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## 1 FOREWORD

This report is issued in the context of the formal request made by the European Commission to the European Regulators Group for Electricity and Gas (ERGEG). The electricity and gas 2003 Directives<sup>1</sup> require of the European Commission the drafting of a series of follow-up reports on both sectors. These Directives also impose requirements on the regulatory authorities relating to the issuance of a report to the European Commission on certain areas of the electricity and gas markets.

For this reason, since the end of 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 above-mentioned Directives. This report presents the agreed structure by the European Commission and European Regulators for this year.

2008 was another important year for the electricity and gas sectors in Spain and, in particular, for retail markets. On 1 July 2008, end-user regulated gas tariffs were removed and a Last Resort Tariff (LRT) entered into force just for those consumers under 4 bar pressure and with less than 3 GWh/year consumption. This important step was completed recently (on 1 July 2009) when the end-user regulated electricity prices also 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.

Hence, since July 2009, just residential consumers, below or equal to 10 kW for electricity and below 4 bar and below 50.000 kWh / year for gas, are allowed to stay under the LRT 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)

In 2008, the Spanish Council of Ministers approved the new “Plan for the Electricity and Gas Sectors for 2008-2016”, which covers the strategic lines of the Government's energy

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<sup>1</sup> 2003/54/EC and 2003/55/EC

policy. In particular, this 2008-2016 planning relates to the required gas and electricity transmission networks aiming to guaranty the security and quality of energy supply in the medium and long term, enabling economic growth, preserving overall competitiveness and protection of the environment.

Related to interconnections, CNE welcomes the long-awaited agreement between France and Spain to build a new electricity interconnection through the Pyrenees. However, CNE highlights the need of more physical interconnection for the SW region towards the 10% goal established by European Council in 2002. In MIBEL, work is on track aiming to reach 3.000 MW of interconnection capacity between Spain and Portugal in 2014.

The CNE is promoting regional integration through better CB regulation in its leading role of the South-West (SW) electricity and South (S) gas regions; 2008 has been also a relevant year in this regard. Related to the SW electricity region, and among other concrete achievements, a new version of the rules for the management of the French-Spanish interconnections is currently in place thanks to the work by the region in 2008. Furthermore, the transparency report for this region was presented to the EC at the 3rd High Level Group meeting on 30 September 2008. The SW PXs (OMEL and EPEXSPOT) have agreed to implement day-ahead price coupling between MIBEL and Central West Europe and CNE-CRE-ERSE have expressed their support to the project. The implementation is expected after the ATC-based market coupling is launched in CWE (foreseen in March 2010).

With regard to the South gas region, an Open Subscription Period (OSP) was successfully launched in 2008 for the allocation of existing and committed capacity at Larrau. As expected, the OSP resulted in a demand that largely exceeded the offered capacity and long-term and short-term capacities were entirely allocated. As a consequence of this capacity allocation process, the number of shippers at the interconnection point of Larrau has increased from 4 to 13 since April 2009. In this framework, an Open Season is being developed for future capacities

In 2008, new powers have been given to CNE aiming to guarantee the absence of discrimination, authentic competition and an efficient market functioning. However, CNE

highlights that decisions taken by regulators in relation to their core duties should not be subject to review by the National Ministries as it is the case of CNE.

In this context, CNE welcomes the agreement between the European Parliament and Council on the “Third Package” and calls on the EC to monitor the proper implementation on all agreed measures, particularly those aiming to empower NRAs and reinforce NRAs’ independency.

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

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

A detailed presentation of CNE's competences and power is available in last years' national report by CNE. In 2008, new powers have been given to CNE aiming to guarantee the absence of discrimination, authentic competition and an efficient market functioning.

The Royal Decree 222/2008 (dated 15<sup>th</sup> February) which determines the remuneration of electricity distribution establishes that the CNE will propose some quality coefficient and losses prices to the General Secretary for Energy. Also concerning distribution networks, Royal Decree 222/2008 disposes that CNE has to prepare a network reference model, has to propose the Operating Procedures for these networks and has to make, as well, a proposal for the annual remuneration for the distribution companies according to the new rules that this Royal Decree establishes.

According to Royal Decree 324/2008 (dated 29<sup>th</sup> February) which regulates (6<sup>th</sup> and 7<sup>th</sup>) auctions of primary energy emissions, the CNE is responsible for overseeing the procedure for the auctions to ensure competition and transparency, and reports to the General Secretary for Energy about possible improvements. Moreover, the CNE is entitled to propose the suspension of the auction to the General Secretary for Energy and establish coordination mechanisms together with the Spanish Securities Market Commission (CNMV).

The Royal Decree 325/2008 (dated 29<sup>th</sup> February) which set up the new transmission remuneration for electricity transmission facilities coming into operation from 1<sup>st</sup> January 2008 onwards determines that the CNE will submit to the General Secretary for Energy a revision proposal of unit costs used to calculate the investment costs and the operation and maintenance costs of transmission facilities.

Similarly, the Royal Decree 326/2008 (dated 29<sup>th</sup> February) which set up the new transmission remuneration for gas transmission facilities coming into operation from 1<sup>st</sup>

January 2008 onwards determines that the CNE will draft a revision proposal of investment and the operation and maintenance standards of transmission facilities.

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

In the context of sustainability, the CNE was already competent to approve the calculation method for the contribution of each primary energy source to the electricity supplies and its corresponding environment impact, as well as the standards for invoices issued by distributors and suppliers. However, the Ministerial Order 1522/2007 is the new regulatory framework for the Guarantees of Origin (GoO) for electricity produced from renewable sources and has set up CNE as the competent body to issue GoO. In this regard, the CNE issued the Circular 1/2008 on information to consumers on the origin (source) of electricity consumed and its environmental impact.

Furthermore, the Royal Decree 1578/2008 (dated 26<sup>th</sup> September) which set up the production remuneration of electricity coming from photovoltaic technology facilities coming into operation after the time limit established for remuneration by Royal Decree 661/2007 entitles the CNE to inspect photovoltaic technology facilities.

Moreover, Order ITC/694/2008 (dated 7<sup>th</sup> March) which regulates the financing of ex-ante deficit auctions endowed the CNE with competencies regarding auctions procedures and credit transfers.

About consumer protection, Order ITC/1857/2008 (dated 26<sup>th</sup> June) creates the Spanish social tariff, for domestic consumption under 3 kW, and entitles the CNE to analyze all consumers' requests. Royal Decree-Law 6/2009 (dated 30<sup>th</sup> April) and Order ITC/1723/2009 (dated 26<sup>th</sup> June) have created and ruled another social measure to protect vulnerable consumers (the so-called "bono social") addressed to pensioners, large families and unemployed people, to guarantee reasonable conditions for those groups despite the suppression of the electricity general tariffs; CNE is also entitled to supervise the compliance with the regulation about this "bono social".

Also related to the suppression of the gas and electricity general tariffs, occurred in 2008 and 2009, respectively, the Royal Decree 1011/2009 (dated 19<sup>th</sup> June) disposes that CNE has to oversee the changes of suppliers and the activity of the Office for Switching Supplier, and has to resolve the disputes between distribution companies and retailing companies about the information that must be furnished.

On the other hand, Order ITC/2877/2008 (9<sup>th</sup> October) which establishes a mechanism of bio-fuel promotion entitles the CNE to certify the fulfillment of the mandatory biofuels blending requirements in an aim to meet its target of 6 percent biofuel use in transport by 2010.

Finally, according to the judgment of the European Court of Justice of 17 July 2008 it was declared that by adopting the first indent of the second paragraph of the single article of the fourteenth function of the National Energy Commission provided for in Supplementary Provision No 11, part 3, point 1 of Law 34/1998 of 7 October 1998 on the hydrocarbon sector, as amended by Royal Decree-Law 4/2006 of 24 February 2006, in order to make the acquisition of certain shareholdings in undertakings which carry on certain regulated activities in the energy sector and the acquisition of the assets necessary to carry on such activities subject to the prior approval of the National Energy Commission, the Kingdom of Spain has failed to fulfill its obligations under Articles 43 EC and 56 EC.

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

### **2.2.1 Electricity markets in 2008**

#### Wholesale market

Market concentration has decreased since a significant part of plants recently commissioned are promoted by new entrants. Market integration within MIBEL progresses, although congestion in the Iberian interconnection appears often (market split in 2008 for aprox. 75% of hours) and the harmonization of a number of relevant regulatory issues is still under way. The still limited interconnection capacity with France hampers deeper market integration with the rest of Europe (see nevertheless progress in infrastructure beneath).



The energy traded for the entire energy production market, including bilateral contracts, in the Spanish electricity market, rose to 345.583 GWh in 2008, up 5,7% on the previous year. Average monthly day-ahead prices ranged from 56,18 to 73,03 €/MWh.

### Retail market

Related to industrial consumers, a massive switch from tariff-based market to the liberalised based scheme happened in 2008 due to the phasing out of end-user tariffs. On the contrary, the number of households in the liberalised market decreased slightly in 2008 (92,89% of the customers, mostly residential, remained in the tariff-based system). In total terms, the number of customers in the liberalised market is around 1.817.953, (2,8% increase in 2008).

Five companies cover almost the whole retailing market and all external (or foreign-controlled) supplier companies' market share lies above 45%.

In terms of energy, about 43% of the liberalised electricity market have changed supplier since the beginning of liberalization, and in terms of number of clients, nearly 22% of clients in the liberalised market have changed supplier since the opening of the domestic market in 2003.

### Infrastructure

The June agreement between France and Spain on a new electricity interconnection, thanks to the mediation of the European Coordinator Prof. M. Monti, was the major step in 2008 in the context of interconnections reinforcement. A joint-venture between RTE & REE is now a reality and work is on track aiming to have the new DC cable in operation in 2014.

Although this project is a good step in the right direction, CNE calls on all European institutions to continue promoting more physical interconnection among member States aiming to achieve the (still far in some borders) 10% target set up by the European Council.

Related to MIBEL, the interconnection capacity between Spain and Portugal has increased significantly in the last years. Besides, new developments will take place in the coming years aiming to achieve 3.000 MW in 2014.

### Key regulatory issues

On 1 July 2009, end-user regulated electricity prices disappeared in Spain 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. According to the new regulation (Royal Decree 485/2009), a last resort tariff (LRT) remains for residential customers (below or equal to 10 kW). In this new context, the LRT is set up according to the following principles: a single tariff for the whole country, cost reflective (through auctions) and additive structure. As a consequence, distributors companies cannot retail electricity to their clients anymore and a list of last resort suppliers has been published for a 4 year term.

Furthermore, special provisions on vulnerable consumers (“social bonus”) have been established and a new body, the Office for Switching Supplier (“*Oficina de Cambio de Suministrador - OCSUM*”) has been created to oversee the switching procedures both for gas and electricity.

A relevant issue in the Spanish market during the first quarter of 2009 is also the acquisition of Unión Fenosa by Gas Natural. In 2008-2009 Gas Natural has completed the acquisition of Unión Fenosa after following the required approval procedure. In late April 2009, the Boards of the two companies approved the project for the takeover merger (see electricity part 3.2.3, paragraphs referring to this acquisition).

### Security of Supply

Slow down of economic activity was reflected by demand growth, positive for 2008, but already showing a decrease in the third quarter; security margin has widened as a direct consequence. Coal and hydro give definitely place to gas (CCGT) and wind respectively, as main generation mix drivers. Incentives to build capacity will be fostered considering the CNE proposal to finance capacity payment approved on 3 April 2008 and duly submitted to the Ministry of Industry.

Moreover, the approval of the Plan for the electricity and gas sectors for 2008-2016 by the Spanish Council of Ministers, which enclose the strategic lines of the Government's energy policy, will contribute to ensure secure supply in a sustainable manner.

## **2.2.2 Gas markets in 2008**

### Wholesale market

Total demand for natural gas in Spain reached 451 TWh in 2008, which means an increase of 10% over the previous year. As in previous years, in 2008, the growth of gas demand was driven by combined cycle power plants. The imports basket of the Spanish gas system has been diversified in 2008, with Algeria standing out with a share of 36%, Nigeria (20%), the Gulf Countries (14%), Egypt (12%) and Trinidad and Tobago (11%).

While 72,2% of natural gas reached the national grid through LNG ships, the remaining 27,8% came via gas pipelines. The shipments unloaded from LNG ships continued at high levels and keep Spain among the most important LNG destinations in the world.

Most of energy in the Spanish market is negotiated in bilateral OTC trading, which is run over an electronic trading platform developed by ENAGAS (so-called "MS-ATR") with more than 20 active traders. At the moment, gas is actively traded in Spain across eight balancing points: the six LNG terminals; the virtual balancing point and the virtual storage point. The trend for negotiated energy in the Spanish OTC gas market over MS-ATR has continued on growing. In 2008, 10.465 transactions were registered over MS-ATR. The volume of energy traded over the counter amounted to 566.226 GWh, which represents 126% of total gas consumption. The main gas trading point is Huelva LNG terminal.

The number of customers in 2008 surpassed 6,9 millions in Spain, with around 193.192 new customers.

### Retail market

Currently, there are 20 active retailing companies in the gas market and new entrants have nearly 50% market share, so that there is a strong competence. In 2008 several trading

companies like Sonatrach (Algeria), E-On (Germany) and Galp (Portugal) started selling gas to final clients in Spain.

In terms of energy, about 90 % of the total gas market have changed supplier since the beginning of liberalization, and in terms of number of clients, nearly 45% of clients have changed supplier since the opening of the domestic market in 2003 (3.125.000 switching).

In the residential market there are 5 active suppliers. The switching rate in 2008 was the highest of the previous years: 427.293 clients switched their supplier in 2008.

The procedure for customer switching is regulated under 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”*) has been established.

### Infrastructures

Six LNG terminals are operative in the Spanish gas system and a new LNG terminal in Gijón (Asturias) is foreseen.

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 represents 49 bcm of entry capacity, the connection from Algeria trough Morocco represents 12bcm and the connection with France at Larrau 2,5 bcm. Regarding to available capacity in the Spanish gas system, while there is available capacity in all regasification plants, interconnection capacity to France is extremely scarce.

A new connection with Algeria, MEDGAZ, is planned for 2009. MEDGAZ is a strategic project for Algeria and Spain. Natural gas will be supplied directly from Algeria, without requiring transit through third countries, which will considerably enhance security of supply. The initial capacity would be 8 bcm.

Related to underground storage, Serrablo and Gaviota are the only subterranean storages currently under operation. Two new projects, Yela and Castor, will be incorporated to the Spanish gas system in the next years.

As regards interconnection capacity, in order to resolve the congestion at the international interconnection with France, it should be mentioned the work carried on in the framework of the South Gas Regional Initiative (S-GRI) through Open Subscription Periods (OSP) and Open Season procedures (OS) at the FR- SP border.

- *Open Subscription Procedure (OSP)*

The OSP procedure was the allocation process, among requesting shippers, of the available existing capacity or under construction between France and Spain in a coordinated way.

OSP results denoted that the total demand largely exceeded the offered capacity. As a consequence of this allocation of capacity, the number of shippers at the interconnection point of Larrau has increased from 4 to 13 in April 2009.

- *Open Season procedure (OS)*

The Open Season procedure emerges from the need for increasing interconnection capacity between France and Spain, and it is being developed in 2009.

Key regulatory issues

On 1 July 2008, regulated end-user gas tariffs were removed and a LRT (as a maximum price last resort suppliers are allowed to charge small consumers) entered into force. In particular, consumers connected to gas pipelines with a pressure under 4 bar and with annual consumption under 3 GWh, could apply for this tariff (about 14% of the market). July 1<sup>st</sup> 2009 has led to a more restrictive threshold (below 4 bar & below 50.000 kWh/year) for staying under the LRT regime.

As presented before (for electricity), the OCSUM also oversees switching procedures in gas.

### Security of supply

Enagas manages the two underground stores in Spain: those at Serrablo and Gaviota, both old natural gas fields which have been depleted. There are currently many others underground storages which are in project as Marismas, Poseidón, Gaviota, Yela, Castor, Barreras, Ruedo and Reus (see point 5.2).

In 2008, 98,4% of the gas marketed in Spain came from imports from the already mentioned 9 countries, with Algeria standing out for another year with a share of 31%. Nigeria (21%), the Gulf Countries (13%), Egypt (11%) and Trinidad and Tobago (12% of the imports of the Spanish gas system) complete the group of the most important countries in the supply structure.

The mentioned MEDGAZ project between Algeria and Spain, as well as the coordinated OSP and OS with France (see open season in point 4.1.1) will considerably enhance SoS.

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

The CNE welcomes the final approval of the “Third Package” and supports all new provisions towards more efficient unbundling for network operators, more transparency and new measures for customer protection. In particular, the Spanish National Energy Commission also welcomes all new requirements aiming to reinforce the independency and powers of national regulatory authorities (NRAs) as well as the new regulation on the Agency for the Cooperation of Energy Regulators (ACER).

Related to NRAs’ powers, CNE highlights that decisions taken by regulators in relation to their core duties should not be subject to review by the National Ministries as it is the case of CNE.

These “core duties” for NRAs should include:

- Duties in relation to tariffs for access to T & D distribution networks.
- Duties in relation to unbundling; ensuring that there are no cross-subsidies between network (regulated) and free-market (non-regulated) activities.

- Duties in relation to the general oversight of energy companies, ensuring compliance of transmission and distribution system operators, system owners and natural gas/electricity undertakings with their obligations under the Directive and other relevant Community legislation, including as regards cross-border issues.
- Duties in relation to consumer protection.

On the other hand, the Third Package will empower NRAs with the ability to impose effective, proportionate and dissuasive penalties on natural gas/electricity undertakings not complying with their obligations under this Directive or any relevant legally binding decisions of the regulatory authority or of the Agency, or to propose a competent Court to impose such a penalty. CNE considers that penalties have to be imposed by the regulatory authority directly.

Another important step by the Third Package will be ACER as an effective means to deal with CB issues at EU level. The current ERGEG has delivered good cooperation among regulators as well as a better understating of common problems and challenges. However, many regulatory problems remain unsolved at different borders and more regulatory but binding solutions are needed at European level. In this framework, the role of ACER will be crucial but CNE also foresees an important role for the current regional structures and their complementary role towards a better management and use of existing and future interconnections.

The new Electricity and Gas Directives call on Member States as well as on the regulatory authorities to cooperate among themselves for the purpose of integrating their national markets at one or more regional levels, as a first step towards a fully liberalised internal market. Promoting regional integration in SW Europe is a priority for the Spanish National Energy Commission who is the Lead Regulator for the South-West Electricity and South Gas ERGEG regions.

In the context of the ERGEG South-West Electricity Region, CRE, CNE and ERSE drafted a report on the analysis of the administrative procedures for the changing of the legislation

in force in each country; one of the main results was the lack of competences of CNE (compared to CRE and ERSE) and particularly on CB issues.



### **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 while internal congestions are not structural and they are solved (as network constrains) when needed by means of specific markets (day-ahead and intraday security markets, managed by the System Operator).

The rules for capacity allocation have remained the same during 2008 for all Spanish interconnections; however, for both French and Portuguese borders, new procedures have been implemented short before this report's submission.

A new version of IFE (Interconnection France - Spain) rules has been agreed and come into force for annual, monthly, daily and intraday Physical Transmission Rights covering periods from 1<sup>st</sup> June 2009<sup>2</sup> onwards. The main improvements achieved in this already third version of the rules include:

- New compensation scheme in case of capacity reduction 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 from the very communication of auction results, instead of from programming authorizations.

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<sup>2</sup> Link to IFE rules v3: <http://www.ree.es/ingles/operacion/pdf/IFERules3.pdf> ; approved by State Secretariat for Energy's Resolution dated May 29<sup>th</sup> 2009.

- 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

As for the interconnection with Portugal, during 2008 —and since July 1<sup>st</sup> 2007— the capacities has been fully implicitly allocated day-ahead by means of a market splitting mechanism: Portugal and Spain are the two prices areas into which the single electricity Iberian market (MIBEL) is split if congestion arises. As of July 1<sup>st</sup> 2009, a medium- and long-term capacity allocation scheme has been introduced, based on the auction 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 contracts covering the second semester of 2009.

In the context of relevant information according to Regulation 1228/2003 and Congestion Management Guidelines, the Spanish TSO has during 2008 even widened the published information in its website: available at [www.esios.ree.es/web-publica/](http://www.esios.ree.es/web-publica/)

In the Spanish-French border, in the context of the ERGEG Electricity Regional Initiative, the involved PXs (OMEL and EPEXSPOT) have agreed to implement day-ahead price coupling between MIBEL and CWE. The regulators of the SW region expressed their support to the project. The implementation would happen after the ATC-based market coupling is launched in CWE (foreseen in March 2010).

No relevant changes this year on computation of transmission capacity. A dedicated meeting on this topic was attended by TSOs and regulators of the SW region on 19<sup>th</sup> February 2009.

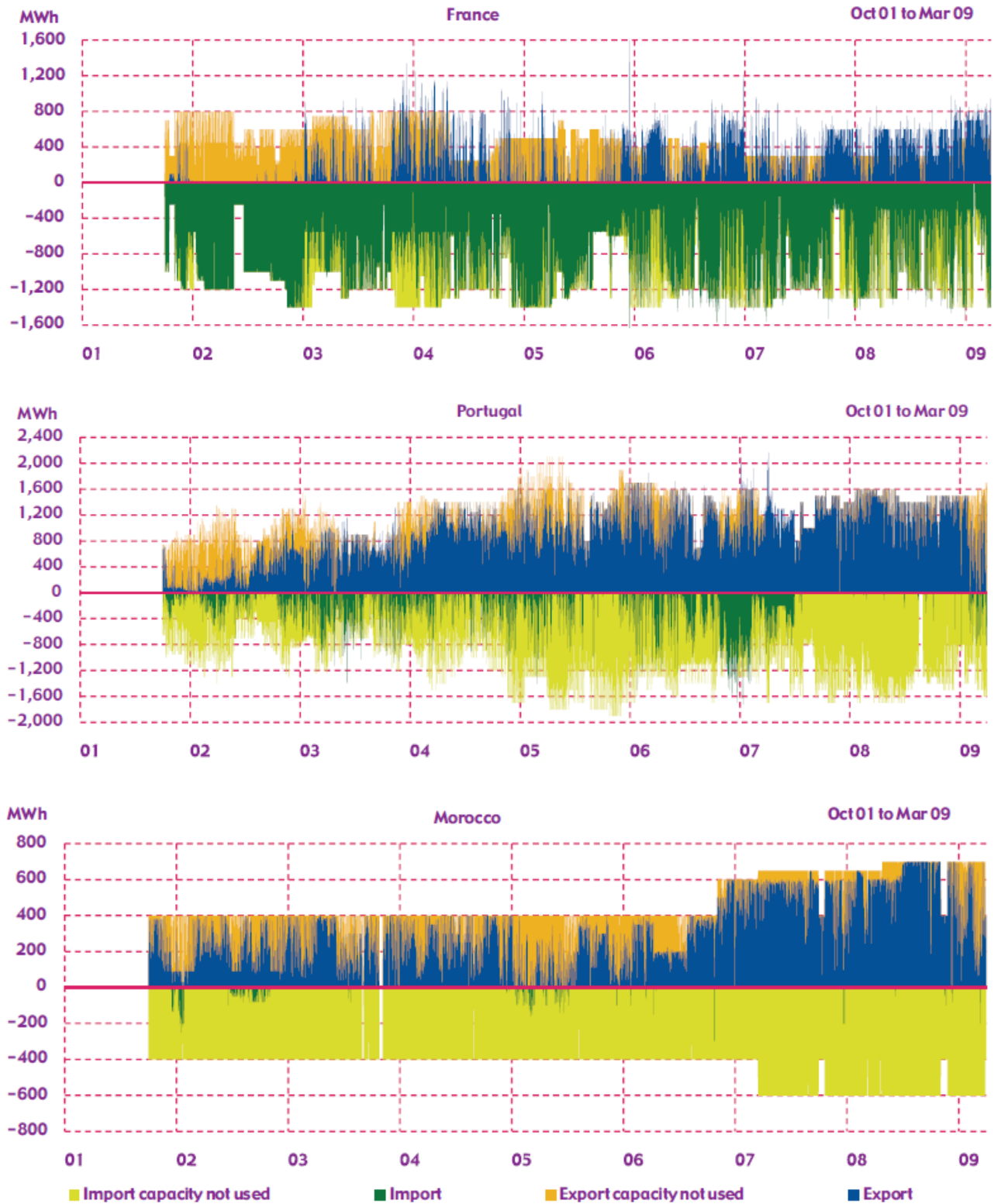


Figure 1. Exchange capacity and market matched energy, including bilaterals – France, Portugal and Morocco (Source: OMEL)

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

#### Network Tariffs

Each year the Government approves the access tariffs through the publication in the Official Spanish Gazette. The tariffs are unique and maximum throughout the entire Spanish territory. Similarly, pursuant to the Hydrocarbons Act 34/1998, dated October 7<sup>th</sup>, the CNE has the function of participating, through proposals or reports, in the process of drawing up projects on the establishment of tariffs, tolls and the remuneration of regulated energy activities.

Regarding the review of access tariffs, 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.

The proposal of review made by CNE takes into account the following principles:

- Additivity: The tariff applied to customers that remain in the regulated market has to include the access tariffs and the best forecast of the energy costs.
- Sufficiency of revenues in the short – medium term
- Recovery of the regulated activities costs by the access tariff
- Efficient allocation of the access cost among customers

In order to obtain a basis for the reports on the draft electricity tariff Royal Decrees or Ministerial Orders, which could be sent every three months to the Ministry, or for making proposals to the Ministry, 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 each period.

In particular, the requested information is the cost of the transport 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's 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) and on the participation of customers in the deregulated market, 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 to CNE. Likewise, information is requested on forecast generation under the Special Regime (renewables and cogeneration), which is compared with the information gathered by the Commission from other sources.

### Network charges

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.

Typical Consumers (1)	Annual Consumption (kWh)	Power (kW)	Access Tariffs (cent€/kWh) (4)
<b>Band DC (2)</b>	3 500 (3)	4 - 9	4,58
<b>Band IB</b>	50 000	50	4,87
<b>Band IE</b>	24 000 000	4 000	0,65

(1) Consumer types according to the new methodology implemented by Eurostat from January, 1st 2008 onwards. Band DC: 2 500 kWh < Consumption < 5 000 kWh, Band IB: 20 MWh < Consumption < 500 MWh and Band IE: 20 000 MWh < Consumption < 70 000 MWh.

(2) This is not a representative domestic customer in Spain. Tariff 2.0N/2.0NA is applied.

(3) As per the Eurostat definition 1300 kWh nocturnal consumption.

(4) Without tax.

*Table 1. Electricity Access Tariffs for Typical Consumers (cent€/kWh). Year 2008*

Prices shown in the table above, published in Order ITC/3860/2007, dated December 28<sup>th</sup>, correspond to year 2008. The access tariffs (network charges) include transport, distribution and commercial management costs in addition to other levies included in the access tariff as per Spanish Electric Power Act 54/1997 and Royal Decree 1164/2001.

In particular, the following costs are included: the Market Operator, the CNE, the System Operator, Extra-peninsular Compensation, the cost of the Nuclear Moratorium, the 2<sup>nd</sup> part of the nuclear fuel cycle, compensation to distributors included under the 11th Temporary Provision for interruptibility and purchase of electricity from generating facilities under the special regime, the special regime equivalent premium, the imbalance in revenues prior to

2003, the review of the extra-peninsular generation cost from 2001 to 2005, and the imbalance in revenues of 2005, 2006 and 2007.

On the other hand, transmission and distribution losses from access tariffs, which are included in the customer generation cost, are not taken into account.

Both transmission and distribution remuneration (and consequently their impact on unique nationwide access tariffs) are assessed by National Energy Commission; nevertheless Ministry is tasked with final tariff approval and publication. Also legally defined quality service parameters are reported to and monitored by CNE, though punitive power relies either on State or Regional Government.

### Transmission

Installations coming into operation before 1998 are globally remunerated by means of a fund which is yearly updated according to a revenue cap (RPI-X) formula. Installations coming into operation from 1998 to 2007 are remunerated individually. Its remuneration can be broken down into three categories:

- (i) Investment remuneration.
- (ii) Financial remuneration.
- (iii) Operating and maintenance costs.

The Royal Decree 325/2008, dated February 29<sup>th</sup>, sets up the new transmission remuneration for transmission facilities coming into operation from 1<sup>st</sup> January 2008 onwards:

The annual transmission remuneration acknowledged to the company for a transmission facility “i” in year “n” shall be calculated pursuant the next formula:

$$R_{in} = CI_{in} + COM_{in}$$

Where:

$CI_{in}$  = Investment Cost of transmission facility “i” in year “n”

$COM_{in}$  = Operation and Maintenance Cost of transmission facility “i” in year “n”

$$CI_{in} = A_{in} + RF_{in}$$

$$A_{in} = \left( \frac{VI_i}{VU_i} \right) \cdot \left( 1 + TA \right)^{m-1}$$

$VI_i$  = Investment Value recognized of transmission facility “i” approved by the DGPEM (Directorate General for Energy and Mining Politics)

$VU_i$  = Useful Life of transmission facility “i”

$TA$  = Update Index, with a constant value of 2,5%

$m$  = Number of years passed since the transmission facility came into operation

$$RF_{in} = VNI_{in} \cdot TR_i$$

$$VNI_{in} = \left( VI_i - \left( n-1 \right) \cdot \left( \frac{VI_i}{VU_i} \right) \right) \cdot \left( 1 + TA \right)^{m-1}$$

$TR_i$  = Rate of return of the Government Bonds with a maturity of 10 years (Obligaciones del Estado) in the year “i” plus 375 basic points

The unit costs used to calculate  $VI_i$  will be determined by the Ministry of Industry, Tourism and Trade. These unit costs will be updated with the following index:

$$IA = 0,4 \cdot (IPRI - X) + 0,6 \cdot (IPC - Y)$$

The unit costs used to calculate  $COM_{in}$  will be determined by the Ministry of Industry, Tourism and Trade. These values will be updated with the following index:

$$IA = 0,15 \cdot (IPRI - X) + 0,85 \cdot (IPC - Y)$$

Where:

$IPRI$  = Industrial Price Index

$IPC$  = Customer Price Index (RPI)

$X$  = 50 basic points

$Y$  = 100 basic points

In addition to the aforementioned remuneration, transmission companies receive a bonus (or penalty) depending on the aggregate availability of facilities, and a remuneration to reduce the environmental impact of the construction of new transmission facilities. The so-called availability index is evaluated and audited for each company; this may turn in a bonus or penalty up to  $\pm 2\%$  of global income.

The regulatory period is four years, subject to yearly update. Related congestion revenues are spent mostly on tariff reduction; once countertrading (TSO's coordinated redispatching) costs incurred in order to give firmness to nominated transactions are satisfied (this latter use is prioritised). The measured values indicative of the transmission service quality and its reference limit values as determined by Royal Decree 1955/2000, are the non-supplied energy (ENS) and the mean Interruption time (TIM, equal to ENS over average system power) and the grid availability index (ID). Last available data (for 2007) are: ENS, 757 MWh; TIM 1.52 minutes, and ID= 98.09%.

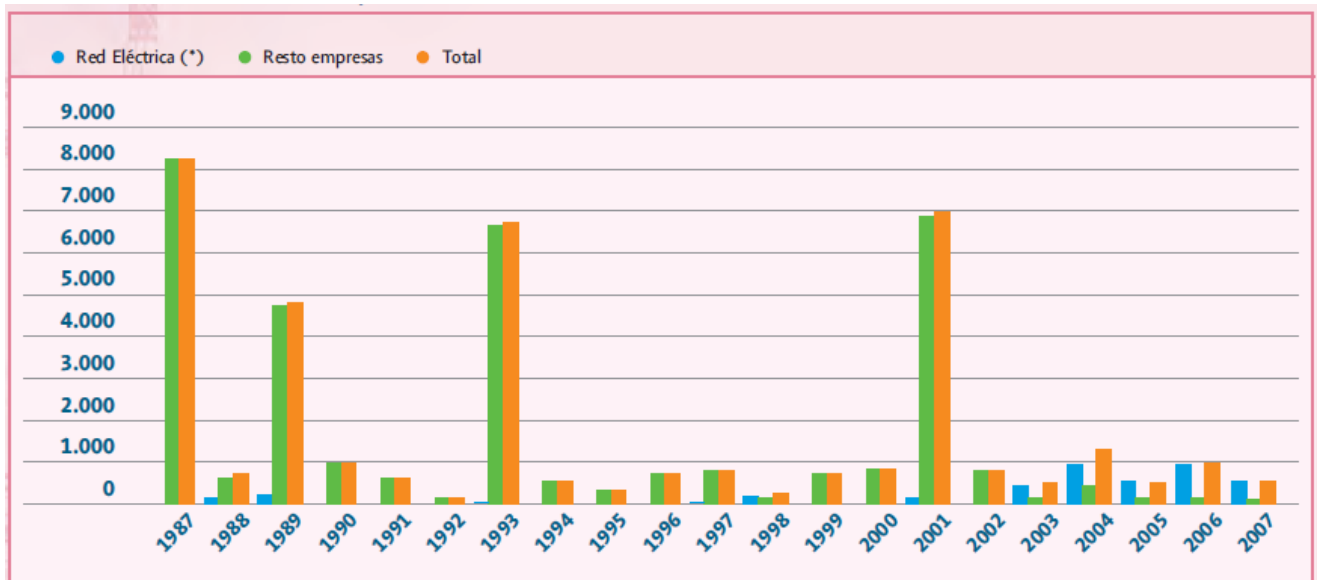


Figure 2. Energy Not Supplied (MWh). Years 1987-2007.

### Distribution

Remuneration of the distribution activity is no longer globally established; CNE's proposal on the development of a methodology for establishing the individual remuneration of each distribution company has been reflected in Royal Decree 222/2008 (published in February 2008). This methodology is based on an analysis of the regulatory information to be requested from distributor companies and the development of a reference network model. For this purpose, CNE has developed a complete monitoring system for real electrical distribution activity, which allows the regulator to reduce information asymmetry with respect to DNOs (regulatory accounts, reference network model, etc) and also to prepare a complete Remunerating Procedure proposal for the activity which permits to consider



each firm's characteristics and constraints. The regulatory period is four years (subject to yearly update).

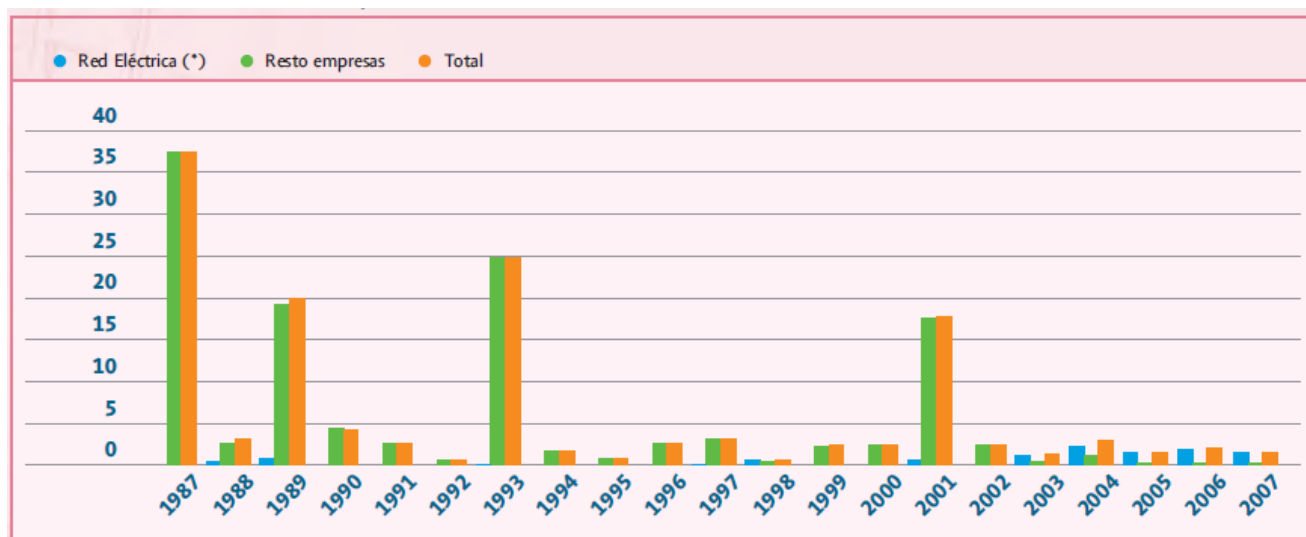


Figure 3. Mean Interruption Time (minutes). Years 1987-2007

AUTONOMOUS REGION/ CITY	2003	2004	2005	2006	2007	2008		
	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 2. TIEPI (Interruption Time in terms of Equivalent Power Interrupted) in minutes, years 2003-2008, by region.

New remuneration scheme for Distribution includes incentives that evaluate quality of service and loss reduction. 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. 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.

### Balancing

Balancing markets structure has not changed during 2008 as 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 2008 up to 2,6 Eur/MWh (for the sake of comparison: weighted average monthly day-ahead prices ranged from 57 to 74 Eur/MWh).

As for market concentration, tables below show evolution of market shares by company for the period 2005-2007 for secondary reserve (power band) and tertiary reserve and deviations management (both up- and downwards, respectively):

	2005	2006	2007
<b>Endesa</b>	34,4%	29,9%	29,5%
<b>Gas Natural</b>	3,5%	3,7%	4,4%
<b>Hidrocantábrico</b>	8,9%	12,0%	11,8%
<b>Iberdrola</b>	30,9%	31,1%	31,5%
<b>Unión Fenosa</b>	19,3%	19,8%	18,1%
<b>Viesgo</b>	3,0%	3,4%	4,0%
<b>Otros</b>	0,0%	0,0%	0,0%

Table 3. Secondary reserve (power band) market shares; Years 2005-2007 – Source: CNE, OMEL

	2005			2006			2007		
	Bajar	Subir	Total	Bajar	Subir	Total	Bajar	Subir	Total
<b>Endesa</b>	29,9%	32,6%	<b>31,4%</b>	33,5%	30,4%	<b>30,6%</b>	26,9%	32,2%	<b>29,2%</b>
<b>Gas Natural</b>	7,4%	2,9%	<b>4,8%</b>	10,7%	5,0%	<b>5,3%</b>	13,1%	5,8%	<b>9,9%</b>
<b>Hidrocantábrico</b>	4,0%	3,0%	<b>3,4%</b>	6,4%	6,8%	<b>6,8%</b>	7,1%	5,1%	<b>6,2%</b>
<b>Iberdrola</b>	32,5%	36,9%	<b>35,1%</b>	22,9%	36,3%	<b>35,6%</b>	25,8%	37,6%	<b>30,9%</b>
<b>Unión Fenosa</b>	15,6%	15,9%	<b>15,8%</b>	17,7%	13,0%	<b>13,2%</b>	19,1%	13,0%	<b>16,5%</b>
<b>Viesgo</b>	8,2%	5,7%	<b>6,8%</b>	5,8%	4,1%	<b>4,2%</b>	6,1%	2,9%	<b>4,7%</b>
<b>Endesa</b>	2,4%	2,9%	<b>2,7%</b>	3,0%	4,4%	<b>4,3%</b>	1,9%	3,4%	<b>2,5%</b>

*Table 4. Tertiary reserve plus deviation management market shares; Years 2005-2007 – 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

### 3.1.3 Effective unbundling

As already presented in the 2008 report by CNE, the Spanish Electricity Act 54/1997 was amended by Law 17/2007, adopted in July 2007. The amended Spanish Electricity Act introduces new unbundling requirements.

Moreover, Spanish legislation foresees an obligation for operators to present an annual report to the Ministry of Industry, Tourism and Trade and to the National Energy Commission, indicating the measures adopted by those operators to comply with the legal measures established for the purpose of guaranteeing the functional unbundling of the regulated and free activities.

In compliance with the aforementioned legal provisions, throughout 2009 energy operators 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.

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:
  - 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

#### TSO:

Law 17/2007, dated 4<sup>th</sup> July, that amends the previous Spanish Electricity Act 54/1997 established on its Third Additional Provision that “Red Electrica de España S.A.”, must create a new company, within its group, holding 100% of its shares, and transfer to it all material and personal assets dedicated to the Transmission and Transmission System Management and Operation. This subsidiary holds all the assets necessary to carry out the regulated activities and assumes all related contracts. Red Eléctrica de España will not be able to sell to third parties the shares of this new company.

This operation was approved by the Board of the CNE on 12 June 2008, following the previous request of Red Eléctrica de España, in order to comply with Article 62 of Law 17/2007 that amends Article 60 of Law 54/1997, for which the CNE is responsible to authorise the acquisition of companies that carry out regulated activities. Thus, in July 2008, RED ELECTRICA DE ESPAÑA TSO, S.L. changed into RED ELECTRICA DE ESPAÑA, S.A.U (REE).

Likewise, RED ELECTRICA DE ESPAÑA, S.A. modified its social denomination for RED ELECTRICA CORPORACION, S.A. (REC). Since July 2008, REC develops its activities as holding society of the GRUPO RED ELECTRICA, owning the total amount of shares of REE.

Within this subsidiary for regulated activities, the law mandates functional unbundling between SO and management of the transmission grid (MTG) and other activities (transport). In order to implement this obligation, it creates a special Unit for SO and MTG regulated activities. There is also a general obligation of functional unbundling and accounting separation between SO activities and management of the transmission grid.

According to the Twenty Third Additional Provision, the executive Director (CEO) in charge of the unit responsible for the Transmission System Management and Operation is appointed by the Red Eléctrica de España Board, subject to the Ministry of Industry, Tourism and Trade approval. This Unit holds all functional separation requirements: their employees should subscribe the internal code of conduct stated above on article 14, and should act independently from the rest of non-regulated activities carried out by other companies within the Group.

In 2007 the mentioned Law declares that there would be a sole transmission company, REE, and that this company will own the whole network. Thus, since 2008 there is a legal requirement to sell the remaining assets to REE within three years deadline. The price of the purchase should be based on market prices, and in case there is no agreement, the CNE should designate an arbitrator.

As already indicated REE, which is the system operator, it is the only company that will carry out transmission activities and does not engage in production or trading activities. On 31 December 2008, ENDESA still kept its participation of 1 per cent in REE's share capital. Likewise, in May, 2009 UNION FENOSA has completed the sale of its share of 1 per cent in REE's capital. 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>% shareholding</b>
Sociedad Estatal de Participaciones Industriales (SEPI)	20,00
HSBC BANK PLC	4,87
Fidelity International Limited	1,00

Table 5. Relevant Stakeholders in RED ELECTRICA CORPORACION S.A.

### 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 2008; the total values reached 89.944 MW.

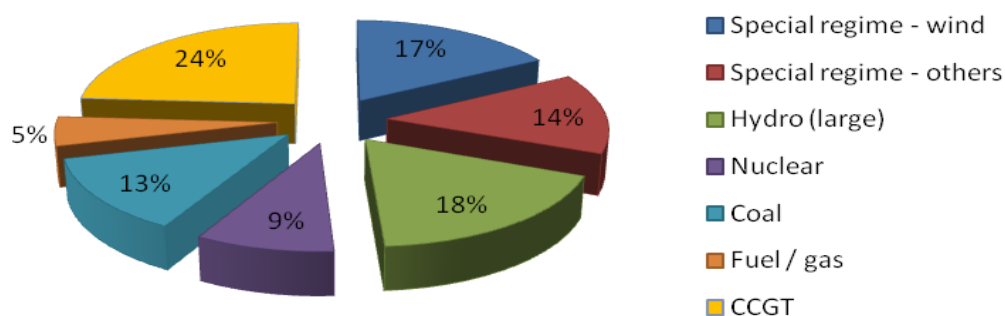


Figure 4. Installed generation capacity in the Spanish system at the end of 2008 (Source: REE)

Technology\Generation capacity (MW)	2007	2008
CCGT (Combined Cycle)	20.957	21.667
Fuel+Gas (conventional)	4.810	4.418
Coal	11.357	11.359
Nuclear	7.716	7.716
Hydraulic	16.658	16.658
Wind power	13.909	15.576
Other Special Regime	10.291	12.552
<b>TOTAL</b>	<b>85.698</b>	<b>89.944</b>

Table 6. Installed generation capacity structure in the Spanish electricity system (Source: REE)

On 31<sup>st</sup> December 2008, the generation capacity shares of the different companies in the “ordinary regime” (conventional generation) of Spanish mainland electricity system were as shown on the attached table:

	Available generation capacity	HHI
IBERDROLA GENERACIÓN, S.A.	29,4%	1805
ENDESA GENERACIÓN, S.A.	23,3%	
UNION FENOSA GENERACIÓN, S.A.	13,9%	
GAS NATURAL SDG, S.A.	6,3%	
HIDROELÉCTRICA DEL CANTÁBRICO, S.A.	5,4%	
E.ON	3,8%	
OTHERS	15,9%	

Table 7. Companies' market shares of available generation capacity (year 2008, 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, Union Fenosa, Gas Natural and HidroCantábrico.

#### Structure of the Generation Market - Energy

In 2008, total demand of power generation increased 1% and amounted to 279.868 GWh, which was covered as follows:

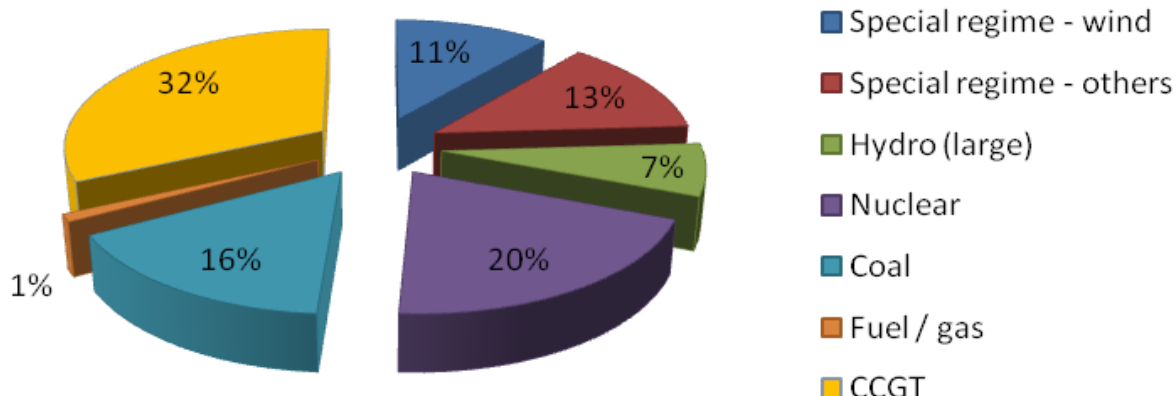


Figure 5. Electricity production in the Spanish system per technology during 2008 (Source: REE)

During this same year 2008, 15<sup>th</sup> December was the day on which the highest ever peninsular hourly demand was recorded, with a value of 42.961 MW. The maximum daily energy value occurred the day afterwards and amounted to 861 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 2007 (TWh)	energy 2008 (TWh)
Hydroelectric	26.381	21.175
Nuclear	55.046	58.756
Coal	74.946	49.726
Fuel+Gas (conventional)	10.771	10.858
Gas (combined cycle)	72.461	96.005
Special Regime	56.422	67.343
International Exchanges	-5.803	-11.221
Consumption in generation	-9.460	-9.280
Consumption in pumping	-4.421	-3.494
<b>Total demand</b>	<b>276.344</b>	<b>279.868</b>

Table 8. Balance of Spanish electric system, TWh (year 2008, Source: REE)



As for 2008, there were six groups of a significant size competing in the market: Endesa, Iberdrola, UNION FENOSA, (Repsol-YPF)/GAS NATURAL, Hidrocantábrico and Viesgo, whose market shares in energy are shown below:

	Energy Share	HHI
ENDESA GENERACIÓN, S.A.	27,6%	1789
IBERDROLA GENERACIÓN, S.A.	23,7%	
UNION FENOSA GENERACIÓN, S.A.	12,6%	
GAS NATURAL SDG, S.A.	7,0%	
HIDROELÉCTRICA DEL CANTÁBRICO, S.A.	4,9%	
E.ON (VIESGO GENERACIÓN, S.L.)	2,7%	
OTHERS (INCLUDING IMPORTS)	21,4%	

*Table 9. Market Shares in electricity generation (year 2008, Source: CNE)*

There are 5 companies with market shares in excess of 5%.

#### Trading venues: PXs and OTC

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 the electric energy supply, 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 2008 bilateral contracts amounted to a volume of energy of 73.973 GWh, representing about 26.5% of the market's total volume.

An energy volume of 253.580 GWh, —corresponding to a trading volume of 16.543 millions €, up 14,7% and 84,3% respectively on the previous year—, has been negotiated in the organised day-ahead and intraday market. The final average market price was 6903 c€/kWh (about a 48,5% above previous year average). The daily market price has represented in the region the 92,5% of the final price, the capacity payments a further 3,8%, and the solution to technical restrictions, the secondary regulation and other technical operation processes account for the remaining 3,6%.

#### 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, since June 2007, 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.

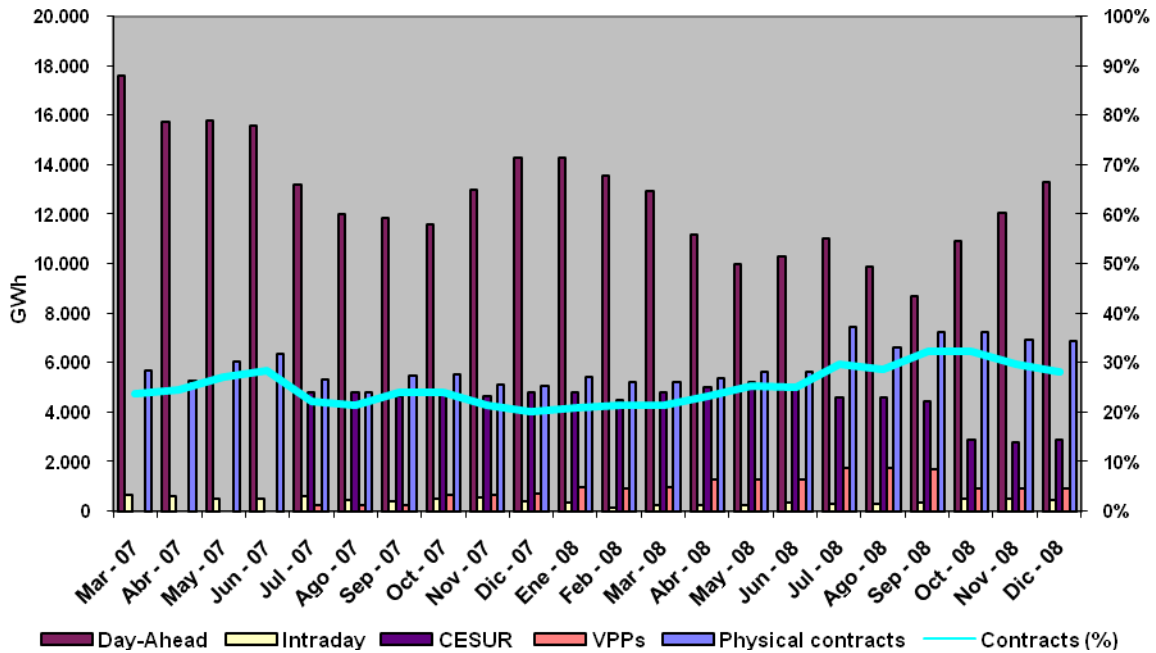


Figure 6. Monthly evolution of wholesale energy supply Source: CNE

As regards integration with neighbouring Member States, the unique 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. During 24,5% of the hours in 2008, prices in the Spanish market have been equal to those of the Portuguese market. Convergence in prices has increased during the first quarter of 2009.

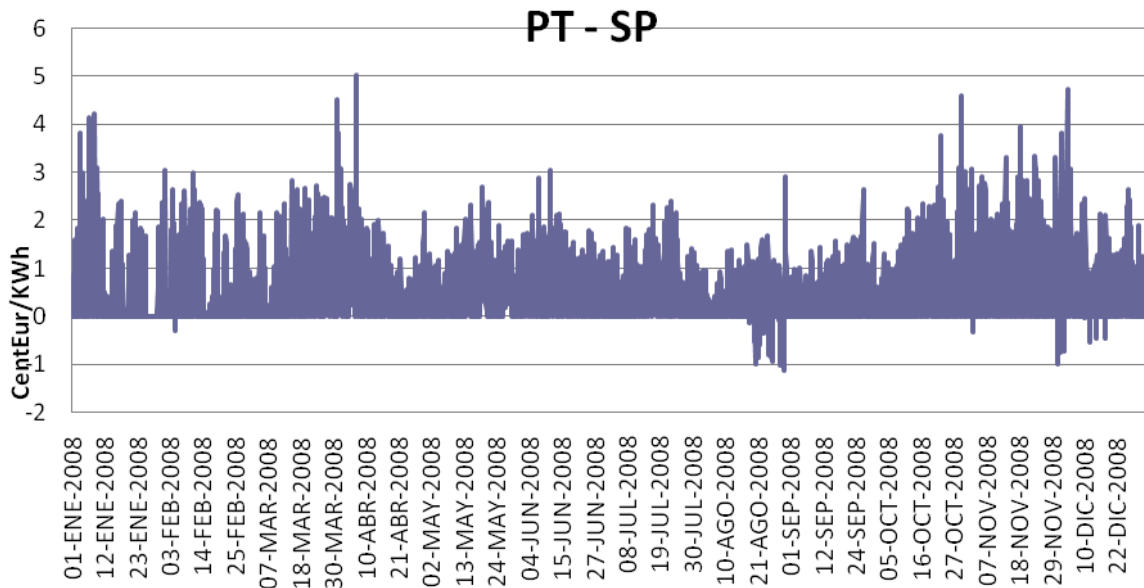


Figure 7. Day-Ahead price difference between Portuguese and Spanish area 2008. CentEur/KWh. (Source: OMEL)

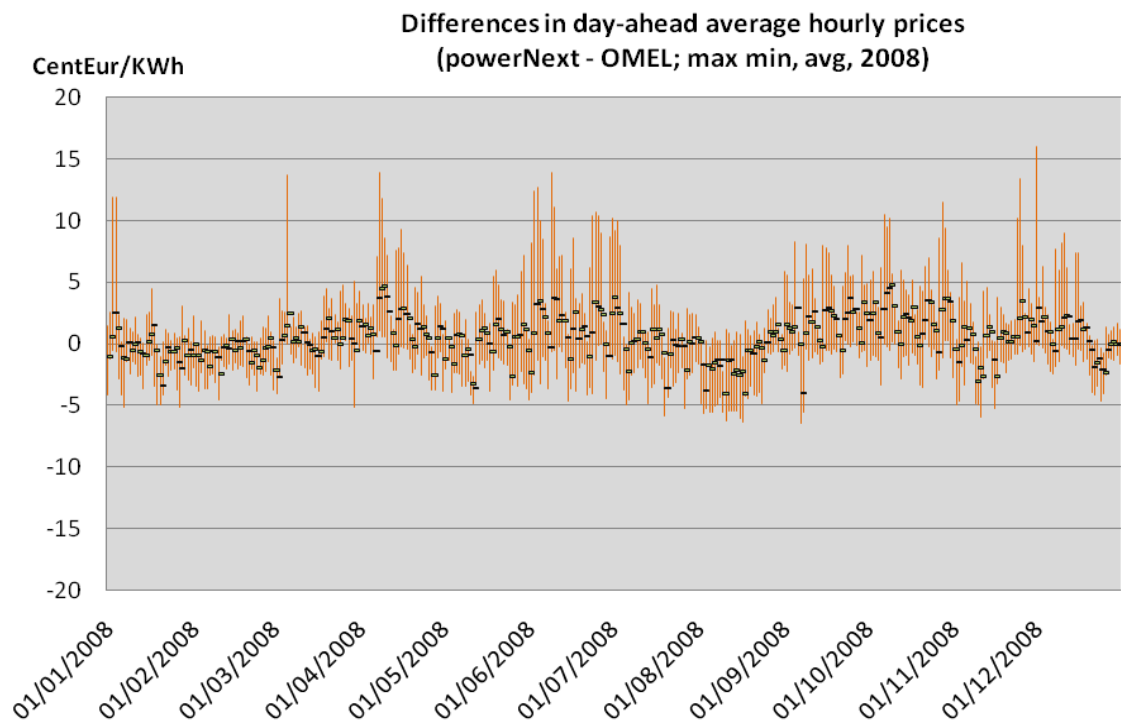


Figure 8. OMIE vs Powernext – 2008 (Source: Powernext and OMEL)

Differences between French Powernext and Iberian OMIE (price of the Spanish area) are shown in figure 8.

### Forward trading of electricity

In the context of the MIBEL Iberian electricity market Regulatory Council, during 2008 and the first six months of 2009, the National Energy Commission continued to supervise the futures market managed by OMIP, in co-ordination with the other members of the Regulatory Council.

In specific terms, by virtue of Article 5 of the Ministry of Industry, Tourism and Trade Order ITC/1865/2007 of 22 June, which regulates forward trading in electrical energy by distributors in the last six months of 2007 and the first six months of 2008, and the Order ITC/1934/2008, of 3 July, which regulates forward trading in electrical energy by distributors in the second six months of 2008, and 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 2008 and the first six months of 2009. This purchase obligation was 10% of the demand at a regulated tariff, as approved at the 22<sup>nd</sup> Spanish-Portuguese Summit in Badajoz, held on 24 and 25 November 2006.

In accordance with article 4 of the Ministry of Industry, Tourism and Trade Orders regulating forward trading of electrical energy by Spanish distributors, the expenditure by these agents arising from the provision of guarantees and the commissions required of them due to their participation in the market managed by OMIP must be acknowledged.

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.

The Order ITC/1659/2009 of 22 June, which establishes the mechanism for the transfer of free market clients 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 will be 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 auctions. In specific terms, they will be obliged to sell the monthly contracts with

delivery in July, August and September 2009 at the OMIP auctions in the fourth week of June 2009 and the third week of July 2009. The first of these auctions was held on 26 June 2009. The other open positions in futures contracts with delivery periods from 1 July 2009 onwards will be closed by distributors through their participation as vendors in the auctions for the purchase of energy from distributors (CESUR Auctions).

The energy traded on the MIBEL Iberian electricity futures market since it began (3 July 2006) until 30 June 2009 was 66 TWh, of which 73% was in auctions and the rest was traded on the continuous market. Figure 9 shows the changes 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 the last quarter of 2007, and from the second half of 2008 onwards, 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 the OMIP), which exceeded the previous records for continuous trading (February 2009: 1.477 GWh; January 2009: 1.237 GWh).

Figure 10 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, 82,9 TWh were traded on the OTC market in 2008, compared to 22,4 TWh traded in the OMIP market (auctions and continuous trading).

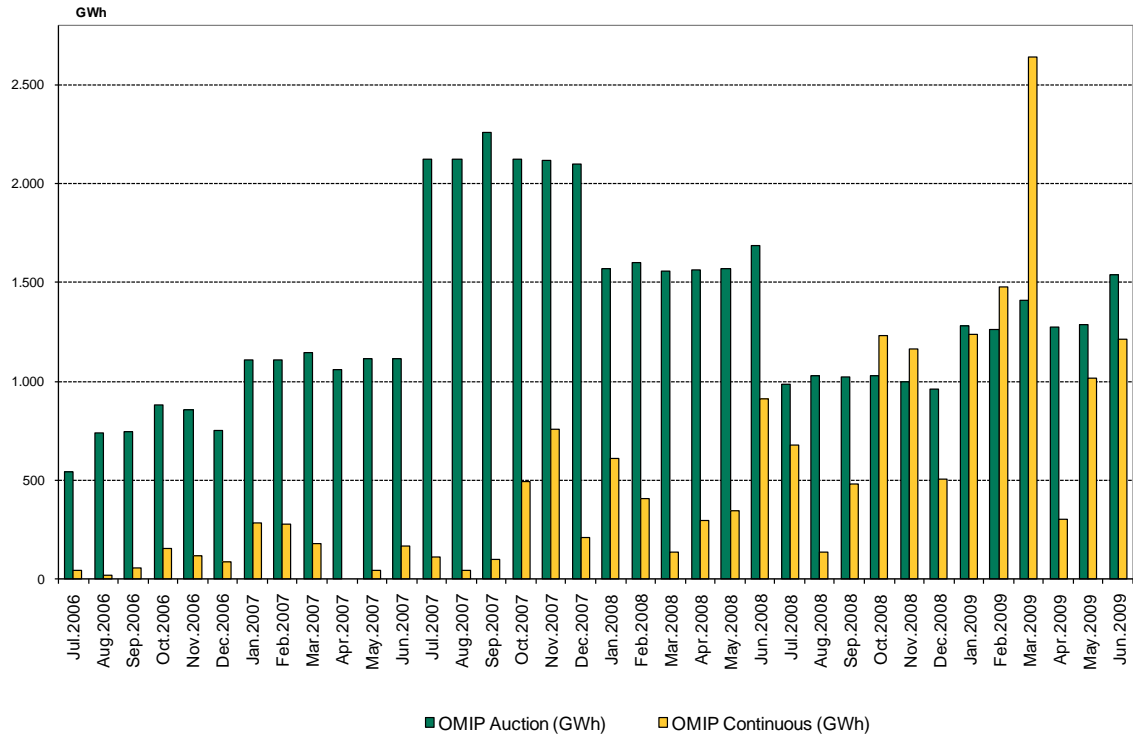


Figure 9. OMIP: Evolution of trading volumes in auctions and on the continuous market (GWh), July 2006 – June 2009

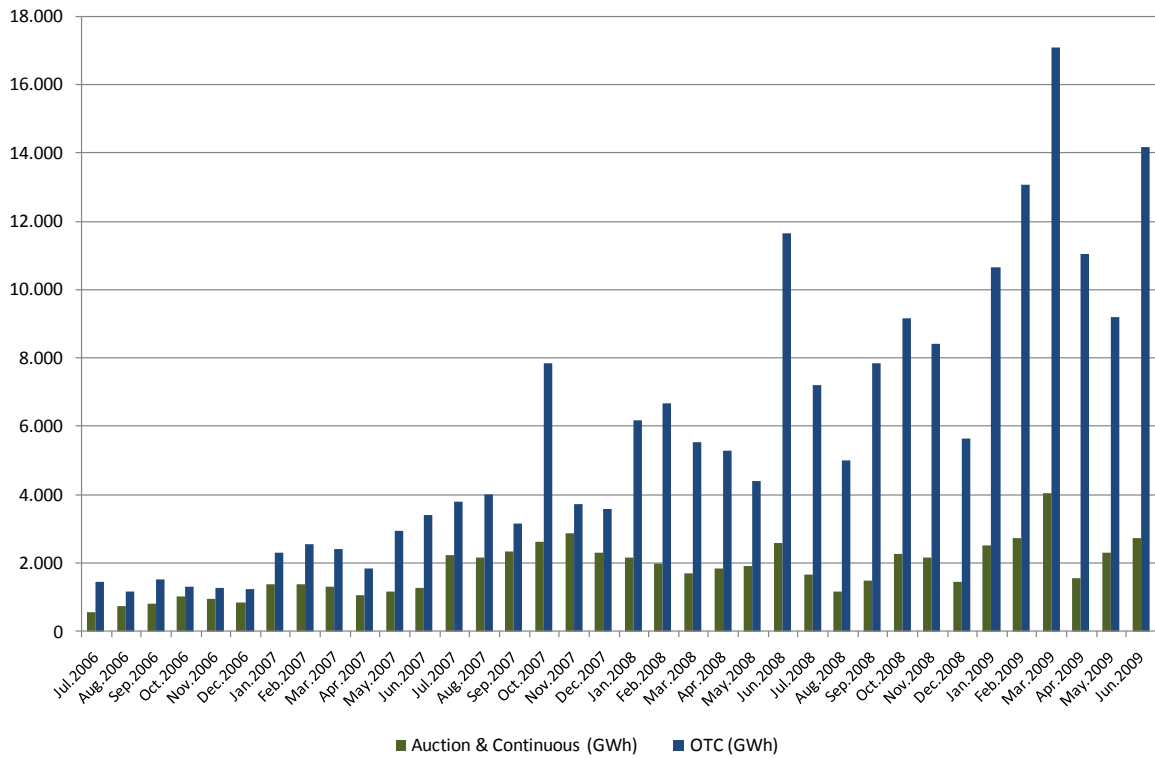


Figure 10. Organised and OTC markets: Evolution of trading volumes in OMIP (auctions and the continuous market) and evolution of OTC trading volumes (July 2006 – June 2009)

### Virtual Power Plant auctions (VPP auctions)

The twentieth additional provision of Royal Decree 1634/2006, of 29 December, which established the electricity tariff from 1 January 2007, established a schedule for holding five VPP auctions during the period between June 2007 and June 2008. The Resolution of the General Secretariat for Energy, of 19 April 2007, regulated them, and stipulated the main characteristics of these auctions.

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 Official State Bulletin (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. Royal Decree 324/2008 was implemented by the Resolution of the General Secretariat for Energy, of 13 May 2008, published in the (BOE) of 28 May, which regulates the VPP auctions provided for in the sole additional provision of Royal Decree 324/2008 of 29 February.

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:

- Product delivery period: in the first five auctions of primary energy two groups of products were auctioned (base load and peak load), with quarterly, six-monthly and annual delivery periods. In the sixth and seventh VPP auctions, two groups of products were auctioned (base load and peak load), but with six-monthly and annual



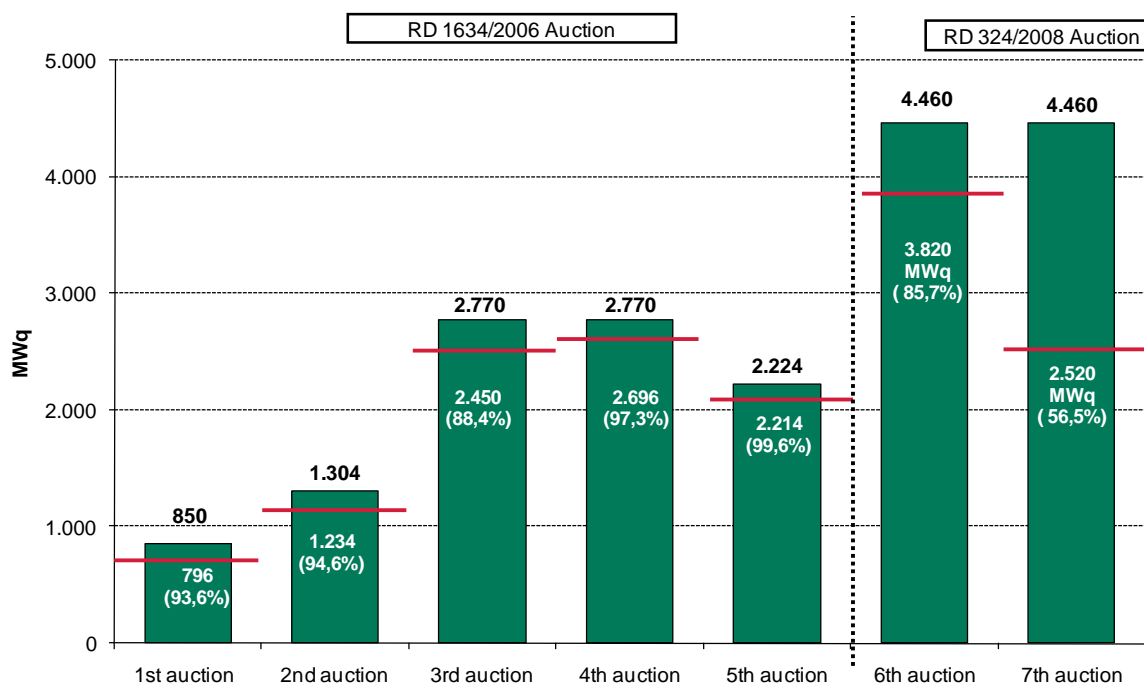
delivery periods (the auction of quarterly base load and peak load product was specifically excluded).

- Settlement of product: by physical delivery, with nomination before the daily market opens, in the first five auctions, and by financial settlement (automatic ), due to differences between the exercise price and the daily market price in the sixth and seventh auctions.
- Nominal power in the contracts: the nominal power in the contracts was increased from 2 MW to 10 MW between the first five auctions and the sixth and seventh auctions.
- Participants in the auction: in the first five auctions they had to be market agents, while in the sixth and seventh auctions this condition was not necessary.
- Definition of peak load product: in the first five auctions, peak load product was defined as timeframe options that could be exercised between 8:00 a.m. and midnight every day, except for Saturdays, Sundays and unchangeable national public holidays. In the sixth and seventh auctions, the timeframe for exercising peak load options was reduced to between 8:00 a.m. and 8:00 p.m. every day, except Saturdays, Sundays and unchangeable national public holidays.
- Designation of the institution(s) managing the auction: in the first five auctions, the managing institutions were designated by the auctioneers (Endesa and Iberdrola), while in the sixth and seventh auctions the National Energy Commission designated the managing institution , using the procedure stipulated in the legislation for public sector contracts, according to article 9 of Royal Decree 324/2008, which establishes the conditions and the operating procedure and participation in primary electrical energy emissions.
- Proposal for suspension of the auction to the General Secretariat for Energy: in the first five primary energy issues, the proposal for suspension of the auction came from the institution running it, and in the sixth and seventh auctions this task was entrusted to the National Energy Commission.

There was also an increase in the volume to be auctioned between the first schedule of auctions (the first five) and the second (the sixth and seventh auctions). The maximum volume to be auctioned was increased by 100,5% between the fifth and sixth auction.

The fourth and fifth VPP auctions, stipulated in the twentieth additional provision of Royal Decree 1634/2006 were held on 11 March and 10 June 2008 respectively, and the sixth auction, provided for in the sole additional provision of Royal Decree 324/2008, was held on 23 September 2008. The seventh primary energy issues auction, as stipulated in the sole additional provision of Royal Decree 324/2008, was held on 24 March 2009.

Figure 11 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 11. VPP Auctions: Power auctioned (MWq)

In the five auctions provided for in the twentieth additional provision of Royal Decree 1634/2006, the total power auctioned was 9.400 MWq, with the highest volumes recorded in the third and fourth auctions, of 2.770 MWq at each auction. 99.9% (9.390 MWq) of the total power auctioned in the first five auctions (9.400 MWq) was sold.

The volume of power for auction was increased significantly in the sixth and seventh auctions, by 100,5% compared to the power auctioned in the fifth primary energy issue, to 4.460 MWq. Taken together, the total power auctioned at these two auctions was 8.920 MWq, of which 71% (6.340 MWq) was sold.

Tables 10 and 11 shows the results of each of the five auctions provided for in Royal Decree 1634/2006, in terms of the power auctioned, power sold and the percentage of the power auctioned that was sold, in overall terms and for each group of products (base load and peak load), and the number of rounds that took place in each auction. For each product, Table 11 shows the prices arising from each of the five auctions (option premium), the exercise price and the total price of the energy auctioned (option premium plus exercise price). This same information is provided for the sixth and seventh VPP auctions, which were held in September 2008 and March 2009, in table 12 and in table 13.

	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		
	Total	Base	Peak	Total	Base	Peak	Total	Base	Peak	Total	Base	Peak	Total	Base	Peak
<b>Rounds</b>	7	7	2	6	6	5	4	4	4	10	10	6	14	14	7
<b>Target volume (MWq)</b>	850	600	250	1.304	1.104	200	2.770	2.570	200	2.770	2.570	200	2.224	2.000	224
<b>Sold volume (MWq)</b>	796	550	246	1.234	1.054	180	2.450	2.290	160	2.696	2.536	160	2.214	1.994	220

Table 10. VPP Auctions: Power auctioned and sold in the five auctions of Royal Decree 1634/2006, by product

Base Product	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		
	One-Quarter	Two-Quarter	Four-Quarter	One-Quarter	Two-Quarter	Four-Quarter	One-Quarter	Two-Quarter	Four-Quarter	One-Quarter	Two-Quarter	Four-Quarter	One-Quarter	Two-Quarter	Four-Quarter
<b>Exercise price (€/MWh)</b>	17	17	17	22	22	22	38	38	38	36	36	36	39	39	39
<b>Auction price (Option price) (€/MWh)</b>	27,17	27,33	29,89	16,08	21,88	24,08	17,63	13,77	12,96	23,35	24,18	24,60	25,82	26,55	27,64

Peak Product	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		
	One-Quarter	Two-Quarter	Four-Quarter	One-Quarter	Two-Quarter	Four-Quarter	One-Quarter	Two-Quarter	Four-Quarter	One-Quarter	Two-Quarter	Four-Quarter	One-Quarter	Two-Quarter	Four-Quarter
<b>Exercise price (€/MWh)</b>	52	52	52	51	51	51	65	65	65	63	63	63	55	55	55
<b>Auction price (Option price) (€/MWh)</b>	6,77	6,21	8,50	3,03	8,13	10,75	6,40	5,15	4,88	9,96	10,66	11,92	17,60	18,72	20,16

Table 11. VPP Auctions: Power auctioned and sold, option premium, exercise price and total price of the energy (option premium plus exercise price) in the five auctions of Royal Decree 1634/2006, by product

	6 <sup>th</sup> auction			7 <sup>th</sup> auction		
	Total	Base	Peak	Total	Base	Peak
<b>Rounds</b>	11	11	7	9	9	4
<b>Target volume (MWs)</b>	2.230	1.700	530	2.230	1.700	530
<b>Sold volume (MWs)</b>	1.910	1.660	250	1.260	760	500

Table 12. VPP Auctions: Power auctioned and awarded in the two auctions of Royal Decree 324/2008, by product. MWs: Equivalent Six-monthly Megawatt, which is defined as twice the power auctioned in a year, plus that auctioned in six months.

Base Product	6 <sup>th</sup> auction		7 <sup>th</sup> auction	
	Two-Quarter	Four-Quarter	Two-Quarter	Four-Quarter
<b>Exercise price (€/MWh)</b>	42	42	22	22
<b>Auction price (Option price) (€/MWh)</b>	30,01	25,96	13,96	16,52

Peak Product	6 <sup>th</sup> auction		7 <sup>th</sup> auction	
	Two-Quarter	Four-Quarter	Two-Quarter	Four-Quarter
<b>Exercise price (€/MWh)</b>	60	60	29	29
<b>Auction price (Option price) (€/MWh)</b>	20,76	17,32	10,62	13,55

Table 13. VPP Auctions: Option premium, price of exercise and total price of the energy (option premium plus price of exercise) in the two auctions of Royal Decree 324/2008, by product

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

The Order ITC/400/2007 of 26 February regulates 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 is added, so that distribution companies can acquire energy for sale to consumers in the regulated market, as well as purchases in the market managed by OMEL and the forward market organised by OMIP.

The distribution auctions are of a “temporary nature” and according to the Order ITC/400/2007, “are vital in preparing the entry into force of the last resort tariffs”. 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 (ii) 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. Until the 8th CESUR auction, held in March 2009, the products auctioned were settled by physical delivery of the energy; however, the products auctioned at the 9th CESUR auction, held in June 2009, will be paid for financially.

Furthermore, the second temporary provision of the Order ITC/1659/2009 of 22 June, which establishes the mechanism for transferring clients from the free market to the electrical energy supply of last resort and the calculation procedure and the last resort rates structure for electrical energy, states that distributors will be obliged to sell futures contracts through CESUR auctions, in order to end their positions in the futures market on contracts with a delivery period starting on 1 July 2009. In specific terms, they are obliged to sell: (i) the quarterly contracts with delivery in the third and fourth quarter of 2009 in the CESUR auction of June 2009; (ii) the products with a delivery period in the first and second quarter of 2010, in the CESUR auction to be held in the last six months of 2009 and (iii) the products with a delivery period in the third and fourth quarter of 2010, in the CESUR auction to be held in the first six months of 2010 .

Four auctions took place in 2008, on 13 March (4th CESUR auction), 17 June (5th CESUR auction), 25 September (6th CESUR auction) and 16 December (7th CESUR auction). In the first six months of 2009, the 8th and 9th CESUR Auctions were held on 26 March and 25 June 2009. The 9th CESUR is the first of these auctions that will be 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.

In the first three CESUR auctions (held between June and December 2007) a base load quarterly product was traded with delivery in the quarter following the auctions. A base load quarterly product and a base load six-monthly product were traded in the 4th to 6th auctions, both of which had a delivery period starting on the first day of the month following the auctions. A base load product and a peak load product were traded in the 7th, 8th and 9th auctions, both of which are quarterly and with a delivery period in the quarter following the auction.

Table 14 summarises the results of the nine CESUR auctions held to date. The volume auctioned in the fifth auction (2.700 MW with delivery in each hour of the third quarter of 2008, as the total of the quarterly and six-monthly products, and 900 MW with delivery in each hour of the fourth quarter of 2008) was lower than in the previous auctions. This was partly due to the effect of the decline in demand caused by the elimination of the general high voltage tariffs (Royal Decree 871/2007) starting on 1 July 2008. In addition, another factor that contributed to the volume auctioned in the fifth auction being lower was that 3.500 MW with delivery in the third quarter of 2008 (Q3-08) had already been auctioned in the fourth auction.

	19-jun-07	18-sep-07	18-dec-07	13-mar-08		17-jun-08		25-sep-08		16-dec-08		26-mar-09		25-jun-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			
				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
<b>Participants</b>	25	26	24	26		25		25		26		24		27		26	
<b>Winners</b>	21	18	23	26		21		22		21		19		24		26	
<b>Rounds</b>	25	15	14	16		12		17		16		17		13		11	
<b>Target volume (MW)</b>	6.500	6.500	6.500	3.500	3.500	1.800	900	2.000	1.000	3.400	200	2.400	450	4.152	670	4.784	670
<b>Starting price (€/MWh)</b>	70	60	85	85	85	85	85	90	90	82	92	57	63	55	67	58	70
<b>Auction price (€/MWh)</b>	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
<b>Products</b>	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

Table 14. CESUR Auctions: results of the nine auctions held



The figure 12 shows the aggregate hourly demand by the five Spanish distributors participating in the CESUR auctions, with a breakdown of the energy they purchased in these auctions.

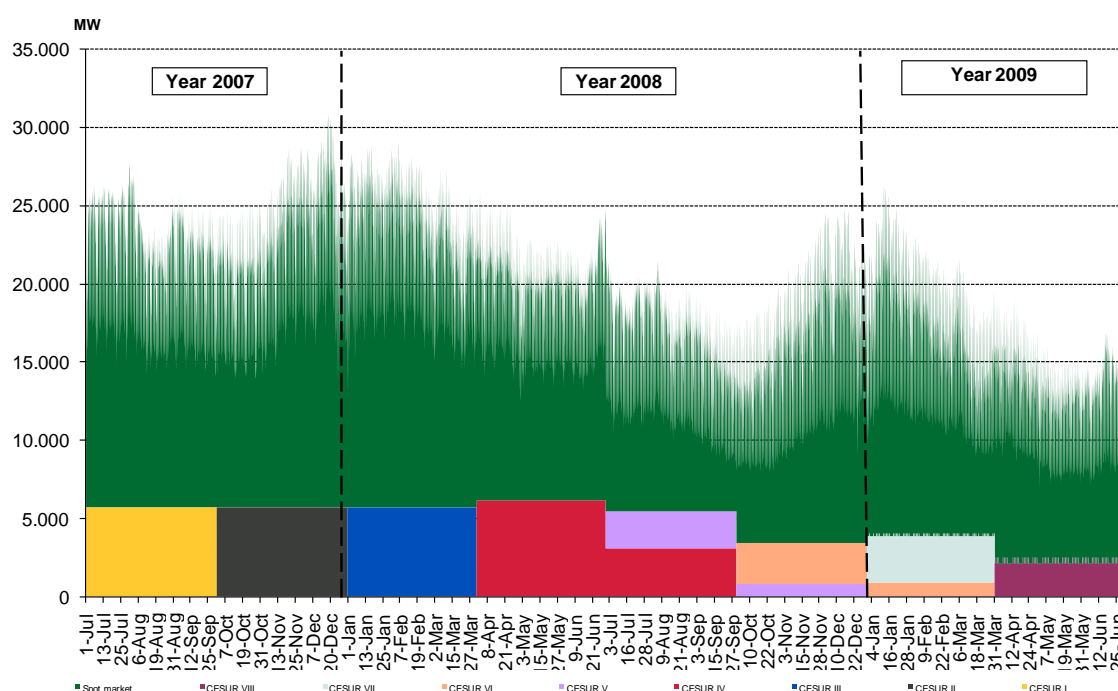


Figure 12. CESUR Auctions: Hourly purchases by Spanish distributors (1 July 07 to 30 June 09)

### 3.2.2 Description of the retail market

Until 2008, all consumers could choose between being supplied in the regulated market (end-user tariff through distribution companies) or in the liberalised market under free market conditions. Since 1 July 2008, high voltage consumers cannot be supplied at a regulated end-user tariff any more. Finally, end-user electricity regulated prices disappeared for all consumers on 1 July 2009. From this moment on, a last resort tariff is in place for consumers with contracted load capacity < 10 kW.

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.

As regards industrial consumers in 2008, a massive switch from tariff-based market to the liberalised based scheme has happened due to the phasing out of end-user tariffs. The number of households in the liberalised market has slightly increased.

Consumer group	Number of customers Dec 2007	Number of customers Dec 2008	Difference 2008-2007	Difference 2008-2007 (%)
Large industry eligible before Jan 2003	19.559	41.329	21.770	111.3%
Medium size industry eligible since Jan 2003	85.761	147.260	61.499	71,7%
Households eligible since Jan 2003	1.663.545	1.629.364	-34.181	-2,1%
<b>Total</b>	<b>1.768.865</b>	<b>1.817.953</b>	49.088	<b>2,8%</b>

Table 15. Number of customers in the liberalised market and difference in 2007 – 2008

Market	Number of customers Dec 2008	(%)
Liberalised	1.817.953	7.11
Tariff based system	23.759.685	92.89
<b>Total</b>	<b>25.577.638</b>	<b>100.00</b>

Table 16. Number of customers in tariff and in the liberalised market at the end of 2008 (Source: CNE)

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%.

The companies with the largest liberalised market shares are those belonging to the large established energy groups, i.e. Endesa, Iberdrola, UNION FENOSA, and GAS NATURAL, whose market shares add up to 94%.

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% of its corporate capital, and Viesgo, which was acquired by the Italian ENEL.

Supplier company	Share clients
ENDESA	60,37%
IBERDROLA	20,32%
UNION FENOSA	7,45%
GAS NATURAL	5,69%
HIDROCANTÁBRICO	5,64%
E.ON (Enel Viesgo )	0,38%
Others	0,15%

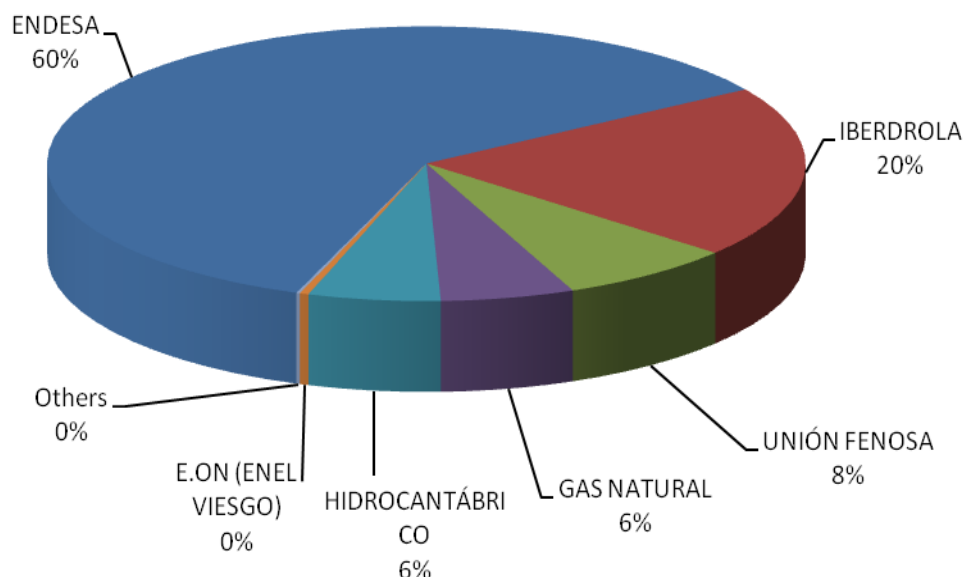


Table 17. Market shares of supply companies in the liberalised market by number of customers  
(Source: CNE)

In comparison with 2007, the number of clients increased by 21% in the liberalized market in 2008. The company with the biggest increase was IBERDROLA (186.098 clients), and its share went up from a 14,14% in 2007 to 20,32% in 2008, followed by ENDESA with an

increase of 143.230 clients, although ENDESA reduced its share from 64,87% in 2007 to 60,27% in 2008. Moreover, as GAS NATURAL and UNION FENOSA are completing a merger process, concentration will increase when the process is finished.

Supplier company	Share energy
ENDESA	42,75%
UNION FENOSA	15,11%
IBERDROLA	14,78%
Others	11,38%
HIDROCANTÁBRICO	9,17%
GAS NATURAL	5,89%
E.ON	0,91%

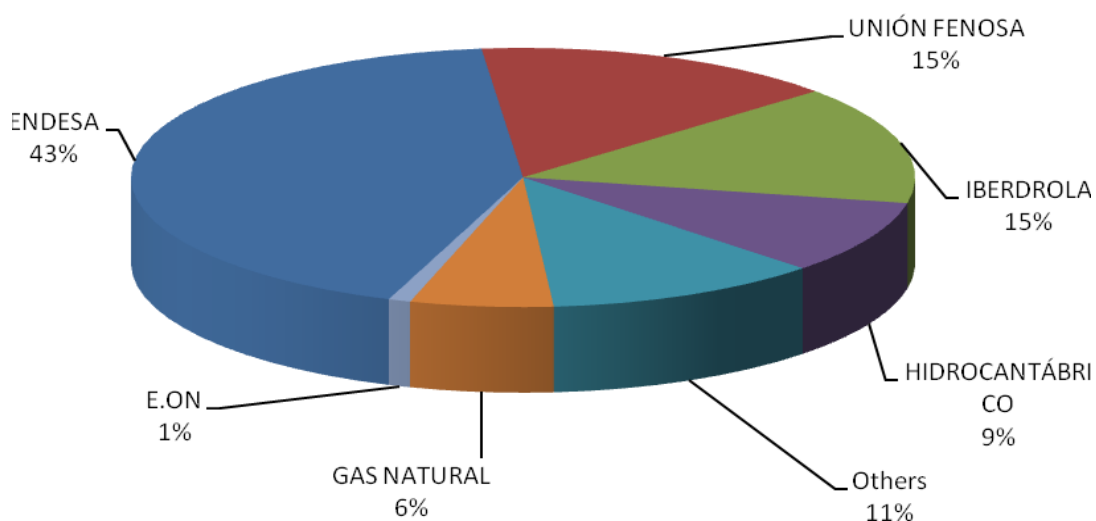


Table 18. Market shares of supply companies in the liberalised market by energy (Source: CNE)

The energy supplied in the liberalized market increased by 51,6% from 2007 to 2008, mainly due to the elimination of high voltage tariffs on July 1, 2008. Other suppliers, not included in the group of the largest companies, showed the biggest increase in absolute value of energy supplied from 2007 to 2008 (8.705 GWh). ENDESA increased its sales by 8.247 GWh, followed by IBERDROLA, with 8.137 GWh. The share of other suppliers went up from 4,57% in 2007 to 11,38% in 2008, while ENDESA reduced its share from 52,80%

in 2007 to 42,75% in 2008 and IBERDROLA increased its share from 10,56% in 2007 to 14,78% in 2008.

Law 17/2007 creates the Office for Switching Supplier, assigning to it the responsibility to monitor the process of supplier switching by consumers. The Office shall guarantee that all processes associated to the electricity suppliers switching (and gas as well) take place under transparent, objective and non-discriminatory conditions, so that no agent can take advantage of its position. An outstanding objective will be to avoid that vertically integrated companies can act against customers switching to independent suppliers.

In order to analyse the switching rates in terms of both: number of customers and energy, three categories are considered:

- Large industry: large consumers connected above 1 kV.
- Medium-small size industry: consumers connected below 1 kV.
- Households, all connected in Low Voltage (below 1 kV).

Switching: in number of customers.

	customers in liberalised market	net number of supplier switches in 2008 (different to the group of the distributor)	net switching rate in 2008	accumulated number of customers that switched to a supplier (different to the group of the distributor) since 2003	accumulated net switching rate since 2003
large industry (connected > 1 kV)	41.329	5.040	12,2%	13.178	31,9%
medium-small size industry (connected < 1 kV)	147.260	12.759	8,7%	34.178	23,2%
domestic	1.629.364	-77.846	-4,8%	348.175	21,4%
<b>total (in absolut terms)</b>	<b>1.817.953</b>	<b>95.645</b>	<b>5,3%</b>	<b>395.531</b>	<b>21,8%</b>

*Table 19. Percentage of customers involved in the change of supplier*

A negative switching rate means that suppliers not belonging to the group of the distributor have lost customers.

It means that those customers have either returned to the regulated market or switched to the supplier of the group of the distributor.

Switching: in energy.

	energy in liberalised market	net energy that switched supplier in 2008 (different to the group of the distributor)	net switching rate in 2008	accumulated energy that switched to a supplier (different to the group of the distributor) since 2003	accumulated net switching rate since 2003
large industry (connected > 1 kV)	78.673	14.993	19,1%	37.176	47,3%
medium-small size industry (connected < 1 kV)	11.300	990	8,8%	2.978	26,4%
domestic	6.109	-187	-3,1%	1.156	18,9%
<b>total (in absolut terms)</b>	<b>96.082</b>	<b>16.170</b>	<b>16,8%</b>	<b>41.310</b>	<b>43,0%</b>

Table 20. Percentage of energy volume involved in the change of supplier

Table below shows main suppliers' energy shares classified by distribution network, as an indicator of switching rate (and loyalty degree):

%CUOTA ENERGÍA COMERCIALIZADOR	DISTRIBUIDOR				
	E.ON	ENDESA	H.CANTABRICO	IBERDROLA	U. FENOSA
CENTRICA ENE	0,00	0,00	0,10	0,00	0,00
CONS DIR MER	5,28	0,00	0,00	0,00	0,00
E.ON	14,23	0,65	0,00	0,75	0,22
ENDESA E.	22,49	74,75	8,38	14,24	10,05
ENR.GRAN.CON	0,00	7,79	2,82	0,00	0,00
FACTORE.	0,00	0,00	0,04	0,00	0,00
GASNAT COMER	2,81	2,85	0,52	4,19	3,66
GASNAT SERVI	0,18	0,47	0,02	0,27	0,34
HCANTAB ENER	6,59	3,90	80,64	9,46	5,55
HISPAELEC E.	0,06	0,15	2,16	0,77	0,06
IBERDROLA SA	0,76	1,40	1,37	35,32	3,09
NATURGAS COM	0,00	0,01	0,00	3,94	0,00
NEXUS E.	0,01	1,13	0,00	0,00	0,00
OTROS	42,00	1,95	0,12	18,00	18,01
U.FENOSA COM	5,49	4,60	3,83	13,07	57,64
U.FENOSA GEN	0,08	0,34	0,00	0,00	1,37
<b>TOTAL</b>	<b>100,00</b>	<b>100,00</b>	<b>100,00</b>	<b>100,00</b>	<b>100,00</b>

Table 21. Loyalty degree (and switching) indicators by network as of Dec.2008 – Source: CNE

### Retail price levels

In Spain access tariffs are regulated prices which encompass within a single payment the different access costs defined in Royal Decree 1164/2001. The breakdown of the different cost components defined in the questionnaire (energy, networks, other levies and taxes) in each one of the access tariffs selected in the questionnaire is not known.

An estimation exercise is presented below in which the access costs of each valid access tariff are distributed by components, following the cost percentage structure included in the mean access tariff.

The hypotheses considered for separating the different cost concepts in the estimation exercise requested in this questionnaire are as follows:

- The access tariffs on which the components have been calculated are those specified in Royal Decree 1634/2006, dated December 29th:
  - o 2.0nA for band DC (domestic consumer).
  - o 3.0A for band IB (small industrial consumer).
  - o 6.2 for band IE (large industrial consumer).
  
- The transmission, distribution and trading management costs (network costs) have been calculated on the basis of the access tariff corresponding to each type of consumer, after deducting the percentage corresponding to other levies (Costs of the Market Operator -OMEL-, the Transmission System Operator -REE-, the regulatory authority -CNE-, off-peninsular Compensation, the cost of the Nuclear Moratorium, the 2nd part of the nuclear fuel cycle, compensation to distributors included under the 11th Temporary Provision for interruptibility and purchase of electricity from generating facilities under the special regime, the special regime surcharge, the imbalance in revenues prior to 2003, the imbalance in revenues of 2005- 2008, and the cost of extra-peninsular generation from 2001 to 2005). The percentage of these levies is a proportional distribution which is calculated in accordance with the cost pricing in 2008.

- The amount corresponding to “levies included in network costs” is obtained by applying to each corresponding access tariff the cost percentage of the Market Operator, the Transmission System Operator, CNE, off-peninsular Compensation, supply diversification and security (the cost of the Nuclear Moratorium, the 2nd part of the nuclear fuel cycle, compensation to distributors included under the 11th Temporary Provision for interruptibility and purchase of electricity from generating facilities under the special regime, the special regime surcharge), the imbalance in revenues and the review of the extra-peninsular generation cost.
- The energy component is calculated by adding to the average market price corresponding to year 2008 the cost of complementary services, power guarantee payments and losses, corresponding to each time block access tariff. The same generation cost has been applied for all consumer types.
- The electricity suppliers’ commercial margin has not been included in the final calculated price in the following table.
- Taxes are obtained by applying to the end price the electricity tax (5,113%) and then VAT (16%).

Typical Consumers	Network Costs	Levies	Energy Costs (2)	Taxes	End Prices (cent€/kWh)
<b>Band DC (1)</b>	2,15	2,43	8,99	2,97	16,54
<b>Band IB</b>	2,29	2,59	8,67	2,05	15,60
<b>Band IE</b>	0,31	0,35	7,29	1,74	9,68

(1) This is not a representative domestic customer in Spain.

(2) Commercial margin not included.

*Table 22. End User Price by Components of Typical Consumers (cent€/kWh). Year 2008*

It should be pointed out that the domestic consumer type (Band DC) is not representative of the domestic consumption registered in Spain due to the fact that the consumer chosen is one with the nocturnal tariff. At present, only 15% of all domestic and other uses



customers have chosen this tariff. In Spain, the representative domestic consumer enjoys tariff 2.0 without discrimination for nocturnal consumption (85% of all domestic consumers).

The calculation of the end user price by components of type Band Dc, without taking into account price time discrimination, that is, applying access tariff 2.0A, is shown in the following chart. It should be noted that the end user price published by Eurostat for this consumer type applies integral tariff 2.0N.

Typical Customers	Network Costs	Levies	Energy Cost	Taxes	End Prices (cent€/kWh)
<b>Dc (1)</b>	2,06	2,33	9,37	2,97	16,73

(1) Invoiced at tariff 2.0A (without discrimination for nocturnal consumption)

*Table 23. End Price by Components for tariff 2.0A (cent€/kWh). Year 2008*

### Complaints

CNE just offers information services<sup>3</sup> to consumers since the Spanish regulator has no competences to resolve consumers' disputes. The regulator may advice 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.

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<sup>3</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)

Since July 2007<sup>4</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.
- 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 Official Bulletin of the State, to request from the agents that operate in the electricity markets all the information needed to carry out the monitoring functions.

#### *Recent mergers and acquisitions in the electricity sector*

##### a) ENDESA

Regarding merger operations undertaken in 2008 in the electricity sector, a special mention should be made to the acquisition of control by ENEL and ACCIONA of the

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<sup>4</sup> Law 17/2007

Spanish society ENDESA. Despite this operation was concluded in 2007, there were several new issues to highlight in 2008 as follows.

On 26<sup>th</sup> March 2007, ENEL and ACCIONA agreed to acquire joint control of ENDESA by launching a joint public bid for the shares in ENDESA that they did not already own or control.

On 2<sup>nd</sup> April 2007 ENEL, ACCIONA and E.ON agreed that ENEL and ENDESA would transfer a number of rights and assets to E.ON, an energy company headquartered in Germany with its main activities in the generation, transmission and supply of electricity and gas throughout Europe and in the US. These rights and assets include ENEL's existing electricity generation, distribution and supply business in Spain (except for its stake in EUFER), certain additional ENDESA assets located in Spain, and ENDESA's current business in Italy, together with related businesses in France, Poland and Turkey.

The acquisition of joint control of ENDESA by ENEL and ACCIONA had already been notified to and authorised by the Commission on 5 July 2007.

However, on 18 March 2008 ENEL, E.ON and ACCIONA concluded another agreement modifying their 2007 agreement concerning the assets to be transferred to E.ON.

Under the Merger Regulation, the change in scope of the transaction required a new notification, as the previous decision had been taken on the basis of a different scope. However, the Commission's analysis showed that the impact of the amendments on the affected market is negligible because of the minimal changes in the market shares of the parties after the new agreement.

The Commission concluded that the proposed transaction would not raise competition concerns.

So, in June 2008 the European Commission approved under the EU Merger Regulation the acquisition of exclusive control through a public takeover bid for ENDESA S.A., by ENEL S.p.A., based in Italy, and ACCIONA S.A., based in Spain.

After examining the operation, the Commission concluded that the proposed transaction would not significantly impede effective competition in the European Economic Area (EEA) or any substantial part of it.

b) GAS NATURAL – UNION FENOSA

Another important acquisition took place in 2008. On 3<sup>d</sup> September 2008 GAS NATURAL SDG, S.A. notified its intention to takeover UNION FENOSA, S.A. to the Spanish Competition Commission (CNC), which in turn asked for CNE's mandatory report, with non binding effects, on 4<sup>th</sup> September 2008.

GAS NATURAL is the dominant player in the Spanish gas market operating along almost the entire gas value chain. Recently, it has entered in the electricity sector focusing mostly in generation and retailing activities. It is also active in France, Italy, Argentina, Brazil, Colombia, Puerto Rico and Mexico.

On the other hand, UNION FENOSA, S.A. is a Spanish electricity operator mainly devoted to electricity generation, distribution and supply activities. However, UNION FENOSA has also developed distribution and supply activities Spanish gas market and is active in other countries such as Mexico, Colombia, Panama, Guatemala, Nicaragua, Dominican Republic and Costa Rica.

CNE issued a report identifying the relevant energy markets affected by the abovementioned merger, and analyzing the possible obstacles that it could entail for effective competition. As a result, the CNE recommended the CNC to approve the operation subject to several conditions. Finally, the CNC approved the merger on GAS NATURAL and UNION FENOSA subject to commitments agreed with GAS NATURAL, affecting both gas and electricity markets.

As regards the electricity sector, the merger was deemed to have three main effects: a moderate increase of unilateral market power, a perceived increase in coordination between the new group and the main incumbents (IBERDROLA and ENDESA) and a

vertical effect due to the relationship between the dominant position of the group in the gas market and its new position in the generation market.

The first effect results from the new group achieving a greater and more diversified generation capacity, including marginal and infra-marginal technologies. The new group will control around 19% of installed capacity, getting closer in size to leading generators ENDESA and IBERDROLA, and causing an increase of HHI of about 160 points. Moreover, the resulting group will control more than 28% of the flexible available generation capacity that can be used strategically to alter the prices in pool. The greater size of the new group and the reinforcement of its flexible capacity will turn it into “pivotal” in order to supply demand, although such pivotality will be limited to a small percentage of hours per year (around 6%).

The second effect, identified by CNC, consists in the perceived risk of coordination between the new group, and the two major incumbents, ENDESA and IBERDROLA, in the electricity wholesale markets. According to CNC this effect would stem basically from the greater symmetry of the new group relative to the incumbents, as well as from the fact that they would meet more often in geographic areas characterized by electricity transmission bottlenecks.

The third identified effect is an increase in the new group incentive to increase the gas price in the retailing segment, resulting from its greater share in the electricity generation market.

In order to eliminate the negative perceived effects of the merger on competition in the electricity sector, the CNC accepted the commitment by GAS NATURAL to sell 2000 MW of CCGTs, located in the geographic areas where transmission congestions usually occur, and to maintain the supply of gas to these CCGTs during a period of two years under market conditions.

## **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, six LNG terminals are operative in the Spanish gas system with 1.861 GWh/day capacity. In 2008, booked TPA capacity at LNG terminals was around 69%, and there was available capacity in all regasification plants. Spain also has several international gas pipeline connections with other countries: Algeria through Morocco; Portugal through Tuy and Campo Maior; and France through Larrau and Irún.

While LNG terminals represents 49 bcm of entry capacity, the connection from Algeria through Morocco represents 12 bcm and the connection with France at Larrau 2,5 bcm.

In 2008, there was available capacity in the connection with Portugal for both senses; entry capacity with Morocco (Tarifa) was 85% booked, so there is a 15 % available TPA capacity in the interconnection with Morocco.

However the capacity at the interconnection with France is scarce and has been identified as one of the main obstacles to create a Gas Regional Market in the South Region. The existence of sufficient accessible interconnection capacity between France and Spain is a prerequisite to foster competition between gas companies, increase the liquidity of the market and provide diversification and security of supply.

In brief, at the end of 2008, available entry capacity under TPA in Spain was:

- In regasification plants: 31 % of total capacity.
- International connection with Morocco (Tarifa): 15 % of total capacity
- International connection with Portugal: available capacity in both senses of flows
- International connection with France: fully booked.

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

In order to resolve the congestion at the international interconnection with France, it should be mentioned the work carried on in the framework of the South Gas Regional Initiative on Open Subscription Periods (OSP) and Open Season procedures (OS) at the FR- SP border.

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

The OSP procedure was the allocation process, among requesting shippers, of the available existing or under construction capacity between France and Spain. The OSP established the process to book exit capacity from one country and entry capacity into the adjacent network in both directions and in a coordinated way.

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

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

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

On 3 October 2008, the French and Spanish transmission system operators, TIGF and Enagas, published on their websites the procedures for the commercialization of existing and committed capacity at the cross border point of Larrau. By the end of 2008 capacity products for both directions, Spain- France and *vice versa*, were offered.

OSP results denoted that the total demand largely exceeded the offered capacity. Capacities offered on the long term, from April 2009 to March 2013, and on the short term, from April 2009 to March 2010, were entirely allocated. As a consequence of this capacity allocation, the number of shippers at the interconnection point of Larrau will increase from 4 to 13 from April 2009.

This procedure is the first coordinated capacity allocation developed at an international interconnection point in the ERGEG South Gas Regional Initiative.

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

b) Open Season (OS) procedure

The OS procedure emerges from the need for increasing interconnection capacity between France and Spain. This procedure's aim is to assess the interconnection capacity needs of the stakeholders and, on a second phase, to organize a request and allocation procedure for these capacities.

At the end of 2008, CNE and CRE carried out a market consultation on the future design of the OS for the development of gas interconnection capacity between France and Spain and inside France.

The capacities to be developed are:

- Western axis: New investments in existing interconnections (Larrau /Biriadou, and TIGF-GRTgaz interface) available from 2013. These investments are not only orientated to cross border interconnections, but they will include expansions of capacity inside France.
- Eastern axis: Creating a new interconnection point at Figueras/Le Perthus with available capacity offer to and from the North of France, available from 2015.

On the French side, a long-term financial commitment of shippers is necessary in order that TSOs will decide to invest on infrastructures. TSOs and Regulators are currently defining a detailed procedure, with Stakeholders participation, in order to establish a legal and economic framework to organize the allocation process.

Taking into account the achievement up to date, the first binding phase allocation is expected to be launched before end of summer of 2009 to decide on the investment before the end of 2009.



### Allocation capacity rules at underground storages

Also in Spain, the underground storage (US) capacity is insufficient and it constitutes a scanty resource. To resolve congestions at underground storage, there are two criteria of storage capacity allocation: about 90% of US capacity is allocated proportional (pro-rata base) to the sales to final clients and the rest is allocated by auction (10%).

On 10 April 2008 OMEL carried out the first 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 2008 to 31 March 2009. The auction process was monitored by the CNE.

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

### Network Tariffs

By publishing Ministerial Orders, the Government annually determines the rates, tolls and fees of natural gas. These are the single applicable prices for the entire country. The tariff model applied in Spain is the entry-exit model with a single balancing area, which results in a postal tariff model.

Under the Hydrocarbon Act, the CNE shall participate, either by making a proposal or by issuing a report in the process of determining the rates, tolls and remuneration of energy activities.

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 – both in the regulated market and in the liberalized market, 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.

### Network charges

Type Consumers (1)	Annual Consumption (KWh)	Access Toll (cent€/kWh) (2)
<b>D2</b>	23 260	2,44
<b>I1</b>	116 300	1,23
<b>I4</b>	116 300 000	0,26

(1) Consumer types according to the new methodology implemented by Eurostat from January, 1st 2008 onwards. Consumer D2: 5 560 kWh < Consumption < 55 600 kWh, I1: Consumption < 278 000 kWh and I4: 27 800 000 kWh < Consumption < 278 000 000 kWh.

(2) Not including taxes.

*Table 24. Network tolls by types of natural gas consumers (cent€/kWh). 2008*

Prices shown in the table above correspond to year 2008, as published in Order ITC/3863/2007, dated December 28<sup>th</sup>, and they are the result of adding levies for receiving

and unloading LNG carrier, regasification, transport and distribution, and the underground natural gas storage fee<sup>5</sup> as applied to each type consumer. These prices also include network costs as well as other regulated costs, such as the CNE levy, the System Operator fee, the provisional re-routing owing to the settlement from 2002 to 2006.

A load factor has been assumed at the entry point of 85% and at the exit point of 50% for consumer type D2. For I1 and I4 consumers, the load factors used in the questionnaire, 56% and 69% respectively, have been used.

- Typical household

The annual consumption of the typical household is calculated dividing the energy sold to tariffs generally used by domestic customers, (3.1 and 3.2), by the number of metering point. Price in the table below is for year 2008, and is calculated with the method and hypothesis used to estimate prices for the D2 consumer.

Type Consumers	Annual Consumption (KWh)	Access Toll (cent€/kWh) (1)
<b>Typical household</b>	10.000	2,77

(1) Not including tax

*Table 25. Network tolls of the typical household consumers (cent€/kWh). 2008*

- Storage charges: average value for the country

Storage charges were determined for 2008 in the Ministerial Order ITC/3863/2007 and they are unique for the Spanish territory.

The operational storage, as established in Royal Decree 949/2001, is included under the transport and distribution toll.

Regarding the underground storage toll, the prices for 2008 were:

- Fixed quantity: 0,000241 €/kWh/month.

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<sup>5</sup> Not including the LNG storage fee

- Variable quantity: 0,000184 €/kWh.

Regarding the variable term of the LNG storage toll, the price for 2007 was 0,02098 €/MWh/day.

In Spain, the main DSOs operating in the natural gas market are the following companies: Gas Natural, Naturgas Energía, Endesa, Unión Fenosa and Gas y Servicios Mérida.

### **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.

Definition of gas transmission and distribution companies under the amended Spanish Hydrocarbons Act is as follows (article 58):

- a) Transmission companies are legal entities which are authorized for the building, operation and maintenance of LNG regasification plants, natural gas transmission and natural gas storage facilities.
- b) 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.

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. New article 63 states that:

1. *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.*
2. *Transmission companies that operate any of the basic network facilities of natural gas, as defined in point 2 of article 59, must have as their sole corporate purpose in the gas industry the transmission activity as defined in section a) of article 58; they may have among their assets gas pipelines in the secondary transport network, where they must keep internal separate accounts for regasification, storage and transmission activities.*
3. *Nevertheless, a group of companies may undertake activities that are incompatible under the preceding sections, provided they are performed by different companies and meet the following criteria:*
  - (a) *Those people responsible for the management of companies engaged in regulated activities may not participate in company structures of the integrated undertaking which are responsible, directly or indirectly, for the day-to-day operation of the production and commercialization;*
  - (b) *Appropriate measures must be taken to ensure that the professional interests of those people responsible for the management of companies engaged in regulated activities are taken into account in a manner that ensures that they are capable of acting independently. In particular, guaranties must be adopted regarding their remuneration and cessation.*

*Companies that carry out regulated activities, and those people responsible for their management, may not participate in the share capital of companies engaged in production and commercialisation.*

*Finally, companies that carry out regulated activities, and those people responsible for their management, may not share any commercial information with companies of the corporate group in the case that these companies carry out liberalized activities.*

- (c) *Companies carrying out regulated activities shall have effective decision-making rights, independent from the integrated undertaking, with respect to those assets necessary to operate, maintain or develop the LNG regasification facilities, and the transmission, storage and distribution facilities of natural gas.*

*This should not prevent the existence of appropriate coordination mechanisms to ensure that the economic and management supervision rights of the undertaking in respect of a subsidiary are protected. In particular, this shall enable the undertaking to approve the annual financial plan, or any equivalent instrument of the subsidiary and to set global limits on its levels of indebtedness.*

*By no means shall the undertaking give instructions to subsidiaries engaged in regulated activities regarding day-to-day operations, nor with respect to individual decisions concerning the construction or upgrading of the LNG regasification facilities, and the transmission, storage and distribution facilities of natural gas, that do not exceed the terms of the approved financial plan, or any equivalent instrument.*

- (d) *Companies engaged in regulated activities shall establish an internal code of conduct, which sets out measures taken to ensure that the objectives set out in the previous paragraphs a), b) and c) are met.*

*The internal code of conduct shall set out the specific obligations of employees to meet this objective and the undertaking shall ensure its compliance.*

*An annual report, setting out the measures taken, shall be submitted by the person or body responsible for monitoring to the Ministry of Industry, Tourism and Trade (MITYC), and to the CNE, and shall be published.*

- 4. Companies that engage in regulated activities may hold shares in other companies that perform activities in economic sectors other than the natural gas industry, provided they obtain authorization as per the Additional Provision eleventh, third, 1, of this Law.*

#### 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.

There are other minor gas transmission companies that are either engaged in LNG plants activities, or undertake transport activities in very specific areas of the country. There are also a few owners of transmission infrastructures related to combined cycle plants activities (CCGT).

According to Order ITC 3993/2006, in Spain there are currently eight natural gas transmission companies and twenty two natural gas distribution companies. Nevertheless, it should be stressed that some companies with regulated activities (transmission and distribution) engage in activities in other economic sectors, such as electricity production.

There are six main groups of companies in the gas industry: ENAGÁS, GAS NATURAL, IBERDROLA, UNION FENOSA, ENDESA and NATURGAS.

According to Order ITC/3993/2006, the transmission companies in Spain are the following: Enagás, Naturgas Energía Transporte, Endesa Gas Transportista, Transportista Regional del Gas, Septentrional del Gas, Infraestructuras Gasistas de Navarra, Planta de regasificación de Sagunto and GAS NATURAL Transporte.

The Distribution gas companies (and DSOs) are: Naturgas Energía Distribución, Gas Directo, Distribuidora Regional, Meridional del Gas, Gas Alicante, Distribución y Comercialización de Gas de Extremadura, Gas Aragón, Gesa Gas, Gas Nalsa, Gas Tolosa, GAS NATURAL Distribución, GAS NATURAL Andalucía, GAS NATURAL Cantabria, GAS NATURAL Castilla-La Mancha, GAS NATURAL Castilla-León, Cegas, GAS NATURAL La Coruña, Gas Galicia, GAS NATURAL Murcia, Gas Navarra, GAS NATURAL Rioja and Gas y Servicios Mérida.

The following DSOs have less than 100.000 customers: GAS NATURAL Navarra, GAS NATURAL Castilla La Mancha, GAS NATURAL Galicia, GAS NATURAL Cantabria, GAS NATURAL Rioja, GAS NATURAL Murcia, GAS NATURAL La Coruña, GAS NATURAL de Álava, Tolosa Gas, Gesa, Distribuidora Regional del Gas, Megasa, Gas Alicante, Dicogexsa, Gas Directo y Gas y Servicios Mérida.

Spain does not apply the exception of the 100.000 customer rule for gas distribution companies.

As for the outcome of the new 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. 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 26 shows the shareholding structure of ENAGÁS as of 14/07/2009:

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.

<b>ENAGÁS shareholders</b>	<b>% total shareholding</b>
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	70,00

*Table 26. Shareholding structure of ENAGAS*

*Source: ENAGAS website*

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.

ENAGAS is the main gas transmission company in Spain and it owns more than 7,600 km of high-pressure gas pipelines and three of the existing regasification plants (Barcelona, Cartagena and Huelva), with a global capacity of emission of 4.050.000 m<sup>3</sup>/h and a global capacity of storage of 1.287.000 m<sup>2</sup> liquefied natural gas (LNG).

Enagas obtained permit in 2006 to build a new regasification plant in El Musel, Gijón. It also manages the two natural gas storage facilities below earth in Spain, called Gaviota and Serrablo, and has obtained permit to manage a new one in Yela, Guadalajara.

NATURGAS operates mainly in the north of Spain, through its subsidiaries Naturgas Energía Transporte SAU (100% owned), Septentrional de Gas SA (70% owned), and Infraestructuras Gasísticas de Navarra (50% owned).

On the 30<sup>th</sup> September 2005, the Board of GAS NATURAL approved the segregation of the Distribution and Transmission activities and the inclusion of the Distribution and Transmission subsidiaries under GAS NATURAL DISTRIBUCIÓN SDG S.A AND GAS NATURAL TRANSPORTE SDG S.L respectively, which are 100% owned by GAS NATURAL.

In addition to this, GAS NATURAL DISTRIBUCIÓN SDG S.A. and GAS NATURAL TRANSPORTE SDG S.L. have obtained on 18<sup>th</sup> June 2008 the approval of the CNE to transfer the transmission and distribution assets that they hold in the regions of Murcia, Valencia and Andalucía to the respective regional sister companies called GAS NATURAL MURCIA SDG, S.A., GAS NATURAL CEGAS S.A. and GAS NATURAL ANDALUCÍA S.A.

ENDESA carries out transmission activities through Endesa Gas Transportista,S.L (100% owned), Transportista Regional del Gas, S.A (45% owned), Gas Extremadura Transportista, S.L (40% owned).

UNION FENOSA operates the Sagunto plant and the liquefied Damietta (Egypt) and Qalhat (Oman) plants. Besides, UNION FENOSA has presence in all the natural gas chain.

IBERDROLA operates through Pts subsidiaries Iberdrola Infraestructuras Gasistas, S.L. (100% owned), Planta de Regasificación de Sagunto, S.A. (30% owned), Infraestructuras Gasísticas de Navarra (50% owned), and BBG (25% owned).

The leading distributors belong to the groups GAS NATURAL, NATURGAS, ENDESA and UNION FENOSA, though the parent company does not always hold a 100% share. For example, within NATURGAS ENERGÍA group, the parent company holds 40% of the equity of TOLOSA GAS.

On 30 September 2005, the Board of GAS NATURAL approved the segregation of the Distribution and Transmission activities and the inclusion of the Distribution and

Transmission subsidiaries under GAS NATURAL DISTRIBUCIÓN SDG S.A AND GAS NATURAL TRANSPORTE SDG S.L respectively, which are 100% owned by GAS NATURAL.

ENDESA carries out distribution activities through Gas Aragón (60,7% owned), Distribuidora Regional del Gas (45% owned), D.C. Gas Extremadura (47% owned), Gesa Gas (100% owned), Meridional de Gas (100% owned), and Gas Alicante (100% owned). In most cases, the gas company subsidiaries of a single group have different registered offices from the parent company; thus, within a vertically integrated group there are separate registered offices for each company performing a different activity.

#### 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).

### 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>6</sup>

#### Evolution of gas import prices

CNE has developed an index for natural gas border prices, since gas imports data are available in the Web of the Office of Economics and Export Control (AEAT).

The following graphic shows the evolution of natural gas border prices from January 2002 to March 2009, including LNG and NG introduced to Spain through pipelines from Magreb and France.

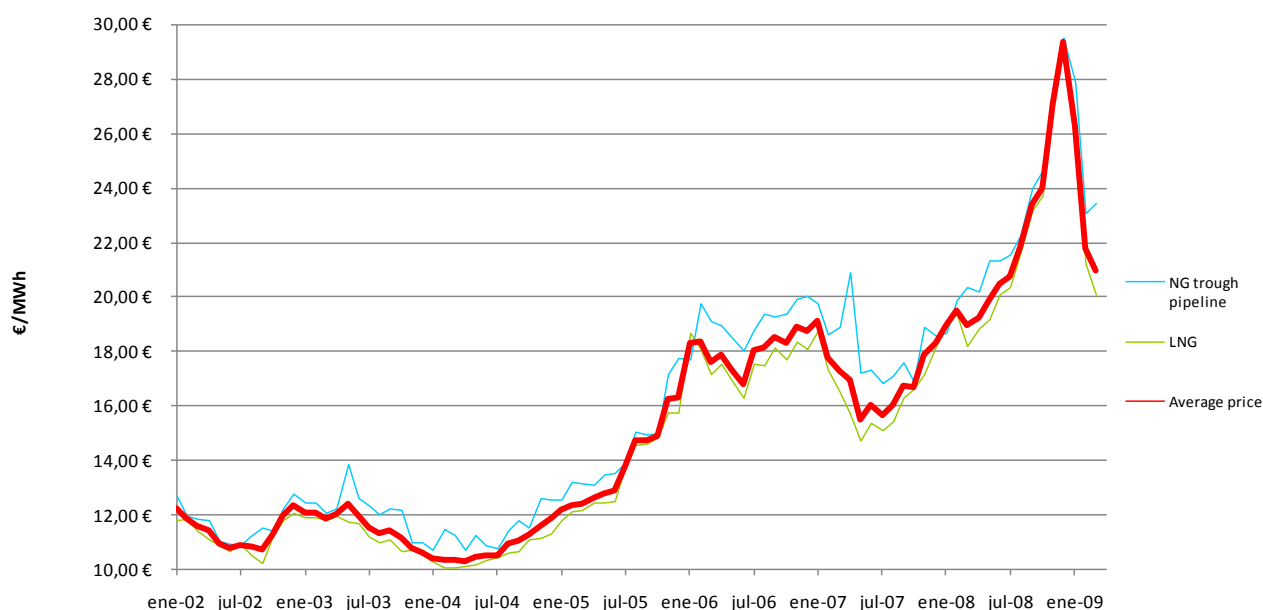


Figure 13. Evolution of natural gas border prices in Spain (€/MWh), 2002-2009.

As shown in Figure 13, prices have reached maximum values in 2008, year where prices have risen sharply up to 29,37 €/MWh in December 2008. However, prices have dropped 29% from December 2008 to March 2009,

Table 27 shows the prices for natural gas in 2008.

<sup>6</sup> Defined as covering any transaction of gas between market participants other than final end-use customers.



	Natural gas through pipe	LNG	Average import price
<b>ene-08</b>	18,66	19,04	<b>18,94</b>
<b>feb-08</b>	19,83	19,36	<b>19,52</b>
<b>mar-08</b>	20,35	18,14	<b>18,97</b>
<b>abr-08</b>	20,16	18,83	<b>19,24</b>
<b>may-08</b>	21,28	19,16	<b>19,90</b>
<b>jun-08</b>	21,30	20,06	<b>20,46</b>
<b>jul-08</b>	21,53	20,31	<b>20,72</b>
<b>ago-08</b>	22,23	21,57	<b>21,82</b>
<b>sep-08</b>	23,97	23,16	<b>23,41</b>
<b>oct-08</b>	24,59	23,67	<b>23,99</b>
<b>nov-08</b>	27,67	26,88	<b>27,11</b>
<b>dic-08</b>	29,47	29,32	<b>29,37</b>

*Table 27. Natural gas border prices in Spain, 2008*

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

Most of energy in the Spanish market is negotiated in bilateral OTC trading, which is run over an electronic trading platform operation developed by ENAGAS, called “MS-ATR”. There are more than 20 active marketers at the platform.

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

### Balancing and trading points

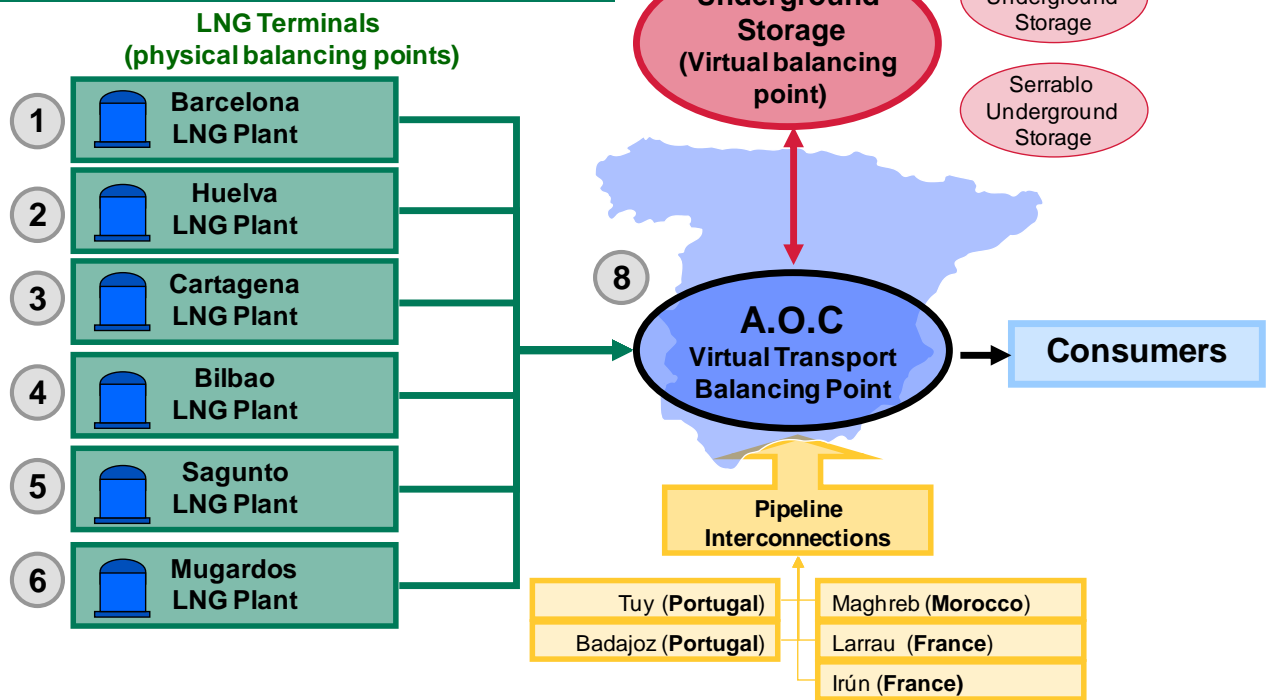


Figure 14. Balancing and trading points

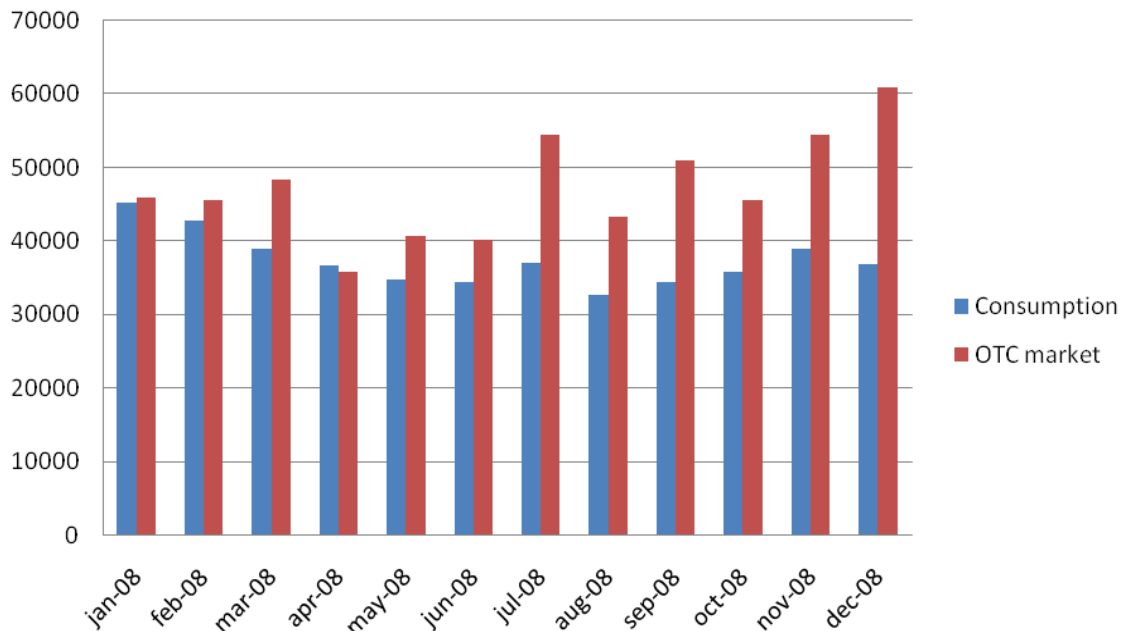


Figure 15. Spanish OTC gas market vs. consumption (GWh/month)

Liquidity is almost all centered on the LNG terminals, which accounted for 96% of all OTC trade in 2008, in special Huelva LNG terminal, with 33% of gas trade. The AOC, which on paper looks like an attractive virtual trading point, only drew 4% of all OTC trade.

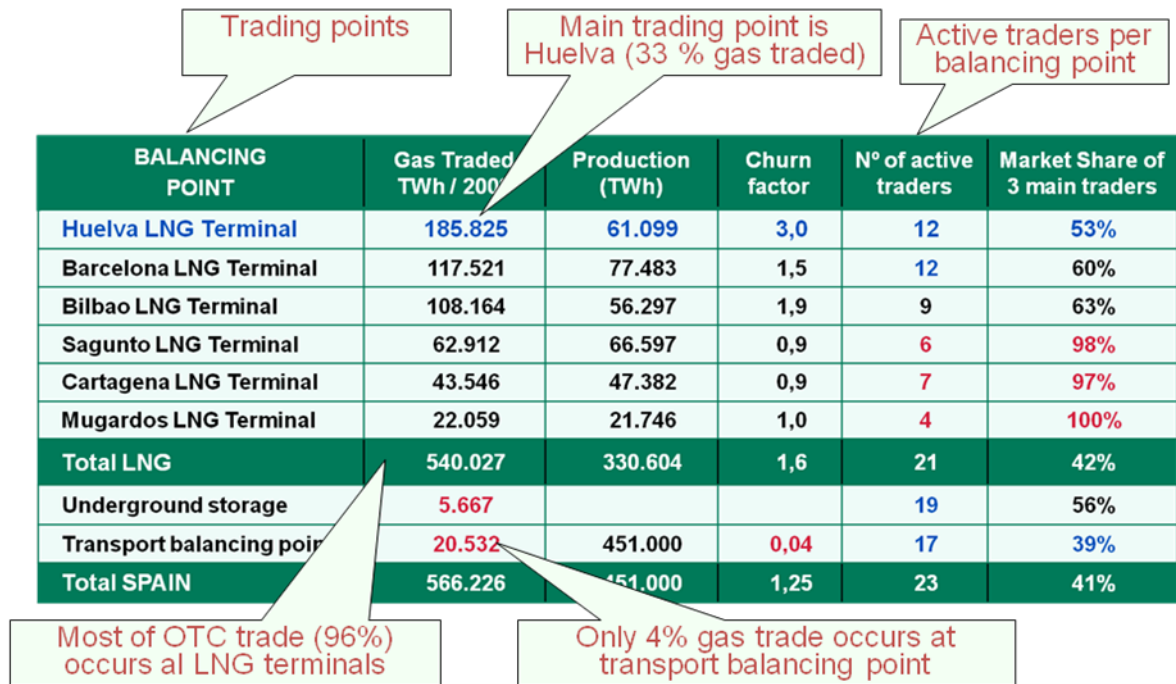


Figure 16. Main features - OTC

As presented in figure 16, transactions in the Spanish OTC market in 2008 represented 566 TWh. Figure 17 shows the gas traded during 2008 with more than 10.465 transactions registered in the Spanish OTC market (Figure 18).

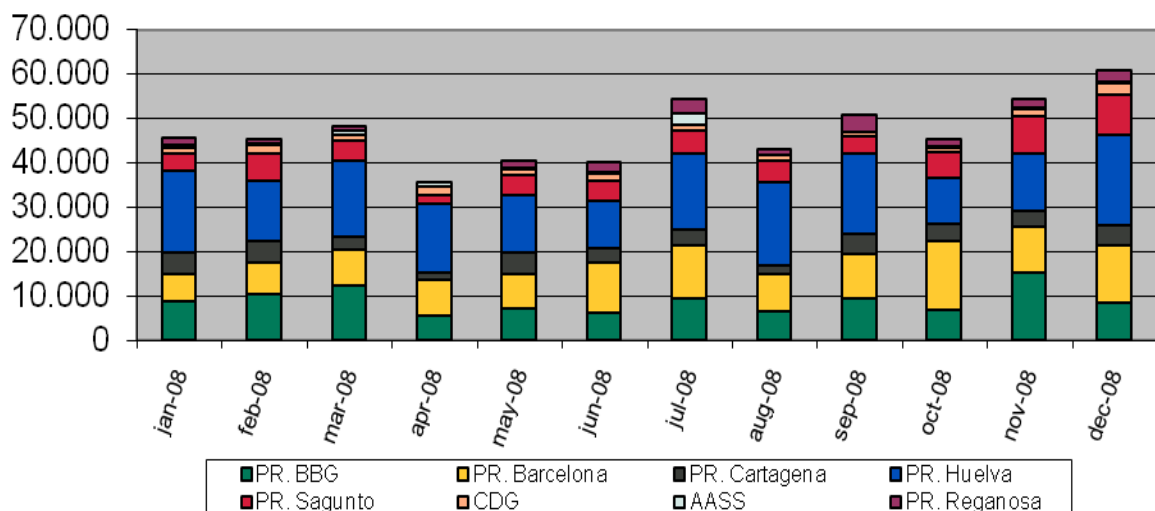


Figure 17. Gas traded (GWh/month)

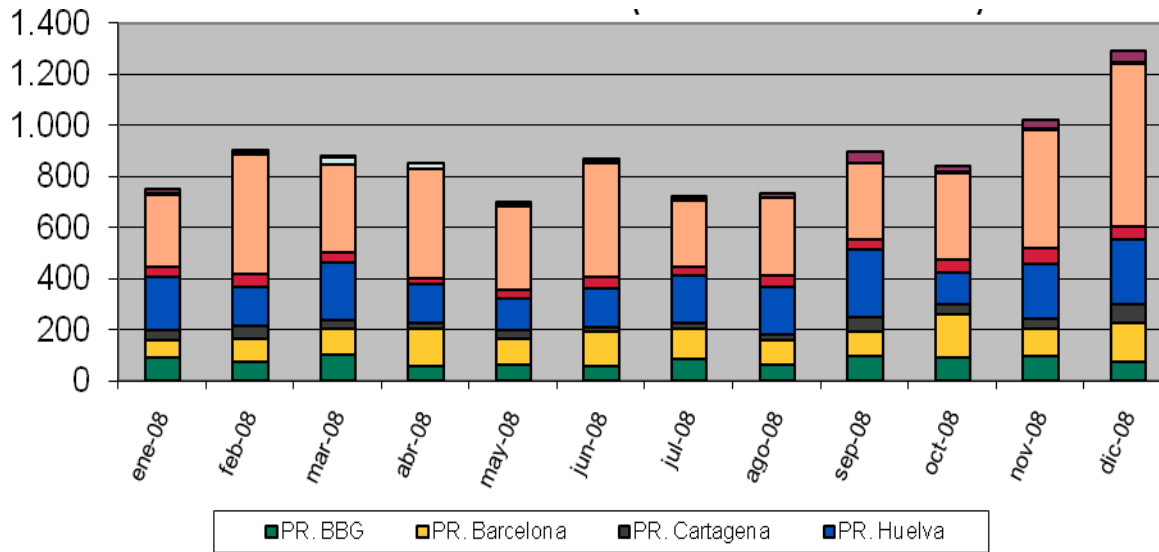


Figure 18. Gas transactions (nº Transactions/month) - OTC

The figure below shows the market shares in the OTC gas market for 2008 in terms of percentage of energy. The highest share belongs to Unión Fenosa, with 15%.

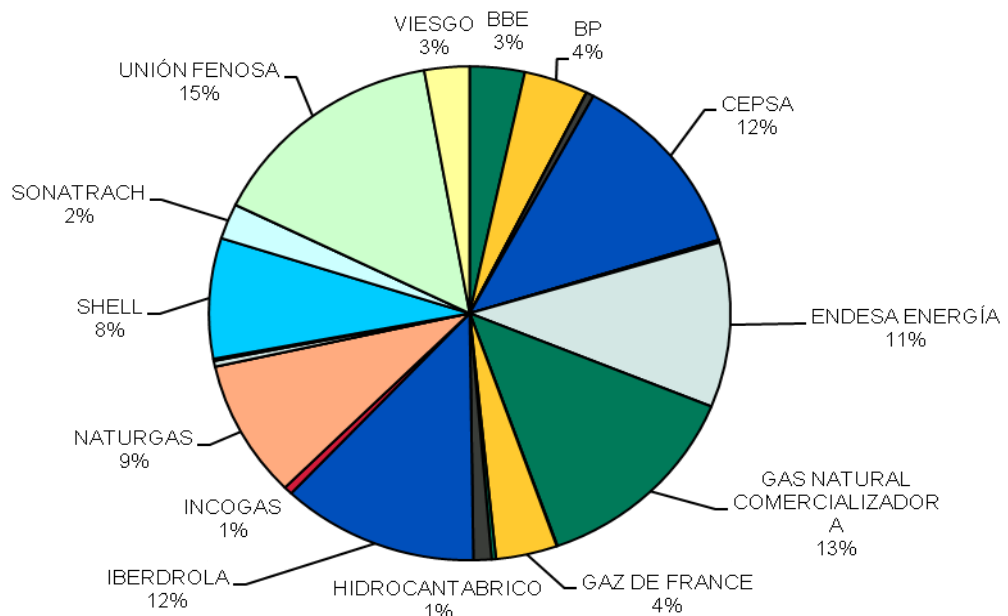


Figure 19. Market shares in the OTC market - 2008

Given that gas procurement has been deregulated and can be performed freely, there is no information available on gas procurement contracts signed by agents. However, nearly 95% gas consumption is traded in long term contracts between producers and suppliers.

As regards market integration with neighboring countries, Spain has several international gas pipeline interconnections with other countries: Morocco through Tarifa; Portugal through Tuy and Campo Maior; and with France through Larrau and Irún. A new connection with Algeria, MEDGAZ, is planned to be operating by the end of 2009. MEDGAZ's deepwater pipeline will connect Beni-Saf, in the Algerian coast, and Almería, in the Spanish coast. Natural gas will be supplied directly from Algeria, without requiring transit through third countries. Moreover, it is a very cost-effective way of delivering natural gas to Southern Europe as interconnection capacity with France is enlarged. As a result, security of supply will be considerably enhanced in Southern Europe.

Related to the behavior of gas producers and importers in the wholesale markets, market players must provide their annual, quarterly, monthly and daily forecasts to ENAGAS. Daily nominations for inputs and monthly ones for unloading of ships of LNG 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.

#### Mechanisms for forward trading of gas (gas auctions)

According to the Ministry of Industry, Tourism and Trade Order ITC/3863/2007 of 28 December, which establishes the tolls and fees associated with TPA to gas facilities for the year 2008 and which brings up to date certain aspects relating to payment for regulated activities in the gas sector, and the Resolution of the General Secretariat for Energy of 19 May 2008, which establishes the auction procedure for the acquisition of natural gas for the operation and minimum filling level for transport, regasification and underground storage facilities, the second and third auctions for operating gas and minimum level gas were held<sup>7</sup>.

The multi-round decreasing price auctions which take place annually were held on 12 June 2008 and 28 May 2009. The CNE is the supervisory body for the auctions and Operator

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<sup>7</sup> These auctions constitute competitive market mechanisms.

del Mercado Ibérico de Energía, Polo Español, S.A. (OMEL)<sup>8</sup> is the institution responsible for organising them.

Auction for the acquisition of natural gas necessary for own consumption (operating gas) and for the minimum fill level of the gas pipelines (cushion gas) of the transport network and regasification plants		
Type	Multi-round descending-price, electronic mechanism	
Date	12 June 2008	28 May 2009
GWh operating gas	1.059,07	1.259,17
GWh cushion gas	26,17	356,84
GWh Total gas	1.085,24	1.616,01
Supply period	1 July 2008 - 30 June 2009	1 July 2009 - 30 June 2010
Final price	30,49 €/MWh	14,65 €/MWh

*Table 28. Auctions for operating gas and minimum level gas: results of the auctions held in 2008 and 2009*

In addition, in the context of the Ministry of Industry, Tourism and Trade Order ITC/3862/2007 of 28 December, which establishes the mechanism for the allocation of underground storage capacity for natural gas and creates a market for capacity, and the Resolution of the General Secretariat for Energy of 14 March 2008, which specifies certain aspects related to the management of underground storage in the basic network and establishes the rules for the auction of their capacity, the first and second auctions for the allocation of capacity for underground natural gas storage were held.

The first auction for the assignment of underground storage capacity for the period between 1 April 2008 and 31 March 2009 was held on 10 April 2008, and the second auction took place on 30 March 2009, for the assignment of the underground storage capacity for the period between 1 April 2009 and 31 March 2010. A multiple-round rising price (“ascending clock”) auction procedure was used.

In these auctions, the CNE is the supervisory body and OMEL is the body responsible for organising the auction.

<sup>8</sup> Through its subsidiary OMEL Diversificación S.A.U., from 2009.

		Auction for the allocation of underground storage capacity of natural gas	
Type	Multi-round ascending-price, electronic mechanism		
Date	10 April 2008	30 March 2009	
Allocated capacity (GWh)	1.518	4.257	
Supply period	1 April 2008 - 31 March 2009	1 April 2009 - 31 March 2010	
Final price	2.588 €/GWh	1.767 €/GWh	

*Table 29. Auctions for underground storage of natural gas: results of auctions held in 2008 and 2009*

Finally, the Ministry of Industry, Tourism and Trade Order ITC/863/2009, which regulates the auctions for the acquisition of natural gas and which will be used as a reference for establishing the last resort rate, was approved on 2 April 2009, and the Resolution of the Secretary of State of Energy which establishes the operating rules for the auction for establishing the last resort rate for the period between 1 July 2009 and 30 June 2010, was approved on 19 May 2009.

The products subject to auction, as established by the Resolution of the Secretary of State for Energy, were: (i) the base-load gas for the pre-established monthly amount during the period between 1 July 2009 and 30 June 2010; and (ii) the winter gas for the pre-established monthly amount for the period November 2009 – March 2010.

In accordance with the applicable regulations, 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 decreasing price mechanism was used for the auction.

Auction for the acquisition of natural gas for the last resort rate	
Type	Multi-round descending-price, electronic mechanism
Date	16 June 2009
Monthly base load gas (GWh)	300
Monthly winter gas (GWh)	-November: 200 -From December to February: 750 -March: 300
Supply period	1 July 2009 - 30 June 2010
Final price for base load gas	16,18 €/MWh
Final price winter gas	19,77 €/MWh

Table 30. Auctions for establishing the last resort rate for natural gas: results of the auction held in 2009

### Evolution of gas demand

The table below shows the evolution of gas demand in the Spanish market in 2008.

	2007	2008	annual increase
<b>Demand of gas (except power generation) GWh</b>	267.137	263.148	-1,5%
<b>Demand of gas for power generation GWh</b>	141.240	187.969	33,08%
<b>Total demand in Spain GWh</b>	<b>408.376</b>	<b>451.117</b>	<b>10,4%</b>

Table 31. Gas demand in 2007 and 2008

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

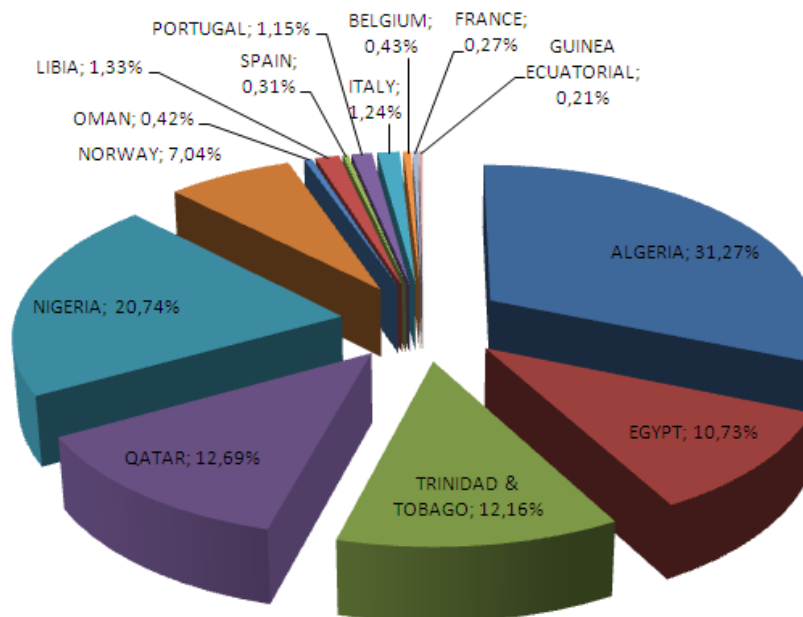
	2007	2008	annual increase %
Pipeline (GWh)	129.589	128.100	-1,15%
LNG (GWh)	280.362	331.909	18,39%
<b>Total (GWh)</b>	<b>409.951</b>	<b>460.009</b>	<b>12,21%</b>

Table 32. Gas imports in 2007 and 2008

### Origin of gas supplies (imports)

The figure below shows the origin of gas sources in 2008 in the Spanish market:





*Figure 20. Origin of gas supplies in Spain, year 2008*

The imports basket of the Spanish gas system keeps mostly the structure and shares of former years, resulting in one of the most diversified countries in the World. 98.4% of the gas marketed in Spain came from imports from 9 countries, with Algeria standing out for another year with a share of 31%, Nigeria (21%), the Gulf Countries (13%), Egypt (11%) and Trinidad and Tobago (12% of the imports of the Spanish gas system) complete the group of the most important countries in the supply structure.

Provisional figures of 2008 show that total natural gas imports have increased by 11.7% amounting around 458 TWh (410 TWh in 2007). 72,2% of natural gas reached the national grid through LNG ships and the remaining 27,8% came via gas pipelines. The shipments unloaded from LNG ships continued at high levels and kept our country among the most important LNG destinations in the world.

### Domestic gas production

National production of gas is only 1.082 GWh accounting only for 0,24% of Spanish gas demand.

Field	Production in 2008 (GWh)
Marismas (Guadalquivir valley)	443
Poseidón (Gulf of Cádiz)	452
Palancares	187

Table 33. Production in the Spanish gas fields. Source: Enagas

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

#### a) Capacity of regasification plants

In Spain there are 6 regasification plants. All regasification plants have regulated TPA, which has favored the development of gas competition in Spain. Capacity utilization ratio is around 50% in average for these plants, varying from 35% (the minimum, at Cartagena), to 80% (maximum, at Bilbao).

Regasification plant	LNG tanks capacity (m <sup>3</sup> )	Vaporisation capacity (Mm <sup>3</sup> (n)/h)
Barcelona	540.000	39,6
Huelva	469.500	32,4
Cartagena	437.000	36,45
Bilbao	300.000	19,2
Sagunto	300.000	19,2
Mugardos	300.000	9,91
TOTAL	2.346.500	156,76

Table 34. 2008 Capacity of regasification plants. Source: Enagás.

#### b) Capacity of international connections by gas pipeline

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 working by the end of 2009. MEDGAZ is a strategic project for Algeria and Spain. This way, natural gas will be supplied directly from Algeria, without requiring transit through third countries, which will

considerably enhance security of supply. The initial capacity is 8 bcm/year, and in the future the conduction will possibly be enlarged in order to reach other European countries, becoming this way, an entrance of gas into Europe.

location	Interconnection capacity by pipeline GWh/day
Larrau (FR->ES)	87
Irún (ES->FR)	5 winter / 4 summer
Irún (FR->ES)	0 winter / 10 summer
Tarifa (MO->ES)	355 (+ 89 transit to PT)
Badajoz (ES->PT)	134
Badajoz (PT->ES)	68
Tuy (ES->PT)	36
Tuy (PT->ES)	12

Table 35. Interconnection physical capacities in 2008. Source:ENAGAS

### c) Booked capacity

In 2008 Gas Natural Comercializadora, with 39% of capacity contracted in the market, is the supplier with the largest entry capacity booked. The merging Unión Fenosa, stands second in terms of capacity contracted, with 15%. Iberdrola and Endesa come closely after with 13% and 11%, and then come companies with smaller shares below 5%.

The figure below shows the proportion of capacity booked by all companies:

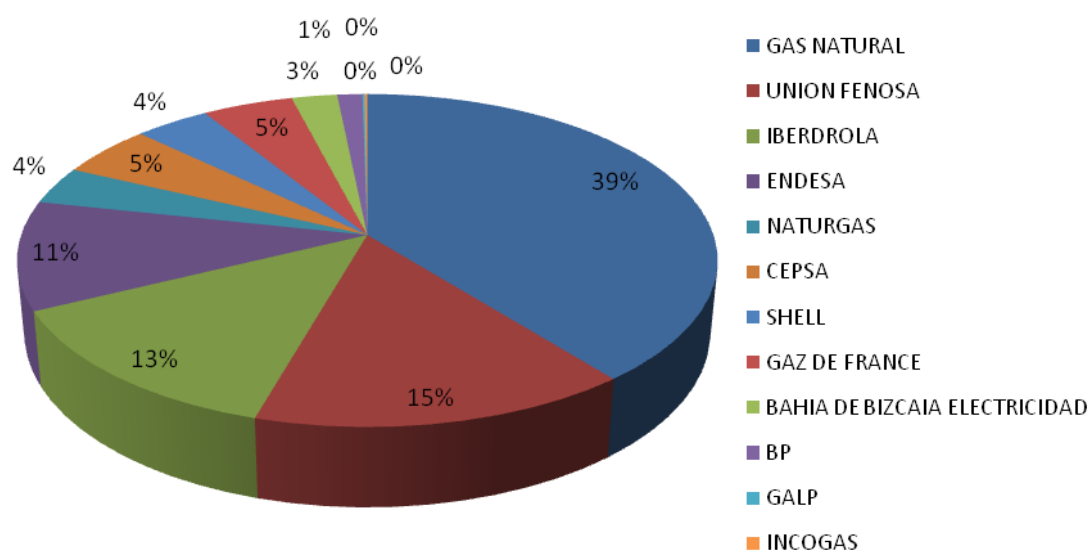


Figure 21. Share of capacity booked in the Spanish market. Source: SL-ATR

And the following chart shows the share of gas imports of all companies:

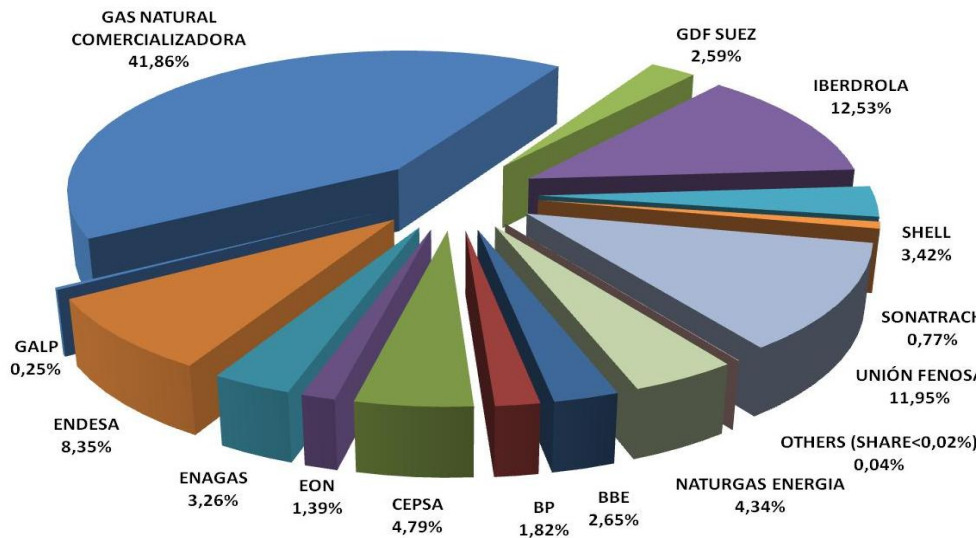


Figure 22. Share of gas imports in the Spanish market in 2008

## 4.2.2 Description of the retail market

Natural gas consumption in 2008 in Spain was 451.117 GWh, 10 % higher than in 2007.

The number of customers in 2008 surpassed 6,9 millions in Spain, with 193.192 new customers.

### 4.2.2.1 Market opening

All Spanish customers (including residential sector) have been free to choose supplier since January 1<sup>st</sup> 2003. The regulation set the liberalization calendar and it gradually lowers the threshold to become eligible customer: From three million in August 2000, to one million in January 2002, and fully aperture in January 1<sup>st</sup> 2003.

Along 2007 the Ministry continued with the trend to develop the TPA market with progressive removal of regulated tariffs for end-users, and on 1 July 2008, the remaining high pressure tariffs (supply pressure between 4-60 bar) were removed.

The figure below shows the evolution of the share of consumption between the regulated and the liberalized markets:

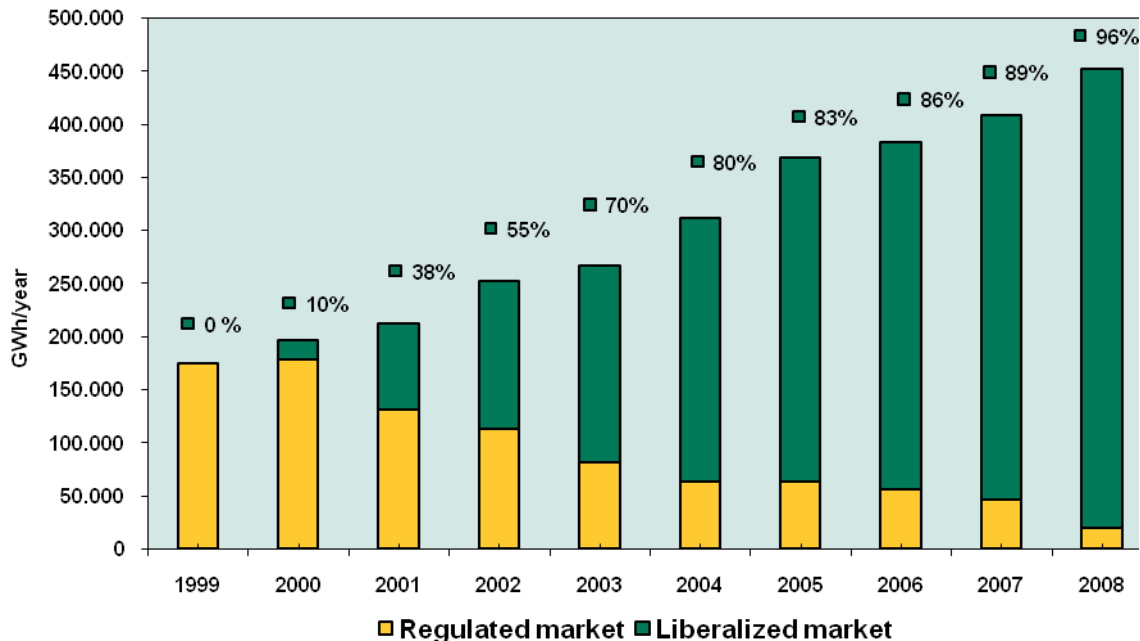


Figure 23. Evolution of market opening in terms of energy

At the end of 2008, the consumers on the regulated market totaled 1,3% (representing 4,3% of gas consumed) whereas those in the liberalized market were 98,7% (with 95,7% of the consumption). From 1<sup>st</sup> July 2008 the last resort supply has replaced the regulated tariff. There is a particular situation in the Balearic Islands, where market is still regulated, and where instead of natural gas, a mixture of propane-air is distributed through the network.

Distribution companies are not allowed to sell gas to their clients anymore since 1<sup>st</sup> July 2008. They are now exclusively dedicated to the distribution gas network. Last resort supply has replaced the regulated tariff since July 2008. Order ITC/2309/2007, establishes the procedure to transfer customers from the regulated tariff to the last resource scheme.

#### 4.2.2.2 Retail market structure

The total number of gas consumers in March 2009 was 6.930.550 (+193.000 consumers than in December 2008), and the gas demand was 451.000 GWh (+10 %).

The figure below shows the volume of annual consumption in the Spanish market in 2008 by type of supply, whether regulated or deregulated, as well as by supplying business group:

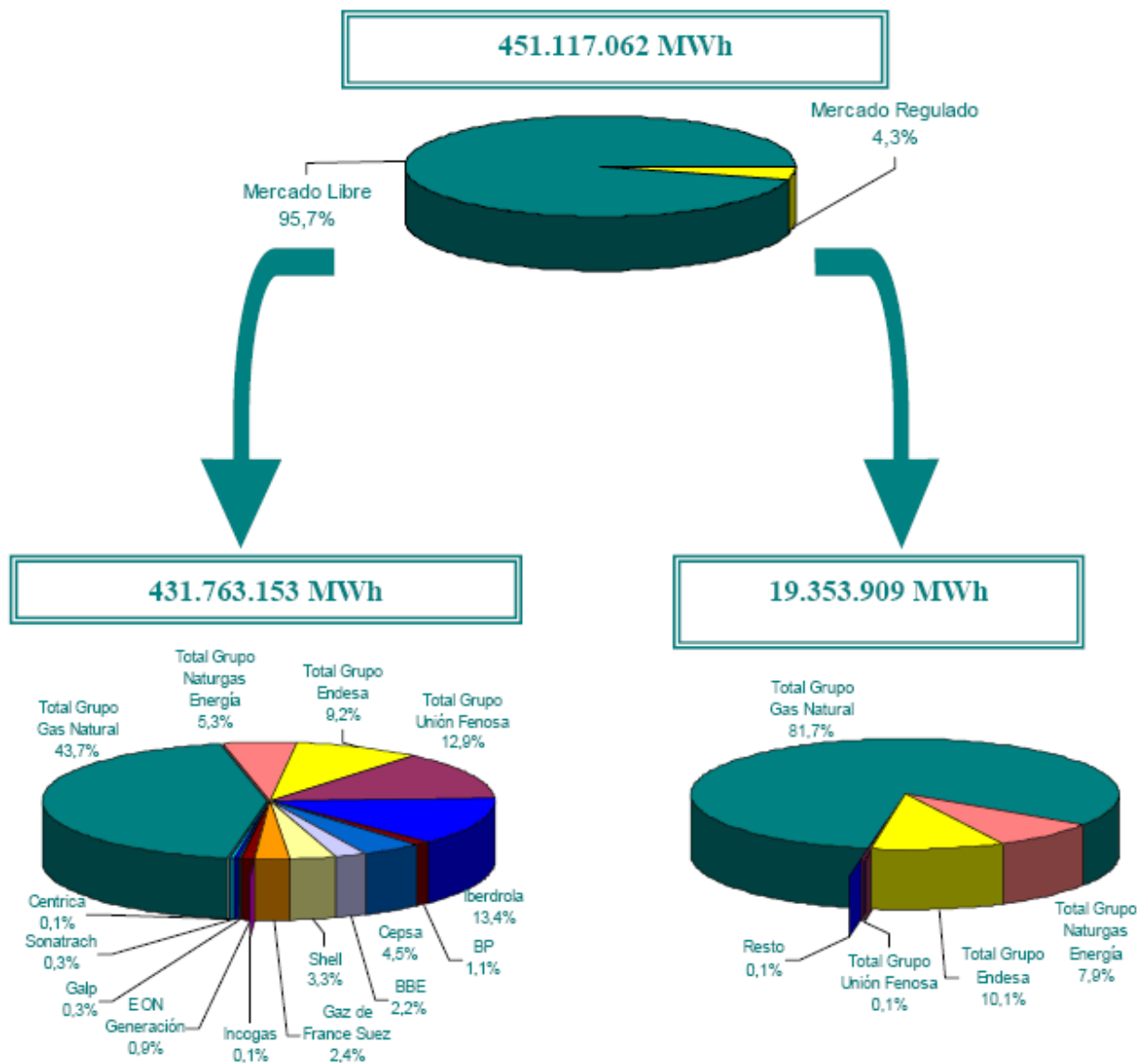


Figure 24. Volume of annual consumption in the Spanish market in 2008

The next figure (25) shows the number of consumers in the Spanish market in 2008 by type of supply, whether regulated or deregulated, as well as by supplying business group:

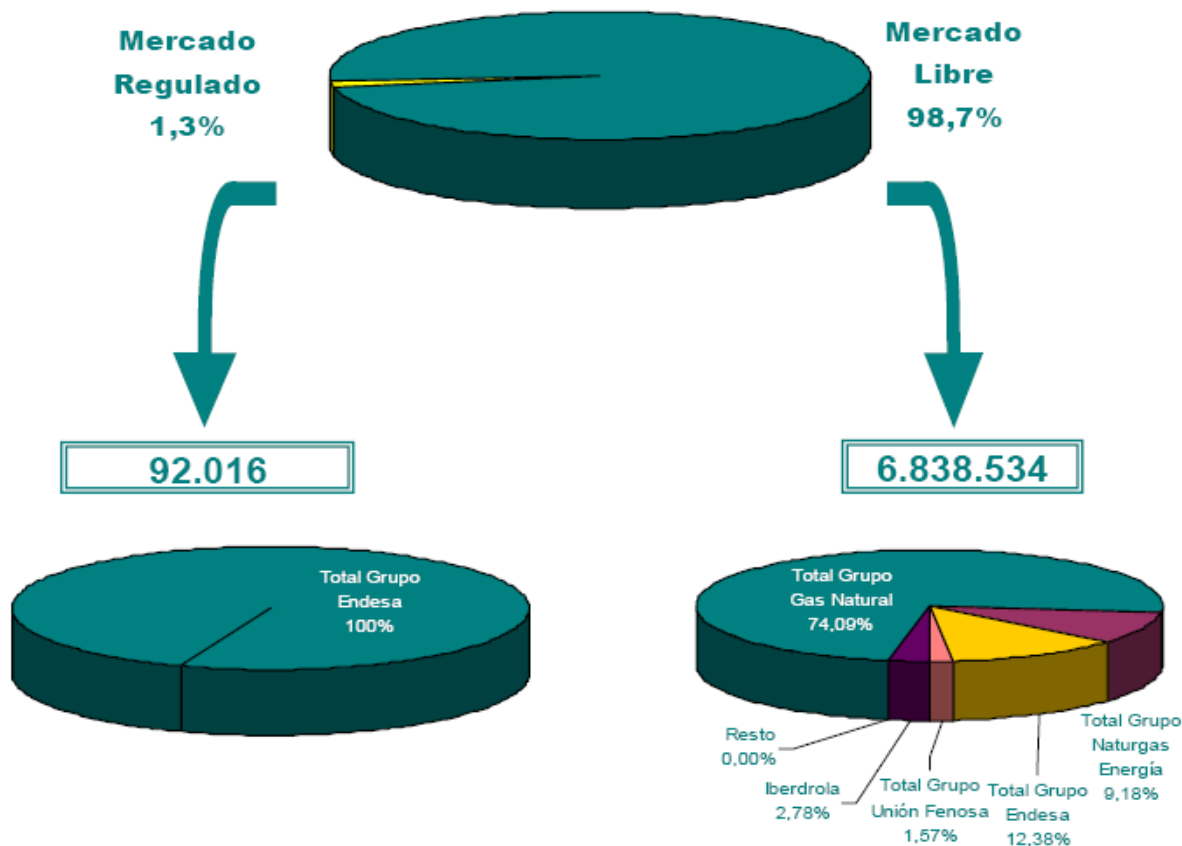


Figure 25. Number of consumers in the Spanish market in 2008

Total: 6.930.550 Customers

There have been 33 companies inscribed in the registry of suppliers since October 2007. In the figure 26, natural gas sales in Spain are shown according to the consumer groups.

Consumption of natural gas (figure 27) by sectors in 2008 was:

- Residential-commercial sector: 13,2%
- Industrial sector: 43,9%
- Use of natural gas as raw material: 1,1%
- Electrical generation (combined cycles and bi-propellant plants): 41,8%

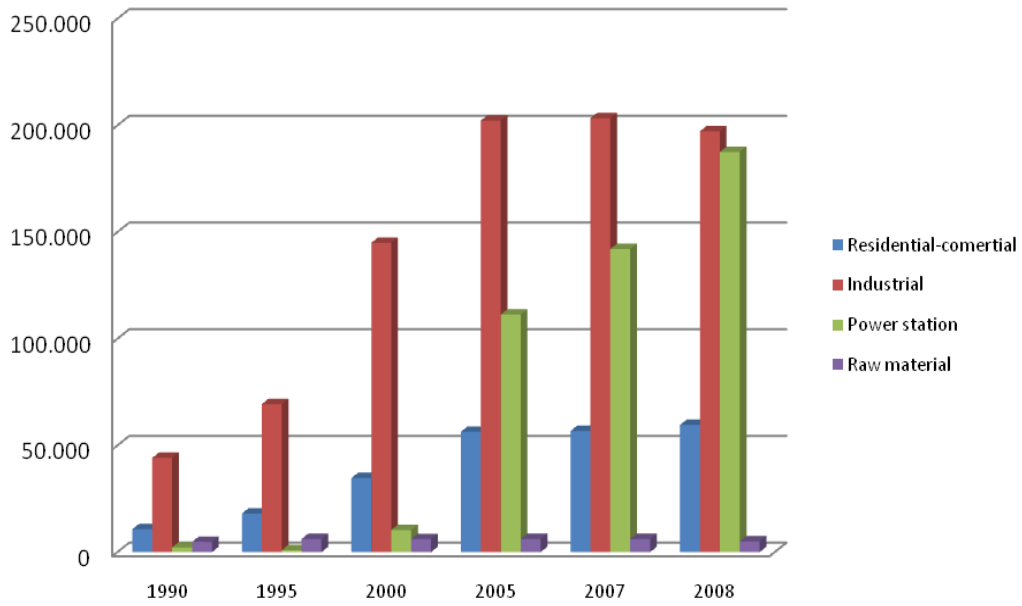


Figure 26. Natural gas sales in Spain (GWh). Source: Sedigas

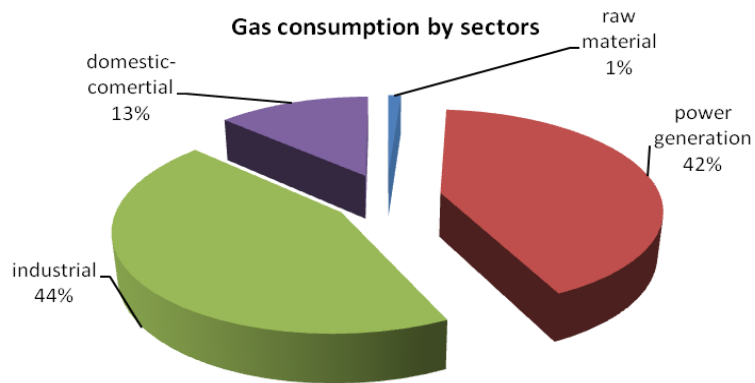


Figure 27. Consumption of natural gas by sectors (2008). Source: Sedigas

The following table (number 36) shows, once again, consumption in the Spanish market, but with different criteria for the itemization. In this case, consumption is shown broken down by levels of pressure and consumption, according to the different tariff groups.



MWh ESTRUCTURA DE TARIFAS / ESCALONES DE Consumption	2008	
	Number of consumers	Total natural gas consumption MWh)
<b>Group 1 (Pressure &gt;60 bars)</b>		
1.1 Consumption =< 200 GWh/year	18	2.036.769
1.2 Consumption > 200 GWh/year y =< 1000 GWh/year	36	18.916.233
1.3 Consumption > 1000 GWh/year	58	192.356.296
<b>TOTAL Group 1</b>	<b>112</b>	<b>213.309.298</b>
<b>Group 2 (Pressure &gt; 4 bars y =&lt; 60 bars)</b>		
2.1 Consumption =< 500.000 KWh/year	710	198.659
2.2 Consumption > 500.000 KWh/year y =< 5 GWh/year	1.826	3.720.848
2.3 Consumption > 5 GWh/year y =< 30 GWh/year	1.356	17.385.558
2.4 Consumption > 30 GWh/year y =< 100 GWh/year	599	32.765.747
2.5 Consumption > 100 GWh/year y =< 500 GWh/year	305	59.389.015
2.6 Consumption > 500 GWh/year	38	47.629.040
<b>TOTAL Group 2</b>	<b>4.834</b>	<b>161.088.867</b>
<b>Group 3 (Pressure =&lt; 4 bars)</b>		
3.1 Consumption =< 5.000 KWh/year	3.307.893	9.007.269
3.2 Consumption > 5.000 KWh/year y =< 50.000 kWh/year	3.464.921	32.123.130
3.3 Consumption > 50.000 KWh/year y =< 100.000 kWh/year	20.858	1.195.637
3.4 Consumption > 100.000 kWh/year	39.914	20.844.965
3.5 Consumption > 10 GWh/year	0	0
<b>TOTAL Group 3</b>	<b>6.833.586</b>	<b>63.171.002</b>
<b>Interrumpible tariff</b>		
4.1. Pressure >4 bares y =< 60 bars	0	0
4.2. Pressure > 60 bares	0	290.559
<b>TOTAL INTERUMPLIBLE TARIFF</b>	<b>0</b>	<b>290.559</b>
<b>RAW MATERIAL</b>	<b>2</b>	<b>5.045.584</b>
<b>LNG satellite plants</b>	<b>-</b>	<b>8.211.752</b>
<b>TOTAL GENERAL</b>	<b>6.838.534</b>	<b>451.117.062</b>

Table 36. Natural gas consumption - year 2008 (MWh)

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

Actually there are 20 active retailing companies in the gas market and new entrants have nearly 50% market share, so that there is a strong competence.

In terms of energy, about 90 % of the total gas market have changed supplier since the beginning of liberalization, and in terms of number of clients, nearly 45% of clients have changed supplier since the opening of the domestic market in 2003 (3.125.000 switching).

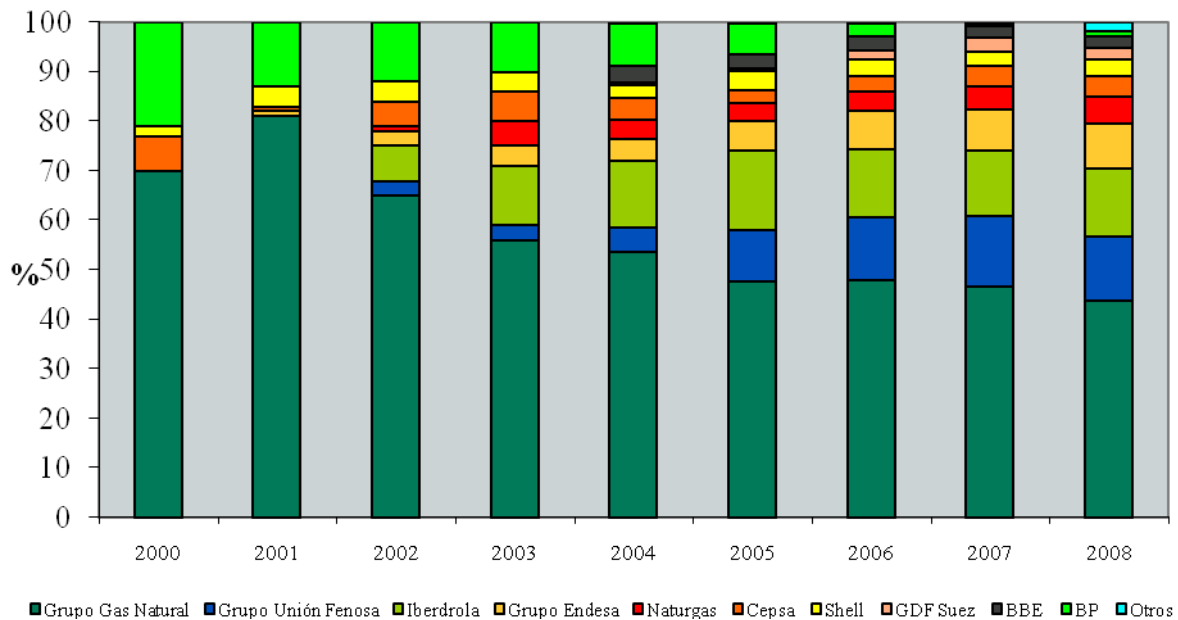


Figure 28. Spanish retailing gas market. Shares in terms of energy.

In the residential market there are 5 active shippers. The switching rate in 2008 was the highest of the previous years: 427.293 clients switched their supplier in 2008.

The procedure for customer switching is regulated under Royal Decree 1434/2002 of 27 December. The maximum delay to switch is 15 days. In order to make easier the switching, a Switching Office, called the Office for Switching Supplier (Oficina de Cambio de Suministrador- 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.

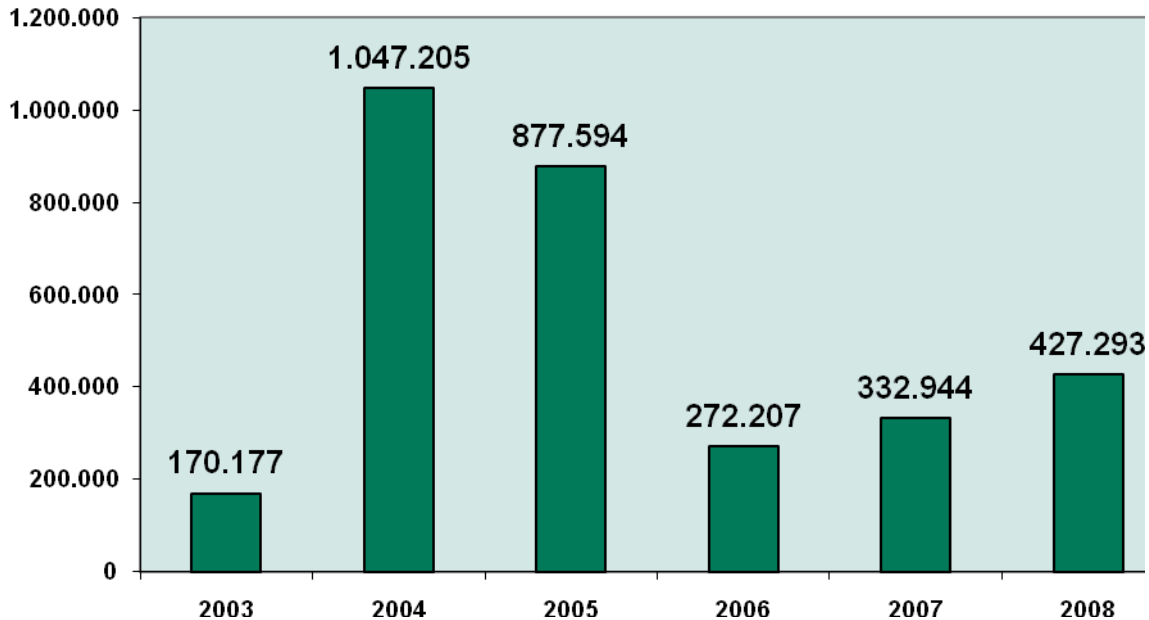


Figure 29. Anual switching rate (number of customers / year)

#### 4.2.2.4 Summary of Spanish market

There are 20 gas marketers' actives in Spain. Gas Natural is the main marketer, but his market share has drop from 90 % at the beginning of liberalization (2003) to 45% in 2008.

The table below shows many shares of the different company groups at the end of 2008. The first column is the share of available gas, based on the imports to Spain. The second column shows the share of companies in the OTC market. The third column is the retailing market share, based on sales volumes to final customers. The fourth shows the distribution system share respect to the total Spanish Grid. The fifth illustrates the transmission system share respect to the total Spanish Grid. And the last column reveals the share of LNG emission capacity.

	GAS TRADING ACTIVITIES			GAS INFRAESTRUCTURE ACTIVITIES		
	Share of available gas (imports)	Share of traded gas in the Spanish OTC market	Retailing market share	Distribution system share of total Spanish grid	Transmission system share of total Spanish grid	LNG regasification share of total Spanish LNG terminals
GAS NATURAL COMERCIALIZADORA	41,86%	13,4 %	45,53%	86%	6%	4%
IBERDROLA	12,53%	12,2%	12,79%	-	-	10%
UNIÓN FENOSA	11,95%	15%	12,36%	-	-	16%
ENDESA ENERGÍA	8,35%	10,8%	9,24%	9%	3%	8%
NATURGAS	4,34%	9%	5,41%	5%	2%	4%
CEPSA	4,79%	12,3%	4,33%	-	-	4%
SHELL	3,42%	7,9%	3,19%	-	-	-
GDF SUEZ	2,59%	3,8%	2,30%	-	-	-
BBE	2,65%	3,4%	2,10%	-	-	-
BP	1,82%	4%	1,09%	-	-	-
EON	1,39%	-	0,86%	-	-	-
GALP	0,25%	-	0,28%	-	-	-
SONATRACH	0,77%	-	0,27%	-	-	-
OTHERS	0,04%	-	0,24%	-	-	-
ENAGAS (*)	3,26%	-	-	-	89%	50%

After July 2008, ENAGAS is no longer allowed to import gas in Spain.

*Table 37. Summary of Spanish gas market in 2008.*

Below, details are provided on the hypotheses included in the calculation of the final price by components for consumer types of natural gas as defined in the questionnaire. The timeframe for these prices is the year 2008.

- The cost of energy is calculated on the basis of the costs of raw materials as published quarterly by the Ministry. In order to calculate the cost of raw materials for 2008, available data have been weighted according to the number of days they were in effect. Costs are modified taking into account network losses as specified in Order ITC/3863/2007.
- Network costs have been calculated by applying tolls published in Order ITC/3863/2007 for receiving and unloading LNG carrier, regasification, transport and distribution and underground storage to each consumer type. Once total network costs are computed, a calculation is made of levies included in such network costs, namely,

the CNE levy, the System Operator fee, the provisional re-routing owing to the settlement from 2002 and 2006.

- An entry load factor of 85% has been estimated for billing the regasification toll and the reserve capacity part of the transport and distribution toll.
- Billing of underground storage has assumed strategic storage of 21 days for each consumer type. For the household type, seasonal storage of 30 days has also been included.
- The concept "*levies included in network costs*" is obtained by deducting the percentage over the total corresponding to other costs, such as the CNE levy and the System Operator fee, from the total amount of tolls and levies. The percentage over total costs corresponding to these other costs is obtained from the provisional costs of the gas system corresponding to 2008.
- Calculation of the final price does not include the supply profit margin. Nevertheless, if each price is computed by adding costs – tolls, levies, raw material unit price and losses – with the price resulting from sales tariffs, the supply profit margin for the D3 consumer (the typical customer) would be about 2%.
- The tax item is the result of applying 16% for VAT to the final price before taxes as calculated by the aggregation of applicable tolls and levies, losses and raw material's unit price.

Type Consumers	Cost of Energy (1)	Regulatory Costs	Network Costs	Taxes	Total Prices (cent€/kWh)
<b>D2</b>	2,55	0,02	2,43	0,80	5,80
<b>I1</b>	2,54	0,01	1,22	0,60	4,37
<b>I4</b>	2,54	0,00	0,26	0,45	3,25
<b>Typical household (10.000 kWh/year)</b>	2,55	0,02	2,75	0,85	6,18

*Table 38. Final consumer price by type of components (cent€/kWh). 2008*

It should be pointed out that consumer type I1 is not representative of an industrial consumption in Spain. Specifically, consumers included in this toll to which this consumer type (toll 2.1) would apply, according to the characteristics defined in the questionnaire, represent 14.5% of the total number of consumers in the tariff group to which the type belongs (customers connected at pressure levels between 4 and 60 bars), and solely 0.13% of the consumption of this tariff group in 2007.

#### Consumer complaints and inquiries

See section 3.2.2.

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

New monitoring functions for CNE in this regards have been addressed in section 3.2.3. Furthermore, no relevant change happened in 2008.

#### Recent mergers and acquisitions in the gas sector

As outlined in section 3.2.3., in September 2008, GAS NATURAL launched a takeover on UNION FENOSA which has been approved subject to conditions by the CNC on the 11<sup>th</sup> of February 2009. In what follows, we provide a short description of the merger key effects in the gas sector.

In the gas sector, the merger implies the loss of UNION FENOSA, that has been one of the most active and important competitors of GAS NATURAL to date and with a great potential of growth in gas supply in Spain, founded on its commercial capillarity to reach

final customers and on its special upstream vertical integration in the LNG chain. Unlike other competitors coming from the electrical sector, UNION FENOSA not only established a portfolio of long-term supply contracts with producers, but it also undertook important investments in LNG shipping and liquefaction capacity (Egypt and Omán).

This loss is not easily replaceable because entry barriers exist in the gas markets: the agreement of long-term contracts with gas producers typically requires a long period of time (between 2 and 5 years) and, although the Spanish system counts with an excess of regasification capacity excess, it has at the present time important deficiencies of flexible instruments such as underground storage, which can make entry difficult for new competitors. Therefore, the global competitive profile of UNION FENOSA can hardly be replaced.

Moreover, the new group will inherit gas distribution networks belonging to GAS NATURAL, that covers the great majority of the Spanish regions, and electricity distribution networks of UNION FENOSA, that serve almost to 14% of the points of provision of electricity in Spain. As a result of the operation, an overlapping of gas and electricity networks would happen in several zones, providing the new group with a competitive advantage in the realization of dual fuel offers to final customers.

In order to eliminate the negative perceived effects of the merger on competition GAS NATURAL commits to maintain UNION FENOSA's supplier company independent from GAS NATURAL in the retailing to third parties.

The CNC finally accepted, as well, the commitment by GAS NATURAL to sale gas distribution networks by a total of 600,000 points of distribution (equivalent to a 9% of the Spanish market). They will sell complete networks in provinces in which GAS NATURAL gas networks are overlapped with UNION FENOSA electricity networks. GAS NATURAL commits as well to sale of 600.000 gas customers (medium and small size industry and domestic consumers) associated to the distribution networks to sell. GAS NATURAL is committed to supply gas under market conditions during two years to the buyers of the customers.

## 5 SECURITY OF SUPPLY

On May 30<sup>th</sup> 2008 the Spanish Council of Ministers approved the “Plan for the Electricity and Gas Sectors for 2008-2016” document, which covers the strategic lines of the Government's energy policy. The Plan for the electricity and gas sectors for 2008-2016 relates to the transport network and has the purpose of guaranteeing the security and quality of energy supply in the medium and long term, enabling economic growth, preserving overall competitiveness and protection of the environment. The environmental objectives are integrated with those of the plan from the start to make it more sustainable.

The planned infrastructure will enable secure supply, in accordance with the electricity transport needs that will be required by the desalinization plants and the AVE (High-speed train) as well as the new interconnection with France via the Eastern Pyrenees. Also, it anticipates the inclusion of future high-speed railways, such as the one in Cantabria, once they are approved and defined by Adif (the body responsible for railway infrastructure developing, operation and management).

In its preparation process, the Ministry of Industry, Tourism and Trade has had the collaboration of all the affected ministries, and in particular the Ministry of the Environment, Rural and Marine Affairs and with the Ministry of Development, the Autonomous Communities, the operators of the electricity and gas systems, the Corporation of Strategic Reserves of Oil Products (CORES) and the National Energy Commission. Furthermore, it has been subject to public hearing and has the Environmental Sustainability Report (ESR). The investments in electricity infrastructure reach 9,220 million Euros and gas infrastructure will involve 10,221 million Euros<sup>9</sup>.

Also common to both gas and electricity, on March 2009 the CNE's Board approved its “2008 Framework Report on the electric energy and natural gas demand, and its adequacy”<sup>10</sup>. This work, subject to a semester-revolving updating, offers full, in-depth

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<sup>9</sup>

<http://www.mityc.es/energia/planificacion/Planificacionelectricidadygas/Desarrollo2008/Paginas/Desarrollo2008.aspx>

<sup>10</sup> [http://www.cne.es/cne/doc/publicaciones/PA006\\_08.PDF](http://www.cne.es/cne/doc/publicaciones/PA006_08.PDF)



detail on prospects for demand coverage on both a global, nation-wide perspective as well as in a project-by-project approach through its extensive half-yearly annexes (the eleventh of the latter also released on March 2009).

### 5.1. Electricity [Article 4 and 2005/89/EC Article 7]<sup>11</sup>

#### Evolution of electricity demand

Energy demand still reports annual growth, but slowing at a rapid pace and already negative for last quarter in 2008. The average increase in last year stands at 1,0% (significantly below values recorded in previous) , considering both mainland and ex-mainland demand. During 2008, gross domestic demand virtually scaled hardly 16 TWh.

A first sign for this change is showed by peak demand maximum power recorded in December 2008 amounted up to 42.961 MW (below 2007's highest record ever of 44.876 MW). The evolution of overall annual growth of demand, from 2004 to 2008, is shown below:

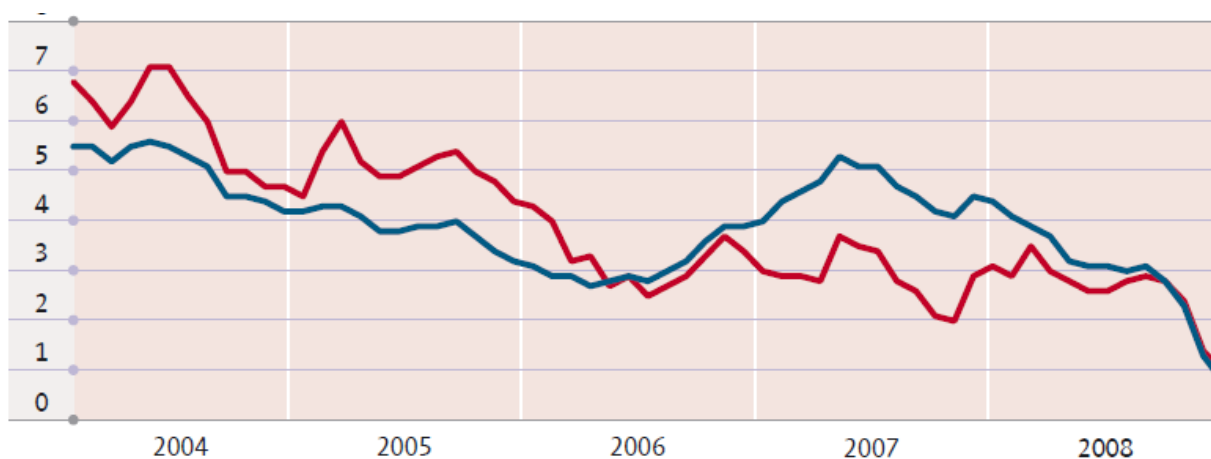


Figure 30. Annual demand growth in % (red: non-adjusted; blue: labor-and-temperature adjusted)  
Source: REE

As already presented in table 6, at the end of 2008, power capacity in mainland Spain stood at 89,944 MW,

<sup>11</sup> This section may make reference to supply demand forecasts compiled by TSOs where appropriate.

Out of this about net generating 90 GW, a conservative estimate might mark some 30-35 GW as unavailable (mainly because of non-usable capacity due to low hydro potential or wind stall period), which would leave still some 13 GW of remaining capacity between years 2009-2011. Long-term prospects (2020) reduce this margin to a mere 6 GW value, but given that conservative scenarios don't include forthcoming generation capacity in its very first commissioning stages, its foreseeable that remaining capacity estimate will rise as this deadline comes closer, as experienced has proved so far. On the other hand, the impact of economic recession on demand could widen generation margin for an more extended period as the previously planned.

#### Generation investment for the next three years

Investments in new capacity in the ordinary regime are expected to be concentrated in combined cycle power plants. From 2008 onwards, expected CCGTs in next three years (in accordance with TSO's conservative scenario, as shown in CNE's Framework Report on Gas and Electricity System Adequacy) comprise a total over 4.500 MW split as follows:

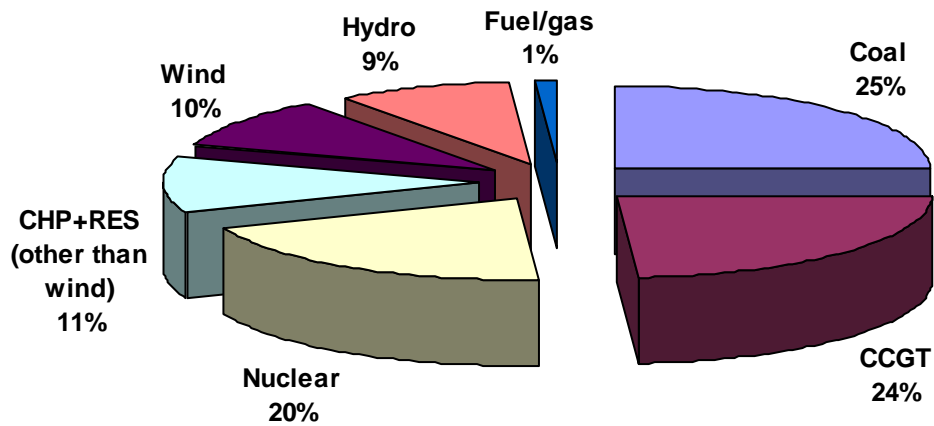
2009	2010	2011
2.073 MW	830 MW	1.658 MW

*Table 39. CCGTs' MW in next three years*

The National Energy Commission monitors the authorization of the forecasted schedule for combined cycle installations under construction. There are also authorizations for generation installations on the islands and for special regime production installations (cogeneration, renewable energies and waste).

#### Current generation fuel mix and expected developments

During 2008, mainland electrical generation derived from the following fuels/technologies, as per the percentages displayed in the chart:



Source: REE

Figure 31. Generation mix in the mainland electrical system.

In the future, the proportion of coal-based generation is expected to decrease further, due to the restrictions imposed by the Mining Plan, and fuel generation is also expected to fall. These decreases should be replaced with combined cycle natural gas power generation, which is more efficient and pollutes less. Furthermore, a gradual increase in special regime generation is expected.

#### Investments commissions / or retired during 2008

During 2008, variation in power capacity in Spain was positive, yielding a figure of almost 1.776 MW; 1.387 MW of this increase was due to the start-up of combined cycle plants, and 2.000 MW arose from the installation of new wind power. The increase in power by technologies is as follows:

Increases in power in 2008 (MW)	
Combined cycle	1.387
Wind	145
CHP+RES (other than wind)	244
Total	1.776

Table 40. Increases in power in the year 2008

### Regulation and authorizations

Regulation of the authorization procedure to generation installations is set forth in Royal Decree 1955/2000, and shall be the competence of the State, provided that more than one Autonomous Community is affected. In this case, the National Energy Commission must issue a report on the installation. Otherwise if the power plant does not affect more than one Autonomous Community, the pertinent Autonomous Government shall be responsible. Furthermore, on an annual basis the CNE draws up the Framework Report, which includes forecasts for the evolution in electricity and gas demand, and the situation and outlook in energy supply.

In this regard, there is no additional regulatory development to highlight in 2008.

### Incentives to build capacity

According to provisions contained in Order ITC/3860/2007 (dated 28<sup>th</sup> December) regarding tariffs review, CNE had to develop a proposal for financing generation remuneration concerning the capacity service and submit it to the Ministry of Industry, Trade and Commerce. Accordingly, on April 3<sup>rd</sup> 2008 the CNE submitted a “Proposal to finance capacity payment” to the Ministry of Industry, Trade and Commerce once approved by the Administration Board of the CNE.

These payments have a dual nature: its first part is an “investment incentive” to foster long-term power commissioning; the second is defined as a medium-term “availability service”. Investment incentive may vary in connection with system adequacy ratio; availability service is contracted by System Operator as a further product.

### TSO processes for planning new network, congestion management and the functioning of wholesale markets

Royal Decree 2019/1997, of 26 December, organising and regulating the electricity production market, article 31, on operation procedures, provides that:

*“1. The system operator shall submit, for approval by the Ministry of Industry, Tourism and Trade, the operating procedures of a technical and instrumental nature which may be*

*required for the proper technical management of the system, said Ministry handing down a decision following a report by the National Electrical System Commission.*

*2. Operating procedures will have to include at least the following aspects:*

.....

*Table 42. Analysis of security in short term coverage.*

.....

*g) Operating information.*

.....

*h) System programming.*

.....

*k) Operating conditions of the production and transport and quality, reliability and security criteria.*

.....

*m) Management of each one of the complementary services.*

*n) Warning and emergency situations.*

.....”

These sections are taken up in different operating procedures, amongst which we may highlight the following approved in 2008-2009:

- P.O. 1.6. “Establishment of security plans for system operation”, approved by Decision of 18 May 2009.
- P.O. 3.1. “Generation programme”, approved by Decision of 18 May 2009.
- P.O. 3.2. “Technical restrictions management”, approved by Decision of 18 May 2009.
- P.O. 3.2. “Handling generation-consumption deviation”, approved by Decision of 18 May 2009.
- P.O. 4.1. “Congestion Management of France-Spain Interconnections” approved by Decision of 28 May 2009.

- P.O. 4.2. “Congestion Management of Portugal-Spain Interconnections” approved by Decision of 29 June 2007.
- P.O. 7.2. “Secondary regulation” approved by Decision of 18 May 2009.
- P.O. 7.3. “Tertiary regulation” approved by Decision of 18 May 2009.
- P.O. 14.3. “Tertiary regulation” approved by Decision of 18 May 2009.

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

### Evolution of gas demand

Natural gas consumption in 2008 was 451.117 GWh, 10% higher than demand in 2007, and slightly higher than the forecast for that year. It is one of the largest growths in Europe in a year in which climatic conditions have been generally mild throughout the continent during winter. In the case of Spain, summer temperatures have also been lower than the previous year.

The demand forecasts for the period 2008-2016 are the following:

	2009	2011	2016	Average increase [%]
TOTAL annual demand (TWh)	402	414	510	1,8%

*Table 41. Annual demand of natural gas*

*Source: Enagas Annual Demand 2009-2016.*

A drop in the gas demand is forecasted in 2009 as a consequence of the economic crisis. Gas demand scenarios are actually under revision.

### Origin of gas supplies (imports)

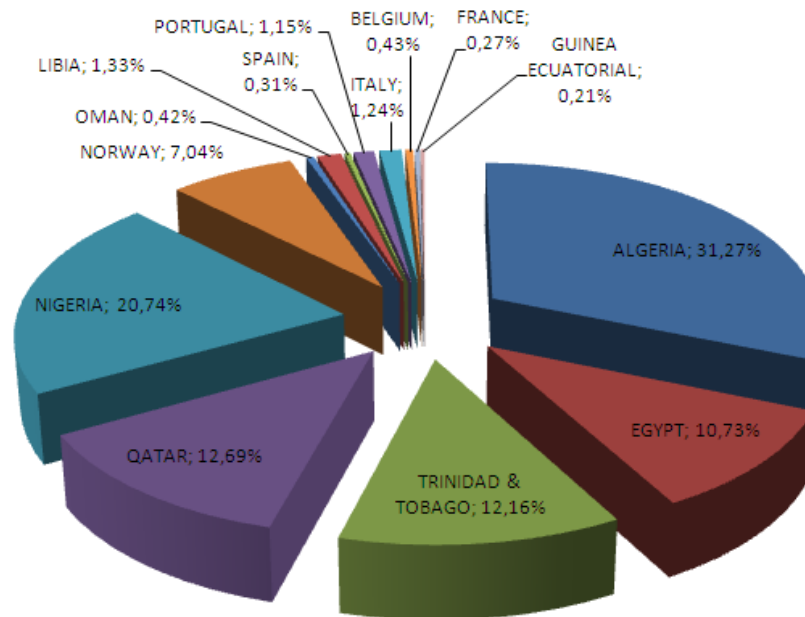


Figure 32. Origin of gas supplies in Spain, year 2008

### Import capacity

As for the currently available production and import capacity (bcm) the situation is the following:

#### A) Capacity of the regasification plants

Regasification plant	Storage capacity (m <sup>3</sup> )	Regasification capacity (Mm <sup>3</sup> (n)/h)
Barcelona	540.000	39,60
Huelva	469.500	32,40
Cartagena	437.000	36,45
Bilbao	300.000	19,20
Sagunto	300.000	19,20
Reganosa	300.000	9,91
<b>TOTAL</b>	<b>2.346.500</b>	<b>156,76</b>

Source: Enagás

Table 42. Capacity of the regasification plants

## B) Capacity of international connections by gas pipeline

Location	Transmission capacity (Mm <sup>3</sup> /day)
Larrau	8,31
Irún (exit towards France)	-0,38
Tarifa (Spain & Portugal)	33,94
Badajoz (exit towards Portugal)	6,5
Tuy (entry towards Spain)	1,72
<b>NET ENTRIES TO THE SPANISH SYSTEM</b>	<b>50,1</b>

Source: Enagás

*Table 43. Capacity of international connections by gas pipeline*

## C) Production of domestic fields

National production of gas in 2008 was only 1.082 GWh accounting for 0,24% of Spanish gas demand.

Field	Production in 2008 (GWh)
Marismas (Guadalquivir valley)	443
Poseidón (Gulf of Cádiz)	452
Palancares	187
Total	1.082

*Table 44. Production in the Spanish gas fields. Source: Enagas*

### Gas Infrastructure investment in 2008

Further new facilities were incorporated within the Spanish gas system in 2008, including both regasification plants and new transportation pipelines.

The Mugardos regasification plant, brought into service in 2007, multiplies in 2008 by three the amount of gas introduced into the system, becoming fully operative.



The regasification plant of Cartagena increased its regasification capacity in 150.000 m<sup>3</sup>(n)/h, as well as its storage capacity with a new 150.000 m<sup>3</sup> tank. Sagunto's plant also increased its regasification capacity.

Also in 2008 started to operate the Transversal pipeline axis at its whole length (264 km). The widening of Ramal to Campo de Gibraltar-Fase II was made, and the increase in pressure capacity (from 45 to 51 bar) in the Sea-Line pipeline in the coast waters of Barcelona-Besós was completed.

Also the following pipelines were brought into service:

- the pipeline to Soto de Real combined cycle plant (80 bar)
- the Madrid's south-west ring
- Montesa-Denia's pipeline
- Widening of the BBV pipeline phase Arbós-Barcelona plant.
- Arévalo-Medina del Campo's pipeline
- South pipeline phase II, Cabanas-Betanzos-Abegondo

Two new compression stations started up in 2008, Zaragoza (with a capacity flow of 375.000 (m<sup>3</sup>(n)/h) ) and Alcázar de San Juan (with 1.300.000 (m<sup>3</sup>(n)/h)).

#### Gas Infrastructure investment for the next three years

We may highlight the Gas System Planning procedure, responsibility of the Government, and in which the Autonomous Communities, the Technical System Manager, and other system agents, transmission operators, distributors and marketers, and CNE, also take part. Planning is in general indicative, except regarding to the basic network gas pipelines, the calculation of the total regasification of liquefied natural gas (needed to supply the gas system), and the hydrocarbon strategic reserve storage plants, in which the planning shall be on a mandatory and minimum enforceable basis for guaranteed supply of gas. The document deals, *inter alia*, with the following areas:

- Demand forecast for natural gas over the stipulated period (ten years).

- Development forecast of the high pressure natural gas transportation network and total liquefied natural gas regasification capacity required to supply gas to the gas system, with the aim of meeting demand with gas infrastructure optimisation criteria nation-wide.
- Defining of priority gasification areas, network expansion and stages of execution, with the aim of assuring uniform development in the gas system nation-wide.
- Forecasts relating to gas storage installations, and regasification plants. It assures gas system stability and regular and continuous gas supplies.
- Environmental protection criteria are established.

The new projects for increasing entry capacity over the next three years are specified below. All of them are included in the Planning Document 2008-2016. Those in which construction is under way are indicated:

A) Regasification plants

The largest new facility becoming fully operative in 2008 was the Reganosa plant, in Mugardos, A Coruña. New infrastructures are:

Transmission Operator	New infrastructures	Current new infrastructures state
<b>2009</b>		
<b>ENAGAS</b>	<b>Barcelona regasification plant</b>	
	7 <sup>th</sup> storage tank with 0.087 bcm capacity.	In project
	<b>Huelva regasification plant</b>	
	5 <sup>th</sup> storage tank with 0,087 bcm capacity.	In project
<b>SAGGAS</b>	<b>Sagunto regasification plant</b>	
	3 <sup>th</sup> storage tank with 0,087 bcm capacity	In construction
	Increase in emission capacity to 72 bar network to a final capacity of 8,60 bcma	In construction
<b>GASCAN</b>	<b>Gran Canaria regasification plant</b>	

<b>Transmission Operator</b>	<b>New infrastructures</b>	<b>Current new infrastructures state</b>
	Initial dimension	In project
<b>2010</b>		
<b>ENAGAS</b>	<b>Barcelona regasification plant</b>	
	8 <sup>th</sup> storage tank with 0,087 bcm capacity. Final capacity of 0,36 bcm.	In project
	<b>Cartagena regasification plant</b>	
	5 <sup>th</sup> storage tank with 0,087 bcm capacity.	In project
	<b>Gijón (Musel) regasification plant</b>	
	Initial dimension	In project
<b>BBG</b>	<b>Bilbao</b>	
	4 <sup>th</sup> storage tank with 0,087 bcm capacity.	In project
<b>ENERGAS</b>	<b>Palos de la Frontera regasification plant</b>	
	Initial dimension	In project
<b>GASCAN</b>	<b>Gran Canaria regasification plant</b>	
	Initial dimension	In project
<b>2011</b>		
<b>ENAGAS</b>	<b>Huelva regasification plant</b>	
	6 <sup>th</sup> storage tank with 0.087 bcm capacity. Increase in emission capacity to 1.500.000 Nm <sup>3</sup> /h	In project
<b>BBG</b>	<b>Bilbao</b>	
	Increase in emission capacity to 1.400.000 Nm <sup>3</sup> /h	In project

Table 45. Developments of new regasification plants

B) Interconnections by gas pipeline

In April 2007, MEDGAZ initiated the construction process for the Algerian- Spain offshore pipeline. It will invest roughly €900 million in this infrastructure and start-up is stated for the end of 2009. The initial capacity of this infrastructure will be 8 bcm/year, although by 2015 it is expected to be increased to 16 bcm/year. MEDGAZ is a strategic project for Algeria

and Spain as natural gas will be supplied directly from Algeria, without requiring transit through third countries, which will considerably enhance security of supply

In the context of the ERGEG South Gas REM, the Implementation Group has decided to increase the interconnection capacity with a view to improve competition and to increase security of supply on both the Spanish and French gas markets. Enagás, TIGF and GRTgaz promote the increase of capacity, and have been working together aiming to build a consistent gas network.

Currently there are 2 interconnection points between France and Spain. This interconnection capacity must be studied within the context of the interconnection capacity at the GRTgaz/TIGF interface, with the objective of developing the South Regional Gas Market.

In the France to Spain direction, there is a potential for a common capacity increase by 2010/11 of approximately 85 GWh/day at the Larrau interconnection, taking the existing capacity from 80 to 165 GWh/d. The first 20 GWh/d step is already decided and will be operational by 2009. On June 2009 tests have been carried out at the interconnection resulting with a transport capacity of 100 GWh/day, as expected.

The interconnection developments in the Spanish part are included in the mandatory planning review 2005/11, were already approved (under category A) and they are under development.

Additionally, there is a new interconnection proposed across the Pyrenees: MidCat Project. This name stands for Midi – Cataluña Project. The projected layout runs across Cataluña parallel to the coast line, from Martorell to Barbaira (MidCat project).

On the Spanish side, a 36” pipeline between the Barcelona area (Martorell) and Figueras is planned. The projected layout runs across Cataluña parallel to the coast line, Figueras is located approximately 30 km away from the French border. In France the existing 32” pipeline “Artère du Midi” runs from Saint Martin de Crau (GRTgaz compressor station) and

the Toulouse area on the TIGF side. The interconnection with a new pipeline coming from Figueras could be located at Barbaira where a compressor station is in operation on the eastern part of TIGF network. Infrastructures on the French side are under study.

In 2008, a new pipeline of 260 km, called cross-axis, was built in order to connect the east coast with the peninsula centre. The length of the gas network in Spain has reached 68.000 km with 14 compression stations.

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

By the Law 7/2007, the CNE is endowed with new competencies, in particular monitoring of gas market and security of supply (article 5 of 2003/55/EC), and ensuring the effective functioning of market, including unbundling and the level of transparency and competition (article 25 of 2003/55/EC).

According to provisions determined by Royal Decree 1766/2007 (dated December 28<sup>th</sup>) the Spanish regulation established for all agents the following obligations:

- The obligation of maintaining all the year a minimum security stocks of gas of 12 days the firm sales to final consumers. At the beginning of winter, the security gas stocks must be increased to 20 days (preparing for winter peak).

Supplies used for the consumption of installations with alternative fuels, and under certain circumstances, are exempted from this requirement.

- The obligation of diversifying supplies, so that the proportion thereof deriving from the main country supplying Spain (actually Algeria) should not exceed 50%. With a view to facilitating the entry of new companies to the market and given that supplies for agents with small market shares may be an obstacle to the development of their business, application of the diversification obligation has been limited to those agents that import more than 7% of the Spanish total gas supply.

### Storage capacity

In Spain, the underground storage capacity is insufficient and it constitutes a scanty resource. To resolve congestions at underground storage, there are two criteria of storage capacity allocation: about 90% of US capacity is allocated proportional (pro-rata base) to the sales to final clients and the rest is allocated by auction (10%).

Enagas manages the two underground stores in Spain: those at Serrablo and Gaviota, both old natural gas fields which have been depleted.

The Serrablo gas field is located between the towns of Jaca and Sabiñánigo (Huesca). Gaviota is an “off-shore” gas field, which belongs to Repsol YPF, and is located near Bermeo (Vizcaya).

Underground Storages	Gas storage capacity Mm <sup>3</sup> (n)			Maximum Intake/Offtake Mm <sup>3</sup> (n)/day	
	Available Gas	Gas assets	Total capacity	Intake	Offtake
SERRABLO (Aurín y Jaca)	420	680	1.100	3,9	6,8
GAVIOTA	1.700	979	2.679	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>

Source: ENAGAS

Table 46. Capacity of underground storages Serrablo and Gaviota.

There are many others underground storages which are in project as Marismas, Poseidón, Gaviota, Yela, Castor, Barreras, Ruedo and Reus.

New storage capacity	Foreseen starting date
Marismas	2009
Poseidón	2009
Gaviota	2009
Yela	2009
Castor	2009

<b>New storage capacity</b>	<b>Foreseen starting date</b>
Reus	2011
Las Barreras	2011
El Ruedo	2011

Source: CNE

Table 47. Foreseen dates for new underground storages.

Other way to store gas is by LNG tanks.

<b>LNG tanks</b>	<b>Gas storage capacity m3</b>
BARCELONA	540.000
CARTAGENA	437.000
HUELVA	488.600
BILBAO	300.000
SAGUNTO	300.000
MUGARDOS	300.000
<b>TOTAL</b>	<b>2.365.600</b>

Table 48. Capacity of LNG tanks.

Gas can also be stored at pipelines, but capacity is insignificant, compared to underground storages or LNG tanks.

	<b>Maximum storage capacity (GWh)</b>
UNDERGROUND STORAGES	27.513
LNG TANKS	16.073
PIPELINES	1.000
<b>TOTAL</b>	<b>44.586</b>

Table 49. Storage capacity of underground storages, LNG tanks and pipelines.

### Long-term gas supply contracts

In Spain the information of the duration of the individual long-term gas supply contracts is not public. However, most of gas supply contracts of all Spanish marketers (> 90 %) are 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 interconnection; also, LNG can be diverted to other markets.

### Incentives for new investment in exploration and production storage, LNG and transport of gas.

Infrastructure is developed according to a central planning made by the Government, among others. Buildings require an Administrative authorization.

The economic regime is based on the following principles:

- Ensuring recovery of investments.
- Ensuring a reasonable profit of financial resources.
- Promoting effective management and improving productivity.

Investment recovering is guaranteed, once the infrastructure is recognised by the Ministry. TPA Tariffs are calculated every year in order to collect the remuneration to infrastructure owners (investors that have built infrastructures included in the central planning).

The annual cost recovery for an infrastructure (direct allocation) consists of an annual cost recovery for investment and an annual operating and maintenance cost. Exceptionally, it is possible to include single investments in the remuneration system.

No TPA exemption regime is actually approved or asked for any of the new infrastructures.



## **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 as the maximum price to be applied to eligible consumers 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 eligible consumers, who are those provided by last resort suppliers.

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

- Endesa Energía, S.L.
- Iberdrola Comercialización de Último Recurso, S.A.U.
- UNION FENOSA Metra, S.L.
- Hidrocantábrico Energía Último Recurso, S.A.U.
- 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>12</sup> who receive their supply in the regulated market in 2008.

Consumer Segments	2008
	% of customers in the regulated market
Domestic	92,6%
Rest	68,9%

*Table 50. Share of customers in each segment supplied in the regulated electricity market*

#### Implementation of labelling for primary energy source (electricity)

The article 110 bis of the Royal Decree 1454/2005 (which constitutes the transposition of Directive 2003/54) specifies that suppliers must include information in the invoices (and promotion materials) about:

- Contribution of each primary energy source to the mix during the previous year.

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<sup>12</sup> Domestic consumers include customers subject to rates 2.0, 2.0 N and 1.0.

- Reference to the complete published information about environmental impact, at least regarding CO<sub>2</sub> emissions and radioactive waste.

In the context of sustainability, CNE was already competent to approve the calculation method for the contribution of each primary energy source to the electricity supplied and its corresponding environment impact, as well as the standards for invoices issued by distributors and suppliers. However, the Ministerial Order 1522/2007 is the new regulatory framework for the Guarantees of Origin (GoO) for electricity produced from renewable sources and has set up CNE as the competent body to issue GoO<sup>13</sup>.

Also regarding the special regime, the Government has entitled CNE, under Royal Decree 661/2007, to issue a circular specifying kinds of technology, costs and other parameters concerning to electricity generation installations under special regime, in order to revise tariffs, premiums and supplements. In this regard, it should be mentioned “Circular” 1/2008 of the CNE on information to consumers on the origin (source) of electricity consumed and its environmental impact.

About, specifically, cogeneration installations, CNE must inspect the plants, in a random way, to supervise cogeneration efficiency requirements, according to Royal Decree 661/2007.

#### 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, widows, etc.

## **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

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<sup>13</sup> [http://www.cne.es/cne/./contenido.jsp?id\\_nodo=266&&&keyword=&auditoria=F](http://www.cne.es/cne/./contenido.jsp?id_nodo=266&&&keyword=&auditoria=F)

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 abovementioned 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 will be eligible to choose last resort tariffs.

The abovementioned calendar has been 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. As a consequence, on 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 and are eligible for last resort tariffs will be transferred to the liberalized market where they are provided with natural gas by last resort suppliers. Hence, all consumers of natural gas are supplied in the liberalized market starting July 1<sup>st</sup> 2008.<sup>14</sup>

According to the Law, the following last resort suppliers are appointed:

- Endesa Energía, S.A.

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<sup>14</sup> Only consumers from Baleares remain in the regulated market as of July, 1<sup>st</sup> 2008.

- GAS NATURAL Servicios, S.A.
- Iberdrola, S.A.
- Naturgas Energía Comercializadora, S.A.U.
- UNION FENOSA Comercial, S.L.

Order ITC/3861/2007, dated 28<sup>th</sup> December, establishes the mechanism for setting the maximum prices to be applied by last resort suppliers to consumers who are eligible to be supplied at last resort tariffs as well as the regulated prices to be applied to consumers, who do not have a current contract with any supplier but they are not eligible for last resort tariffs.

#### Appropriate treatment of vulnerable customers in gas

Vulnerable customers do not exist under Spanish gas regulation.