tariffs represent according to the settlements made taking into account the real consumption of all consumers by category.

A more precise table has been made for the last resort (default) supply which is only available for consumers with contracted load capacity below or equal to 10 kW. For more information on this, please refer to Supply of Last Resort Energy Contract Auctions (CESUR Auctions) and section.

Consumer type	Access tariff
last resort supply	76,6
last resort supply with day/night discrimination	41,4

Table 3. Average electricity access tariffs for consumers in last resort supply (€/MWh). Year 2009

## Balancing

In the year 2009, there have been no developments in the balancing market model.

It is a free activity comprising secondary reserve (both power and energy), tertiary reserve (energy), load-generation deviations management and constraints management. The average economic impact of this so-called “system services” amounted in 2009 up to 6,2% of the domestic demand hourly final price (weighted average final price amounted 42,65 Eur/MWh, weighted average monthly day-ahead prices ranged from 39 to 56 Eur/MWh).

As for market concentration, tables below show evolution of market shares by company for the period 2008-2009 for secondary reserve (power band) and tertiary reserve and deviations management (both up- and downwards, respectively):

	2008	2009
<b>Endesa</b>	30,30%	32,60%
<b>E.ON</b>	3,60%	7,10%
<b>Gas Natural Fenosa</b>	21,70%	12,60%
<b>Hidrocantábrico</b>	14,60%	13,90%
<b>Iberdrola</b>	25,40%	27,50%
<b>Others</b>	4,40%	6,20%

Table 4. Secondary reserve (power band) market shares; Years 2008-2009 – Source: CNE, OMEL

	2008			2009		
	Downwards	Upwards	Total	Downwards	Upwards	Total
<b>Endesa</b>	31,70%	26,60%	<b>28,90%</b>	25,40%	32,70%	<b>30,10%</b>
<b>Iberdrola</b>	18,50%	34,80%	<b>27,40%</b>	34,10%	23,40%	<b>27,20%</b>
<b>Gas Natural Fenosa</b>	29,20%	24,00%	<b>26,40%</b>	21,90%	17,30%	<b>19,00%</b>
<b>Hidrocantábrico</b>	7,20%	5,40%	<b>6,20%</b>	6,20%	8,00%	<b>7,40%</b>
<b>E.ON-viesgo</b>	5,80%	3,50%	<b>4,50%</b>	7,40%	14,00%	<b>11,70%</b>
<b>Others</b>	7,60%	5,70%	<b>6,50%</b>	5,00%	4,50%	<b>4,70%</b>

Table 5. Tertiary reserve plus deviation management market shares; Years 2008-2009 – Source: CNE, OMEL

A roadmap for balancing integration within MIBEL has been envisaged, consisting of three stages:

1. Exchange of energy for system support (concluded)
2. Exchange of balancing energy between TSOs, used only when the receiving operator has already used all the bids for upwards/downwards regulation of its own system (well-advanced; final implementation still pending)
3. Bids for upwards/downwards regulation are offered from one TSO to the other TSO and are incorporated in the merit order list of the receiving system

Throughout 2009, only stage 1 was applicable. This roadmap may be adapted in 2010 so as to include in the third stage the integration of MIBEL balancing bids with the French balancing market, therefore widening the scope to the whole SW region.

### **3.1.3 Effective unbundling**

As already presented in last year's report by CNE, the Spanish Electricity Act 54/1997 was amended by Law 17/2007, adopted in July 2007. The amended Spanish Electricity Act introduced new unbundling requirements.

Throughout 2009 energy companies have presented to the National Energy Commission the codes of conduct for unbundling of activities elaborated by them, as well as the report that details the measures adopted during 2008.

Likewise, throughout 2010 energy companies have submitted to the National Energy Commission the binding reports over measures adopted in 2009 to ensure effective unbundling.

Among the measures adopted and explained in the aforementioned reports, it is interesting to note the following:

- implementation of measures with the aim to reorganize their holdings;

- change and increase of job functions of some workers, different from the persons in charge of the management of the regulated activities, according to their position in the firm;
- reference to measures still being carried out as well as planned for the next years;
- revision of the remuneration and contracts of the persons in charge of the management of regulated activities;
- obligation to sign a formal declaration by those persons in charge of the management of the regulated firms, declaring that they do not own shares or other participations of societies that develop free activities;
- with respect to commercially sensitive information:
  - o revision of procedures of access to that information,
  - o introduction of confidentiality clauses in contracts with third parties,
  - o designation of those persons in charge of the custody of that information
  - o incorporation of disciplinary measures to be adopted in case of breach of the code of separation of activities

Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009, concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, provides different proposals for the effective separation of supply and generation activities from network operations. So, Member States are given a choice between ownership unbundling and setting up a system operator or transmission operator which is independent from supply and generation interests. From 3 March 2012, Member States must unbundle transmission systems and transmission system operators.

The Spanish legislation has chosen a regulatory model that would fit in the option of the ownership unbundling (TSO Model).

The Directive states that transmission system operators are mainly responsible for:

- Ensuring the long-term ability of the system to meet demands for electricity;
- Ensuring adequate means to meet service obligations;
- Contributing to security of supply;
- Managing electricity flows on the system;

- Providing to the operator of any other system information related to the operation, development and interoperability of the interconnected system;
- Ensuring non-discrimination between system users;
- Providing system users with the information they need to access the system;
- Collecting congestion rents and payments under the inter-transmission system operator compensation mechanism.

As regards unbundling and transparency of accounts, Directive 2009/72/CE sets that undertakings shall keep separate accounts for their transmission and distribution activities.

The Spanish Electric Power Act regulates the unbundling of accounts in the following terms:

- Companies whose corporate aim is to perform regulated activities shall keep separate accounts, differentiating between the revenues and costs strictly attributed to each of the activities in order to prevent discrimination, subsidies between different activities and distortion to competition.
- Retailers designated as last resort suppliers shall keep the accounts for last resort supply activities separate from all other activities in their internal accounting.
- Companies engaged in non-regulated electricity activities shall keep separate accounts for generation activity, retailing activity and any other non-electricity related activities performed on national territory and all those other activities performed abroad.
- Generators operating under the special regime shall keep separate accounts in their internal accounting procedures for electricity activities and non-electricity activities.

Nowadays, the National Energy Commission is examining whether it is necessary to adopt any further measures in the field of unbundling in order to transpose Directive 2009/72/CE, of 13 July 2009, concerning common rules for the internal market in electricity.

### TSO:

REE is the only company that carries out transmission activities. REE does not engage in generation or trading activities. REE is part of the REE GROUP, being the company holding RED ELECTRICA CORPORACION, S.A. (REC).

The rules on legal and functional unbundling were provided in Directive 2003/54/EC. So, Law 17/2007 of 4 July amended the previous law to adapt it to European Directive 2003/54/CE. This law has resulted in the definitive consolidation of the REE TSO Model (Transmission System Operator).

The Law 17/2007 declared that there would be a sole transmission company, REE, and that this company will own the whole network. In 2009, there was still a 1 per cent of the national transmission network in the hands of other energy companies, but since 2008 there is a legal requirement included in the Law 17/2007 to sell the remaining assets to REE within three years deadline, before July 6, 2010. The price of the purchase should be based on market prices, and in case there is no agreement, the CNE should designate an arbitrator. Most of the concerned assets belonged to Endesa which has sold them to REE before the 6 July deadline.

To the date of the present report, REC significant shareholders are shown in the following table, according to public information of the CNMV:

<b>RED ELECTRICA CORPORACION, S.A. Significant shareholders</b>	<b>% Direct shareholding</b>	<b>% Indirect shareholding</b>
Sociedad Estatal de Participaciones Industriales (SEPI)	20,00	
TALOS CAPITAL LIMITED	3,087	
CAPITAL RESEARCH ANDO MANAGEMENT COMPANY		3,177
FIDELITY INTERNATIONAL LIMITED		1,004
HSBC HOLDINGS, PLC		3,239
MFS INVESTMENT MANAGEMENT		3,077
THE CHILDREN'S INVESTMENT FUND MANAGEMENT (UK) LLP		3,087

*Table 6. Relevant Stakeholders in RED ELECTRICA CORPORACION S.A.*

In 2009, ENDESA has completed the sale of its share of 1 per cent in REE's share capital, as it did UNION FENOSA.

#### DISTRIBUTION SYSTEM OPERATORS:

Article 14 of the Spanish Electric Power Act 54/1997 required the legal unbundling of regulated and free activities. However, within a group of companies, activities that are deemed incompatible by the Act, might be carried out provided that they are actually performed by different companies in the group.

The Law 17/2007, of 4<sup>th</sup> July, introduced modifications on such article 14 so as to include as well the independence of organisation and decision making of DSOs where they are part of vertically integrated undertakings (adaptation of articles 10 and 15 of Directive 2003/54/EC).

With regard to unbundling of distribution system operators, the Directive 2009/72/CE establishes that where the distribution system operator is part of a vertically integrated



undertaking, it shall be independent at least in terms of its legal form, organization and decision making from other activities not relating to distribution.

Those rules shall not create an obligation to separate the ownership of assets of the distribution system operator from the vertically integrated undertaking. In addition, it shall be independent in terms of its organization and decision-making from the other activities not related to distribution.

So, the recent Directive does not modify the regime of separation of the distribution activity already established by the previous Directive 2003/54/EC. These requirements are already fulfilled by the current national legislation.

Anyhow, as it has been indicated, the National Energy Commission is studying whether there is a need to introduce further changes into Spanish legislation in this field.

## **3.2 Competition Issues [Article 23(8) and 23(1)(h)]**

### **3.2.1 Description of the wholesale market**

#### Structure of the Generation Market - Capacity

The following graph and table show the shares by technology of installed generation capacity in the Spanish mainland system in 2009; the total values reached 93.215 MW.

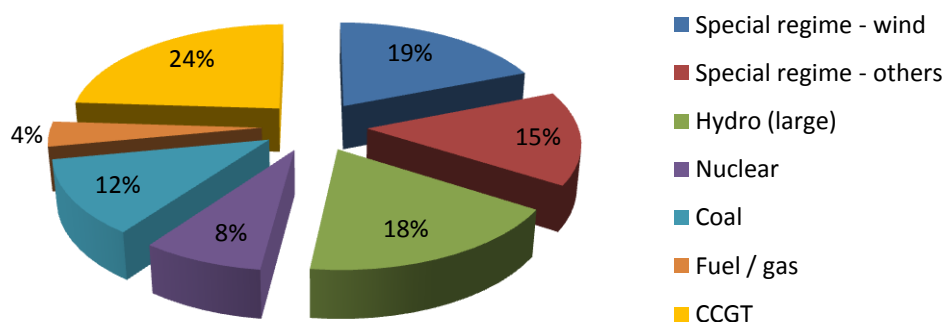


Figure 5. Installed generation capacity in the Spanish mainland system at the end of 2009 (Source: REE)

Technology\Generation capacity (MW)	2008	2009
CCGT (Combined Cycle)	21.667	22.243
Fuel+Gas (conventional)	4.418	3.927
Coal	11.359	11.359
Nuclear	7.716	7.716
Hydraulic	16.658	16.657
Wind power	15.576	18.119
Other Special Regime	12.552	13.194
<b>TOTAL</b>	<b>89.944</b>	<b>93.215</b>

Table 7. Installed generation capacity structure in the Spanish mainland electricity system (Source: REE)

On 31<sup>st</sup> December 2009, the generation capacity shares of the different companies in the “ordinary regime” (conventional generation) of Spanish mainland electricity system were as shown on the following table:

	Available generation capacity	HHI
<b>IBERDROLA</b>	32,5%	2254
<b>ENDESA</b>	26,6%	
<b>GAS NATURAL FENOSA</b>	20,3%	
<b>EDP-HIDROCANTÁBRICO</b>	5,4%	
<b>E.ON</b>	6,5%	
<b>OTHERS</b>	8,8%	

Table 8. Companies' market shares of available generation capacity in the ordinary regime (year 2009, Source: CNE)

As shown on the above table, the number of companies with more than 5% of the Spanish electricity system's installed power is 5, being Endesa, Iberdrola, Gas Natural Fenosa, E.ON and HidroCantábrico.

### Structure of the Generation Market - Energy

In 2009, total demand of power generation (including mainland and extra-peninsular demand) declined 4,4% and decreased to 266.874 GWh, which was covered as follows:

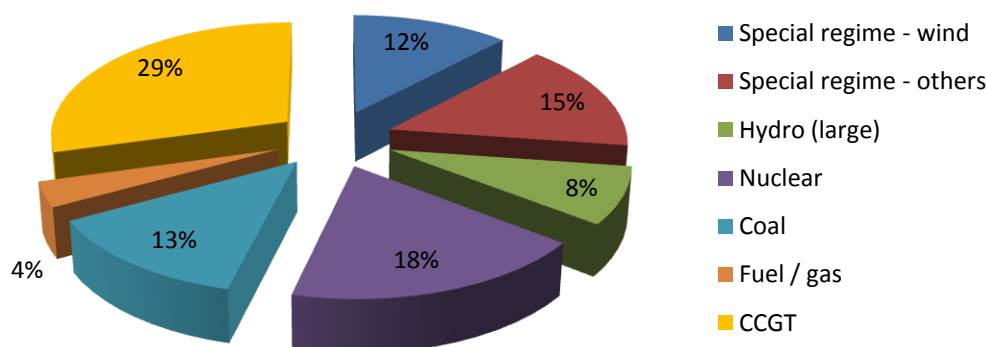


Figure 6. Electricity production in the Spanish system per technology during 2009 (Source: REE)

During the year 2009, 13<sup>th</sup> January was the day on which the highest ever peninsular hourly demand was recorded, with a value of 44.440 MW. The maximum daily energy value occurred the same day and amounted to 886 GWh.

As a result of the merger and acquisition transactions carried out in the nineties, the electric energy production market in Spain started to function with four large electricity groups: Endesa, Iberdrola, Union Fenosa and Hidrocantábrico. In 2007 ENEL and Acciona took over Endesa, defeating another competing bid from E.ON; E.ON has taken full control over formerly ENEL-owned Viesgo. Additionally, as explained in section 4.2.3, Gas Natural has taken over Union Fenosa during 2009.

Balance of Spanish electric energy system	energy 2008 (GWh)	energy 2009 (GWh)
Hydroelectric	21.175	23.236
Nuclear	58.756	52.765
Coal	49.726	37.812
Fuel+Gas (conventional)	10.858	10.156
Gas (combined cycle)	96.005	83.895
Special Regime	67.343	79.226
International Exchanges	-11.221	-8.398
Consumption in generation	-9.280	-8.116

Balance of Spanish electric energy system	energy 2008 (GWh)	energy 2009 (GWh)
Consumption in pumping	-3.494	-3.703
<b>Total demand</b>	<b>279.868</b>	<b>266.874</b>

Table 9. Balance of Spanish electric system, GWh (year 2009, Source: REE)

As for 2009, there were five groups of a significant size competing in the market: Endesa, Iberdrola, Union Fenosa-Gas Natural, Hidrocantábrico (EDP) and Viesgo (E.ON), whose market shares in energy are shown below:

	Energy Share	HHI
<b>IBERDROLA</b>	24,6%	(1403-1788)
<b>ENDESA</b>	22,5%	
<b>GAS NATURAL FENOSA</b>	16,2%	
<b>EDP-HIDROCANTÁBRICO</b>	5,4%	
<b>E.ON</b>	4,7%	
<b>OTHERS (Ordinary Regime)</b>	6,2%	
<b>OTHERS (Special Regime)</b>	19,6%	
<b>IMPORTS</b>	0,7%	

Table 10. Market Shares in electricity generation (year 2009, Source: CNE)

There are 4 companies with market shares in excess of 5%. The HHI would be in an interval between 1.403 and 1.788 depending on what minimum threshold is considered for computing a company separately (some companies have very little shares). The share in the big five companies includes ordinary and special regime. The rest of ordinary regime generation makes up 6.2% and the rest of special regime generation, 19.6% (which, in fact, is splitted in many companies).

#### Trading venues: PXs and bilateral contracts

Electricity Power Act 54/1997 of 27<sup>th</sup> November establishes that the generation market is to be managed by two Operators: the Market Operator (Operador del Mercado Español de Electricidad, S.A. – OMEL), which is responsible for the market's economic management, and the System Operator (Red Eléctrica de España – REE), which is responsible for its technical management. In Royal Decree-Law 5/2005 of 11<sup>th</sup> March of urgent measures for boosting productivity and improving public contracting, a series of reforms within the field

of energy were regulated, modifying part of the functions which, until then, had been carried out by each operator and attributing to the System Operator the balancing markets' economic management.

The production market in Spain is made up of an organized part and a non-organized part. The organized market is structured around a series of sessions held on the day prior to and on the day of delivery, in which the final generation price's different components and the programming of the generator groups are established. The non-organized part consists of physical bilateral contracts, the economic terms and conditions of which are agreed between the signing parties and are not known by this Commission but whose execution has to be notified to the Market Operator, meaning that the negotiated quantities are known. During 2009 bilateral contracts amounted to a volume of energy close to 91 TWh representing about 34.7% of energy in the daily programme (PBF).

An energy volume of 261.846 GWh, corresponding to a trading volume of 11.191 millions €, down 3,2% and 41,1% respectively on the previous year, has been negotiated in the organised day-ahead and intraday market. These declines are caused by lower prices and a decrease in final demand. The final weighted average market price was 42,65 €/MWh (about a 40% below previous year average). The daily market price has represented in the region the 89,3% of the final price, the capacity payments a further 4.5%, and the solution to technical restrictions, the secondary regulation and other technical operation processes account for the remaining 6,2%.

#### Representative spot market price:

From the beginning of the liberalization process, in January 1998, until 2005, almost all wholesale electricity transactions took place in the day-ahead market. Since then, forward contracts have steadily increased, partially in relation to the Royal Decree 3/2006, CESUR auctions and obligations imposed to distribution companies to acquire part of their energy through these mechanisms. Moreover, between 2007 and 2009, ENDESA and IBERDROLA have been obliged, by law, to release part of their capacity through auction mechanisms (Virtual Power Plants, VPPs).

In the following figure, the monthly evolution of wholesale energy supply, broken down into day-ahead transactions, physical bilateral contracts, and CESUR and VPP auctions, can be observed.

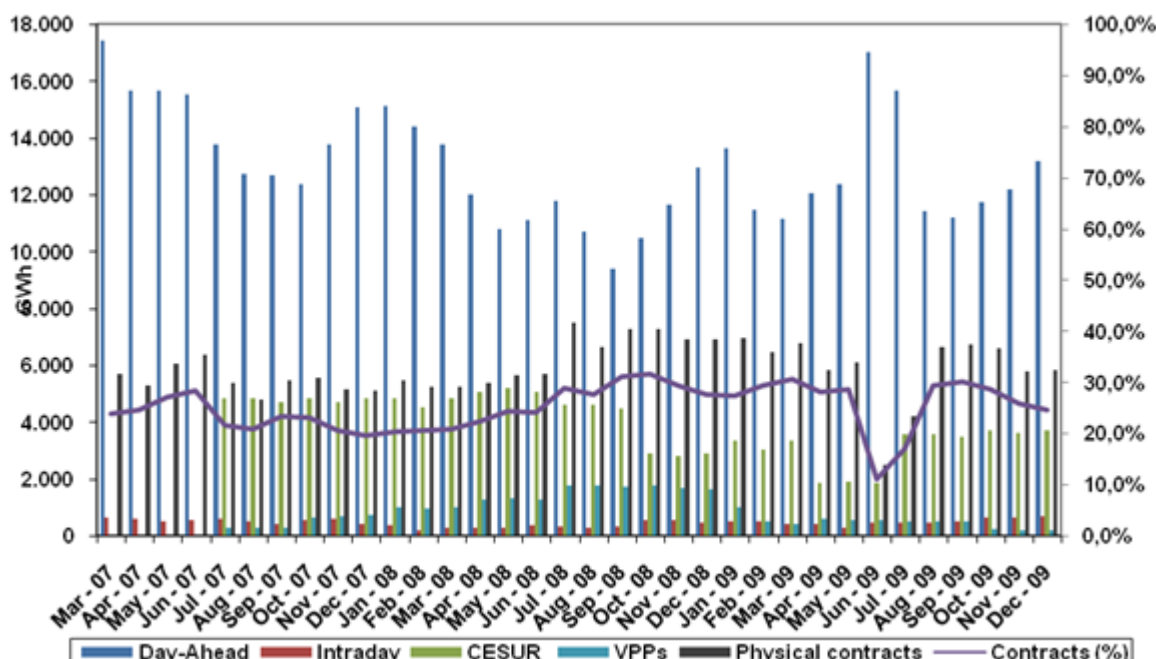


Figure 7. Monthly evolution of wholesale energy supply Source: CNE

As regards integration with neighbouring Member States, the single Iberian wholesale market aggregates Spain and Portugal. Balancing markets integration within MIBEL has started in 2008 as it was mentioned before. MIBEL is a governmental initiative.

The contribution of regional initiatives to integration is the improvement of auction rules in the Spanish-French interconnection (new version of IFE rules) and the works towards market coupling between MIBEL and CWE, which are being undertaken by PXs (OMEL and EPEXSPOT). There are, as well, ongoing analysis on how to improve intraday capacity allocation in the IFE and balancing integration in the whole SW region.

When there is congestion in the PT-ES interconnection, the MIBEL is splitted into two price areas. Convergence in prices has significantly increased in 2009. During 75.2% of the hours in 2009, prices in the Spanish market have been equal to those of the Portuguese market.

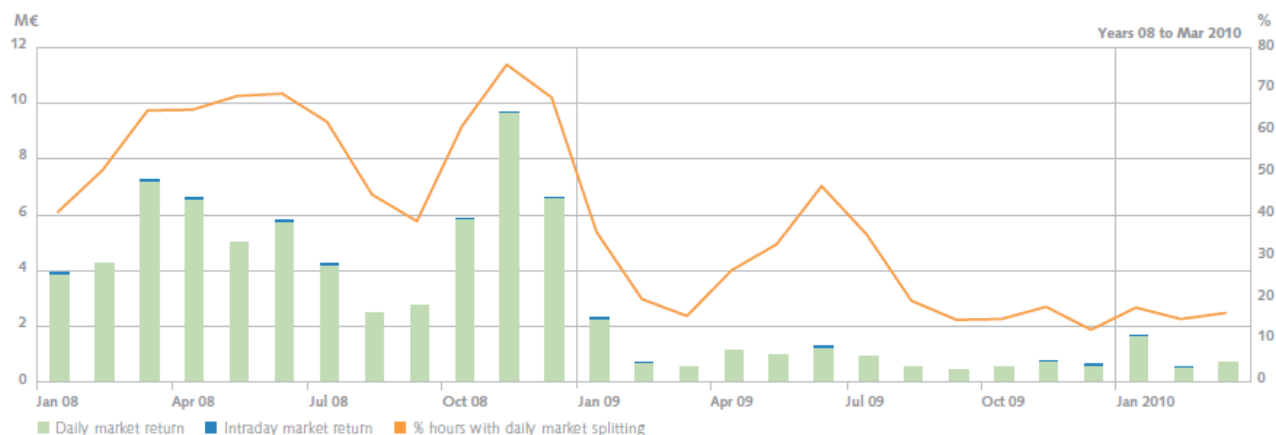


Figure 8. Congestion rent in the Portuguese-Spanish interconnection and share of hours with market splitting 2008-2009. (Source: OMEL)

#### Average monthly price Europex

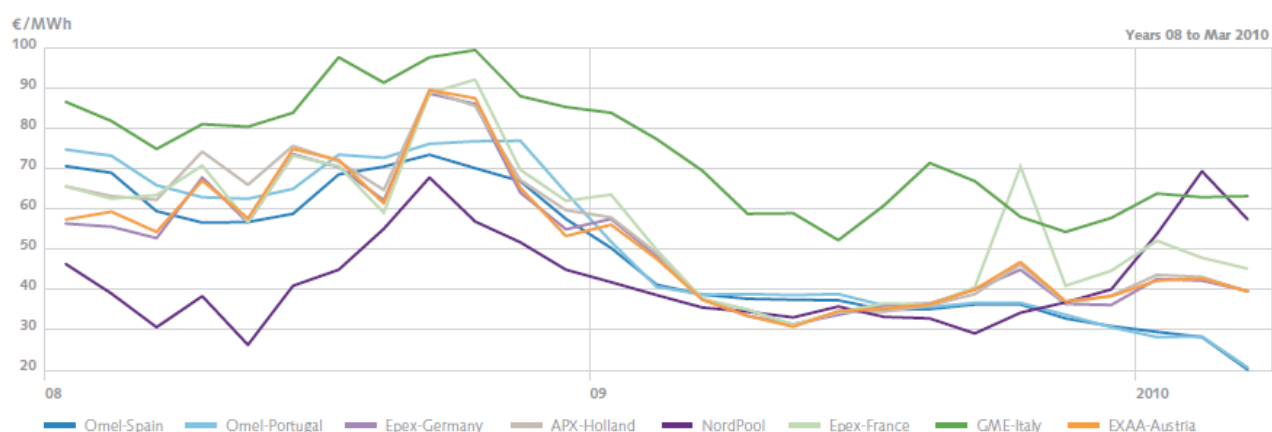


Figure 9. PXs day-Ahead prices in Portugal, Spain and France (i.a.) 2008-2009. €/MWh. (Source: OMEL)

### Forward trading of electricity

In the context of the MIBEL (Iberian electricity market) Board of Regulators, since 2006, the CNE continued to supervise the futures market managed by OMIP, in co-ordination with the other members of the MIBEL Board of Regulators. Such a market started on July 3, 2006..

In specific terms, by virtue of the Order ITC/3789/2008, of 26 December, which regulates forward trading of electrical energy by distributors in the first six months of 2009, the National Energy Commission verified compliance with these purchase obligations during the first six months of 2009.

The amendment of Law 54/1997 of 27 November, concerning the electricity sector, by Law 17/2007 of 4 July, to adapt it to the stipulations of Directive 2003/54/CE, led to a new model in which default supply in the Spanish market is no longer a part of the distribution activity and becomes entirely a task carried out by the last resort suppliers as from 1<sup>st</sup> July 2009.

The Order ITC/1659/2009 of 22 June, which establishes the mechanism for the transfer of customers (once supplied by distributors) to the supplier of last resort and the procedure for calculation and structuring of the last resort tariffs for electrical energy, states in its second temporary provision that distributors are obliged to sell the contracts acquired with a delivery period starting on 1 July 2009 on the futures market managed by OMIP and through CESUR<sup>4</sup> auctions. In specific terms, they were obliged to sell the monthly contracts with delivery in July 2009 (at the OMIP auction held on 26<sup>th</sup> of June 2009), and with delivery in August and September 2009 (at the OMIP auction held on 16<sup>th</sup> of July 2009). The other open positions in futures contracts with delivery periods from July to December 2009 were closed by distributors through their participation as vendors in the 9<sup>th</sup> auction for the purchase of energy to the supplier of last resort (CESUR Auctions), held on June 2009. Open position in futures contracts with delivery period from January to June 2010 were sold by distributors in the 10<sup>th</sup> CESUR auction, held on December 2009.

The energy traded on the MIBEL Iberian electricity futures market during the year 2009 was 31.4 TWh, of which 50% was in auctions and the remaining 50% was traded on the continuous market. Figure 10 shows the evolution in trading on the MIBEL Iberian electricity futures market (trading at auction and continuous trading).

In auction trading, the leaps in the levels of monthly trading between adjacent six-month periods are due to new trading calendars coming into force. In continuous trading as a whole, there has been a gradual increase since October 2008, it has even exceeded trading at auctions in some months. Of particular interest is the trading recorded in March 2009, a month which saw continuous trading of 2,639 GWh (65.2% of the total traded in

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<sup>4</sup> CESUR: Supply of Last Resort Energy Contract Auctions



the OMIP), which exceeded the previous records for continuous trading (February 2009: 1,477 GWh; January 2009: 1,237 GWh).

Figure 11 shows the changes in trading in the futures market managed by OMIP (continuous trading and at auctions), and the non-organised financial OTC market. The volume of trading in the OTC market is greater than the volume of trading in the futures market managed by OMIP. As a result, 153.9 TWh were traded on the OTC market in 2009, compared to 31.4 TWh traded in the OMIP market (auctions and continuous trading). 13% of the OTC volume traded in 2009 was cleared by OMIClear.

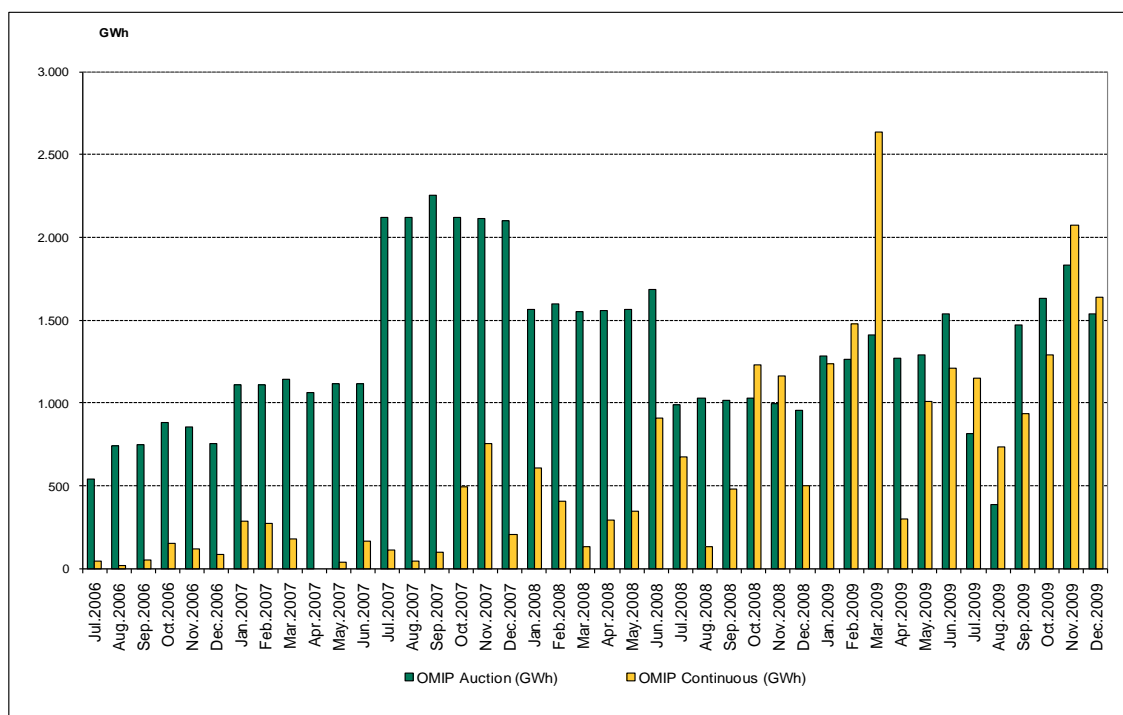


Figure 10. OMIP: Evolution of trading volumes in auctions and on the continuous market (GWh), years 2006-2009

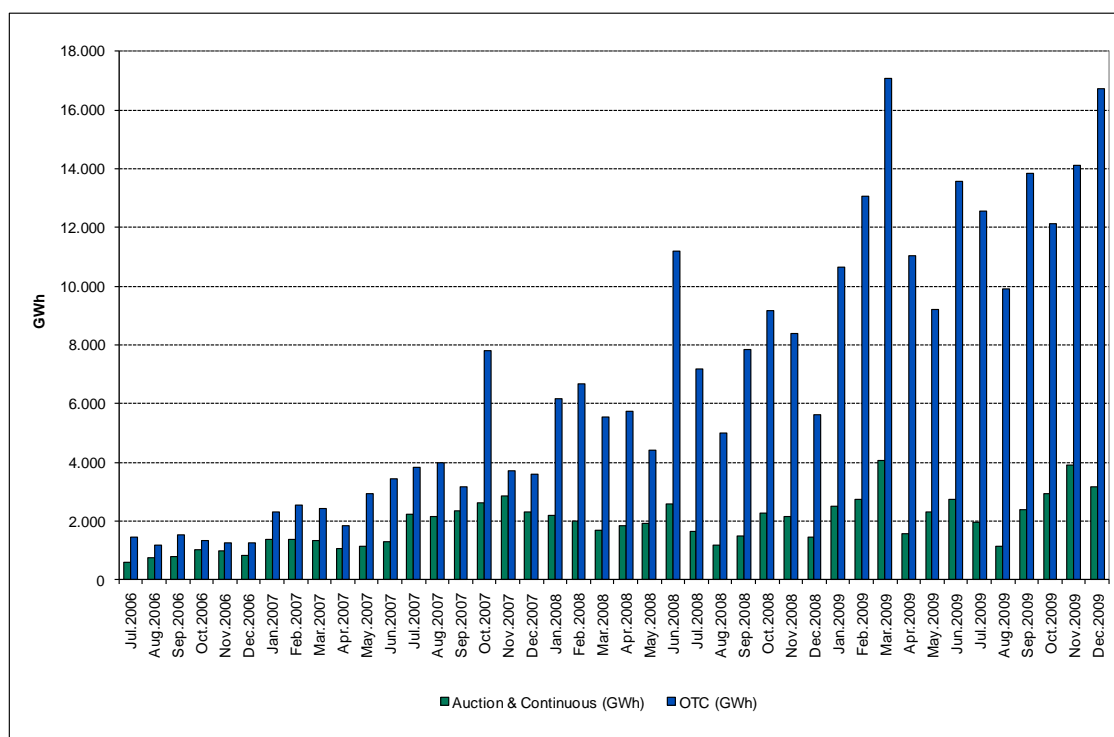


Figure 11. Organised and OTC markets: Evolution of trading volumes in OMIP (auctions and the continuous market) and evolution of OTC trading volumes (GWh), years 2006-2009

### Virtual Power Plant auctions (VPP auctions)

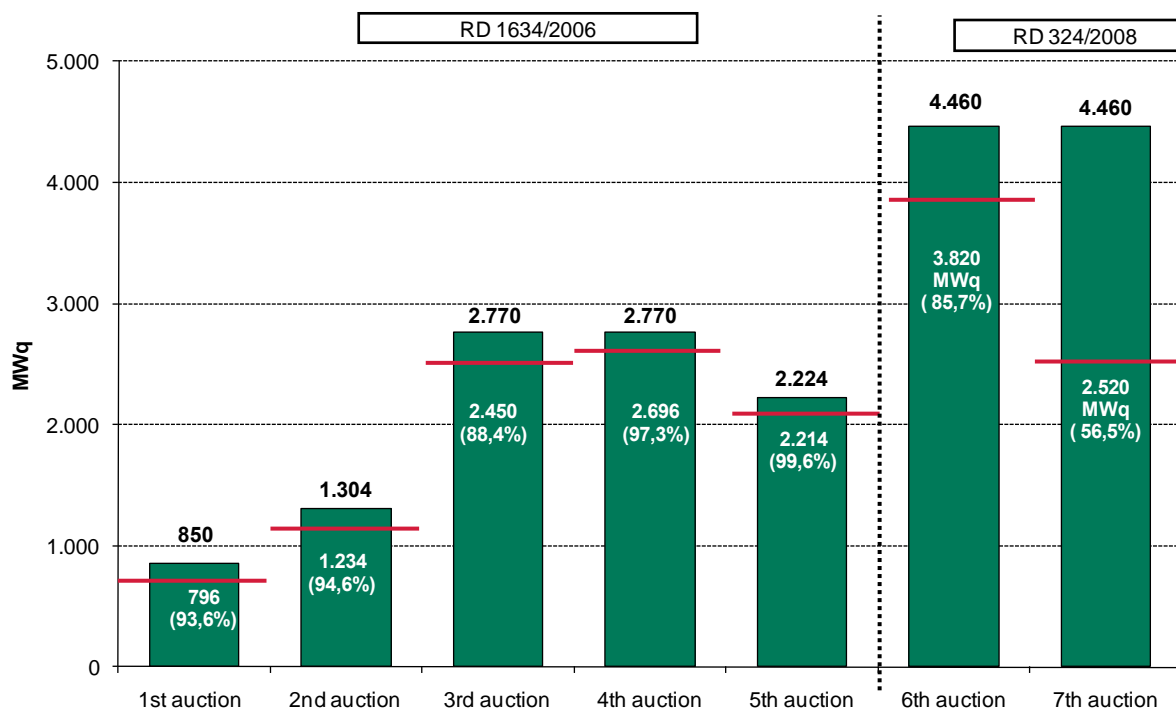
As explained in last year's report, the twentieth additional provision of Royal Decree 1634/2006, of 29 December, which established the electricity tariff from 1 January 2007, built a schedule for holding five VPP auctions during the period between June 2007 and June 2008.

On 20 March 2008, Royal Decree 324/2008 of 29 February, which established the conditions and operating procedure and participation in VPP auctions, was published in the Spanish Official Gazette (BOE). In its sole additional provision, this Royal Decree extended the schedule of VPP auctions included in the twentieth additional provision of Royal Decree 1634/2006, by providing for two additional auctions, the sixth and seventh auctions, with the power delivery period starting on 1 October 2008 and 1 April 2009, respectively.

The explanatory preamble of Royal Decree 324/2008 of 29 February, which states the conditions and operating and participation procedure in VPP auctions states that “*by means of primary energy issues, as a measure to encourage forward trading, the ultimate aim is to reduce the operators' power in the market as a necessary condition for effective competition*”. Some differences were noted between the auctions stipulated in the twentieth additional provision of Royal Decree 1634/2006 and those stipulated in the sole additional provision of Royal Decree 324/2008.

There was also an increase in the volume to be auctioned between the first set of auctions (first to fifth) and the second set (the sixth and seventh auctions).

Figure 12 shows the power auctioned in each of the seven auctions of primary energy issues, in accordance with the applicable regulations, expressed in terms of quarterly equivalent megawatts (MWq).



(\*) In the first five auctions regulated by Royal Decree 1634/2006, from the second auction onwards, the amount not sold in the previous auction (as stipulated in the regulations) is included in the volume auctioned, as stated in the applicable regulations.

Figure 12. VPP Auctions: Power auctioned (MWq)

For more details on VPP auctions held to date, please refer to last year's report.

Following the seventh VPP auctions, the Spanish Energy Regulator (CNE) Board of Directors decided to open a Public Consultation on July 16<sup>th</sup> 2009. The main purposes of the Consultation were to assess the overall benefit on the market of these auctions, the impact on forward market liquidity and on market competition and to analyse the convenience of launching new rounds of VPP auctions. The Public Consultation was launched on July 21<sup>st</sup> 2009 and was ended on September 30<sup>th</sup> 2009.

The Public Consultation was structured in 3 parts in order to gather the responses of all interested market participants regarding the following:

- VPP impact on competition and forward market liquidity.
- Auction design critical factors: released the volumes, type of product, duration of the program and auction participation criteria.
- Convenience of launching new rounds of VPP auctions and if so, design definition.

For the purpose of analysis, Public Consultation results showed separately answers by sellers and by other market participants. The vertical integration degree of generation and supply to final consumers in the Spanish market was also taken into account. As a consequence, 3 Groups of answers were established: sellers, vertically integrated agents, and non-vertically integrated agents.

The main conclusions obtained from the Public Consultation were:

Regarding the impact of previous VPPs:

- Sellers and vertically integrated agents considered that VPP did not have a significant impact, neither on the forward market nor on the spot market competition.
- The non-vertically integrated agents valued positively VPP auctions on the grounds that they enhanced competition in the retail market and also in the forward market.

They supported financial settlement and also suggested that VPP should have taken place more often and at more distant dates relative to the start of the delivery period.

There were mainly 2 different positions regarding the convenience of launching new rounds of VPPs. Sellers and vertically integrated agents opposed the launching of new rounds; while , non-vertically agents supported it.

Due to the recent changes in the market structure and in the market regulation related with electricity tariffs, the CNE considers necessary to carry out a further deeper study about:

- The evolution of the functioning and structure of the OTC market and their relationship with other segments of the wholesale electricity market.
- The evolution of competition in the retail market, taking into account the impact of the vertical integration.

The Public Consultation conclusions were published in the CNE website on the 15th of December 2009.

#### Supply of Last Resort Energy Contract Auctions (CESUR Auctions)

The Order ITC/400/2007 of 26 February regulated bilateral trading of electrical energy with physical delivery by the companies responsible for default supply on the Spanish mainland. With this type of trading, another market mechanism was added, so that distribution companies could acquire energy for sale to consumers in the former regulated market (end-user tariffs), in addition to energy purchases in the organised markets managed by OMEL (spot) and OMIP (forward market).

From 1 July 2009, the default supply is no longer a part of distribution and becomes entirely provided by last resort suppliers, in accordance with Royal Decree 485/2009 of 3 April, which regulates the implementation of the supply of last resort in the electrical energy sector. The participation of last resort suppliers in the CESUR Auctions will be voluntary, as stipulated in the eighth additional provision of the Order ITC/3801/2008 of 26 December, which reviewed the electric tariffs from 1 January 2009 onwards.

Likewise, the eighth additional provision of the Order ITC/3801/2008 states that auctions with delivery of energy from 1 July 2009 onwards can be settled either by physical delivery or by differences (i.e. cash settlement). Until the 8th CESUR auction, held in March 2009, the products auctioned were settled by physical delivery of the energy; however, the products auctioned since the 9<sup>th</sup> CESUR auction, held in June 2009, were cash settled.

The Resolution of 22 June 2009, of the State Secretariat of Energy, establishes the features, rules and contract form for the 9<sup>th</sup> auction. The Resolution of 24 June 2009, of the State Secretariat of Energy, approves the key parameters for the 9<sup>th</sup> auction, namely: end prices of the first round, target auctioned volumes, formula for price reduction between rounds, and information about the total offer excess. The Resolution of 17 November 2009, of the State Secretariat of Energy, establishes the features, rules and contract form for the 10<sup>th</sup> auction. The Resolution of 4 December 2009, of the State Secretariat of Energy, approves the key parameters for the 10<sup>th</sup> auction.

The 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> CESUR auctions were held on 26 March, 25 June and 15 December 2009. The 9<sup>th</sup> CESUR is the first of these auctions whose equilibrium prices were taken into account to calculate the electricity last resort rate, applicable from 1 July 2009, in accordance with the stipulations of the Order ITC/1659/2009 of 22 June. The 11<sup>th</sup> auction has been celebrated on 23 June 2010, according to the stipulations of Order ITC/1601/2010, of 11 June.

A base load product and a peak load product were traded in the 8<sup>th</sup> auction, both of which are quarterly and with a delivery period in the quarter following the auction. In the 9<sup>th</sup> and 10<sup>th</sup> auctions, base load and peak load quarterly products were offered for the 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2009 (9<sup>th</sup> auction) and for the 1<sup>st</sup> and 2<sup>nd</sup> quarters of 2010. In the 11<sup>th</sup> auction, base load and peak load quarterly products were offered for the 3<sup>rd</sup> quarter of 2010.

Table 11 summarises the results of the CESUR auctions held until the end of 2009.

	19 June 2007	18 Sept. 2007	18 Dec. 2007	13 March 2008		17 June 2008		25 September 2008		16 December 2008		26 March 2009		25 June 2009				15-Dec-09			
	1 <sup>st</sup> auction	2 <sup>nd</sup> auction	3 <sup>rd</sup> auction	4 <sup>th</sup> auction		5 <sup>th</sup> auction		6 <sup>th</sup> auction		7 <sup>th</sup> auction		8 <sup>th</sup> auction		9 <sup>th</sup> auction				10 <sup>th</sup> auction			
				One- Quarter	Two- Quarter	One- Quarter	Two- Quarter	One- Quarter	Two- Quarter	Base load	Peak load	Base load	Peak load	Base load	Peak load	Base load	Peak load	Base load	Peak load	Base load	Peak load
Participants	25	26	24	26		25		25		26		24		33				31			
Winners	21	18	23	26		21		22		21		19		29				25			
Rounds	25	15	14	16		12		17		16		17		13				17			
Target volume (MW)	6 500	6 500	6 500	3 500	3 500	1 800	900	2 000	1 000	3 400	200	2 400	450	4 800	670	5 000	670	4 800	540	4 800	600
Starting price (€/MWh)	70	60	85	85	85	85	85	90	90	82	92	57	63	55	67	58	70	54	62	54	62
Auction price (€/MWh)	46.27	38.45	64.65	63.36	63.73	65.15	65.79	72.49	72.45	58.86	66.84	36.58	38.22	42.00	47.60	45.67	51.31	39.43	43.70	40.49	44.52
Products	Q3-07	Q4-07	Q1-08	Q2-08	Q2-08+ Q3-08	Q3-08	Q3-08+ Q4-08	Q4-08	Q4-08+ Q1-09	Q1-09	Q1-09	Q2-09	Q2-09	Q3-09	Q3-09	Q4-09	Q4-09	Q1-10	Q1-10	Q2-10	Q2-10

Table 11. CESUR Auctions: results of the auctions until the end of 2009

### Auctions regarding financial contracts based on the price differences of the Spanish and Portuguese Electrical Systems

As previously indicated in Section 3.1.1., a long-term transmission capacity product has been introduced by Order ITC/1549/2009, of 10 June, updating annex III of Order ITC/4112/2005 (principles applying to the auction procedures and market splitting for the interconnection Spain-Portugal). The Resolution of 16 June 2009, of the State Secretariat of Energy approves the time horizon and the number of contracts of each type offered by the Spanish Electrical System in the auctions of financial contracts for the Spanish-Portuguese interconnection, to be celebrated in 2009. The Resolution of 25 June 2009, of the State Secretariat of Energy, approves the rules and the adhesion contract of the first auction. The Resolution of 27 November 2009, of the State Secretariat of Energy, approves the rules and the adhesion contract of the second auction.

Two auctions were celebrated in year 2009. The results of these auctions are shown in Figure 13. The auctioned products are hedging forward contracts regarding the export of electrical energy from Spain to Portugal. These contracts are commonly known as *Contracts for Differences* (CfD). The capacity sold by the Spanish System was fully matched in both auctions. The third auction was celebrated on 24<sup>th</sup> June 2010 and the contracts cover the second semester of 2010.

	1st auction	2nd auction	
	29 June 2009	18 December 2009	
Auctioned Product	2 <sup>nd</sup> Semester 2009	Year 2010	1 <sup>st</sup> Semester 2010
Amount offered by the Spanish System (MW)	100	200	200
Matched Volume (MW)	100	200	200
Equilibrium Price (€/MW)	2.01	0.46	0.49

Figure 13. Results of CfD auctions for the Spanish-Portuguese interconnection celebrated in 2009

### 3.2.2 Description of the retail market

Since 1 July 2009, all electricity consumers are formally in the liberalised market. However, (as explained in last year's report) in the liberalised market, there is a last resort tariff available only for consumers with contracted load capacity below or equal to 10 kW. In addition to the access tariff (which is a regulated cost), the price for energy in the last resort tariff is computed by the Government according to CESUR auctions. For more information on this, please, refer to the section "Supply of Last Resort Energy Contract Auctions (CESUR Auctions)

It must be mentioned that from an overall amount of 27.589.557 electricity consumers in mainland Spain, most of them (23.941.730) are supplied by last resort suppliers. In terms of energy, in the second half of 2009, 36% of all energy retailed in Spain was supplied by last resort suppliers.

Therefore, it is worth to analyse separately the market in two categories: last resort supply and rest of the market.

#### Last resort supply:

23.941.730 consumers (by the end of 2009) were supplied by last resort suppliers, with consumption (in the second half of 2009) of 43.015 GWh, which is 36% of all energy retailed in Spain. Five last resort supply companies were appointed, which have the obligation to supply consumers (below or equal to 10 kW) that request it. These five



companies belong to the big five electricity groups active in Spain. Endesa and Iberdrola cover around 80% of the customers.

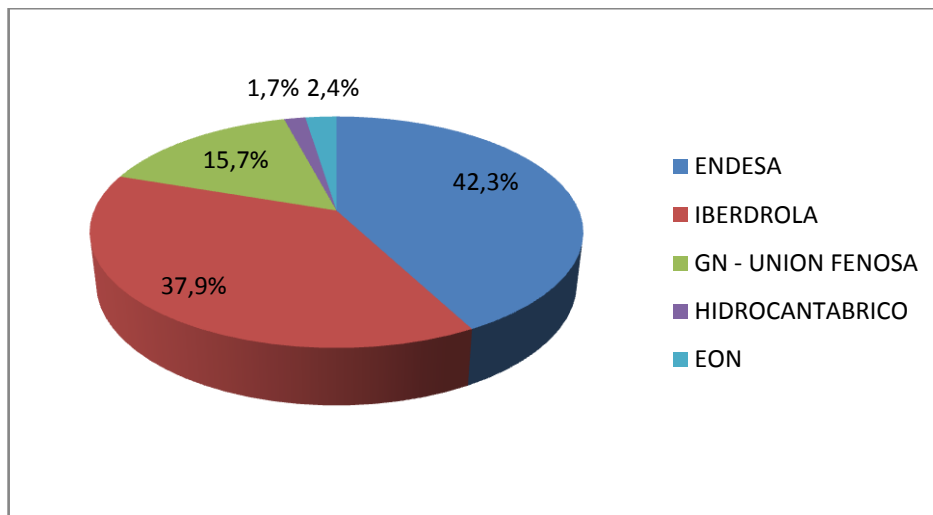


Figure 14. Market shares of last resort suppliers by number of customers (Source: CNE)

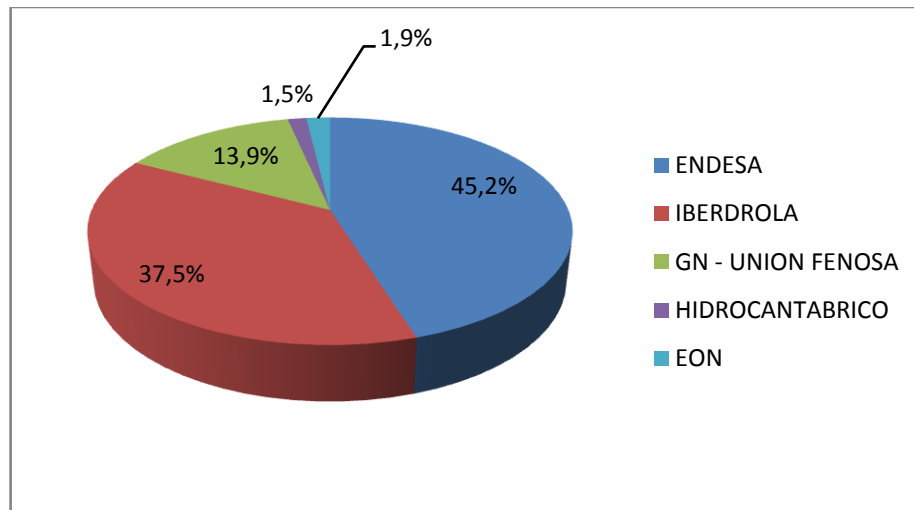


Figure 15. Market shares of last resort suppliers by energy (Source: CNE)

#### Rest of the market:

In the rest of the market there were (by the end of 2009) 3.647.827 consumers with consumption (in the second half of 2009) of 76.447 GWh, which is 64% of all energy retailed in Spain. The companies with the largest liberalised market shares are those

belonging to the large established energy groups, i.e. Endesa, Iberdrola and Gas Natural Fenosa, whose market shares add up to 75% in energy (90% in customers).

In general, the way in which all the other supplier companies have entered the market has been through organic growth, without being associated with any distribution company, with the exception of Hidrocantábrico, in which the Portuguese EDP holds 96,6% of its corporate capital, and Viesgo, which was acquired by E.ON. [Though Gas Natural – Unión Fenosa merge was not effective until July 2009, since data provided here are a “market snapshot” by end 2009, they are showed jointly.]

Supplier company	Share (clients)
ENDESA	43,5%
IBERDROLA	32,7%
GAS NATURAL FENOSA	14,0%
HIDROCANTÁBRICO (EDP)	8,2%
E.ON (Viesgo)	0,5%
Others	1,1%

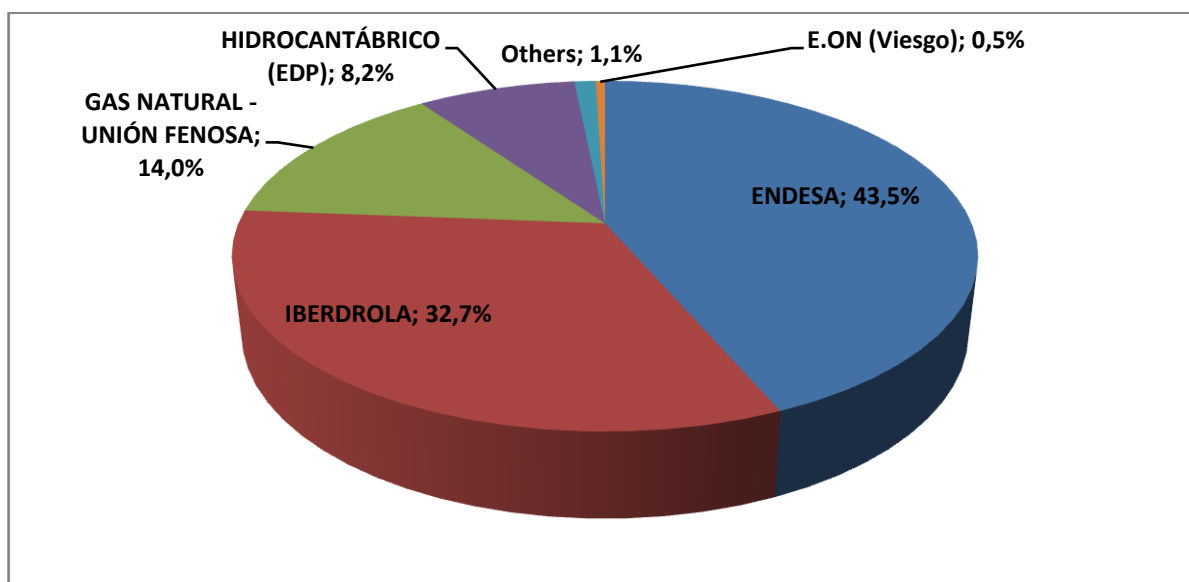


Table 12. Market shares of supply companies in the liberalised market by number of customers (Source: CNE)

The company with the biggest increase was again IBERDROLA: its share went up from a 20,3% in 2008 to a 32,7% in 2009, mostly at the expense of ENDESA, which reduced its share from 60,27% in 2008 to 43,5% in 2009.

Supplier company	Share (energy)
ENDESA	37,7%
IBERDROLA	20,8%
GAS NATURAL FENOSA	16,1%
HIDROCANTÁBRICO (EDP)	9,7%
E.ON (Viesgo)	1,5%
Others	14,2%

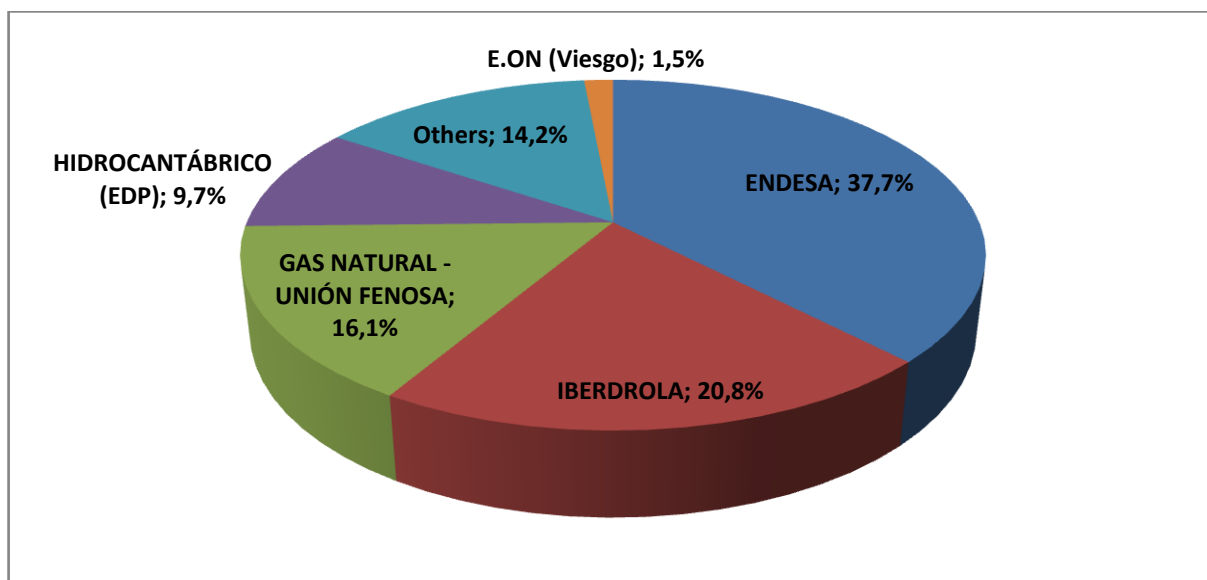


Table 13. Market shares of supply companies in the liberalised market by energy (Source: CNE)

With regard to switching supervision, the recently passed Royal Decree 1011/2009, dated June 19<sup>th</sup> 2009 establishes the aim, competencies and duties of the “Office for Switching Supplier” (OCSUM) — this new enterprise has as sole purpose overseeing switching procedures in both power and gas markets, thus making all pertinent information and data freely available and compiling periodical reports on relevant switching indicators.

Considering the geographical scope, the relevant market can be defined as national. There are Spanish retailers active in Portugal and in other European markets (France, UK...) and there are Portuguese (EDP), British (Centrica), Italian (ENEL), German (E.ON)

and French (EDF) companies participating in the Spanish retail market. The sum of the external (or foreign-controlled) supplier companies' market share lies above 45%.

In order to analyse the switching rates in terms of both: number of customers and energy, two categories are considered (like in the previous point): last resort supply and rest of the market.

The retail market had been quite dormant before 2009 partly because of the existence of “refuge” end-user tariffs. All consumers are in the liberalised market since July 2009, from that moment on, the retail market has been more active. Suppliers are offering new products for different types of consumers including new services. Usually joint offers (gas and electricity) incorporate additional discounts.

However, consumers supplied under the last resort regime are more conservative: only 93.826 of these consumers (from 23.941.730, it makes just 0,4%) have switched to a last resort supplier different to the group of the distributor. In terms of energy, it makes a similar share (0,3%). One of the reasons is that the retail market is not offering attractive prices to this kind of consumer; it is more oriented to bigger consumers.

On the other hand, consumers supplied in the rest of the market (not supplied in the last resort regime) are more prone to switching. By the end of 2009, 518.329 consumers (from a market comprising 3.647.827 consumers, it makes 14,2%) were supplied by a supplier different to the group of the distributor.

Given that, by the end of 2008, the overall number of consumers being supplied from a company different from the group of the distributor was 395.531 and considering the switches occurred in the last resort regime (93.826), this means that, in 2009, 216.624 consumers<sup>5</sup> (at least<sup>6</sup>) have changed supplier. In previous years, the number of switches in a year was below 100.000, so it can be inferred that the liberalisation has promoted much more activity in the retail market, at least for big consumers.

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<sup>5</sup> Overall nr of switches in 2009 = nr consumers with last resort supplier different from distribution group in 2009 + nr consumers with supplier (rest of the market) different from distribution group in 2009 – overall nr consumers with supplier different from distribution group in 2008.

<sup>6</sup> Several switches in a year or switching back to the company of the distribution group are not accounted for.

In the so called “rest of the market”, switching is much more important in terms of energy: in the second half of 2009, 45,3% of energy was retailed by a supplier different to the group of the distributor.

For more detailed information on switching, please refer to the OCSUM<sup>7</sup>.

Supplier	Distribution Network Operator				
	E.ON	ENDESA	H.CANTABRICO	IBERDROLA	U. FENOSA
CIDE HCENER	0,00	0,00	0,00	0,00	0,00
CONS DIR MER	1,08	0,00	0,00	0,00	0,01
E.ON	<b>20,75</b>	1,03	0,32	1,63	0,00
ENDESA CYR	0,00	<b>0,00</b>	0,00	0,00	0,00
ENDESA E.	17,02	<b>72,96</b>	3,47	11,49	25,17
ENR.GRAN.CON	0,00	6,27	0,51	8,55	6,94
HCANTAB ENER	8,62	4,00	<b>48,56</b>	9,78	4,85
HISPAELEC E.	0,00	0,18	0,00	0,35	0,25
IBERD. GENER	0,00	0,06	42,88	0,00	0,00
IBERDROLA SA	6,03	2,95	0,73	<b>42,84</b>	4,69
NATURGAS COM	0,00	0,01	<b>0,00</b>	<b>2,87</b>	0,00
OTROS	38,16	4,95	1,13	8,08	7,48
GN UF	8,34	7,60	2,40	14,41	<b>50,61</b>

Table 14. Loyalty degree (and switching) indicators by network (in terms of energy) as of Dec.2009 –

Source: CNE

### Retail price levels

Like in previous sections, last resort tariff must be addressed separately from the rest of the market:

### Last resort tariff:

The Order ITC 1659/2009 sets forth the last resort tariff. There are two subtypes: with or without hourly discrimination (day/night).

The last resort tariff that applies since July 2009 (until end 2009) has two terms:

<sup>7</sup> The OCSUM recovers detailed data on all switches, however, no public report has been issued so far.

Without hourly discrimination:

- Contracted load (fix) term: 2,079750 €/kW month
- Energy (variable) term: 0,133245 €/kWh

With hourly discrimination:

- Contracted load (fix) term: 1,858500 €/kW month
- Energy (variable) term: 0,143063 €/kWh peak; 0,063107 €/kWh off peak

The average prices (per MWh consumed) paid by consumers supplied under the last resort tariff are:

consumer type	access tariff	last resort supply margin	energy cost	final cost (before taxes)	final cost (taxes included)
last resort supply	76,6	6,0	62,8	145,4	177,3
last resort supply with day/night discrimination	41,4	2,8	55,5	99,7	121,5

*Table 15. End user price by components of consumers in the last resort supply (€/MWh). Year 2009 (4<sup>th</sup> quarter)*

Taxes are obtained by applying to the end price the electricity tax (5,113%) and then VAT (16%).

#### Rest of the market:

Data on actual prices paid ex post are not ready by the moment the report had to be submitted. For that reason, an additive exercise to estimate retail prices has been made<sup>8</sup>. However, it must be noted that actual prices may vary depending on the deals agreed between supplier and customer.

In Spain, access tariffs are regulated prices which encompass within a single payment the different access costs defined in Royal Decree 1164/2001. In the following table, the average access tariff paid by each consumer type is provided (according to the settlements). Besides, the average capacity payments of each consumer type are provided increased in the corresponding standard losses. Finally, the energy theoretical

<sup>8</sup> Source: [http://www.cne.es/cne/doc/publicaciones/iap\\_indicadores-abr10.pdf](http://www.cne.es/cne/doc/publicaciones/iap_indicadores-abr10.pdf)

cost is calculated, according to the hourly spot market price and considering standard load profiles.

The electricity suppliers' commercial margin has not been included in the final calculated price in the table. Therefore, taxes have not been computed in the following table as the taxable amount is not known (it depends on the commercial margin which can vary significantly). Anyway, the taxes are obtained as explained above: electricity tax (5,113%) and then VAT (16%).

Access tariff group	Access tariff	Capacity payments	Energy cost	Total
Low volt (< 1 kV)	62,8	8,9	48,4	110,9
High volt 1 ( $\geq 1$ kV and < 36 kV)	27,6	2,2	41,7	71,5
High volt 2 ( $\geq 36$ kV and < 72,5 kV)	10,8	1,4	40,6	52,8
High volt 3 ( $\geq 72,5$ kV and < 145 kV)	08,6	1,2	39,7	49,5
High volt 4 ( $\geq 145$ kV)	07,5	1,1	38,7	47,2
Total	37,4	4,6	43,9	82,2

Table 16. End user theoretical average price by components (excluding retail margin and taxes) of typical consumers. Year 2009, €/MWh

Access tariff group	Access tariff	Capacity payments	Energy cost	Total
Low volt (< 1 kV)	57%	42%	-40%	-12%
High volt 1 ( $\geq 1$ kV and < 36 kV)	56%	0%	-42%	-22%
High volt 2 ( $\geq 36$ kV and < 72,5 kV)	33%	-3%	-42%	-34%
High volt 3 ( $\geq 72,5$ kV and < 145 kV)	31%	0%	-44%	-37%
High volt 4 ( $\geq 145$ kV)	23%	1%	-45%	-39%
Total	94%	71%	-40%	-14%

Table 17. End user theoretical average price by components (excluding retail margin and taxes) of typical consumers. Year 2009, % change on a year earlier.

The more remarkable changes on the previous year are the increase in access tariffs and the decrease in energy cost. The first is explained partly by soaring overall amount of subsidies for Special Regime generation. The second is explained by a significant drop in demand.

CNE offers a price calculator in its website:

<http://www.cne.es/consumidores/calculador.html>

### Complaints

CNE just offers information services<sup>9</sup> to consumers since the Spanish regulator has no competences to resolve consumers' disputes. The regulator may advise consumers and provides information on the steps to be taken when issuing a complaint.

In Spain, the Autonomous Communities have the responsibility of customer complaint handling and dispute settlement.

### **3.2.3 Measures to avoid abuses of dominance**

The Spanish legislation includes provisions and tools to avoid market abuse. The new Competition Act 15/2007, of 3<sup>rd</sup> July, entered into force on 1 September 2007 (abolishing the previous Competition Act 16/1989, of 17<sup>th</sup> July) meant a major change in this context.

Since July 2007<sup>10</sup>, and without prejudice of the competitions attributed to the different organs of Defence of the Competition, the National Commission of Energy, besides the functions that assumes in the paragraph 3 of the Eleventh additional Provision of the Law 34/1998, of October 7, of the Sector of Hydrocarbons, and in order to guarantee absence of discrimination, real competition and effective functioning of the market, will monitor:

- a) The management and allocation of interconnection capacity.
- b) Mechanisms aimed at settling capacity congestions in the networks.
- c) Time spent by the transporters and distributors in carrying out connections and repairs.
- d) The suitable publication of the necessary information on the part of transporters and distributors on the interconnections, the use of the network and the allocation of capacities to the interested parties.
- e) Effective separation of accounts with the objective to avoid cross subsidies among transport activities, distribution, storage and provision.
- f) Conditions of access to storage facilities.

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<sup>9</sup> The CNE also publishes a comparison of offers at:  
[http://www.cne.es/cne/contenido.jsp?id\\_nodo=354&&keyword=&auditoria=F](http://www.cne.es/cne/contenido.jsp?id_nodo=354&&keyword=&auditoria=F)

<sup>10</sup> Law 17/2007



- g) The extent to which the transmission and distributing companies are complying with their functions.
- h) The level of transparency and competition.
- i) The fulfillment of regulation and procedures related to the changes of supplier, as well as the activity of the Suppliers Switching Office.

To that end, the CNE adopts information by-laws, which will have to be published in the Spanish Official Gazette, to request from the agents that operate in the electricity markets all the information needed to carry out the monitoring functions.

### Generation

As regards transparency, availability information is required for generators, the bids in OMEL and in the balancing markets, managed by REE, are published ex-post.

CNE carries out market surveillance examining bids and market results. Furthermore, CNE executes inspections on generators when suspicious bidding behaviour or unavailability is observed. Sanctions can be imposed by the Ministry after the infringement procedure is resolved. Besides, the (general) Competition Authority (CNC) can investigate and impose penalties on generators when anticompetitive behaviour is detected.

VPPs have been put in practice in order to prevent abuse of dominant position and foster competition. For information on VPPs, please, refer to chapter 3.2.1.

### Supply

Suppliers have to comply with a series of rules concerning the supply contract.

The main focus in supply activity (for promoting competition) is the procedure for switching supplier. For that purpose, the Office for Switching Supplier” (OCSUM) was set up. The registry of supply points can be accessed by any supplier.

In 2009, the CNC fined the main distributors for preventing competition by hindering information exchange of their supply points connected to their networks.

### Recent mergers and acquisitions in the electricity sector

- a) GAS NATURAL – UNION FENOSA

The Spanish Competition Commission (CNC) approved the acquisition of UNION FENOSA by Gas Natural on February 11<sup>th</sup> 2009. The CNC agreed to this authorization conditionally to the fulfillment of certain commitments related to the assets sale proposed by Gas Natural. These commitments were detailed in an Action Plan approved by the CNC on March 17<sup>th</sup> 2009.

Gas Natural had to sell 2000 MW of electricity generation capacity through functioning CCGTs plants located in one of the following areas: Andalucía, Galicia, Centro, Levante and Cataluña.

Gas Natural has committed to supply gas to the buyer or buyers of the above mentioned generation plants during at least 2 years under market conditions. Likewise, Gas Natural has also committed not to be a shareholder, nor to participate in their business management, in a direct or indirect way.

The assets sale has not taken place yet.

Gas Natural ended the merger process with UNION FENOSA on September 7<sup>th</sup> 2009, after the new exchange rate of the shares of the new company had been admitted.

## **4 REGULATION AND PERFORMANCE OF THE NATURAL GAS MARKET**

### ***4.1 Regulatory Issues [Article 25(1)]***

#### **4.1.1 Management and allocation of interconnection capacity and mechanisms to deal with congestion**

At present, there are six LNG terminals in operation in the Spanish gas system, with a total regasification capacity of 1.953 GWh/day. At the end of 2009, Spain had also several international gas pipeline connections with other countries: with Algeria, through Morocco; with Portugal, through Tuy and Campo Maior; and with France, through Larrau and Irún. An additional direct connection with Algeria (Medgaz pipeline) is expected to come into operation before the end of 2010.

While LNG terminals represented around 61 bcm/year of entry capacity in 2009, the connection from Algeria through Morocco (Maghreb pipeline) could provide 12 bcm/year, and the connection with France at Larrau reached 3,0 bcm/year.

At the end of 2009 there was available capacity in all LNG terminals. Mean booked TPA capacity at LNG terminals was 66,7% throughout the year. Available capacity ranges from a minimum mean value of 14,1% in Bilbao up to a 52,8% in Cartagena. The pipeline connections with Portugal also presented available capacity in both senses. However, in the pipeline connections with Morocco and France, import capacity was fully booked.

In particular, capacity in the IPs with France is still deemed very scarce and has been identified as one of the main obstacles to create a Gas Regional Market in the South Region, as an interim step through the single Internal Energy Market in Europe. The existence of sufficient accessible interconnection capacity between France and Spain is a prerequisite to foster competition between gas companies, increase market liquidity and enhance diversification and security of supply.

### Capacity Allocation rules at the France-Spain interconnection

In order to manage congestion at the international interconnection with France, it is worth mentioning the work carried out in the framework of the South Gas Regional Initiative that has led to the implementation of a system of Open Subscription Periods (OSP) and Open Season procedures (OS) at the FR-SP border.

#### a) Open Subscription Period (OSP)

The OSP procedure is the allocation process, among requesting shippers, of the available existing capacity between France and Spain. The OSP establishes the process to allocate, in a coordinated way, exit capacity from one country and entry capacity into the adjacent network, in both flow directions.

The capacity offered under the OSPs is split, in order to promote competition in the supply business and enhance liquidity of the Spanish and French markets:

*Long-Term Capacity:* 80% of the firm capacity offered, reserved for multiannual and multi-seasonal requests until 2013.

*Short-Term Capacity:* 20% of the firm capacity, reserved for requests of one year or less.

Following the first allocation through OSP in 2008, where all the capacity offered both in the long term (from April 2009 to March 2013) and the short term, (from April 2009 to March 2010) was allocated, in 2009 a new OSP was launched for allocating yearly capacity from April 2010 to March 2011. The results were as satisfactory as in the previous year, for all offered capacity in both directions was allocated. This allocation process will be reproduced annually until 2013.

The document describing the OSP procedure is available at ERGEG and TSOs websites.

#### b) Open Season (OS) procedure

The OS procedure emerges from the need to increase interconnection capacity between France and Spain. The aim of this procedure is to assess the interconnection capacity needs of the stakeholders between the two countries and inside France and, on a second

phase, to organize a request and allocation procedure for these capacities in order to develop the new infrastructure needed.

French and Spanish TSOs and NRAs started working in close cooperation in 2008, with the support of Ministries from both countries, in order to put in place such a coordinated procedure aiming at developing new capacities in two different axes:

- Western axis: new investments in existing interconnections (Larrau, Irún-Biriatou, and TIGF-GRTgaz interface) to be available from 2013. These investments are not exclusively cross border interconnections, but also include capacity expansions inside France.
- Eastern axis: setting up a new interconnection point at Figueras/Perthus, creating a new corridor (Midcat) for transmission of gas from South to North and from North to South, to be available from 2015, including as well capacity expansions inside France.

The binding phase of the 2013 Open Season and the non-binding phase of the 2015 Open Season were launched at the end of July 2009. The allocation of capacity took place in October 2009, and contracts were signed in November 2009. A big number of shippers from 11 different countries showed interest in taking part in the process, and finally 12 requests from 8 different companies were received. The process ended successfully with the positive French TSOs' decision of investing in the infrastructures associated to 2013 capacities. As a result of this process, capacity will be increased up to 5,5 bcm/year at Larrau interconnection as of March 2013.

The OS process goes on in 2010 with the development of the binding phase for the allocation of 2015 capacities.

#### Allocation capacity rules at underground storages

The underground storage capacity in Spain is also insufficient and it constitutes a scanty resource. To manage high interest in this resource and avoid congestion, there are two criteria for underground storage capacity allocation: about 90% of it is allocated in

proportion to the sales to final clients on a pro-rata basis, and the rest of it (about 10%) is allocated by auction.

In 30 March 2009, OMEL carried out the second auction of underground storage capacity, in accordance with section two of chapter II of Order ITC/3862/2007 of 28 December, for the period running from 1 April 2009 to 31 March 2010. The auction process was monitored by the CNE.

The 25 of March of 2010, the third auction of underground storage capacity took place for the period running from 1 April 2010 to 31 March 2011.

#### Regulatory harmonization in the frame of the creation of the Iberian Gas Market (MIBGAS)

Portuguese and Spanish Administrations and Regulatory Authorities are currently working for the creation and development of an Iberian Natural Gas Market, MIBGAS, to set out the a reference regional market as a step forward towards the single European gas market.

In the frame of this common project, it was initially agreed to entrust the preparation of a document to identify the operating principles and the organisation of MIBGAS to CNE (Spanish Energy Commission) and ERSE (Portuguese Energy Regulator). After public consultation, both regulators released a proposal for the Model for Organisation and Operating Principles for the Iberian Natural Gas Market (MIBGAS) in January 2008.

One of the specific actions both regulators proposed in this document was realising a comparative study of the conditions for obtaining a trading license in the two countries, and presenting a proposal for harmonising trading licences in the Iberian area.

In 2009, the CNE and ERSE organised a public consultation with the aim of collecting opinions from the market agents, players in the gas system and other interested institutions regarding the legal, technical and economic conditions required to perform the trading activity in Spain and Portugal, and suppliers' obligations and rights in both countries. This public consultation ran from March to April 2009, and its outcome was quite satisfactory, showing once more the high interest from market actors in the development of

MIBGAS. One of the main lessons was the identification of a number of matters that needed to be harmonised in both countries, in order to create the necessary conditions for a proper functioning of the common market.

As a result of the public consultation, both regulators CNE and ERSE proposed in December 2009 to submit a proposal to the corresponding Spanish and Portuguese ministries for the mutual recognition of gas trading licenses. Such a proposal, based on a set of general principles to be respected in both countries, was finally submitted to both Governments in January 2010.

#### **4.1.2 The regulation of the tasks of transmission and distribution companies**

##### Network Tariffs and Balancing

The Government approves rates, tolls and fees of natural gas (previously, the NRA issues a non-binding report) and publish them in the Official Spanish Gazette. The tariff model applied in Spain is the entry-exit model with a single balancing area, which results in a postal tariff model.

To undertake the studies necessary to underpin the reports on the Ministerial Order draft on the sale rates, tolls, levies and remuneration in the gas industry, the CNE gathers the necessary information from the different actors in the industry.

Firstly, in order to calculate total revenues of the gas system, information is gathered from suppliers on projections for invoicing variables – number of customers, capacity and consumption – broken down by tariff groups. Information is requested for the end of the year in progress and for next year. Forecasts provided by companies are compared to available information by the CNE for settlements of regulated activities in natural gas. In like manner, individualised information is requested on the forecasts of major consumers of gas such as combined cycles, electrical plans and supplies under the interruptible sale rate.

In the annual rate exercise, determination is made of the variations to be applied in sale rates, tolls and levies of natural gas, so as to cover the regulated costs of the system.

Secondly, for transport, storage and regasification of natural gas, remuneration for new facilities is set at service cost, calculated at standard levels. Operating costs are remunerated at standard levels. Furthermore, standard levels of investment and operating costs are updated by means of an index that takes into account the variation of the CPI (Consumer Prices Index) and PPI (Producer Prices Index). Nevertheless, remuneration of each distribution company is set according to a revenue cap formula, established in 2002. In 2008, remuneration system for regasification and storage of natural gas has been updated in Order ITC/3863/2007. The system adopted for these activities is similar to the remuneration system for electricity transport facilities in place since January, 1<sup>st</sup> 2008.

#### **4.1.3 Effective Unbundling**

Law 12/2007 amending Spanish Hydrocarbons Act (Law 34/1998) was adopted in July 2007 in order to comply with the provisions of the gas Directive 2003/55/EC. The amended Spanish Hydrocarbons Act introduces new unbundling requirements which were already addressed by the CNE's National Report last year.

Before the entry into force of Law 12/2007, the Spanish Hydrocarbons Act (article 63) already required the legal unbundling of activities, whereby regulated tasks such as LNG plants activities, storage, transmission and distribution should be separated from liberalized activities. Therefore companies had adapted their structures according to legal unbundling requirements.

However, Law 12/2007 has amended article 63, so as to adapt it to articles 9 and 13 of Directive 2003/55/EC. The new article 63 states that companies that engage in one or more of the regulated activities – regasification, strategic storage, transmission and distribution – must have as their sole corporate purpose the performance of such activities, where they may neither engage in production or commercialization nor be shareholders in companies that carry out such activities. Likewise, it indicates that transmission companies



that operate any of the basic network facilities of natural gas must have as their sole corporate purpose in the gas industry the transmission activity.

Finally, the laws establishes that a group of companies may undertake activities that are incompatible, provided they are performed by different companies and meet different criteria to guarantee the functional unbundling.

Article 63 of the Hydrocarbons Act, says 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 CNE and the Ministry for approval and shall be published.

#### Current TSOs' and DSOs' situation

In Spain, the main gas transmission operator is the company ENAGAS, which was set up in 1972 with the objective of developing the gas pipeline network in the Iberian Peninsula. At the moment ENAGAS is the national transmission system operator (TSO) and the main gas transmission company in Spain.

Recently, the Royal Decree- Law 6/2009, of April 30, designated ENAGAS as the only company to be owner of the main network of primary transmission of natural gas.

Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas, and repealing Directive 2003/55/EC, establishes from 3 March 2012, Member States shall unbundle transmission systems and transmission system operators. An undertaking must first be certified before being officially designated as a transmission system operator. On 3 September 2009, an undertaking owning a transmission system is part of a vertically integrated undertaking, Member States should therefore be given a choice between ownership unbundling and setting up a system operator or transmission operator which is independent from supply and production interests.

So, ENAGAS would already comply with the requirements of ownership unbundling (TSO Model) required by Directive 2009/73/CE as one of the several proposed models.

On the other hand, in the Spanish gas system there are, together with the model of ENAGAS as TSO not vertically integrated, other vertically integrated companies developing transmission activities. In view of the obligations that the Directive 2009/73/CE imposes to the activity of transmission, it is necessary to examine whether these companies comply or not with the obligations set by the Directive in terms of ownership unbundling.

Related with distribution and supply, the Directive requires that Member States shall designate distribution system operators or require undertakings which own or are responsible for distribution systems to do so.

So, it mentions that Distribution system operators are mainly responsible for:

- ensuring the long-term capacity of the system in terms of the distribution of gas, operation, maintenance, development and environmental protection;
- ensuring transparency with respect to system users;
- providing system users with information;
- covering energy losses and maintaining reserve capacity.

The distribution system operator shall be independent in legal terms from other activities not relating to distribution.

Nowadays, the National Energy Commission is examining whether there is a need or not to introduce further changes to Spanish legislation in order to comply with the requirements set by the Directive 2009/73/CE in the field of unbundling.

As for the outcome of the article 63 unbundling rules, the first annual reports, setting out the internal code of conduct and the measures taken by each regulated company in 2008 in order to implement the unbundling requirements, should be sent to the CNE and the Ministry for approval and shall be published by the end of 2008.

In compliance with the aforementioned legal provisions, throughout 2009 energy operators have presented to the CNE the codes of conduct of unbundling of activities elaborated by them, as well as the report that details the measures adopted during 2008. Equally,

throughout 2010 the reports relative to measures adopted during 2009 have been received by National Energy Commission.

Among the measures adopted and explained in the aforementioned report, it is interesting to note the following:

- implementation of measures with the aim to reorganize their holdings;
- change and increase of job functions of some workers, different from the persons in charge of the management of the regulated activities, according to their position in the firm;
- reference to measures still being carried out as well as planned for the next years;
- revision of the remuneration and contracts of the persons in charge of the management of regulated activities;
- obligation to sign a formal declaration by those persons in charge of the management of the regulated firms, declaring that they do not own shares or other participations of societies that develop free activities;
- with respect to commercial sensitive information:
  - revision of procedures of access to that information,
  - introduction of confidentiality clauses in contracts with third parties,
  - designation of those persons in charge of the custody of that information
  - incorporation of disciplinary measures to be adopted in case of breach of the code of separation of activities

#### Further unbundling measures

There is no obligation for ownership unbundling applicable to distribution companies or transmission companies other than ENAGAS. Only ENAGAS, the Spanish System Operator and main transmission company is ownership unbundled. Moreover, in order to increase its independence, the law also establishes further limits to share capital ownership of ENAGAS to individual shareholders and specific functional unbundling rules.

As for the functional unbundling requirements, in order to separate operation of the system from transport, the 2007 Act, amending former 20<sup>th</sup> Additional Provision of the

Hydrocarbons Acts, requests ENAGAS to create a unit integrated within the same company. This unit will be entrusted with the operation of the System and its executive director (CEO) will be appointed and ceased by ENAGAS Board with approval of the Ministry.

This unit has to implement accounting and functional unbundling for other activities (transport) and its workforce must sign a code of conduct to guarantee its independence from all other activities.

Accordingly, the Company has separated the activities that it carries out as the Technical Operator of the system from those that it carries out as a carrier and network manager. Therefore, ENAGAS has created a specific unit responsible for the Technical System Operator.

Subject to Spanish law, CNE must supervise the way in which these functional unbundling obligations are satisfied.

If ENAGAS wants to develop other activities such as the supply of gas, legal and functional unbundling requirements should apply.

As for the limits to share capital ownership of ENAGAS to individual shareholders, no physical or legal entity will be allowed to participate directly or indirectly in a share ownership of ENAGAS higher than five per cent. However, voting rights are limited to one per cent for those companies operating in the gas sector and those individuals or legal entities with a direct or indirect participation of over five per cent in the capital of such entities. For any other shareholders, (both, individuals and other legal entities), voting rights are limited to three per cent. These limitations will not be applicable to the direct or indirect participation of the public Administration. It also establishes the prohibition of syndicating shares, and re-establishes the joint limit of forty per cent (40%) for the whole joint participation of shareholders carrying out activities in the gas sector. There is no legal limit applicable to State ownership.

Enagas was given a deadline of four months to adapt company statutes and shares exceeding the limits will have voting rights suspended. Table 18 shows the shareholding structure of ENAGÁS as of 1/06/2010:

<b>ENAGÁS shareholders</b>	<b>% total shareholding</b>
Pictet Asset Management LTD	3,00
Oman Oil Company S.A.O.C.	5,00
Sagane Inversiones, S.L.	5,00
CIC, S.L. (Cajastur)	5,00
Bancaja Inversiones	5,00
BBK	5,00
SEPI	5,00
Free Float	67,00

*Table 18. Shareholding structure of ENAGAS*

*Source: ENAGAS website*

Related to distribution companies, the article 58 of the Spanish Hydrocarbons Act, as amended by Law 12/2007 establishes "...the distribution companies are entities that are authorized for the building, operation and maintenance of distribution facilities used to situate gas in points of consumption ... the distribution companies may also build, maintain and operate secondary transmission network facilities. In this case, the distribution companies must keep internal separate accounts for both activities..."

Therefore, all DSOs own their distribution assets.

The Directive 2009/73/CE does not modify the regime of separation of the distribution activity already established by previous Directive.

The new 2007 Act mandates for functional unbundling of activities as well as legal unbundling and prevents the regulated activities companies holding any share in companies carrying out production or supply. These provisions entered into force in 2008.

### Accounting rules

The amended article 62 of the Spanish Hydrocarbons Act, which adapts article 17 of the Directive 2003/55/EC, establishes the accounting and information requirements for gas companies.

Entities that engage in one or more activities in the natural gas shall conduct their accounting in accordance with Chapter VII of the Law on Limited Liability Companies, even if such companies are not limited liability companies. In any case, undertakings shall keep a copy of their annual accounts at the disposal of the public at their head office.

Natural gas undertakings shall, in their internal accounting, keep separate accounts for each of their regulated activities specifying those revenues and expenses strictly allocated to each activity. This rule also applies to the Technical Manager of the System and the suppliers of last resort.

Undertakings must explain in the annual report the criteria for the allocation of assets and liabilities, expenditures and incomes.

The gas undertakings must submit to the Authority any information requirements, mainly on their annual accounts, which must be audited according to the Law and shall in particular make sure that the obligation to avoid discrimination and cross-subsidies is respected.

In case of vertical undertakings, the obligation to inform shall also apply to the parent company, if it carries out operations in any energy sector, and to other group companies that are engaged in operations with the gas subsidiary.

Apart from the rules included in article 62 of the Hydrocarbons Act, the Ministry of Industry, Tourism and Trade approved an Act (Order ITC 3993/2006 29<sup>th</sup> December, on Remuneration of the Regulated Gas Sector Activities), which is already in force, by which transmission and distribution companies must submit to the Ministry and to the CNE their audited accounts.

The Ministry of Industry, Tourism and Trade and the CNE receive, by virtue of Order ITC/2348/2006, regular accounting and economic-financial information, which is required to perform the functions allocated to both the Ministry and the Regulator. The CNE does not establish any rules or criteria with respect to the allocation of items by activities or the preparation of accounts broken down by activities. The Order establishes that the information must be presented separately for the following activities: regasification, storage, transmission, gas trading, Technical Manager of the Gas System, distribution, sales to tariff-based customers, retailing, other gas activities and other activities.

The entry into force of the New Accounting Principles in Spain, approved by Royal Decree 1514/2007, of 16th November, requires that the formats for reporting the accounting and economic-financial information to the Ministry of Industry, Tourism and Trade and the CNE (Order ITC/2348/2006) have to be adapted. Both bodies are currently working on those matters.

Companies are audited by independent companies according to the existing regulation. In addition, the Spanish Hydrocarbons Act assigns specifically to the CNE the function of verifying the effective unbundling of accounts. The regulator has a department that performs inspections in companies to verify the veracity of the information provided, whether financial or technical in nature, in so far as the regulator tasks are concerned. (measuring equipment, etc).

Directive 2009/73/CE establishes unbundling and transparency of accounts. So, natural gas undertakings shall keep separate accounts for all of their activities relating to the supply of gas, such as transmission and distribution.

### Sanctions

Since unbundling requirements came into force, documentation has been checked aiming to accredit the effective founding of new companies which have a regulated activity as their sole corporate object. The Spanish Hydrocarbons Act specifies the actions and omissions which constitute administrative offences.

Thus, the performance of incompatible activities according to the Law, (i.e. non-fulfilment of the obligation of legal unbundling of activities) is treated as a very serious failure.

As regards authority to impose sanctions, within the scope of the General State Administration, sanctions for very serious offences will be imposed by the Council of Ministers and sanctions for serious offences by the Ministry of Industry, Tourism and Trade. The application of sanctions for minor offences will correspond to the Director General of Energy. Within the scope of the Autonomous Regions, the provisions of their own rules and regulations shall apply.

The law considers a refusal to submit information to the authorities or the CNE as a grave infringement. A continuous infringement will be considered as a very grave infringement.

Very serious offences are fined with a maximum fine of 30.000.000 Euros, and serious infringements with a maximum fine of 6.000.000 Euros, as envisaged in article 113 of the Hydrocarbons Act. Moreover, a very serious infringement may lead to revocation or suspension of administrative authorization and a subsequent temporary disqualification from the performance of the activity for a maximum period of one year. Revocation or suspension of authorizations shall be decided, in any event, by the authority with the power to grant said authorization.

In conformity with article 116 of the Hydrocarbons Act, very serious sanctions shall be levied by the Council of Ministers, and serious sanctions by the Minister.



## 4.2 Competition Issues [Article 25(1)(h)]

### 4.2.1 Description of the wholesale market<sup>11</sup>

#### Evolution of gas demand

The table below shows the evolution of gas demand in the Spanish market in 2009.

	2008 (GWh)	2009 (GWh)	Annual variation (%)
Demand of gas (except power generation)	261.921	241.062	-8,0
Demand of gas for power generation	187.468	160.793	-14,2
<b>Total demand in Spain</b>	<b>449.389</b>	<b>401.855</b>	<b>-10,6</b>

Table 19. Gas demand in Spain. 2009 vs 2008. Source: Enagas

The following table shows the evolution of gas imports to the Spanish market, including imports through pipeline and as LNG:

	2008 (GWh)	2009 (GWh)	Annual variation (%)
Pipeline	127.321	106.462	-16,4
LNG	331.672	305.647	-7,8
<b>Total</b>	<b>458.993</b>	<b>412.109</b>	<b>-10,2</b>

Table 20. Gas imports in Spain. 2009 vs 2008. Source: Enagas

#### Origin of gas supplies (imports)

The figure below shows the origin of gas sources in 2009 in the Spanish market:

<sup>11</sup> Defined as covering any transaction of gas between market participants other than final end-use customers.

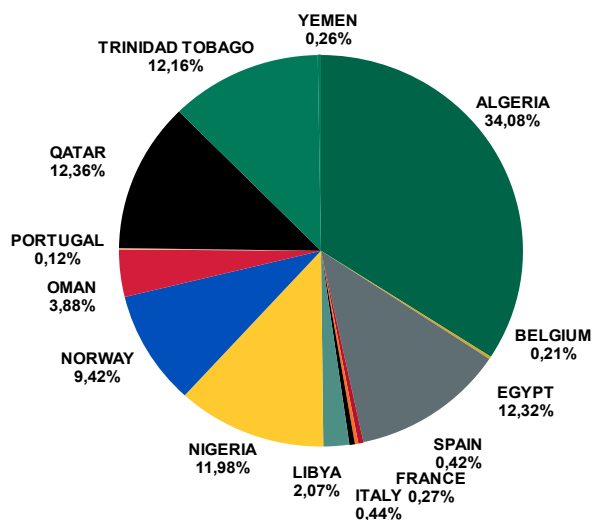


Figure 16. Origin of gas supplies in Spain in 2009

The imports basket of the Spanish gas system roughly keeps the structure of the previous years, resulting in a very high diversification of sources (up to 14 different countries). Algeria stood out once again with a share of 34,08%, then the Gulf Countries (16,24%), Egypt (12,32%), Trinidad and Tobago (12,16%), Nigeria (11,98%) and Norway (9,42%).

With regard to the previous year 2008, total natural gas imports have decreased in 2009 by -10,3%, amounting around 411 TWh (458 TWh in 2007). 74,2% of natural gas reached the national grid through LNG ships, while the remaining 25,8% came via gas pipelines. The shipments unloaded from LNG ships continued at the high levels of the previous years and kept Spain among the most important LNG destinations in the world.

#### Domestic gas production

National production of gas was only 1.715 GWh, accounting for 0,4% of Spanish gas demand. This production comes from three gas fields that are close to depletion and are intended to be used as underground storages in the future.

#### Import capacity (Tm<sup>3</sup> /year)

##### i. Capacity of LNG terminals

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

of gas competition in Spain. Capacity use rate is around 50% in average for these plants, varying from 31% (the minimum, at Cartagena), to 62% (maximum, at Bilbao).



Figure 17. Use rate of LNG terminals in 2009. 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 <sup>3</sup> )	Send-out capacity (m <sup>3</sup> (n)/h)
Barcelona	540.000	1.950.000
Huelva	460.000	1.350.000
Cartagena	437.000	1.350.000
Bilbao	300.000	800.000
Sagunto	450.000	1.000.000
Mugardos	300.000	413.000
<b>TOTAL</b>	<b>2.496.500</b>	<b>156,76</b>

Table 21. Capacity of LNG terminals at 31 Dec 2009. Source: Gas LNG Europe (GLE)

## ii. Capacity of international pipeline interconnections

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

A new interconnection with Algeria, MEDGAZ, is planned to be operational by the end of 2010. MEDGAZ is a strategic project for Algeria and Spain. It will allow natural gas to be supplied directly from Algeria, without requiring transit through third countries, and in addition it will considerably enhance security of supply and diversification in the balance

NG/LNG in the imports to the Iberian Peninsula. Its initial capacity will be 8 bcm/year, and the pipeline will possibly be enlarged in the future in order to reach other European countries, becoming this way an entrance corridor of gas into Europe.

The current capacity of international interconnections is the following:

Pipeline connection	Capacity (GWh/day)
Larrau (FR->ES)	100
Irún (ES->FR)	5 (Winter) / 4 (Summer) <sup>12</sup>
Irún (FR->ES)	0 (Winter) / 10 (Summer)
Tarifa (MO->ES)	355 (+ 89 transit to PT)
Badajoz (ES->PT)	134
Badajoz (PT->ES)	68-105 <sup>13</sup>
Tuy (ES->PT)	36
Tuy (PT->ES)	12

Table 22. Interconnection physical capacities at 31 Dec 2009. Source: ENAGAS

### iii. Booked and available capacity

At the end of 2009 there was available capacity in all LNG terminals. Mean booked TPA capacity at LNG terminals was 66,7% throughout the year. Available capacity ranges from a minimum mean value of 14,1% in Bilbao up to a 52,8% in Cartagena.

In the pipeline interconnections, there was available capacity in both IPs with Portugal. In the connection through Tuy all capacity was available in the direction from Portugal to Spain throughout the year, and nearly all (99,86%) remained free in the opposite sense. In the connection through Badajoz, some 90,5% average of technical capacity was free for booking during 2009 from Portugal to Spain, while more than 80% was available in the opposite sense, Spain to Portugal.

The situation was different in the connections with Morocco and France. In the Maghreb pipeline, importing gas from Algeria through Morocco, the capacity was fully booked throughout the year. There was not hardly any free capacity either at the connection with France through Larrau, with 98,2% of mean capacity booked during 2009 and only 1,8%

<sup>12</sup> Minimum capacity value determined by the entry capacity on the French side.

<sup>13</sup> Depending on the demand of CCGTs in Portugal and the underground storage of Carriço.

left. However the Irún-Biriatou connection was free for booking, though its capacity is much smaller.

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

Entry (or exit) point		Mean booked capacity in 2009 (%)	Mean available capacity in 2009 (%)
Barcelona LNG terminal		61,3%	38,7%
Sagunto LNG terminal		81,6%	18,4%
Cartagena LNG terminal		47,2%	52,8%
Huelva LNG terminal		71,0%	29,0%
Mugardos LNG terminal		65,1%	34,9%
Bilbao LNG terminal		85,9%	14,1%
<i>TOTAL LNG TERMINALS</i>		66,6%	33,4%
Maghreb pipeline (import)		100,0%	0,0%
Larrau (import F=>E)		98,2%	1,8%
Irún-Biriatou	Import (F=>E)	0,0%	100,0%
	Export (E=F)	0,0%	100,0%
Tuy	Import (P=>E)	0,1%	99,9%
	Export (E=>P)	0,0%	100,0%
Badajoz	Import (P=>E)	18,5%	81,5%
	Export (E=>P)	9,5%	90,5%

Table 23. Interconnection physical capacities at 31 Dec 2009. Source: ENAGAS

#### iv. Gas import share

Finally, the following chart shows the share of gas imports per company:

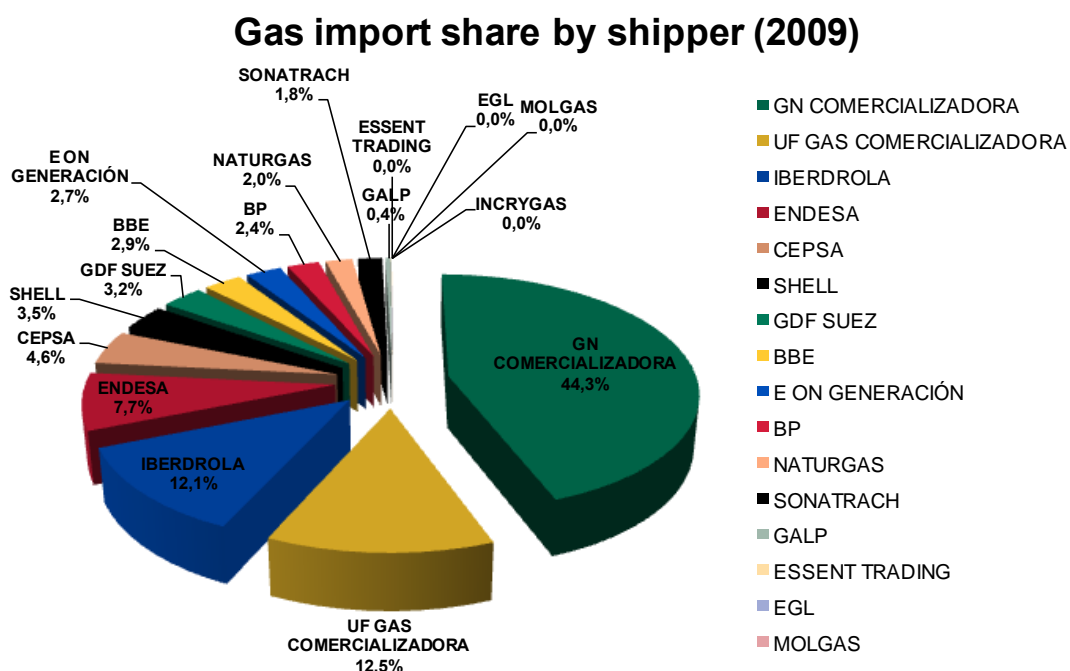


Figure 18. Share of gas imports in the Spanish market in 2009

### Evolution of gas import prices

Since there is no organised gas hub at present to provide a price reference for gas in Spain, CNE has developed an index for natural gas border prices, out of gas imports data which are available in the Web of the Office of Economics and Export Control (AEAT).

The following graph shows the evolution of natural gas prices at the border according to this index, from January 2002 to December 2009, including LNG and natural gas introduced to Spain through pipelines from Maghreb and France:

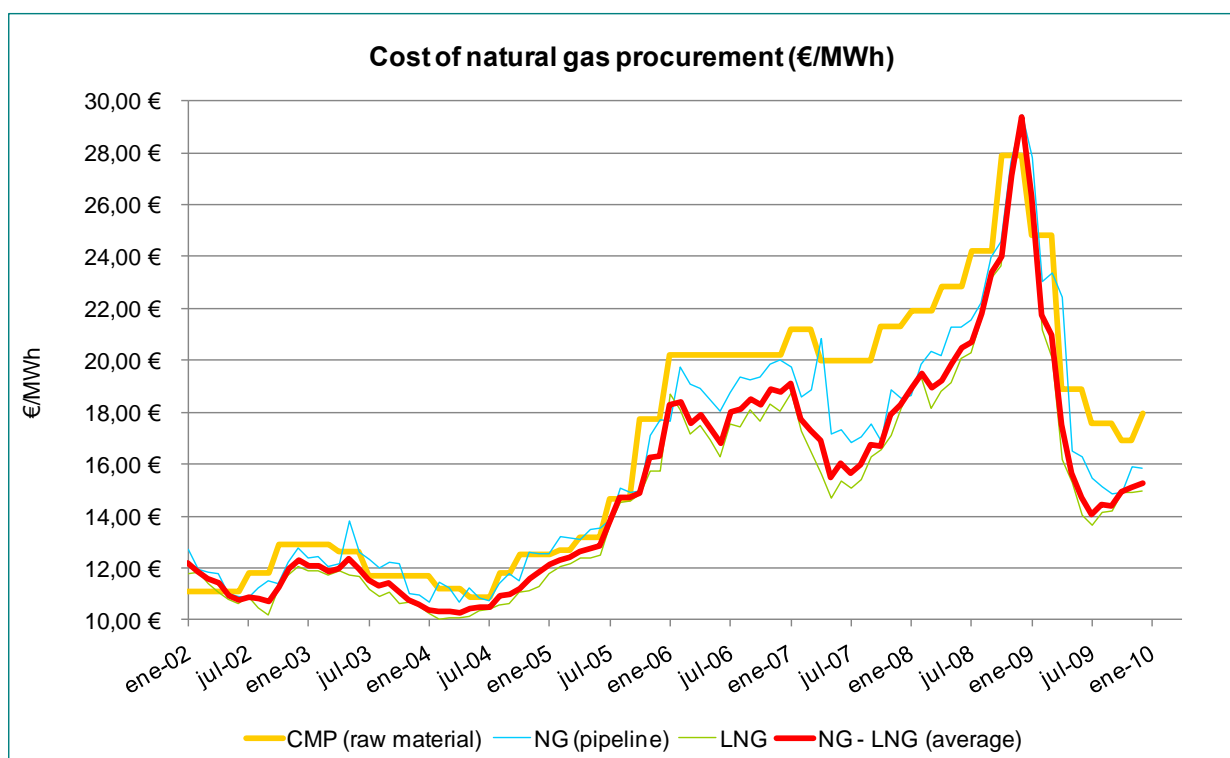


Figure 19. Evolution of natural gas border prices in Spain (€/MWh), 2002-2009.

As shown in the figure above, prices reached their peak values in 2008, when prices rose sharply up to 29,37 €/MWh in December 2008. However, prices dropped a 52% from December 2008 to July 2009, with a subsequent low increase of 8,7% in December 2009.

The table below shows the monthly evolution of these prices in 2009 (in €/MWh):

(€/MWh)	Natural gas (pipeline)	LNG	Average import price
Jan 2009	27,83	25,84	26,29
Feb 2009	23,03	21,18	21,76
Mar 2009	23,39	20,08	20,98
Apr 2009	22,44	16,15	17,54
May 2009	16,50	15,29	15,67
Jun 2009	16,26	14,02	14,73
Jul 2009	15,47	13,64	14,03
Aug 2009	15,12	14,14	14,43
Sep 2009	14,83	14,18	14,38
Oct 2009	14,93	14,91	14,91
Nov 2009	15,87	14,89	15,12
Dec 2009	15,82	14,98	15,25

Table 24. Natural gas border prices in Spain, 2009

### Spanish OTC gas market (MS-ATR Platform)

Most of gas traded in the Spanish market is negotiated in bilateral OTC transactions, over an electronic trading platform operation developed by ENAGAS, called “MS-ATR”. There are nearly 30 active marketers in this platform.

At the moment, gas is actively traded in Spain across eight balancing points: the six LNG terminals; the virtual balancing point (so called AOC - *Almacenamiento para la Operación Commercial - Storage for Commercial Operation*) and the virtual storage point comprising the two Spanish underground storage sites in operation (Serrablo and Gaviota).

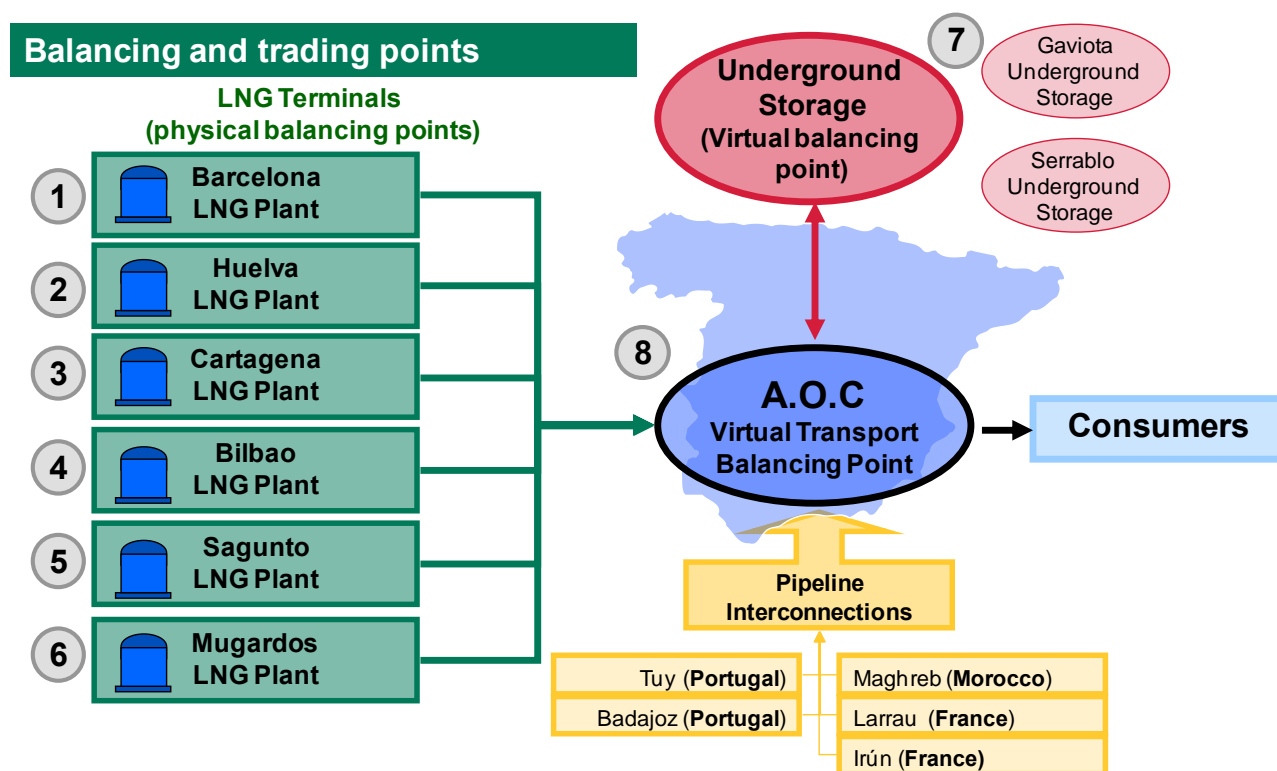


Figure 20. Balancing and trading points



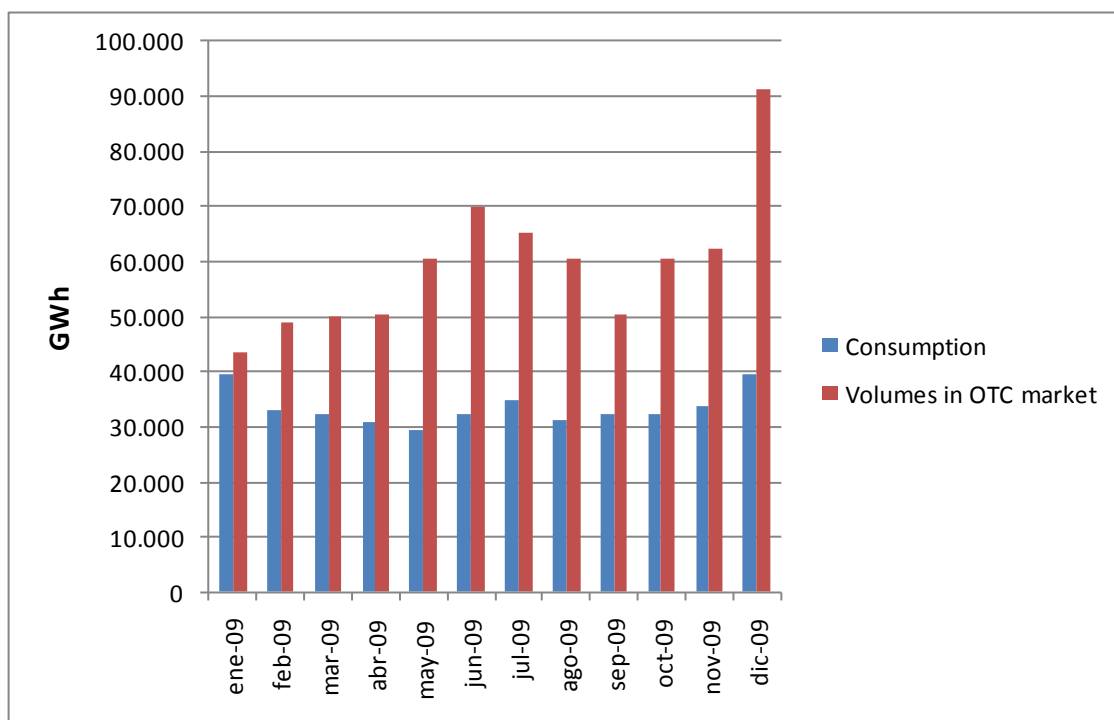


Figure 21. Spanish OTC gas market vs. consumption (GWh/month)

Liquidity lies almost completely on the LNG terminals, which accounted for 95% of all OTC trade in 2009. Huelva LNG terminal was the main trading point with 33% of gas trade. The AOC, which could look like an attractive virtual trading point, only drew 4,5% of OTC trade.

Balancing point	Traded gas 2009 (TWh)	Production (TWh)	Churn rate	Number of active traders	Market share of 3 main traders
Huelva LNG Terminal	233.152	60.005	3,9	14	46%
Barcelona LNG Terminal	159.471	72.278	2,2	15	55%
Bilbao LNG Terminal	140.619	49.303	2,9	12	72%
Sagunto LNG Terminal	61.339	65.284	0,9	4	100%
Cartagena LNG Terminal	38.331	44.477	0,9	12	73%
Mugardos LNG Terminal	43.718	16.189	2,7	4	100%
<b>Total LNG</b>	<b>676.630</b>	<b>307.536</b>	<b>2,2</b>	<b>19</b>	<b>44%</b>
Underground storage	5.379			15	80%
Transmission balancing point (AOC)	32.300	94.319	0,3	22	49%
<b>Total Spain</b>	<b>714.309</b>	<b>401.855</b>	<b>1,8</b>	<b>29</b>	<b>41%</b>

Figure 22. Main features - OTC

Transactions in the Spanish OTC market in 2009 represented globally 714,3 TWh. Next figures show the monthly evolution of gas traded and of the number of transactions – more than 19.400 – registered in the Spanish OTC market in 2009.

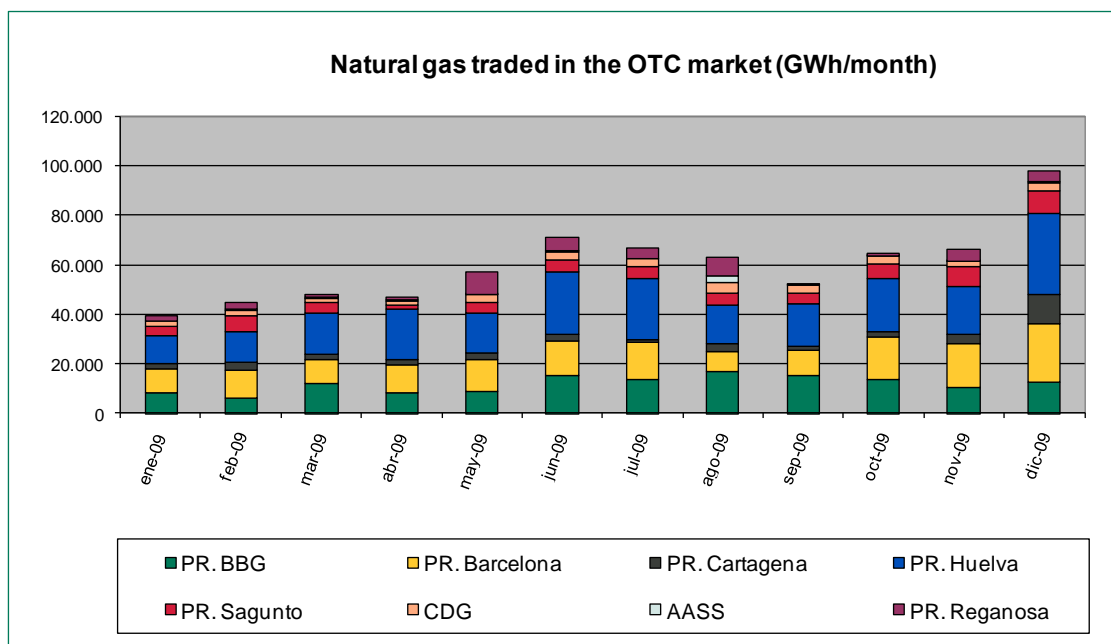


Figure 23. Gas traded (GWh/month)

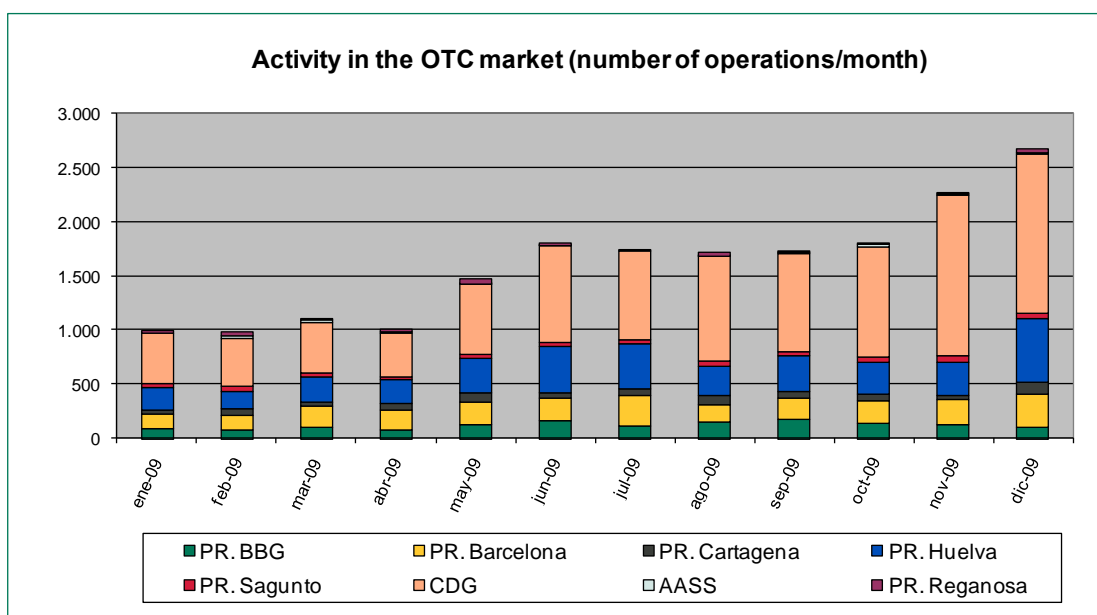


Figure 24. Gas transactions (nº Transactions/month)

The figure below shows the market sharing-out in the OTC gas market for 2009, in terms of purchased energy. The highest shares belong to Endesa Energía and Gas Natural Comercializadora, both with 15%.

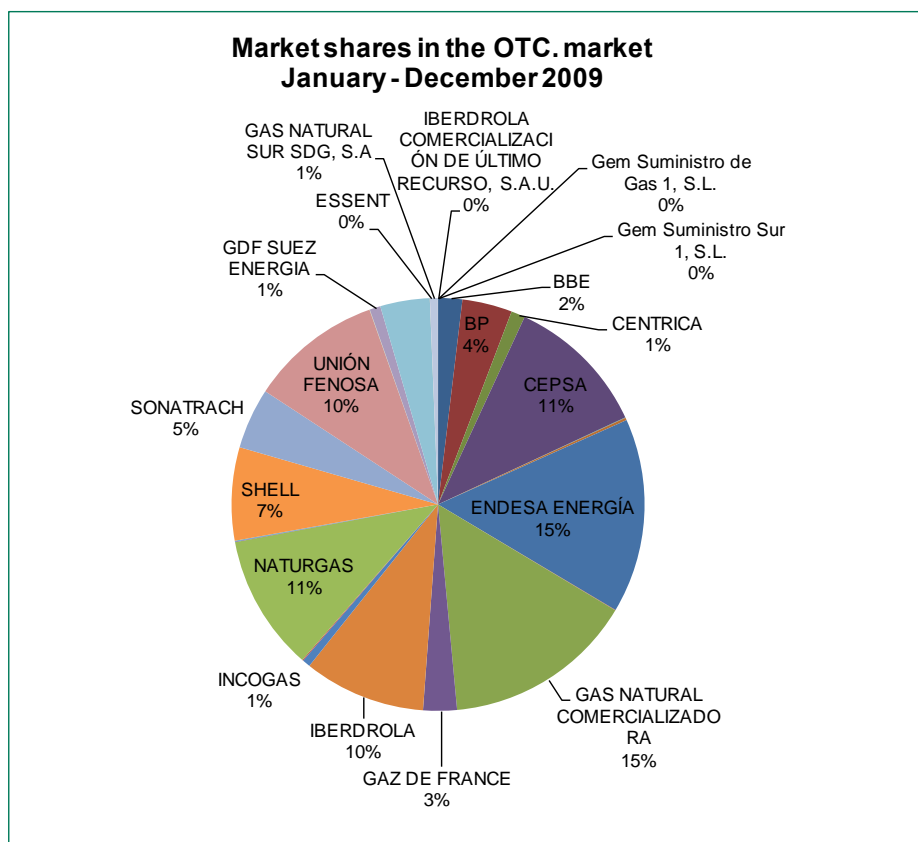


Figure 25. Market share (purchases) in the OTC market in 2009

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.

Related to the management and operation in the wholesale market, and to transparency in information, market players must provide their annual, quarterly, monthly and daily forecasts to ENAGAS about the operations they plan to execute. Daily nominations for inputs and monthly ones for unloading of LNG cargoes are contractually binding. ENAGAS must publish in its web page monthly information on unloading of ships, gas to be unloaded and free unloading slots. Demand and operational information is also available, together with capacity.

### Market-based mechanisms (gas and capacity forward contracting auctions)

#### Auctions to buy operational gas for TSOs and LSOs

According to the Ministerial Order ITC/3802/2008, of 26 December, which establishes the access tariffs associated with TPA to gas facilities for the year 2009, and the subsequent

Ministerial Orders that update them every year (ITC/3520/2009 for 2010), transmission 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 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 CNE is the supervisory body for these auctions and the Operador del Mercado Ibérico de Energía, Polo Español, S.A. (OMEL)<sup>14</sup> is the institution responsible for organising them.

The Resolution of the General Directorate of Energy Policy and Mines of 30 April 2009, established the operative rules of the third auction for the purchase of gas needs covering the period from the 1 July 2009 to the 30 June 2010. The Resolution of the General Directorate of Energy Policy and Mines of 20 May 2009, defined the parameters of the auction.

These auctions are based on a mechanism of multi-round descending clock price, as established in Resolution of the General Secretariat for Energy of 19 May 2008. The third auction took place on 28 May 2009. The fourth auction took place on 25 May 2010.

3 <sup>rd</sup> Auction for the acquisition of natural gas necessary for own consumption (operating gas) and for the minimum filling level of the gas pipelines (linepack) of the transport network and regasification plants (LNG stock)	
Type	Multi-round descending-price, electronic mechanism
Date	28 May 2009
Auctioned amount	20 Blocks / 100%
Matched amount:	20 Blocks / 100%
Number of total rounds	13
Supply period	1 July 2009 - 30 June 2010
Equilibrium price	14.65 €/MWh
Number of winners	2

*Table 33. Auctions for operating and minimum filling level gas: results of the auction held in 2009*

<sup>14</sup> Through its subsidiary OMEL Diversificación S.A.U. from 2009.

### Auctions to allocate Underground storage capacity

The Ministerial Order ITC/3862/2007 of 28 December established a yearly mechanism for the allocation of underground storage capacity for natural gas to their users for each annual period from the 1 April of the current year to the 31 March of the following one. This procedure directly allocates capacity to the users of underground storage according to their needs, in proportion to their supplies in the previous year, and introduces a market-based procedure for the allocation of the remaining capacity, consisting of an auction mechanism. The CNE is the supervisory body for these auctions and the Operador del Mercado Ibérico de Energía, Polo Español, S.A. (OMEL)<sup>15</sup> is the institution responsible for organising them.

The Resolution of the General Secretariat for Energy of 14 March 2008<sup>16</sup>, specifies certain aspects related to the management of underground storage in the basic network and establishes the rules for the auction of their capacity. Three auctions for the allocation of capacity for underground natural gas storage have been held so far.

The Resolution of the General Directorate of Energy Policy and Mines of 9 March 2009 established the following key information for the second auction covering the period from the 1 April 2009 to the 31 March 2010: auction date, estimated auctioned capacity, auction rules, information and documentation of the System Operator, contract form, and the payment of the management costs. The Resolution of 18 March 2009 of the General Directorate of Energy Policy and Mines determines the following key parameters for the second auction: auctioned volume, price of the first round, price determination of subsequent rounds, and information about the demand excess per round.

The second auction was held on 30 March 2009, for the assignment of the underground storage capacity for the period between 1 April 2009 and 31 March 2010. The third auction took place on 25 March 2010, for the assignment of the underground storage capacity for the period between 1 April 2010 and 31 March 2011. A multiple-round rising price (“ascending clock”) auction procedure was used in both auctions.

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<sup>15</sup> Through its subsidiary OMEL Diversificación S.A.U. from 2009.

<sup>16</sup> This resolution is modified by Resolution of 1 March 2010, of the State Secretariat of Energy.

	2 <sup>nd</sup> Auction for the allocation of underground storage capacity of natural gas
Type	Multi-round ascending-price, electronic mechanism
Date	30 March 2009
Auctioned capacity (GWh)	4 257
Allocated capacity (GWh)	4 257
Supply period	1 April 2009 - 31 March 2010
End price of 1 <sup>st</sup> round	250 €/GWh
Number of rounds	22
Equilibrium price	1 767 €/GWh

Table 25. Auctions for underground storage of natural gas: results of auctions in 2009

#### Auctions of gas purchase for the fixation of the last resort rate:

The Ministerial Order ITC/863/2009, approved on 2 April 2009, regulates 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). The Resolutions of 4 May, 19 May and 9 June 2009 established respectively the products and volumes to be auctioned, the operating rules and the required parameters for the auction covering the period between the 1 July 2009 and the 30 June 2010<sup>17</sup>.

The products subject to auction were: (i) the base-load gas at a pre-established monthly amount for the period 1 July 2009 - 30 June 2010; and (ii) the winter gas for pre-established monthly amounts for the period November 2009 - March 2010.

In accordance with the referred resolutions, the first reference auction for establishing the last resort rate for natural gas, for the period 1 July 2009 - 30 June 2010, was held on 16 June 2009. A multiple-round descending-clock price mechanism was used for the auction, and its results were as follows:

<sup>17</sup> Whereas the first two Resolutions were issued by the State Secretariat of Energy, the third one was issued by the General Directorate of Energy Policy and Mines.

	1 <sup>st</sup> Auction for the acquisition of natural gas for the last resort rate
Type	Multi-round descending-price, electronic mechanism
Date	16 June 2009
Number of rounds	13
Number of winners	6
Base load gas	Auctioned amount: 100 blocks Matched amount: 100 blocks (3 600 GWh, split in 300 GWh/month)
Winter gas	Auctioned amount: 100 blocks Matched amount: 100 blocks (2 750 GWh, split in 200 GWh in November, 750 GWh from Dec. to Feb., and 300 GWh in March)
Supply period	1 July 2009 - 30 June 2010
Equilibrium price for base load gas	16.18 €/MWh
Equilibrium price for winter gas	19.77 €/MWh

Table 26. Auction for natural gas devoted to last resort supply: results of the auction held in 2009

The second reference auction for establishing the last resort rate for natural gas, for the period 1 July 2010 - 30 June 2011, was held on 16 June 2010.

## 4.2.2 Description of the retail market

Natural gas consumption in 2009 in Spain reached 402,5 TWh, 10,6 % lower than in 2008. The number of customers in 2009 surpassed 7 millions, with 123.575 new customers.

### 4.2.2.1 Market opening

All Spanish customers (including household) have been free to choose supplier since 1 January 2003. The liberalization calendar was set by regulation, gradually lowering the consumption threshold to become eligible customer: from 3 GWh/year in August 2000, to 1 GWh/year in January 2002, and fully aperture since 1 January 2003.

In 2008 the progressive removal of regulated tariffs for end-users, which had started in the previous years, was finally completed with the full disappearance of all regulated tariffs and the introduction of the Last Resort Tariff (in Spanish, *Tarifa de Último Recurso* or

TUR) as the only end-user tariff with prices fixed by the administration<sup>18</sup>. As of July 2008, only those consumers connected to a network at a pressure under 4 bar, and consuming less than 3 GWh/year, had the right to be submitted to this tariff. In July 2009, this maximum consumption threshold was reduced to 50.000 kWh/year.

The figures below show the evolution of the share of consumption and consumers between the regulated and the liberalized markets since the beginning of liberalization:

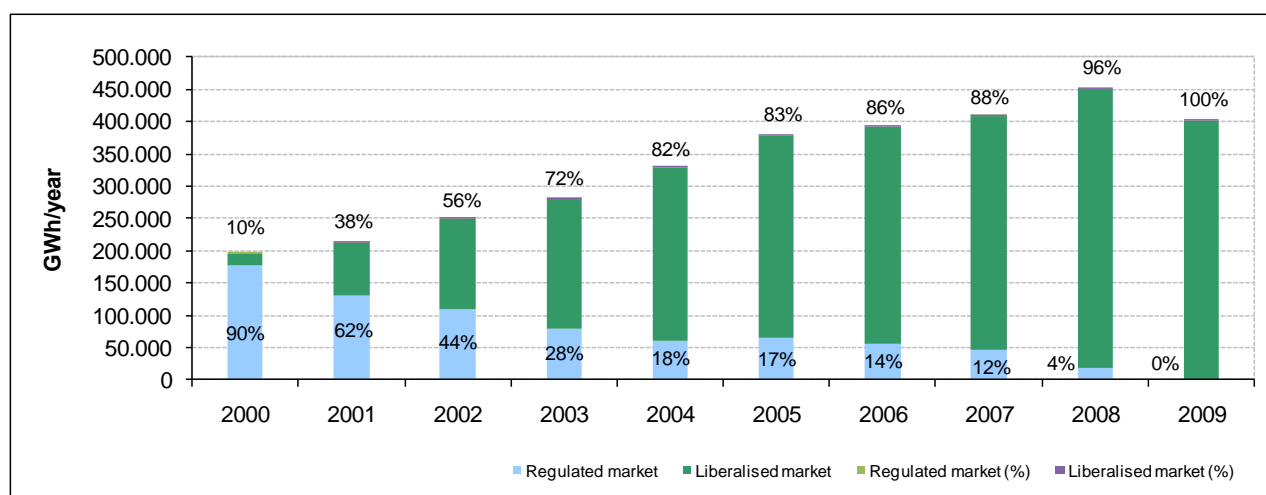


Figure 26. Evolution of market opening in terms of energy

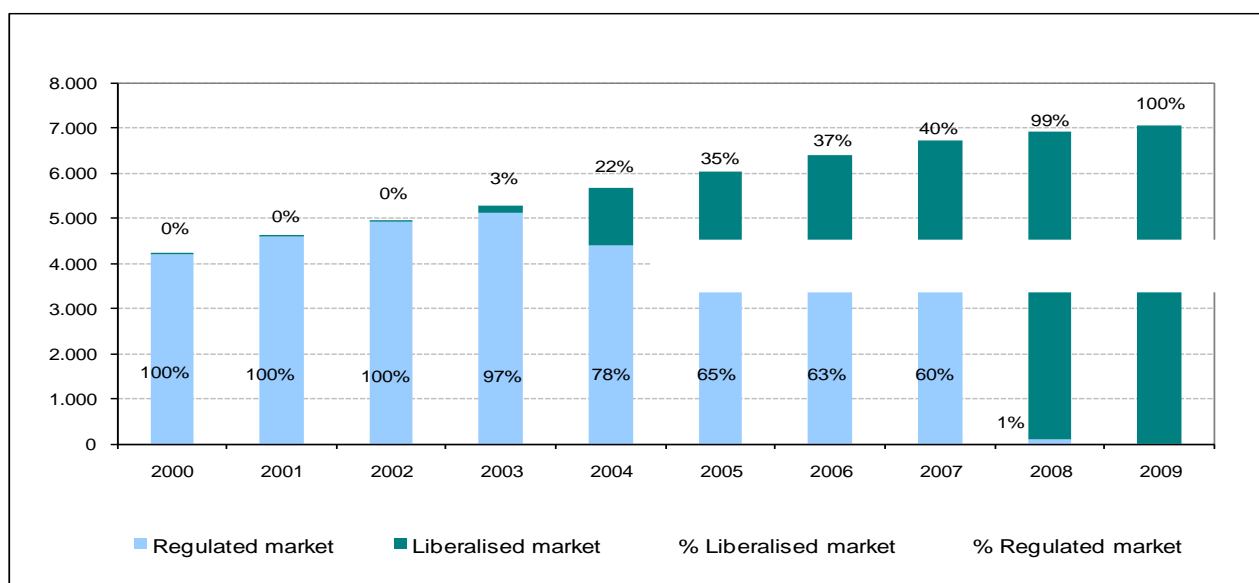


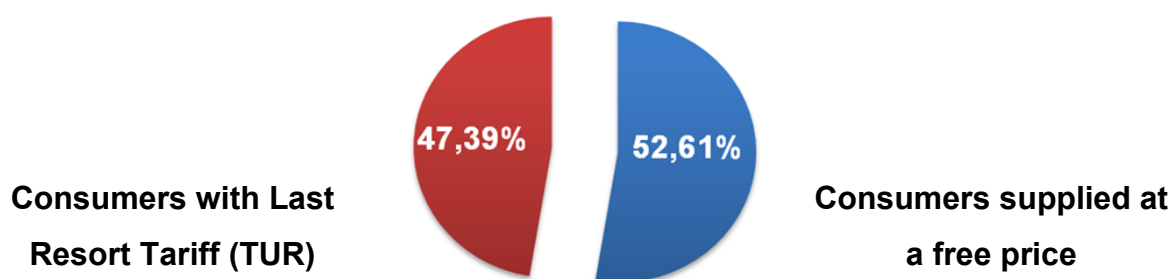
Figure 27. Evolution of market opening in terms of number of consumers

<sup>18</sup> See chapter 6.2 for a more detailed description of the Last Resort Tariff (TUR).



At the end of 2009, all consumers were supplied at liberalized tariffs. The last to join the liberalized market were the 90.000 consumers from the Balearic Islands, where the market was still regulated and a mixture of propane-air was distributed through the network before the arrival of natural gas. This situation ended in September 2009 with the entry into operation of the new pipeline Denia-Ibiza-Mallorca, connecting the islands to the mainland.

In 31 December 2009, 6.984.926 of the 7.054.125 consumers of the market (99%) had the right to be supplied at the TUR. 3.343.500 of them (47,4% of the market) were supplied at the TUR, while the number of consumers supplied at a free non-regulated price was 3.711.500 (52,6% of all consumers).



*Figure 28. Consumers at the Last Resort Tariff vs consumers at free price*

There are at present five suppliers designated as suppliers of last resort, which supply all consumers submitted to the TUR.

#### **4.2.2.2 Retail market structure**

The total number of gas consumers in December 2009 was 7.054.348 (+123.575 consumers with regard to December 2008), and the gas demand was 402,5 TWh (-10,6 % compared to 2008).

The figure below shows the share of supplies in the Spanish market in 2009 by company, in terms of energy volume:

### Supply share per retailer, energy (2009)

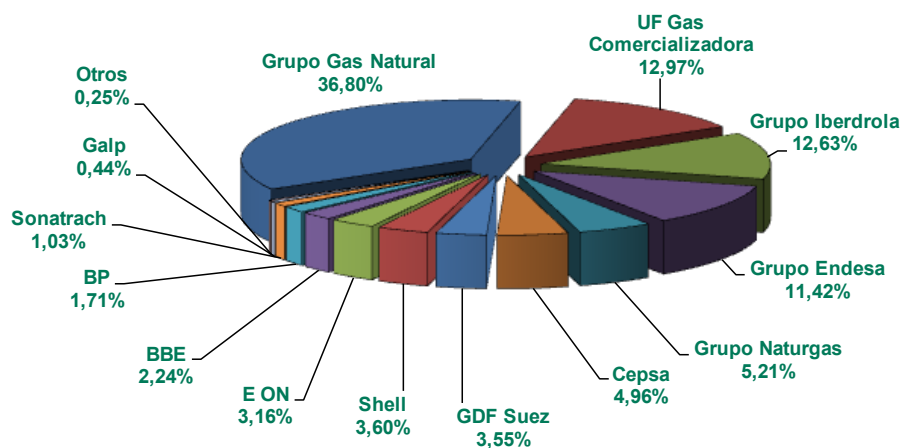


Figure 29. Share of natural gas supplies by company (in energy volume)

In terms of number of customers, the sharing-out of supplies at 31 December 2009 was:

### Share per company, number of customers (31-Dec-2009)

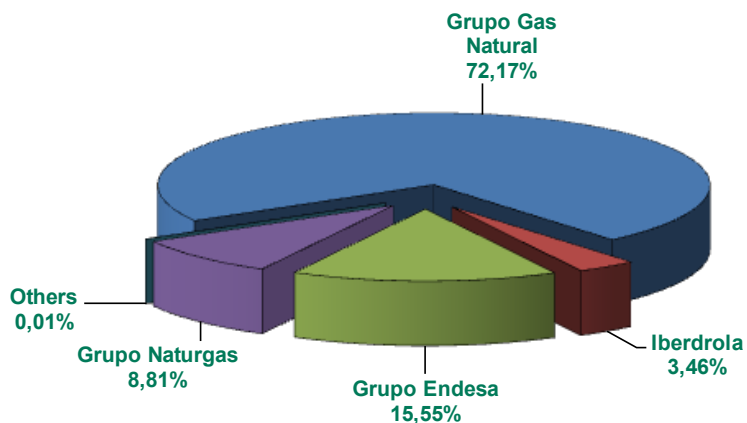


Figure 30. Share of natural gas supplies by company (in number of customers)

The sharing-out of natural gas consumption by end-use sectors in 2009 was as follows:

- Household-commercial: 13,8%
- Electricity generation (CCGTs and gas-fired power plants): 40,1%
- Industrial: 44,9%
- Non-energetic use (natural gas as raw material): 1,2%

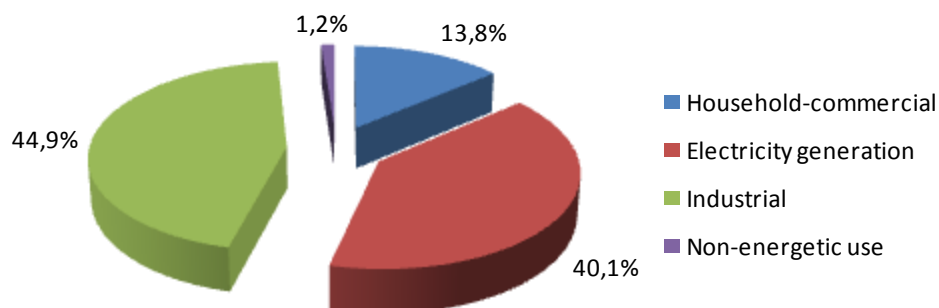


Figure 31. Consumption of natural gas by sectors (2009). Source: Sedigas

The evolution of this segmentation over time shows a very remarkable increase in the share of gas dedicated to electricity generation, reaching a percentage of nearly 40% in the last years:

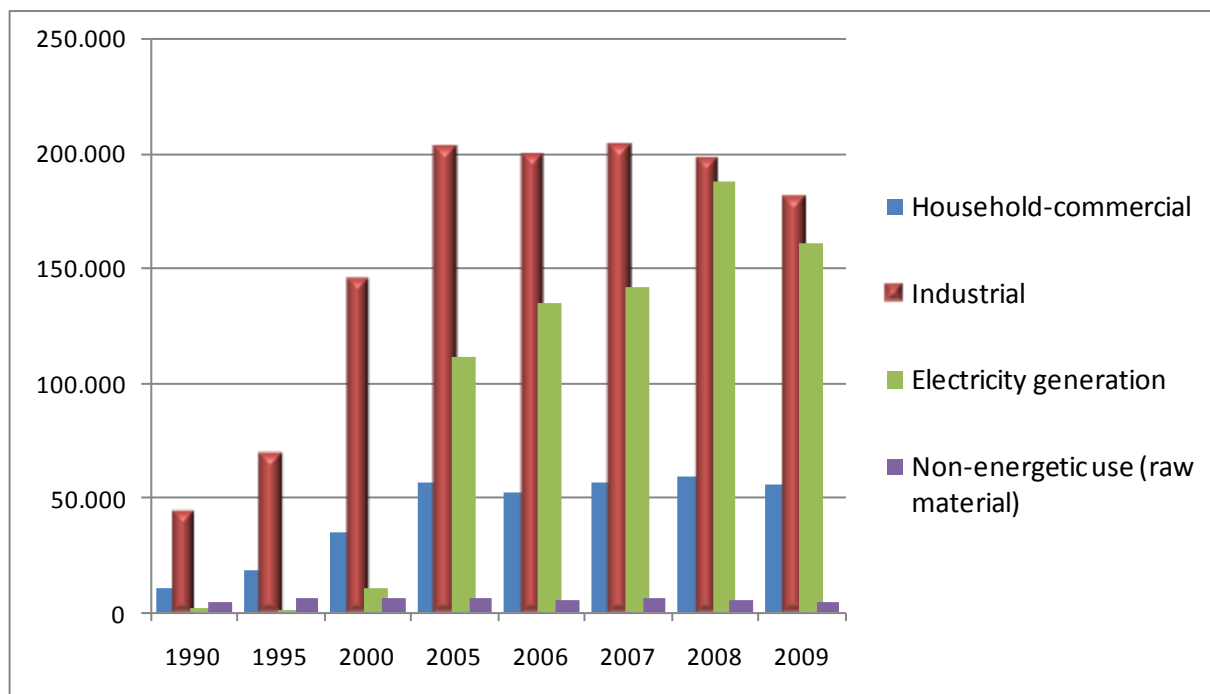


Figure 32. Natural gas sales in Spain (GWh). Source: Sedigas

The following table shows the sharing-out of 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:

Consumption groups (Pressure range and annual consumption)	MWh	Number of Consumers (31 Dec 2009)
<b>Group 1 ( Pressure &gt;60 bar)</b>		
1.1: Consumption <= 200 GWh/year.	1.553.119	18
1.2: Consumption > 200 GWh/year <= 1.000 GWh/year.	16.332.142	37
1.3: Consumption > 1.000 de GWh/year.	161.465.154	54
<b>TOTAL Group 1</b>	<b>179.350.415</b>	<b>109</b>
<b>Group 2 ( Pressure &gt;4 bar and &lt;= 60 bar)</b>		
2.1: Consumption <= 500.000 KWh/year.	180.639	635
2.2: Consumption > 500.000 KWh/year <= 5 GWh/year.	2.595.860	1.383
2.3: Consumption > 5 GWh/year <= 30 GWh/year.	12.325.629	1.087
2.4: Consumption > 30 GWh/year <= 100 GWh/year.	21.821.871	476
2.5: Consumption > 100 GWh/year <= 500 GWh/year.	51.204.523	293
2.6: Consumption > 500 GWh/year.	43.766.362	37
<b>TOTAL Group 2</b>	<b>131.894.884</b>	<b>3.911</b>
<b>Group 2 BIS ( Pressure &lt;= 4 bar)</b>		
2.1 bis: Consumption <= 500.000 KWh/year.	24.542	138
2.2 bis: Consumption > 500.000 KWh/year <= 5 GWh/year.	780.771	496
2.3 bis: Consumption > 5 GWh/year <= 30 GWh/year.	1.348.458	173
2.4 bis: Consumption > 30 GWh/year <= 100 GWh/year.	694.949	19
2.5 bis: Consumption > 100 GWh/year <= 500 GWh/year.	411.645	1
2.6 bis: Consumption > 500 GWh/year.	0	0
<b>TOTAL Group 2 BIS</b>	<b>3.260.365</b>	<b>827</b>
<b>Group 3 ( Pressure &lt;=4 bar )</b>		
3.1: Consumption <= 5.000 kWh/year	8.496.795	3.498.729
3.2: Consumption > 5.000 kWh/year <= 50.000 kWh/year.	30.356.391	3.486.299
3.3: Consumption > 50.000 kWh/year <= 100.000 kWh/year.	1.222.118	21.752
3.4: Consumption > 100.000 kWh/year hasta 1 GWh.	18.135.168	42.108
3.5: Consumption > 8 GWh/year.(night consumption)	2.066.897	215
<b>TOTAL Group 3</b>	<b>60.277.370</b>	<b>7.049.103</b>
<b>Group 4 ( Interruptible )</b>		
<b>(Pressure &gt; 60 bar)</b>		
4.1.Consumption <= 200 GWh/year.	0	0
4.2.Consumption ia 200 GWh/year.<= 1000 GWh/year.	106.501	0
4.3:Consumption > 1000 GWh/year.	9.956.716	7
<b>(Pressure &gt;4 bar and &lt;= 60 bar)</b>		
4.4.Consumption <= 30 GWh/year.	8.234	0
4.5.Consumption > 30 GWh/year <= 100 GWh/year.	8.515	0
4.6:Consumption > 100 GWh/year <= 500 GWh/year.	784.793	2
4.7: Consumption > 500 GWh/year.	2.558.842	2
<b>TOTAL Group 4</b>	<b>13.423.601</b>	<b>11</b>
<b>Non-energetic use (raw material)</b>	<b>4.874.714</b>	<b>2</b>
<b>LNG satellite plant for a single consumer</b>	<b>9.462.833</b>	<b>385</b>
<b>TOTAL GENERAL</b>	<b>402.544.181</b>	<b>7.054.348</b>

Table 27. Natural gas consumption and number of consumers – 2009

#### 4.2.2.3 Evolution of market shares and switching of gas clients

At the end of 2009 there were nearly 40 companies registered as retailers in the Spanish gas market. At this time, new entrants had already got more than 60% of market share in terms of energy, which reveals a fair level of competition in the Spanish gas market.

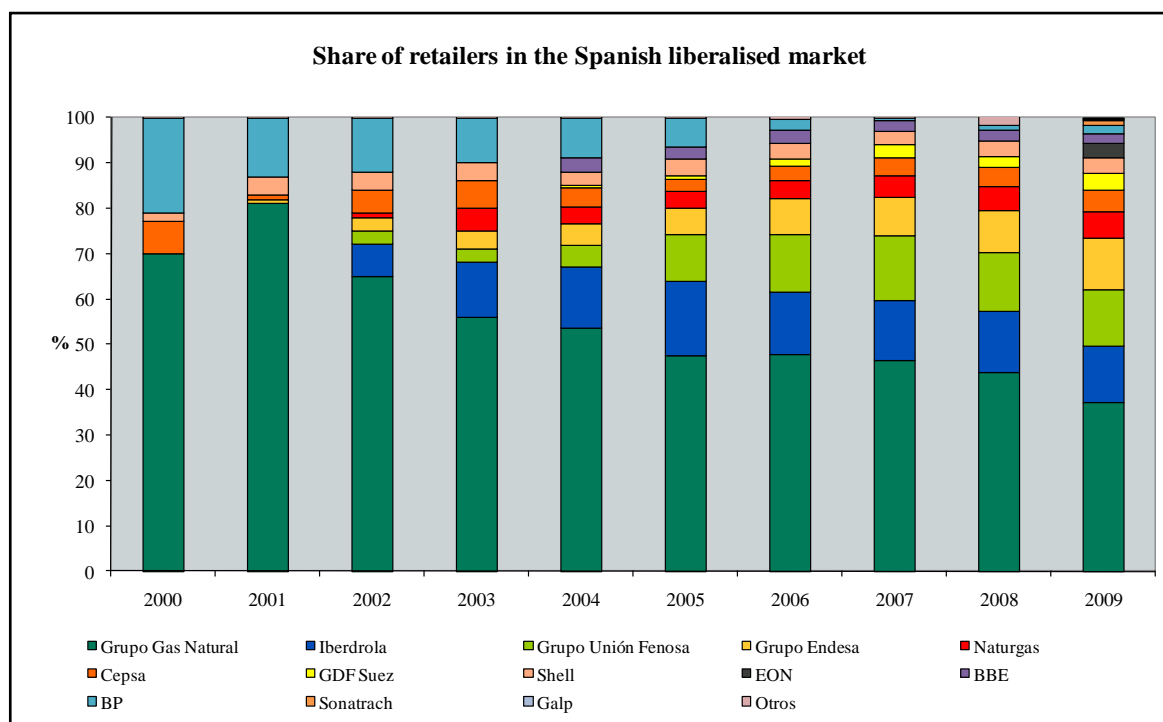


Figure 33. Spanish retail gas market. Sharing-out in terms of energy<sup>19</sup>

The procedure for customer switching is regulated under Royal Decree 1434/2002 of 27 December. In order to make it easier, a Switching Office, called the Office for Switching Supplier (*Oficina de Cambio de Suministrador*, or OCSUM), has been set up. The OCSUM is a body, under company law, created following the provisions contained in Laws 12/2007 y 17/2007, responsible for the supervision of consumers' switching for both electricity and gas markets, according to the principles of transparency, objectivity and independence. Gas and electricity suppliers and retailers must participate in its capital. Finally, its structure and functions are established in the Royal Decree 1011/2009, of 19 of June.

The switching rate in 2009 was of 390.437 clients, as shown in the following figure:

<sup>19</sup> This chart does not take into account the concentration operation of GAS NATURAL and UNION FENOSA.

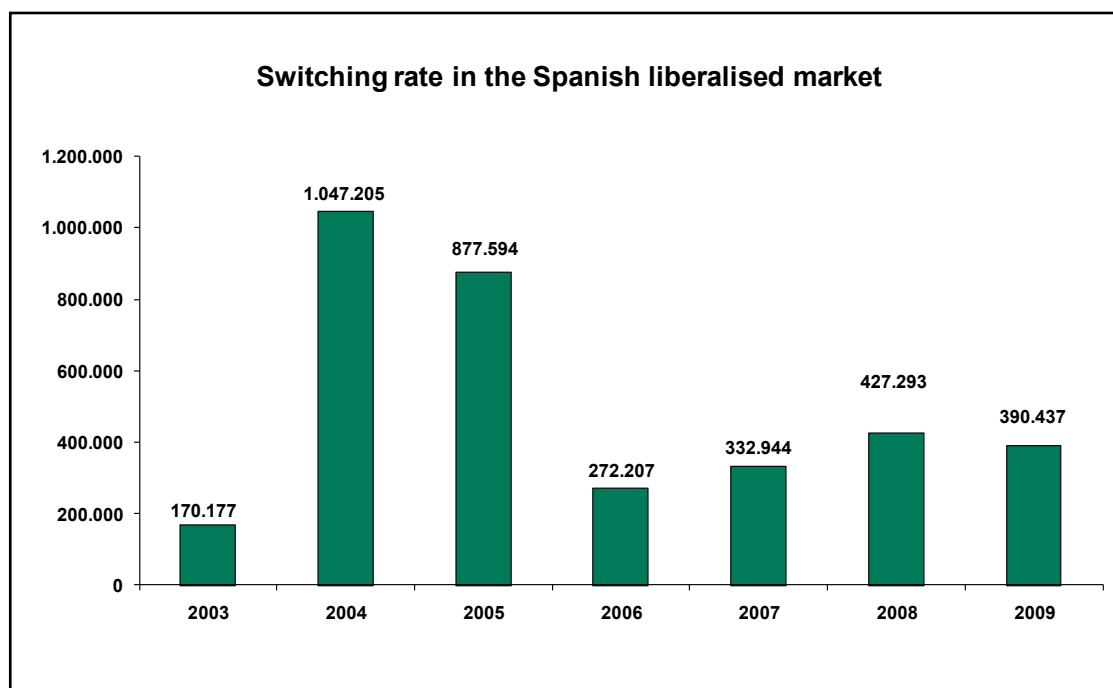


Figure 34. Annual switching rate (number of customers / year)

#### 4.2.2.4 Summary of Spanish market

##### Market share in trading and infrastructure activities

There are nearly 50 registered gas marketers in Spain. Gas Natural is the main marketer, but his share in the retail market has dropped from 90 % at the beginning of liberalization (2003) to less than 37% in 2009.

The table below shows the sharing-out in the different liberalised and regulated activities of groups and companies at the end of 2009. The first column is the share of available gas, based on gas imports to Spain. The second column shows the share of companies in the OTC market. The third column is the retail market share, based on sold volumes to final customers. The fourth one shows the distribution system share in the total Spanish Grid, in terms of number of consumption points. The fifth illustrates the transmission system share in the total Spanish Grid, in terms of number of km; and the last column reveals the share of LNG emission capacity, in terms of ownership (shareholding in LSO companies).

	GAS TRADING ACTIVITIES			GAS INFRASTRUCTURE ACTIVITIES		
	Share of available gas (imports)	Share of traded gas in the OTC market	Share in the retail market	Share of the Spanish distribution network (number of points)	Share of the Spanish transmission network (in km)	Share in emission capacity in LNG terminals (ownership)
GAS NATURAL FENOSA	44,3%	15,6%	36,8%	84,3%	8,7%	-
IBERDROLA	12,1%	9,5%	12,6%	-	0,0%	-
UNION FENOSA (UF GAS COMERCIALIZADORA)	12,5%	10,4%	13,0%	-	-	10,6%
ENDESA	7,7%	15,2%	11,4%	5,7%	8,4%	6,8%
NATURGAS	2,0%	10,7%	5,2%	10,0%	3,6%	-
CEPSA	4,6%	11,2%	5,0%	-	-	-
SHELL	3,5%	7,3%	3,6%	-	-	-
GDF SUEZ	3,2%	3,5%	3,6%	-	-	-
E.ON	2,7%	3,9%	3,2%	-	-	-
BBE-BBG	2,9%	1,9%	2,2%	-	-	-
BP	2,4%	3,9%	1,7%	-	-	-
SONATRACH	1,8%	4,8%	1,0%	-	-	1,7%
GALP	0,4%	0,0%	0,4%	-	-	-
ENAGAS	-	-	-	-	77,1%	54,2%
OTHERS	0,1%	2,2%	0,2%	0,0%	2,2%	26,8%
	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>

Table 28. Summary of Spanish gas market in 2009

Some of the figures in this table will change after all the operations and transactions issuing from the concentration operation between Gas Natural and Unión Fenosa, which are currently in progress, have been realised. The conditions imposed by the CNC Council to this merger oblige the new holding to sell complete gas distribution networks accounting 600.000 distribution points and sell a portfolio of 600.000 small gas clients.

### Retail Gas prices levels

The Prices in the table below resume the end consumer price in 2008 and 2009 according Eurostat data, including all taxes. The prices are the average between the prices of the first half of the year and the prices of the second half of the year.

The end prices of the household consumers decreased between 4,4% and 9,5% (D1 - 4,4%, D2 -6,6%, D3 -9,5%) and the end prices of the biggest industrial consumers decreased between 2,7% and 15,3% (I3 -2,7%, I4 -10,2%, I5 -9,9%, I6 15,3%) in 2009. On the contrary, the end prices of the lowest industrial consumer, I1 and I2, increased significantly (I1 +24,9% and I2 5,9%).

Reference consumers			End prices (c€/kWh)	
			2008	2009
Household end-users	D1	Consumption < 20 GJ	7,445	7,118
	D2	20 GJ < Consumption < 200 GJ	6,147	5,740
	D3	Consumption > 200 GJ	5,233	4,734
Industrial end-users	I1	Consumption < 1 000 GJ	4,130	5,157
	I2	1 000 GJ < Consumption < 10 000 GJ	3,704	3,921
	I3	10 000 GJ < Consumption < 100 000 GJ	3,485	3,392
	I4	100 000 GJ < Consumption < 1 000 000 GJ	3,256	2,923
	I5	1 000 000 GJ < Consumption < 4 000 000 GJ	2,973	2,679
	I6	Consumption > 4 000 000 GJ	2,883	2,441

Table 29. Final consumer price (cent€/kWh). 2008 and 2009

### Consumer complaints and inquiries

See section 3.2.2.

## 4.2.3 Measures to avoid abuses of dominance

Monitoring functions for CNE in this regards have been addressed in section 3.2.3. Furthermore, no relevant change happened in 2009.

### Recent mergers and acquisitions in the gas sector

The Spanish Competition Commission (CNC) approved the acquisition of UNION FENOSA by Gas Natural on February 11th 2009. The CNC agreed to this authorization conditionally to the fulfillment of certain commitments related to the assets sale proposed by Gas Natural. These commitments were detailed in an Action Plan approved by the CNC on March 17th 2009.

The commitments related to the gas market were the following ones:

- Sale of participations of Gas Natural in ENAGAS



On June 1<sup>st</sup>, OMAN OIL HOLDINGS SPAIN announced the signing of an agreement with Gas Natural to acquire its entire 5% interest in ENAGAS, Spain's leading natural gas transportation, regasification, and storage company.

OMAN OIL HOLDINGS SPAIN owns 10% of total CLH shares and 7, 5% of total SAGGAS shares (Regasification Plant of Sagunto). The CNC authorized the ENAGAS's shares sale on June 23<sup>rd</sup> 2009.

- Divestment of 600.000 gas distribution points in the areas where Gas Natural gas networks overlap with UNION FENOSA electricity networks.

The commitment included not only the staff but also the resources to guarantee a successful business management. The assets to be sold incorporate networks, installations, consumers' contracts and all kind of authorizations required to allow the buyer to run the business properly.

- Divestment of gas customers

Gas Natural committed:

- To reduce in 600.00 customers its presence in the gas retail market (domestic consumers and SME (Small and medium size enterprises)). The divestment should be in line with the divested distribution points.
- To supply gas to the buyer or buyers during at least 2 years under market conditions.
- Neither to be a shareholder, nor to participate in their business management in a direct or indirect way.

On December 31<sup>st</sup> 2009 Gas Natural signed an agreement with NATURGAS, belonging to the Portuguese group EDP, to sell its Cantabria and Murcia gas distribution networks, as well as the high pressure distribution networks in Cantabria, País Vasco and Asturias.

This sale affected 248.000 distribution points, 209.900 clients in the gas market and 4000 clients in the electricity market <sup>(20)</sup>.

MORGAN STANLEY purchased part of Gas Natural distribution network in Madrid. Gas Natural SDG, S.A., communicated that MORGAN STANLEY INFRASTRUCTURE & GALP ENERGIA SGPS had signed an asset purchase contract with them on December 19th 2009. MORGAN STANLEY acquired distribution assets located in 38 municipalities in the Madrid Community. On the other hand, GALP acquired from Gas Natural the customers associated to the distribution assets. These sales affected 504.000 distribution points, 412.000 clients in the gas market and 8.000 clients in the electricity market <sup>(20)</sup>.

The above sales implied the splitting and selling of certain societies of Gas Natural, as indicated below.

COMPANY	New Companies created in order to reach CNC requirements related to the merger approval.
<b>GAS NATURAL DISTRIBUCIÓN SDG, S.A.</b>	<b>GAS NATURAL DISTRIBUCIÓN SDG, S.A. MADRILEÑA RED DE GAS, S.A. (previously GEM DISTRIBUCIÓN GAS 1, S.A.) sold to MORGAN STANLEY GROUP</b>
<b>GAS NATURAL SERVICIOS SDG, S.A.</b>	<b>GAS NATURAL SERVICIOS SDG, S.A. GAS ENERGÍA SUMINISTRO, S.L. <sup>(21)</sup> (previously GEM SUMINISTRO 1, S.L.) sold to NATURGAS GROUP MADRILEÑA SUMINISTRO DE GAS 2010, S.L. (previously GEM SUMINISTRO 2, S.L.) sold to GALP GROUP</b>

<sup>20</sup> Source: CNE- (GAS department) “Gas Supply Monthly Report”

<b>GAS NATURAL SUR SDG, S.A</b>	<b>GAS NATURAL SUR SDG, S.A. GAS ENERGÍA SUMINISTRO SUR, S.L. <sup>(21)</sup> (previously GEM SUMINISTRO SUR 1, S.L.) sold to NATURGAS GROUP MADRILEÑA SUMINISTRO DE GAS SUR 2010, S.L. (previously GEM SUMINISTRO SUR 2, S.L.) sold to GALP GROUP</b>
<b>GAS MURCIA, S.A</b>	<b>GAS ENERGÍA DISTRIBUCIÓN MURCIA, S.A. sold to NATURGAS GROUP</b>
<b>GAS CANTABRIA, S.A.</b>	<b>GAS ENERGÍA DISTRIBUCIÓN CANTABRIA, S.A. sold to NATURGAS GROUP</b>

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<sup>21</sup> In 2010, the EDP/HC/NATURGAS GROUP restructured its supply business. As a consequence, some Companies were integrated in the Group, and some others finalized their activity. It is shown as follows:

- GAS ENERGÍA SUMINISTRO, S.L. was integrated in NATURGAS ENERGÍA COMERCIALIZADORA S.A.U.
- GAS ENERGÍA SUMINISTRO SUR, S.L. was merged with NATURGAS ENERGÍA COMERCIALIZADORA DE ÚLTIMO RECURSO S.A.U.
- GAS ENERGÍA SUMINISTRO, S.L and GAS ENERGÍA SUMINISTRO SUR, S.L. finalized their activity on May 31<sup>st</sup> 2010.

## 5 SECURITY OF SUPPLY

### 5.1 Electricity [Article 4 and 2005/89/EC Article 7]

#### Evolution of electricity demand

Power demand fell in 2009 by 4,6% related to 2008 values — the first annual negative rate ever in present record series (starting back to 1985), amounting up to short above 251 TWh. However, contraction significantly decelerated in three last quarters. Peak demand was recorded in January (44.440 MW), The evolution of overall annual growth of demand, from 2005 to 2009, is shown below:

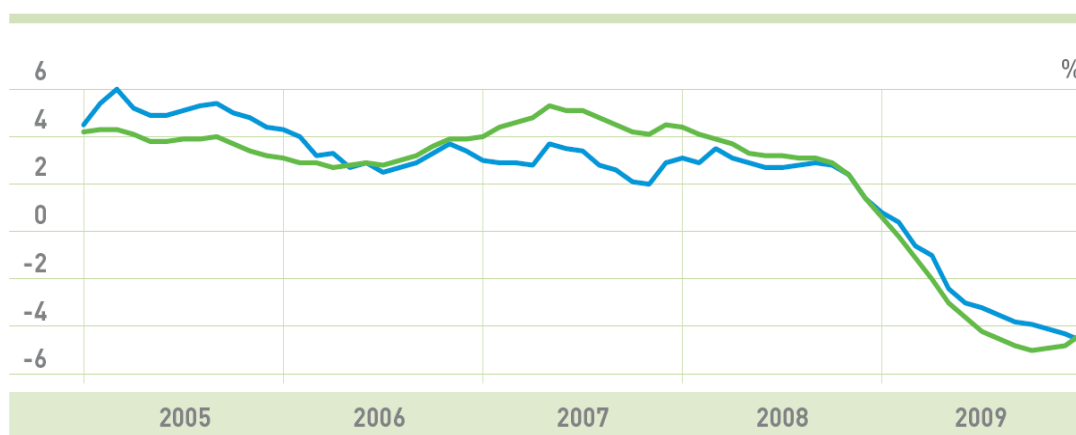


Figure 35. Rolling annual demand growth in % (blue: non-adjusted; green: labor-and-temperature adjusted)  
Source: REE

By end 2009, power capacity in mainland Spain stood at 93,215 MW — an annual 3% increase, due to wind farms, growing above 16%, and CCGTs, short above 2,5%. These data, combined with fall in demand and improvements in energy intensity, yield a comfortable reserve margin for still some years to come, even under conservative assumptions. As a result, a number old fuel oil and (open-cycle) gas-fired facilities have been decommissioned, and the CCGT-project pipeline experiences a generalized delay as regards commissioning deadlines,

#### Current generation fuel mix and expected developments

During 2009, mainland electrical generation derived from the following fuels/technologies, as per the percentages displayed in the chart:

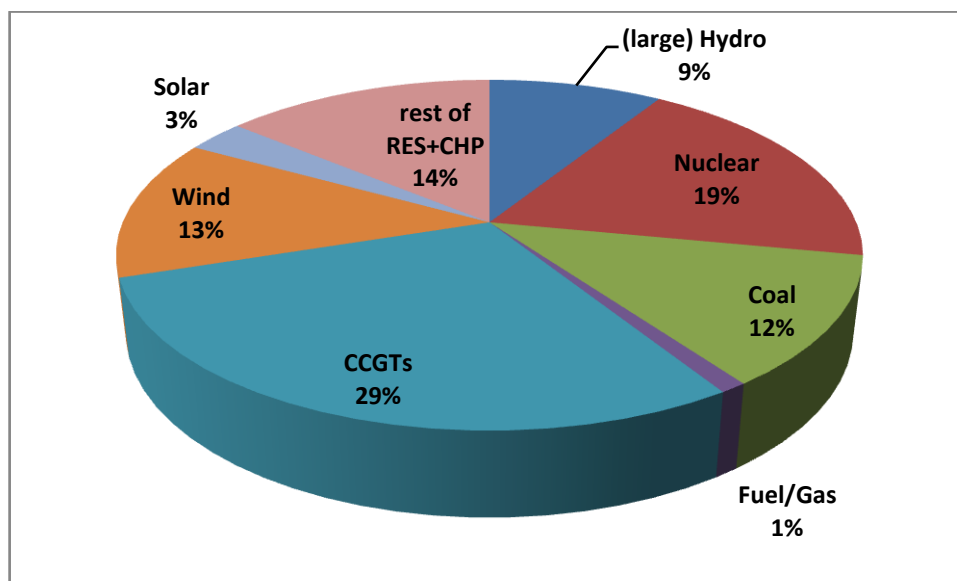


Figure 36. Generation mix (energy) in the mainland electrical system. Source: REE

A further increase in renewables' share is expected, especially wind and solar thermoelectric (concentrated solar power). CCGTs remains the only "ordinary regime" (non-renewable nor CHP) technology to grow, mainly at the expense of coal; their speed and efficiency makes them most complementary with steadily increasing RES.

## 5.2 Gas [Article 5 and 2004/67/EC Article 5]

### 5.2.1 Evolution of gas demand

Natural gas consumption in 2009 was 400.790 GWh, 10,6% lower than demand in 2008, and also significantly smaller than the initial forecast for that year. It is one of the largest decreases in Europe in a year in which the economic crisis has seriously affected gas and energy demand in general all over the world. This primary factor has eclipsed the effect of other drivers of consumption, such as climate conditions or the technologies competing with gas-fired combined cycles in power generation – coal and renewable energy sources. The fall in demand has been sharper in the first half of the year than in the second one, and more important in consumption for power generation (-14,2%) than in the conventional sectors, household-commercial and industrial (-8,0%).

The table below shows the evolution of gas demand in the Spanish market in 2009.

	2008 (GWh)	2009 (GWh)	Annual variation (%)
Demand of gas (except power generation)	261.921	241.062	-8,0
Demand of gas for power generation	187.468	160.793	-14,2
<b>Total demand in Spain</b>	<b>449.389</b>	<b>401.855</b>	<b>-10,6</b>

Table 30. Evolution of gas demand in 2009 vs 2008. Source: Enagas

The following table shows the evolution of gas procurement in the Spanish market, including imports through pipeline and through LNG.

	2008 (GWh)	2009 (GWh)	Annual variation (%)
Pipeline	127.321	106.462	-16,4
LNG	331.672	305.647	-7,8
<b>Total</b>	<b>458.993</b>	<b>412.109</b>	<b>-10,2</b>

Table 31. Gas imports in Spain. 2009 vs 2008. Source: Enagas

The most recent demand forecasts developed by the System Operator in Spain provide the following figures for 2010-2014:

	2010	2011	2012	2013	2014	Mean annual variation (%)
Conventional	257.224	258.949	267.976	277.301	286.853	2,8%
Power generation	147.023	149.250	156.882	161.478	166.944	3,2%
<b>Total demand</b>	<b>404.247</b>	<b>408.199</b>	<b>424.858</b>	<b>438.779</b>	<b>453.797</b>	<b>2,9%</b>

Table 32. Forecast of annual gas demand 2010-2014. Source: Enagas

The System Operator's forecasts for the 5-year period consist on a mean annual growth of 2,9%. For the present year 2010, Enagas foresees a stabilization of demand with regard to the actual value of 2009, with a very slight increase of 0,6%.

## 5.2.2 Procurement of gas supplies. Origin and mix of gas imports

The domestic production of Spanish fields is marginal and reaches only 1.715 GWh, 0,4% of Spanish gas demand in 2009. This production comes from three gas fields that are close to depletion and are thought to be used as underground storages in the future.

The rest of the gas consumed in Spain is imported. The figure below shows the mix of gas supplies to the Spanish system in 2009:

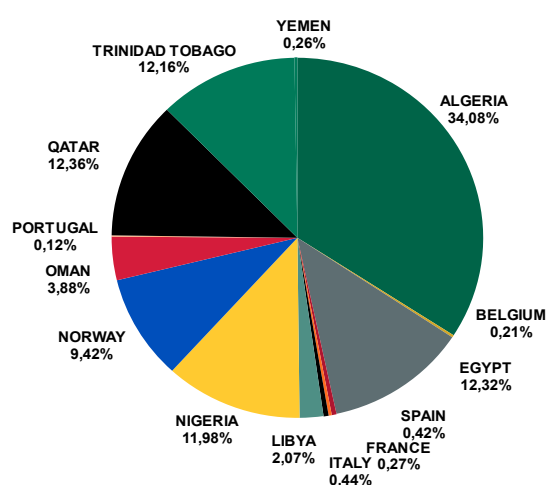


Figure 37. Sources of gas imported to Spain in 2009

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:

	2009 (GWh)	% of imported gas
Pipeline	106.462	25,8%
LNG	305.647	74,2%
<b>Total</b>	<b>412.109</b>	<b>100%</b>

Table 33. Gas imports in Spain. 2009 vs 2008. Source: Enagas

LNG high presence provides the Spanish system with a sound level of flexibility, favoring the access to new upstream gas sources and enabling gas suppliers to benefit from low-

price situations by arbitrating and interacting with other markets. Moreover, the geographic situation of Spain, with access to both Atlantic and Mediterranean basins, enlarges the scope of available LNG sources, allowing gas suppliers to import gas from virtually any LNG producing country. Finally, LNG also serves as a competition driver, enabling newcomers to access the wholesale market and introduce gas in the Spanish network via spot contracts. The high share of LNG in gas imports is a consequence of the remarkable development of LNG import capacity in Spain, as explained below.

### 5.2.3 Import capacity

Import capacity from pipeline interconnectors with neighboring countries is still a limited resource in the Spanish system. Spain is interconnected to Algeria through Morocco, to Portugal through Tuy and Badajoz, and to France through Larrau and Irún, and will soon have a new direct link with Algeria through the MEDGAZ pipeline.

Pipeline connection	Capacity (GWh/day)
Larrau (FR->ES)	100
Irún (ES->FR)	5 (Winter) / 4 (Summer) <sup>22</sup>
Irún (FR->ES)	0 (Winter) / 10 (Summer)
Tarifa (MO->ES)	355 (+ 89 transit to PT)
Badajoz (ES->PT)	134
Badajoz (PT->ES)	68-105 <sup>23</sup>
Tuy (ES->PT)	36
Tuy (PT->ES)	12

Table 34. Interconnection physical capacities at 31 Dec 2009. Source: ENAGAS

Exchange capacity is particularly scarce with Europe, for the interconnection with France is not very significant. French and Spanish TSOs, NRAs and Authorities are currently working to develop new infrastructure between both countries and inside the French system in order to increase this interconnection capacity in both flow directions (see chapter 4.1.1).

The limited available pipeline import capacity has motivated a spectacular development of LNG import capacities in recent years, with the following terminals in operation in the year

<sup>22</sup> Minimum capacity value determined by the entry capacity on the French side.

<sup>23</sup> Depending on the demand of CCGTs in Portugal and the underground storage of Carriço.



2009:

LNG Terminal	LNG storage capacity (m <sup>3</sup> )	Send-out capacity (m <sup>3</sup> (n)/h)
Barcelona	540.000	1.950.000
Huelva	460.000	1.350.000
Cartagena	437.000	1.350.000
Bilbao	300.000	800.000
Sagunto	450.000	1.000.000
Mugardos	300.000	413.000
<b>TOTAL</b>	<b>2.487.000</b>	<b>6.863.000</b>

*Table 35. Capacity of LNG terminals. Source: Gas LNG Europe (GLE)*

## 5.2.4 Gas infrastructure investments in 2009

Some capacity expansions in current infrastructure were accomplished and further new facilities were incorporated within the Spanish gas system in 2009, including both LNG terminals and new transmission pipelines.

In LNG infrastructure, the most relevant investments were made in Sagunto terminal, with a new 150.000 m<sup>3</sup> tank in operation since June 2009, and in Barcelona, where regasification capacity was extended from 1.650.000 Nm<sup>3</sup>/h to 1.950.000 Nm<sup>3</sup>/h through the entry into service of two new vaporizers.

Regarding the transmission network, there have been some remarkable accomplishments such as the connection between the Iberian Peninsula and the Balearic Islands with the entry into service of the pipeline Montesa-Denia and the underwater pipeline Denia-Ibiza-Mallorca. These new assets allow the gasification of the Balearic region, replacing the mix air-propane that had been supplied up to now by natural gas. Several internal pipelines have also been built in the island of Mallorca.

Also in 2009 started to operate some of the necessary pipelines for the future operation of the MEDGAZ interconnector: the pipeline Almería-Chinchilla and the connection of the transmission network with Lorca.

Besides these new pipelines, some expansions have been made in the Northern axis of

the transmission network – Lemona-Haro pipeline and Haro compression station – and in the interconnection capacity with France – Navarra compression station and phase II of Vergara-Irún second pipeline.

### **5.2.5 Forthcoming investments for the next three years**

In Spain, gas network investments are planned by means of a Gas System Planning procedure, which is responsibility of the Government and counts with the participation of the Autonomous Communities, the Technical System Operator, transmission and distribution system operators and other actors, as well as the CNE. Planning is indicative for all activities except the basic network gas pipelines, the global needs of regasification capacity and the hydrocarbons strategic reserve storage capacity, where the planning shall be on a mandatory and minimum enforceable basis.

The document deals, inter alia, with the following areas:

- Demand forecast for natural gas over the stipulated period (ten years).
- Forecast of the high pressure natural gas transportation network development and total LNG regasification capacity required to supply gas to the gas system, under a set of optimization criteria on a nation-wide basis.
- Definition of priority gasification areas, network expansion and execution stages, with the aim of assuring uniform development in the gas system.
- Forecasts relating to gas storage facilities and LNG terminals. It assures gas system stability and regular and continuous gas supplies.
- Environmental protection criteria are also established.

#### **5.2.5.1 LNG terminals**

The new projects for increasing entry capacity foreseen to be put in place over the next three years are specified below. All of them were established in the last available Planning document, for the period 2008-2016. It is worth mentioning that this document is currently subject to a revision procedure, which takes place every two years.

The table includes only those infrastructures whose construction is foreseen to be finished in the period 2010-2012. The foreseen date for each facility has been provided by the

sponsor/developer of the project.

Transmission System Operator	New infrastructures	Current state	Foreseen date
<b>2010</b>			
<b>ENAGAS</b>	<b>Barcelona LNG terminal</b>		
	Increase of reception capacity up to 250.000 m <sup>3</sup>	Under construction	31-Dec-2010
	7 <sup>th</sup> storage tank with 0,087 bcm capacity	Under construction	30-Nov-2010
	<b>Huelva LNG terminal</b>		
	Increase of reception capacity up to 250.000 m <sup>3</sup> /LNG	Under construction	31-Dec-2010
	5 <sup>th</sup> storage tank with 0,087 bcm capacity.	Under construction	30-Nov-2010
	<b>Cartagena LNG terminal</b>		
<b>SAGGAS</b>	5 <sup>th</sup> storage tank with 0,087 bcm capacity.	Under construction	30-Oct-2010
	<b>Sagunto LNG terminal</b>		
<b>SAGGAS</b>	Increase in emission capacity to 72 bar network up to a final capacity of 1.200.000 Nm <sup>3</sup> /h	Under construction	31-Dec-2010
<b>2011</b>			
<b>ENAGAS</b>	<b>Barcelona LNG terminal</b>		
	8 <sup>th</sup> storage tank with 0,087 bcm capacity	Under construction	30-Apr-2011
	<b>Huelva LNG terminal</b>		
	Increase in emission capacity up to 1.650.000 Nm <sup>3</sup> /h	Planned	Not available <sup>24</sup>
	6 <sup>th</sup> storage tank with 0,087 bcm capacity.	Planned	Not available <sup>24</sup>
	<b>Gijón (Musel) LNG terminal</b>		
	New LNG terminal	Under construction	31-Dec-2011
<b>2012</b>			
<b>SAGGAS</b>	<b>Sagunto LNG terminal</b>		
	Increase in emission capacity up to 1.400.000 Nm <sup>3</sup> /h	Planned	1-Sep-2012
	4 <sup>th</sup> storage tank with 0,087 bcm capacity.	Planned	31-Mar-2012
<b>BBG</b>	<b>Bilbao LNG terminal</b>		
	Increase in emission capacity up to 1.200.000 Nm <sup>3</sup> /h	Planned	11-Jul-2012
	3 <sup>rd</sup> storage tank with 0,087 bcm capacity	Planned	11-Jul-2012

Table 36. Planned LNG infrastructures for 2010-2012. Sources: Ministry of Industry, Tourism and Trade (Planning of Electricity and Gas 2008-2016) and CNE Infrastructures report (2<sup>nd</sup> half 2009)

### 5.2.5.2 Pipeline international interconnections

The already mentioned interconnector with Algeria MEDGAZ, initially foreseen to be in place before the end of 2009, is expected to come into operation before the end of 2010.

<sup>24</sup> This infrastructure is conditioned to the construction of other facilities.

This new pipeline will provide the Spanish system with an additional entry capacity of 8 bcm/year.

In the French-Spanish border, in the next three years new infrastructure is planned to start to be built in order to increase the interconnection capacity between both countries. This infrastructure development is discussed in the frame of the common project of Open Season, involving French and Spanish TSOs, NRAs and Ministries, and currently in progress. It aims at developing new capacities in the existing Western Axis (Larrau and Irún-Biriatou), as well as a new Eastern Axis (Midcat-Perthus). Where for Larrau it has already been planned that 5,5 bcm/year will be in place as of 2013, for the rest of points the precise capacity that will be built and offered to the market is still to be decided.

### 5.2.5.3 Transmission network

In the coming three years, the Spanish transmission network will continue to be developed and enlarged in order to maintain its reliability and its ability to serve the foreseen demand, taking into account that the demand forecasts have been reduced significantly since the last planning exercise 2008-2016, released when the economic downturn was still at an early stage. This fact may cause that the construction and entry into operation of a number of assets is finally reported with regard to the initially foreseen date.

The table below shows all the pipelines planned for the next three years, with indication of the best finalization date foreseen by the sponsor<sup>25</sup>:

PROJECT	SPONSOR	INITIALLY PLANNED FOR	BEST DATE FORESEEN BY SPONSOR
<b>Pipelines initially planned for 2010</b>			
Duplication Castelnou - Tivissa	Enagas	2010	30/10/2010
Baeza - Mancha Real	Endesa	2010	30/11/2012
Cártama - Nerja	Enagas	2010	---
Belmonte de Tajo - Arganda del Rey	Gas Natural Fenosa	2010	---
Belmonte de Tajo - Arganda del Rey	Naturgas	2010	01/01/2010
Villanueva del Arzobispo - Puente Génave	Naturgas	2010	01/01/2010

<sup>25</sup> Apart from these pipelines, other assets that had initially been planned for 2007-2010 are not yet in place and are expected to be built in the next years.

Villanueva del Arzobispo - Puente Génave	Endesa	2010	30/11/2012
Villanueva del Arzobispo - Puente Génave	Gas Natural Fenosa	2010	---
Almería - Adra	Enagas	2010	----
Planta de Bilbao - Treto	Naturgas	2010	01/10/2012
Vergara-Irún (duplication). Villabona-Irún	Naturgas	2010	01/07/2010
Duplicación Paterna - Tivissa	Enagas	2010	30/06/2011
<b>Pipelines initially planned for 2011</b>			
Algete - Yela	Enagas	2011	30/12/2011
Zarza del Tajo - Yela	Enagas	2011	30/12/2011
Pipeline to Besós	Enagas	2011	31/12/2011
Bermeo - Lemona	Enagas	2011	31/12/2016
Musel - Llanera	Enagas	2011	31/12/2012
Martorell - Figueras	Enagas	2011	30/09/2011
Tenerife LNG terminal - Granadilla	GASCAN	2011	01/01/2013
Ca's Tresorer-Felanitx - Mallorca	Endesa	2011	31/12/2012
Ca's Tresorer-Felanitx - Mallorca	Gas Natural Fenosa	2011	---
Pipeline to underground storage of El Ruedo	Unión Fenosa Gas	2011	23/09/2014
Pipeline to underground storage of Las Barreras	Unión Fenosa Gas	2011	01/07/2015
<b>Pipelines initially planned for 2012</b>			
Duplication Villapresente - Burgos	Enagas	2012	31/12/2012
Gran Canaria LNG terminal - San Bartolomé de la Tirajana	GASCAN	2012	01/10/2013
Gran Canaria LNG terminal - San Bartolomé de la Tirajana	Endesa	2012	---
Tenerife South pipeline	GASCAN	2012	01/08/2013
Tenerife South pipeline	Endesa	2012	---
New pipeline Tivissa - Arbós	Enagás	2012	31/12/2012
Yela - Villar Arnedo	Enagas	2012	30/10/2012
Villar Arnedo - Castelnou	Enagas	2012	---
Tenerife North pipeline	Endesa	2012	----
Guitiriz-Lugo	Gas Natural Fenosa	2012	---
Guitiriz-Lugo	Enagas	2012	---

*Table 37. Planned domestic pipelines 2010-2012. Sources: Ministry of Industry, Tourism and Trade (Planning of Electricity and Gas 2008-2016) and CNE Infrastructures report (2<sup>nd</sup> half 2009)*

Besides these assets, several new compression stations will be needed: Chinchilla, planned for 2010, for the operation of MEDGAZ; Villar de Arnedo, foreseen for the end of 2010; and the expansion of the C.S. Zaragoza. In addition, a number of direct lines to power plants may be built in the period, depending on the entry into operation of the

combined cycles and gas-fired plants they are associated to.

### 5.2.6 Underground storage

In Spain, underground storage capacity is small – only 6% of demand in 2009 – and has historically been a scarce resource. Withdrawal capacity is even more restrictive. That is why the available capacity is subject to a specific allocation mechanism: a first amount of underground storage capacity is allocated to those users obliged to keep strategic and operational gas reserves (see next section); then a second amount of capacity is allocated on a pro-rata basis, proportionally to the sales to household and commercial consumers in the previous year; and finally the remaining capacity is allocated through an auction.

In 2009, these three parts of storage capacity amounted to:

Underground storage capacity - Concept	GWh	%
For strategic and operational reserves	20.491	73,0%
For users prorata to household-commercial sales	3.321	11,8%
Auctioned capacity	4.257	15,2%
<b>TOTAL</b>	<b>28.069</b>	<b>100,0%</b>

Table 38. Underground storage capacity allocated in 2009

ENAGAS manages the two existing underground storage facilities in Spain: Serrablo and Gaviota, both old natural gas fields which are now depleted.

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).

Underground Storage	Gas storage capacity Mm <sup>3</sup> (n)			Maximum Intake/Offtake Mm <sup>3</sup> (n)/day	
	Available Gas	Cushion gas	Total capacity	Intake	Offtake
Serrablo	820	280	1.100	3,8	6,8
Gaviota	1.346	1.135	2.481	4,5	5,7
<b>TOTAL</b>	<b>2.120</b>	<b>1.659</b>	<b>3.779</b>	<b>8,4</b>	<b>12,5</b>

Table 39. Capacity of underground storages Serrablo and Gaviota. Source: Enagas

It is interesting to compare this capacity with the storage potential of the other facilities that allow for the storage of natural gas: LNG tanks and the marginal storage capacity of the transmission network (linepack):

	Maximum storage capacity (GWh)
Underground storage	24.656
Tanks in LNG terminals	16.920
Linepack	1.000
<b>TOTAL</b>	<b>42.576</b>

*Table 40. Storage capacity of underground storages, LNG tanks and pipelines*

There are several sites where the creation of an underground storage facility is currently projected: Yela, Marismas, Poseidón, Gaviota, Castor, Las Barreras, El Ruedo, Reus, Cardona and La Dorada. According to the most u information available in CNE, only the sites of Yela (2011) and Castor (2012) are expected to come into operation in the next three years.

### **5.2.7 Competitive impact of measures taken pursuant to Articles 3 and 4 of Directive 2004/67/EC on gas market players**

The Law 12/2007, that modified the Hydrocarbons Law 34/1998, endowed CNE with new attributions regarding monitoring of several aspects of gas markets, capacity management and security of supply, in accordance with article 5 of Directive 2003/55/EC. These new competencies also included supervising the effective functioning of the market, unbundling of activities and the level of transparency and competition (deriving from article 25 of Directive 2003/55/EC).

Concerning measures reinforcing security of supply, the Royal Decree 1766/2007 the Spanish regulation, modifying the Royal Decree 1716/2004, established the following obligations for companies supplying gas to final consumers:

- The obligation of diversifying supplies, so that the proportion thereof deriving from the main country supplying Spain (currently Algeria) should not exceed 50%. With a view

to facilitating the entry of new companies to the market, the application of this obligation to diversify procurement has been limited to those agents importing more than 7% of the Spanish total gas supply.

- The obligation of maintaining at every moment a minimum security stock of gas of 12 days of firm sales to final consumers. At the beginning of winter, the security gas stocks must be increased to 20 days, in order to be ready for winter demand. Supplies used for the consumption of facilities with alternative fuels, and under certain circumstances, are exempted from this requirement.

Finally, there is another provision in Spanish regulatory regime that aims at assuring security of gas supplies to consumers on a daily basis, which is contained in the rule 9 of the System Operation Network Code (*Normas de Gestión Técnica del Sistema*, or NGTS). This provision establishes the obligation for all users to be balanced after their operations in the network, and introduces economic penalties to those users incurring in imbalance. This guarantees an appropriate behavior of gas suppliers enhancing a safe operation of the gas system by the Technical System Operator.

### **5.2.8 Long term gas supply contracts**

In Spain the information of the duration of the individual long-term gas supply contracts is not public. However, historically most of the gas supply contracts of all Spanish marketers have been long-term contracts with producing countries. That applies for both, LNG and pipelines supply contracts.

Long term gas supply contracts don't hinder competition, since there is available entry capacity in Spain, with the exception of France and Morocco interconnections; in addition, LNG can be diverted to other markets.



## **6. PUBLIC SERVICE ISSUES [ARTICLES 3(9) ELECTRICITY AND 3(6) GAS]**

### **6.1. Electricity**

#### *Maintenance of end user price regulation in electricity*

The Law 17/2007, dated 4<sup>th</sup> July, establishes the schedule for the elimination of the end-user regulated prices (the so-called “integral tariffs”) as well as for the introduction of last resort tariffs, which are aimed at consumers with low consumption levels in the electricity sector. The suppression of integral tariffs is the final stage in the move to a fully competitive market.

The Law 17/2007 defines last resort tariffs (TUR) as the maximum price to be applied to consumers with right to be supplied at the TUR, and it also 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: generation costs, access tariffs and commercialization costs.

The abovementioned Law sets up the implementation of last resort tariffs and the suppression of integral tariffs on January 1<sup>st</sup> 2009. From that date onwards, distributors will not perform the supply activity anymore.

However, Royal Decree 485/2009, dated 3<sup>rd</sup> April, delays the introduction of last resort tariffs and the elimination of integral tariffs in the electricity sector to July 1<sup>st</sup> 2009. It also determines that, starting on July 1<sup>st</sup> 2009, only low voltage consumers (less than 1 kV) with contracted load capacity lower than or equal to 10 kW may be supplied at last resort tariffs.

Royal Decree 485/2009 also defines the last resort tariff as the maximum and minimum (unique) price to be charged by last resort suppliers to consumers with right to be supplied at the TUR.

The Order ITC/1659/2009, dated June 22<sup>th</sup>, establish the methodology to determine the last resort tariff. The last resort tariff includes the access tariffs, the commercialization costs and the energy cost.

The energy component of the last resort tariff includes the energy costs, that contain the result of the electricity auctions, the ancillary service cost, the premium risk, the capacity payment and the impact of the losses over the energy costs.

According to Royal Decree 485/2009, the last resort suppliers have been appointed for a period of four years:

- Endesa Energía XXI, S.L.U.
- Iberdrola Comercialización de Último Recurso, S.A.U.
- Gas Natural S.U.R., SDG, S.A.
- HC-Naturgás Comercializadora Último Recurso, S.A.
- EON Comercializadora de Último Recurso, S.L.

The following table shows the percentage of customers in each segment, both domestic and other (commercial and industrial)<sup>26</sup> who receive their supply by the last resort supplier in December of 2009.

In connection with the customers who receive their supply by the last resort supplier, it should be noted that in Spain the last resort suppliers can supply all customers, including consumers with or without right to be supplied at the TUR.

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<sup>26</sup> Low voltage consumers (less than 1 kV) with contracted load capacity lower than or equal to 15 kW.

Consumer Segments	2009
	% of customers who receive their supply by the last resort supplier
Domestic	88,3%
Rest	29,5%

Table 41. Share of customers in each segment supplied by last resort supplier.

### Appropriate treatment of vulnerable customers in electricity

Royal Decree-Law 6/2009 approved the social bonus from July 1<sup>st</sup> 2009 onwards subject to the fulfilment of several requirements established by law such as being a large family, a pensioner older than 60 years old with minimum retirement pension, unemployed, or low voltage consumers (less than 1 kV) with contracted load capacity lower than or equal to 3 kW.

The abovementioned Royal Decree-Law established that the social bonus is the difference between the last resort tariff and the integral tariffs that are in force the June 30<sup>st</sup> 2009. The Royal Decree-Law 6/2009 also established the percentages to distribute the cost of the social bonus between the generators. In December of 2009, 3.042.535 customers has social bonus.

### Implementation of labelling for electricity (guarantee of origin)

The “guarantee of origin and disclosure of electricity system” was launched by CNE as of December 1<sup>st</sup> 2007, following Ministerial Order 1522/2007, aiming to inform final electricity consumer in detail about origin and environmental impact associated to energy consumption.

This initiative is an adaptation of European Regulation; already Directive 2001/77/EC on promotion of electricity generated by means of renewable energy sources (now superseded by Directive 2009/28/EC) established in its 5<sup>th</sup> article the need for such a guarantee of origin of the electricity purchased. Directive 2004/8/EC also promotes the

highly efficient cogeneration (combined heat & power). Directive 2009/72/EC establishing common rules for the internal power market requests electricity retailers to inform their consumers via bills and promotional material about the contribution of each primary energy source during previous year, as well as its environmental impact — at least in terms of CO<sub>2</sub> emissions and nuclear waste.

The guarantee of origin and disclosure of electricity system makes possible to certify the provenance of power generated from renewable sources or high-efficient cogeneration, thus determining both national annual global mix of primary sources and each supplier's mix for previous year, and their corresponding environmental impact associated.

It might be argued that it's not possible to distinguish instantly the source of incoming electricity onto the system, no matter if it comes from coal-fired thermal plants or wind farms. Nevertheless, during a given time period, say a year, each technology's contribution to national domestic demand coverage can be precisely gauged.

Whenever a supplier wants to offer to his clients cleaner electricity (even 100% renewable or high-efficient cogeneration), that supplier has the possibility (regardless how clean "his" mix is) to take part in the guarantee of origin system and purchase additional guarantees to improve his mix versus the national mix. Additionally, supplier's guarantees of origin can be applied to specific consumers, so as he can assure, in annual terms, that the his energy comes from clean sources in a certain amount. Generators can then request the transference of guarantees of origin from suppliers, so that they can cancel them via end-consumer supply.

All this system is controlled by CNE, including inspections covering the accounting of guarantees issued and their use (cancellation). CNE annually publishes by end of March an electricity labeling for each supplier, similar to the ones used for energy efficiency purposes in home electrical appliances, disclosing previous year retailer's mix, CO<sub>2</sub> emissions and nuclear waste originated as compared to average nation-wide values. These data must be included, in a given format, in electricity bills and any promotional material.

## 6.2. Gas

### Maintenance of end user price regulation in gas

The Law 12/2007, dated 2<sup>nd</sup> July, establishes the calendar for both the elimination of end-user regulated prices and the introduction of last resort tariffs, aimed at consumers connected to a gas pipeline pressure lower than 4 bars in the gas sector, since January 1<sup>st</sup> 2008. As a consequence, distributors companies cannot retail gas to their clients anymore.

The Law 12/2007 defines last resort tariffs as the maximum price to be applied to with right to be supplied at the TUR and it also 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: generation costs, access tariffs and commercialization costs.

The above mentioned Law also eliminates end-user regulated prices for consumers connected to a gas pipeline with design pressure above 4 bars and equal to or below 60 from July 2007 onwards. It also included the definition of last-resort suppliers and tariffs, the creation of the Change of Supplier Office, and the establishment of the Energy System Technical Management Monitoring Committee.

The calendar for applying last resort tariffs in the gas natural sector, it is established by the Law 12/2007 as follows: as from July 1<sup>st</sup> 2008, consumers connected to gas pipelines with a pressure equal to or smaller than 4 bar and annual consumption smaller than 3 GWh could apply. From 1 July 2009, the limit is reduced to 2 GWh and, one year later, to 1 GWh. Since 1 July 2010, only consumers connected to a gas pipeline with design pressure equal to or below 4 bars and consumption below 1 GWh per year may be supplied at last resort tariffs.

The abovementioned calendar is modified by Order ITC/1251/2009, dated 14<sup>th</sup> May, following an agreement of the Council of Spanish Ministries, dated 3<sup>rd</sup> April 2009, so from July 1<sup>st</sup> 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.

By means of the introduction of last resort tariffs consumers who were supplied at end-user regulated prices in the regulated market with right to be supplied at the last resort tariffs are transferred to the liberalized market where they are provided with natural gas by last resort suppliers. Hence, all consumers of natural are supplied in the liberalized market starting July 1<sup>st</sup> 2008.<sup>27</sup>

Royal Decree 104/2010 also defines the last resort tariff as the maximum and minimum (unique) price to be charged by last resort suppliers to consumers with right to be supplied at the TUR.

According to the Law, the following last resort suppliers are appointed for a period of four years:

- Endesa Energía, S.A.
- Gas Natural SUR , S.A.
- Iberdrola, S.A.
- Naturgas Energía Comercializadora, S.A.U.
- Unión Fenosa Comercial, S.L.
- Madrileña Suministro de Gas S.U.R 2010, S.L.

Order ITC/3861/2007, dated 28<sup>th</sup> December, establish the mechanism for setting the maximum prices to be applied by last resort suppliers. The last resort tariff includes the rates, tolls and fees, the commercialization costs and the energy cost. The energy component of the last resort tariff includes the result of the gas auctions, and also the

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<sup>27</sup> Only consumers from Baleares remain in the regulated market.

crude oil quotation and the settlement prices of the futures of natural gas in international markets.

In 31 December 2009, the 47,4% of the consumers with the right to be supplied at the TUR were supplied by a last resort suppliers. In connection with the customers who receive their supply by the last resort supplier, it should be noted that in Spain the last resort suppliers can supply all customers, including consumers with or without right to be supplied at the TUR