



Comisión  
Nacional  
de Energía

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

23 July 2008

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## 1 FOREWORD

This report is issued in response to the formal request made by the European Commission through the Director General of Energy and Transport (DG TREN) to the President of 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 the report presented here, 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.

2007 was characterized by the Laws 12/2007 (of July 2<sup>nd</sup>) and 17/2007 (of July 4<sup>th</sup>) amending the Law 34/1998 of the Hydrocarbons Sector and the Law 54/1997 of the Spanish Electric Power Sector respectively. These new Laws (12/2007 & 17/2007) have transposed several aspects still pending of European Directive 2003/55/EC and 2003/54/EC. Among other changes, new requirements on unbundling are currently in place for TSOs and DSOs.

In 2007, the CNE was endowed with new competencies regarding market monitoring aiming to ensure an effective functioning of all energy markets. In this regard, the CNE has enhanced the publication of relevant reports on energy markets monitoring through its web page and a continuous and closer cooperation with the National Competition Authority is being pushed forward.

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

The Competition Act 15/2007, of 3<sup>rd</sup> July, entered into force on 1 September 2007, and abolishing the previous Competition Act 16/1989, of 17<sup>th</sup> July. A detailed presentation of this new regulatory framework is also considered in this report.

This report also addresses other relevant regulatory changes in 2007 such as the new CNE's powers to propose electricity and gas quarterly tariffs and to propose VPPs.

Furthermore, 2007 was pivotal for MIBEL since a unique wholesale market for Spain and Portugal began on 1 July 2007. In this regional context, a public consultation on MIBGAS (common gas market for Spain and Portugal) was launched in 2007 and the resulting regulatory model was proposed by regulators to the Governments of Spain and Portugal at the beginning of 2008.

2007 has been also the year in which the South-West Electricity region was launched under the CNE's leadership. A detailed action plan 2007-2009 was agreed with stakeholders in July and first concrete results were delivered already at the end of 2007. The South Gas region, also under the leadership of the CNE, continued progressing with a solid performance in 2007. The European Commission took note of this progress in both regions during the 2<sup>nd</sup> High Level Meeting held in February 2008.

In September 2007, the CNE also welcomed the appointment of Professor Monti as European Coordinator for the new electricity interconnection between Spain and France. After more than 25 years without any investment in new electricity lines at the Spanish-French border, the agreement reached in June 2008 between both countries paves the way towards the (still very far in the Spanish-French case) 10% goal established by the European Council in Barcelona 2002.

In November 2007, the CNE published its initial reaction to the European Commission's third package. The CNE fully welcomed all measures proposed by the Commission although effective unbundling of transmission operators, a stronger agency and more independent and executive national energy regulators were highlighted by CNE as main pillars for the success of this third effort at Community level towards the creation of a truly Internal Energy Market in the EU.

## 2 SUMMARY - MAJOR DEVELOPMENTS IN THE LAST YEAR

### 2.1 *Basic organisational structure and competences of the regulatory agency*

#### Composition

CNE is governed by a Board of Commissioners, which is made up of a President, in whom the Commission's legal representation is vested, a Vice-President, seven Commissioners and a Secretary, who shall act with the right to speak but without the right to vote.

The Commissioners are appointed by the Government following a proposal from the Minister of Industry, Tourism and Trade and later discussion within the Committee of Industrial, Tourist and Trading Affairs of the Parliament to check if they satisfy the requirements. They must be acknowledged professionals.

There is no right of dismissal. They can only be dismissed only by reasons set under the law.

#### Main statutory objectives

The general objective of CNE is to monitor effective competition in energy markets and transparency in their operation, thus benefiting all stakeholders and customers.

List of specific statutory objectives and powers:

**One:** To act as the Administration's advisory body on energy-related matters.

**Two:** To participate, through reports or proposals, in the process of drafting general provisions affecting the energy markets and, in particular, in the regulatory implementation of the present Law.

**Three:** To participate, through reports or proposals, in the energy planning process.

**Four:** To participate, through reports or proposals, in the process of preparing projects on the establishment of tariffs, tolls and the remuneration of energy activities.

**Five:** To report on new energy facilities' authorisation proceedings, when they are the responsibility of the General State Administration.

**Six:** To issue the reports requested by the Autonomous Regions when this is deemed to be necessary in the exercising of their energy-related responsibilities.

**Seven:** To issue circulars for the application and execution of the rules contained in Royal Decrees and the Orders of the Ministry of Industry, Tourism and Trade in application of the energy regulations, always provided that these provisions expressly authorise it to do so.

These provisions shall receive the name of Circulars and shall be published in the «Official State Gazette».

**Eight:** At the request of the General State Administration, the competent Autonomous Regions or, ex officio, the Spanish National Energy Commission, to inspect the plants' technical conditions, fulfilment of the requirements established in the authorizations, the correct and effective use of autochthonous coal in electricity power plants with the right to collect the autochthonous coal consumption premium, the activities and economic conditions of agents to the extent that they may affect the application of energy activity tariffs, prices and remuneration criteria, the effective availability of generating plant in the ordinary regime, the correct conditions of sale and billing by suppliers and distributors to consumers and qualified clients, the electricity energy supply's continuity, the quality of the service and the effective unbundling of these activities when so required.

**Nine:** To act as an arbitrage body in any conflicts which may arise between the agents who carry out activities in the electricity or hydrocarbons sectors. The exercising of this arbitral function shall be free of charge and shall be of a non-public nature. This arbitration function, which shall be voluntary for the parties, shall be exercised in accordance with Arbitration Act 36/1988 of 5th December and the regulatory rules which may be issued on the corresponding arbitrage procedure and which shall be approved by the Government.

**Ten:** To establish the agents to whose activities shall be attributed responsibility for deficiencies in the supply to users, proposing any measures which may have to be adopted.

**Eleven:** To agree on the serving of penalty proceedings and to carry out the hearing thereof, when they are the competence of the General State Administration and, when so required, to report on penalty proceedings served by the different public Administrations, without prejudice to the competencies attributed to the Petrol Products Strategic Reserves Corporation in Section 52.4 of this Law.

**Twelve:** To ensure that the agents which act in the energy markets in the conducting of their activities respect the principles of free competition. To this end, whenever the Commission detects the existence of signs of restrictive practices prohibited by Restrictive Practices Law 15/2007 of 3rd July, it shall make this known to the National Competition Commission, contributing all the items of evidence within its scope and, as and when applicable, a non-binding opinion of the particulars of offence.

**Thirteen:** To settle any conflicts which may be raised in respect of contracts related to the third parties access to the transport and, when applicable, distribution networks, in the terms and conditions which may be established in the regulations.

**Fourteen:** (changed in 2006<sup>2</sup>) To authorise the stakes acquisition by companies with activities deemed to be regulated in any trading corporation or subject to any special administrative requirement, such as nuclear power plants, coal power plant of special relevance in terms of autochthonous coal consumption, or activities developed in insular or extra-peninsular electricity networks, as well as natural gas storing or transport through international gas pipelines crossing or ending in national territory.

Authorisation will be required too for stakes acquisition over 10% of capital stock, or any other that results in a significant influence, made by any person or company, on a

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<sup>2</sup> On February 24<sup>th</sup> 2006 the Royal Decree-Law 4/2006 was approved.

company that operates in any of the above mentioned activities. The same authorisation will be required when purchasing the necessary assets to develop the mentioned activities.

The mentioned authorizations may be refused or subjected to conditions by any of the following reasons:

- a) The existence of significant risks or negative effects, whether direct or indirect, on the above mentioned activities.
- b) Protection of the public interest in the energy sector and, particularly, the warranty of a proper defence of the sectorial policy objectives, with special regard to assets considered as strategic, i.e., those that can affect the security of supply of gas and electricity. The following assets will be considered as strategic:
  - Facilities included in the natural gas basic network as described in article 59 of Law 34/1998.
  - International gas pipelines crossing or ending in national territory.
  - Electricity transport facilities defined in article 35 of Law 54/1997.
  - Generation and transmission facilities in insular and extra peninsular electrical systems
  - Nuclear power plants, coal power plant of special relevance in terms of autochthonous coal consumption
- c) The possibility that the entity developing the above mentioned activities is exposed to not being able to work with warranties as a result of the activities developed by the acquiring or acquired company.
- d) Any other reason of public security, and particularly:
  - d.1) The security and quality of supply, i.e. the uninterrupted physical availability of the products or services in the market at reasonable prices in the long or short term for all customers, regardless of their geographical location, as well as:



d.2) The security versus the risk of an investment or an insufficient maintenance in infrastructures that do not allow assuring, continuously, a minimum set of indispensable services to guarantee supply.

d.3) The authorisation of CNE will have to be requested before the acquisition, so that acquisition will be valid only after the authorisation is granted. In case the acquisition is made by a takeover bid, the acquiring entity will have to obtain that authorisation prior to the authorisation of the bid according to the rules of the stock market.

**Fifteen:** To furnish a mandatory report, with non binding effect, on transactions involving the concentration of companies or the takeover of one or several energy companies by another which carries out activities in the same sector, when such transactions have been submitted to the Government for its decision, in accordance with the prevailing legislation on the subject of competition.

**Sixteen:** To agree on its organisation and internal working, and to select and hire its personnel, complying with the requirements established in the prevailing regulations on the subject within the scope of the General State Administration.

**Seventeen:** On an annual basis, to prepare a report on its activities, which shall be referred to the Government for its remission to the Spanish Parliament.

**Eighteen:** To perform all those other functions which may be attributed to it by virtue of the law or which, by virtue of the regulations, may be entrusted to it by the Government at the proposal of the Ministry of Industry, Tourism and Trade.

In addition to the functions referred to in the previous section, regarding the electricity sector, the Commission shall be responsible for the following:

One: To carry out the settlement of electricity transport and distribution costs, the system's permanent costs and all those other costs which may be established for the entire system, whenever their settlement is expressly entrusted to it.

Likewise, on a half-yearly basis, it shall report to the Ministry of Industry, Tourism and Trade on the energy settlement carried out by the market operator in conjunction with the system's operator.

Two: To settle any conflicts that may arise in connection with the system's economic and technical management and transport.

In connection with the gas sector, and in addition to the functions referred to under point 1 above, the Commission shall be responsible for the following:

To carry out the settlement corresponding to revenue obtained from tariffs and tolls relating to the use of the Basic Network, secondary transport and distribution installations referred to in article 96 of the CNE regulations.

To solve any conflicts that may arise in connection with the natural gas system's technical management.

As also concerning gas and electricity markets, it is important to remark that CNE intervenes and is the organism in charge of monitoring the procedure for auctions for acquisition of gas for self-consumption and to cover the minimum storage level in facilities for transport, regasification and underground storing (Order ITC/3993/2006 and Resolution 12-4-2007 regulate the first auction and Order ITC/3863/2007 and Resolution 19-5-2008 for the second one), and gas storage capacity auctions (ITC/3862/2007 and Resolution 14-3-2008), as well as auctions of primary energy emissions (Royal Decrees 1634/2006 and 871/2007) and for electricity auctions for distributors with physical delivery (Order ITC/400/2007). Specifically, CNE appoints the entity in charge of the auctions, oversees the procedure for the auctions to ensure competition and transparency, and reports to the General Secretary for Energy about possible improvements.

#### Regulatory Board for MIBEL

The CNE is part of the Regulatory Board for MIBEL along with the Spanish Securities Market Commission (CNMV) and their respective Portuguese counterparts, the Regulatory

Entity for Energy Services (ERSE) and the Securities Market Commission (CMVM - Comissão do Mercado de Valores Mobiliários).

The aim of the Regulatory Board is the supervision of MIBEL. Furthermore, the CNE verifies the fulfilment of the distributors' obligation to buy in the future markets in OMIP-OMIClear (Orders ITC/2129/2006, ITC/3990/2006, ITC/1865/2007 and ITC/1934/2008).

As well, the Royal-Decree 1634/2006 foresees the elaboration of a plan reinforcing its supervision functions in electricity markets.

### *New powers in 2007*

In 2007, new powers have been given to CNE with the aim to guarantee the absence of discrimination, authentic competency and an efficient market functioning (Law 17/2007 that modifies Law 54/1997, and Law 12/2007 that modifies Law 34/1998).

Also the RD 871/2007 (July 2007) has reinforced CNE, with the power to propose electricity and gas quarterly tariffs as from July 2008. This Royal Decree also granted to the CNE the right to propose new VPPs.

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.

Also regarding the special regime, the Government has entitled CNE, under RD 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. Furthermore, CNE has to propose the framework of conditions for the connection of the aforementioned installations to the transmission grid or distribution network (RD 871/2007). About, specifically, cogeneration installations, CNE must inspect the plants, in a random way, to supervise cogeneration efficiency requirements, according to RD 661/2007.

Order ITC/3860/2007 foresees that CNE has to develop a proposal for financing generation remuneration concerning the capacity service. As well, Order ITC/2794/2007 provides that CNE shall inspect provision conditions of this capacity service.

About CNE's new powers on gas market, Orders ITC/3861/2007, ITC/3862/2007 and ITC/3863/2007 provide that CNE foresees the procedure for the new auctions for acquisition of gas for self-consumption, for the new auctions to cover the minimum storage level in facilities for transport, regasification and underground storing and for the gas auctions for distributors with physical delivery.

CNE has also to give general information to the consumers about gas system operation through its web portal, as a specific guide, according Order ITC/2309/2007, and has to prepare, under Order ITC/3863/2007, a standard agreement for the agents concerned to contract the use of facilities under third party access entitlement for less than a year.

Regarding petroleum by-products market, CNE has to inform to the agents concerned of the rules about their information provision duties, including a phone support that CNE must give (Order ITC/2308/2007).

#### Main enforcement powers to implement its role.

The statutory objectives number 7 and 14, above mentioned, give CNE the power to respectively issue regulatory circulars and to issue authorisations regarding stakes acquisitions and takeover bids in the energy sector companies.

CNE does not have the power to impose penalties. This corresponds to the Ministry of Industry, Trade and Tourism.

#### Independence and accountability, Who does it report to?

The President and members of the Board of Commissioners shall be appointed amongst persons of well-known professional and technical competence, through a Royal Decree, at the proposal of the Ministry of Industry, Trade and Tourism, after the appearance thereof and a debate in the competent commission of the Lower House, so as to confirm the

candidates' compliance with the conditions indicated in this section. The President and members of the Board of Commissioners shall be appointed for a period of six years and may be re-elected for a further period of the same duration.

Nevertheless, the Board of Commissioners shall partially renew its members every three years. This renewal shall alternatively affect five or four of its members, as applicable.

In the event that during the period of office, one of its members were to resign from or cease in its office, its successor shall cease on the termination of its predecessor's term of office. When this latter cessation occurs before one year has elapsed since the appointment, the limit about re-election shall not apply and such successor's term of office may be renewed on two occasions.

The President and members may be removed from office for the following causes:

- a) Expiry of the term of office, continuing to act until the appointment of the new members who replace him/her.
- b) Resignation accepted by the Government.
- c) Permanent disability for the exercising of his/her functions, incompatibility occurring subsequent to his/her appointment as a member of the Commission or conviction of an offence subject to the hearing of the proceedings by the Ministry of Industry, Tourism and Trade, serious non-fulfilment of his/her obligations or dismissal by the Government, at the reasoned proposal of the Ministry of Industry, Tourism and Trade.

The President and members of the Board of Commissioners shall be subject to the incompatibility regime established for top-level offices of the General State Administration. On being removed from office and for the next two years, they may not conduct any professional activity relating to the energy sectors. The economic compensation which corresponds by virtue of this limitation shall be established in the regulations.

The Spanish National Energy Commission's economic and financial control shall be carried out by the State Administration General Inspectorate, pursuant to the provisions of Sections 17 and 99.3 of the Revised Text of General Budget Law, without prejudice to the functions which correspond to the Court of Auditors.

Without prejudice to the control established in this connection by Spain's General Budget Law, the Ministry of Industry, Tourism and Trade shall exercise control over the efficacy of the Spanish National Energy Commission's activities. The purpose of this control is to verify the degree of fulfilment of its objectives and the adequate use of the resources allocated to it.

In order to implement this control, on an annual basis, the Spanish National Energy Commission shall draw up an Action Plan in conjunction with the Ministry of Industry, Tourism and Trade, which shall be responsible for monitoring its execution. Every quarter, the Spanish National Energy Commission must remit a report to the Ministry of Industry, Tourism and Trade, in which it shall indicate the actions carried out and the annual Action Plan's degree of execution during that quarter, justifying, when necessary, any deviations from the Plan's forecasts which may have arisen.

The preparation of the Action Plan referred to in the previous paragraph shall be deemed to be without prejudice to the Action, Investment and Financing Programme which, in accordance with the Revised Text of State General Budget Law, must be submitted to the Government for its approval on a yearly basis.

As per the provisions of Spain's Hydrocarbons Sector Act, each year the Spanish National Energy Commission shall draw up an activity report, which it shall refer to the Government for its remission to the Spanish Parliament.

*Overlapping jurisdictions with other governmental authorities (national and supranational)*

The CNE's jurisdiction does not overlap with that of any other government agencies. What do exist are complementariness and a spirit of co-operation.

### Stages of appeal

Those concerned can appeal to the Minister of Industry, Tourism and Trade the decisions by CNE, except decisions on conflicts that may arise in connection with the system's economic and technical management and transport, decisions on conflicts that may arise in connection with the natural gas system's technical management, and circulars gathering information from the agents operating on the energy markets.

These other decisions (that cannot be appealed to the Minister of Industry, Tourism and Trade) can be appealed directly to the Judiciary,

### Other authorities' power over the decision of the regulator

No authority has decisional power over the decision of the regulator itself. The Minister of Industry, Tourism and Trade, the General Secretary for Energy, or any other high-ranking official from the Ministry that they delegate to, may attend the meetings of the CNE's Board of Commissioners, albeit without the right to vote.

Only the Minister of Industry, Tourism and Trade is able to revise the decisions of the regulator when these were appealed to him, as applicable. The decision of the Minister shall be motivated.

### Cooperation with other national authorities (competition, consumer protection)

According to Restrictive Practices Law 15/2007, of 3rd July, Spanish Competition Commission and sectorial NRAs will cooperate in common matters and share information about each other activities.

For such purpose, the CNE works in close cooperation with the Spanish Competition Commission to ensure that the agents who act in the energy markets in the conducting of their activities respect the principles of free competition. In 2007, the CNE issued 5 reports to the competition authority in this regard.

About the auctions of primary energy emissions, CNE and Spanish Securities Market Commission (CNMV) must cooperate in the exercise of their functions.

Concerning other national authorities; one member representing the Spanish Nuclear Safety Council serves on the Electricity Consultative Board, and one member representing Spanish Strategic Reserves of Petroleum Products Corporation serves on the Hydrocarbons Consultative Board, as advisory bodies to CNE.

Consumers are represented in both the Electricity and Gas Consultative Boards through relevant consumers associations. Although the CNE has no direct competences with regard to customer protection, the CNE work in close cooperation (as an advisory body) with Autonomous Regions which are competent in solving problems between consumers and suppliers.



## **2.2 Main developments in the gas and electricity markets**

### **2.2.1. Electricity markets in 2007**

2007 has been characterized by the Law 17/2007, of July 4th (published in the Official State Journal on 5 July, 2007) amending Law 54/1997 of the Spanish Electric Power Sector, and transposing several aspects still pending of European Directive 2003/54/EC.

The highlights of this new legislation are:

- Unbundling of supply and distribution activities.
- Tariffs of last resort as from 1st January 2009.
- Transmission and System Operation.
  - o REE sole TSO.
  - o Accounts and functional unbundling of activities
- Solution to REE's international contracts.
- Reduction of deadlines for claims concerning conflicts against network operators.
- Set up of an "Office for switching supplier"
- MIBEL
  - o Adaptation in contracting possibilities.
  - o More flexible requirements for intra-community transactions.
  - o The "external agent" figure is eliminated.
  - o Amendment in the financing of the market operator.
- Modification of sanctions regime.

#### Wholesale market

In 2007, MIBEL has become a reality since a unique wholesale market for Spain and Portugal began on 1 July 2007.

The legal framework for the organisation of MIBEL is based on the "*Agreement between the Portuguese Republic and the Kingdom of Spain relative to the constitution of an Iberian Electrical Energy Market*" (MIBEL Agreement) signed by the respective governments, on 1 October 2004. This Agreement established the general principles for

the organisation and management of MIBEL and, in particular, the framework for the organisation of the Spot Market (OMEL) and the Derivatives Market (OMIP).

This spot market is run by OMEL (Operador del Mercado Iberico de Energía – Polo Español). When congestion appears at the Spanish-Portuguese interconnection, market splitting is put in place.

Figure 1 (a) presents market shares in OMEL. On the other hand, Figures 1 (b, c & d) show how this electricity is sold in the different markets. Around 27 % of the electricity was sold in the liberalised market while the other 73% of the volume was moved through regulated suppliers.

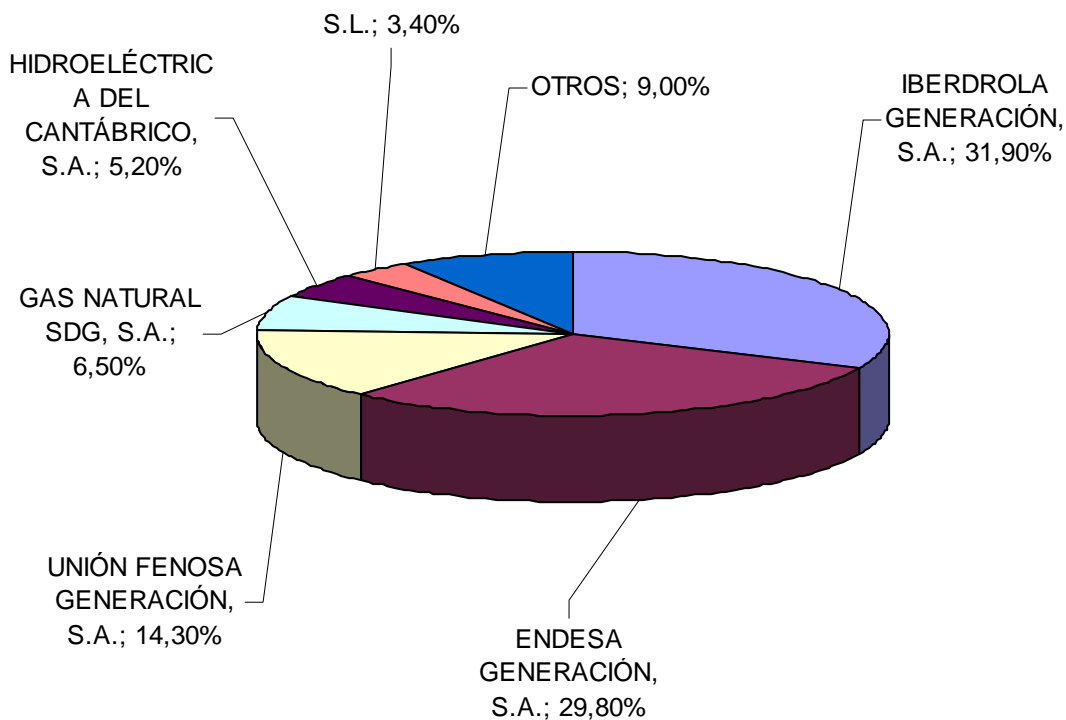


Figure 1 (a) Wholesale market share

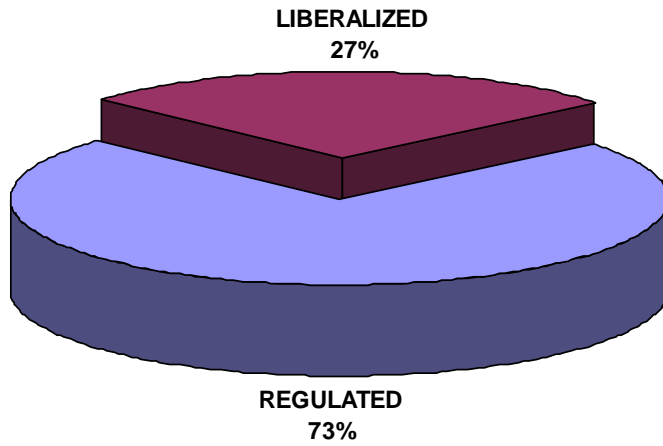


Figure 1 (b) Electricity consumption in 2007

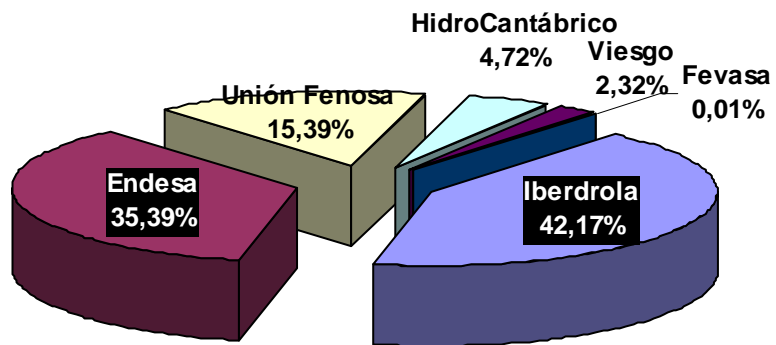


Figure 1(c) Regulated market. Market shares by supplier (173.867 GWh)

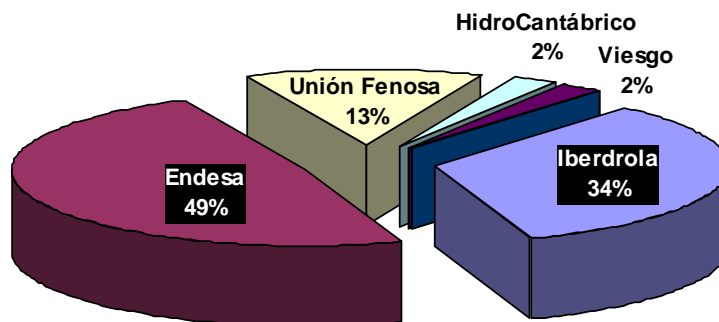


Figure 1 (d) Liberalised market. Market shares by supplier (63.789 GWh)

However, with regard to the determination of the top five companies and the so-called dominant operators in Spain (those with a market share equal or higher than 10 %) the

CNE calculates the ranking and market shares having into account physical units instead of turnover. The Royal Decree-Law 5/2005 establishes that CNE will publish through telematic lines the lists including the top five companies and the dominant operators.

The top five companies<sup>3</sup> in the electricity market, for 2007, were the following (in this order): Endesa, Iberdrola, EDP/Hidrocantábrico, Union Fenosa and Repsol YPF/Gas Natural. The mentioned ranking did not experience any change with regard to the previous year 2006. The dominant operators are, for 2007: Endesa, Iberdrola, EDP/Hidrocantábrico and Unión Fenosa.

#### Derivatives market (in the context of MIBEL)

The negotiation of futures market of the MIBEL, managed by the OMIP, whose clearing house is the OMIClear, takes place in a continuous market and in auctions in which the Iberian distributors are obliged during a transition period, to purchase energy of a determined volume. As set forth in the International Agreement of Santiago de Compostela, the said mechanism serves the purpose of providing the futures market of the MIBEL with initial liquidity. Regarding the hiring, the Ministerial Order ITC/3990/2006, dated on December 28<sup>th</sup>, regulates the electricity future contracts by the Spanish distributors and EDP Distribuição in the first semester 2007, and extended the Order ITC/2129/2006 of June 30<sup>th</sup> 2006. In this normative, it is settled that the DSOs have to acquire in three auctions per month 10% of the annual demand in the regulated market within the MIBEL in line with the agreements adopted in the Portuguese-Spanish Summit which took place in Badajoz on 24th and 25th November 2006. Therefore, the demand within the OMIP is much lower than the one in OMEL.

The Order ITC/1865/2007, dated on June 22<sup>nd</sup>, regulated future contracts among distributors during the second semester 2007 and the first semester 2008, and extended the Order ITC/3990/2006 of December 28<sup>th</sup> 2006. The said number of auctions has risen to four in the second semester of 2007 and the first semester of 2008.

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<sup>3</sup> The top five companies will be those within the energy sector with the highest market shares.

The cost of energy and the obligation established by the OMIP-OMIClear for distributors and the last resort traders to participate in the OMIP's auctions is acknowledged as a cost of the system at the expense of the electricity tariff.

In 2007 and 2008, within the scope of the MIBEL Regulators Council and in conjunction with the other members of the Regulators Council, the CNE (National Energy Commission) has continued to supervise the futures market operated by the OMIP. It has verified that the purchase obligations of Spanish distributors in the auctions organised by the OMIP are fulfilled. In 2007, the said quantities amounted to 10% of tariff demand, as approved in the 22<sup>nd</sup> Spain-Portugal Summit of Badajoz, held on 24<sup>th</sup> and 25<sup>th</sup> November, 2006.

The energy negotiated in the mentioned market from its recent start-up (3rd July 2006) until the end of June 2008 amounts to 39,392.6 GWh and the number of participating agents is currently 30 trading members, 14 clearing members and 22 settlement agents. The greatest percentage of negotiation in the futures market is concentrated in the auction sessions. Although negotiation in the continuous market (outside auctions) has reached in June 2008 a maximum level of 912.6 GWh, it only represented 35% of total negotiation in the futures market (14.8% average percentage from the beginning of OMIP).

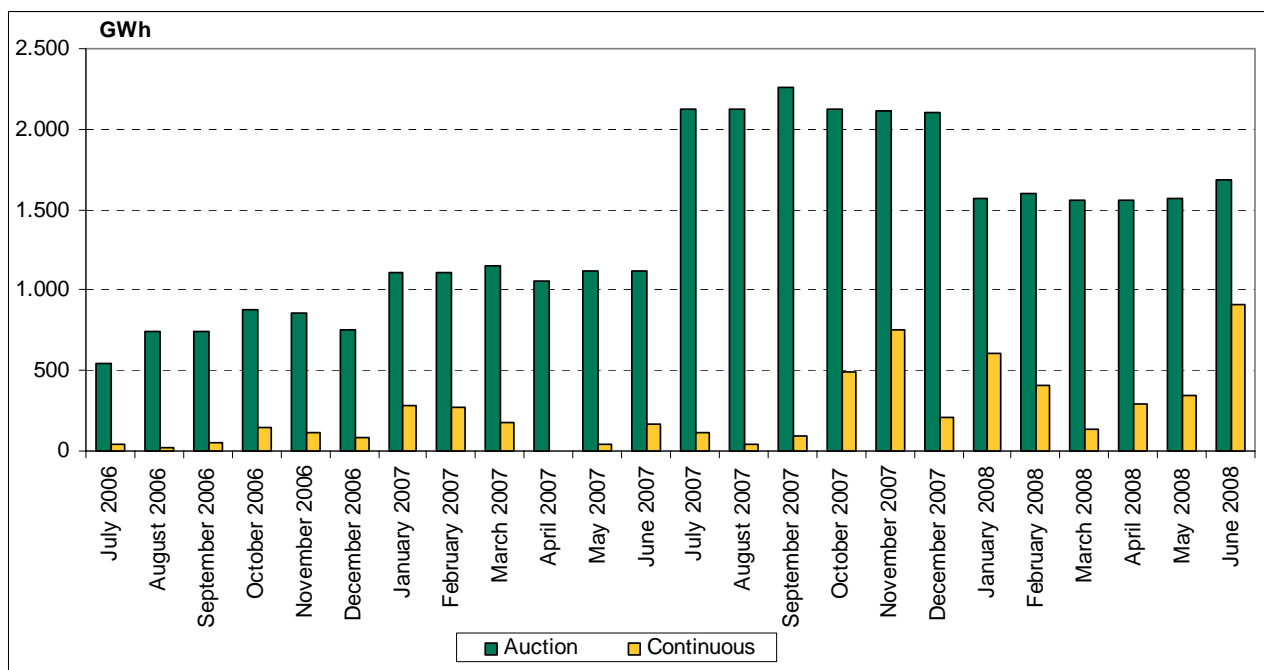


Figure 1. OMIP: Energy traded in auctions and continuous trading (GWh)

Month	Auction	Continuous
July 2006	538,8	44,2
August 2006	740,9	18,5
September 2006	746,9	55,3
October 2006	880,2	151,5
November 2006	857,1	119,2
December 2006	752,3	88,8
January 2007	1.108,1	284,0
February 2007	1.109,9	274,2
March 2007	1.146,6	180,7
April 2007	1.060,2	0,0
May 2007	1.115,0	41,8
June 2007	1.115,0	169,2
July 2007	2.124,0	113,5
August 2007	2.124,3	44,8
September 2007	2.256,0	96,1
October 2007	2.123,6	494,8
November 2007	2.116,1	756,0
December 2007	2.100,7	206,9
January 2008	1.567,9	606,9
February 2008	1.597,6	407,8
March 2008	1.554,2	134,8
April 2008	1.561,2	293,1
May 2008	1.568,7	344,5
June 2008	1.688,0	912,6

Source: OMIP

*Table 1. OMIP: Energy traded in auctions and continuous trading (GWh)*

Furthermore, in 2007, new auction-based forward contracting mechanisms were developed for electricity acquisition. Specifically, in 2007, three Virtual Power Plant (VPP) auctions were held on 13<sup>th</sup> June, 13<sup>th</sup> September and 11<sup>th</sup> December 2007, while three auctions were held for the acquisition of energy by distributors (CESUR auctions) on 19<sup>th</sup> June, 18<sup>th</sup> September and 18<sup>th</sup> December, 2007.

This process has continued in 2008, with two further VPP auctions, held on 11<sup>th</sup> March and 10<sup>th</sup> June 2008, and two further additional CESUR auctions, held on 13<sup>th</sup> March and 17<sup>th</sup> June 2008.

As regards VPP capacity, the twentieth additional provision of Royal Decree 1634/2006, of 29<sup>th</sup> December, which establishes electricity tariffs as of 1<sup>st</sup> January 2007, stipulates a timeframe for the holding of five VPP auctions between June 2007 and June 2008. The Ruling of the Secretariat General for Energy of 19<sup>th</sup> April 2007 regulates the VPP capacity

set forth in the twentieth additional provision of Royal Decree 1634/2006, stipulating the main characteristics of the said VPP capacity.

The explanatory statement of the Ruling of 19<sup>th</sup> April 2007 by the Secretariat General for Energy points out that two objectives are pursued regarding VPP capacity: firstly, to foster competition in the electricity market “by reducing in practice the generation capacity of the operators with the greatest market share” and, secondly, to develop forward contracting, due to the fact that “the companies taking part as bidders will have an incentive to cover the risks associated with the purchase of the options”.

The concept of VPP capacity is equivalent to a purchase option (call) through which the sellers (Endesa and Iberdrola) hold an auction of part of their virtual plant capacity (there is no transfer of ownership). The successful bidders acquire an electricity production right for which they pay a bonus. If the buyer decides to exercise the option when it matures, it pays a price for the electricity obtained (strike price, agreed previously in the contract).

According to the Preliminary Information Memorandum in which the beforehand companies explain the virtual power plant auctions, the auction will be carried out in several rounds. During the auction, the prices for the Option Premiums will be announced and the bidders will enter the MW they want to bid<sup>4</sup>. In the following rounds, prices will be increased and bidders may only maintain or decrease the amounts of energy they bid for. The auction clears when a price level is reached -Closing price- where demand no longer exceeds the supply of energy. The main features of the auctions will be:

- “Ascending clock” auction method.
- Simultaneous auction of all products.

Table 2 displays the results of the first five VPP auctions.

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<sup>4</sup> With the next restriction: each bidder will not be allowed to increase the MWq if the price increases. MWq is the Equivalent Quarterly Power offered for each product, defined as four times the power auctioned in the Annual Period, plus twice that of the Half-Year period, plus once that of the Quarterly Period.

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

	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
Base Product															
Auction price (Option price) (€/MWh/month)	20.000	20.115	21.883	11.840	16.022	17.627	12.832	10.023	9.485	17.000	17.699	17.961	19.000	19.540	20.178
Exercise price (€/MWh)	17	17	17	22	22	22	38	38	38	36	36	36	39	39	39

	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
Peak Product															
Auction price (Option price) (€/MWh/month)	2.310	2.087	2.867	1.001	2.731	3.642	2.151	1.745	1.665	3.400	3.666	4.004	6.100	6.438	6.853
Exercise price (€/MWh)	52	52	52	51	51	51	65	65	65	63	63	63	55	55	55

Table 2. VPP Results

Regulatory developments have been published in 2008 which affect VPP auctions. Specifically, Royal Decree 324/2008, of 29<sup>th</sup> February 2008, which sets forth the conditions and procedure for operating and taking part in VPP auctions, was published in the BOE (Official State Gazette) on 20<sup>th</sup> March 2008. This Royal Decree extends the schedule of VPP auctions set forth in the twentieth additional provision of Royal Decree 1634/2006, requiring two additional auctions, namely the sixth and seventh auctions, with the electricity delivery period beginning on 1<sup>st</sup> October 2008 and 1<sup>st</sup> April 2009 respectively. Royal Decree 324/2008 is implemented through the Ruling of the Secretariat General for Energy (SGE), of 13<sup>th</sup> May 2008, published in the BOE (Official State Journal) of 28<sup>th</sup> May 2008, which regulates the virtual power plant capacity set forth in the single additional provision of Royal Decree 324/2008, of 29<sup>th</sup> February.

Meanwhile, Order ITC/400/2007, of 26<sup>th</sup> February, which regulates bilateral contracts signed by distributors for the supply of electricity at the tariff rate on the peninsula, establishes the general regulation of CESUR auctions. Furthermore, before the holding of each auction, three specific rulings are published for each auction with the purpose of establishing characteristics, approving the rules and contract model, and stipulating the parameters that regulate auctions.

This contracting mode completes the range of possibilities available to distributors for acquiring electricity for its sale to consumers at tariff rates, as well as regarding acquisitions in the market operated by OMEL and in the OMIP organised forward market.



At present, distribution auctions are of a “transitory nature” and, according to the explanatory statement of Order ITC/400/2007, “they are crucial for paving the way for the coming into force of last-resort tariffs”.

The CESUR auctions have a descending-clock price format, with multiple rounds. The auction concludes at the round where the total bid volume equals the target volume that must be acquired for energy supply.

Table 3 displays the results of the first five CESUR auctions.

	5 <sup>th</sup> auction		4 <sup>th</sup> auction		3 <sup>rd</sup> auction	2 <sup>nd</sup> auction	1 <sup>st</sup> auction
	Quarter	Semester	Quarter	Semester			
<b>Participants</b>	25		26		24	26	25
<b>Winners</b>	21		26		23	18	21
<b>Rounds</b>	12		16		14	15	25
<b>Target volume (MW)</b>	1.800	900	3.500	3.500	6.500	6.500	6.500
<b>Starting price (€/MWh)</b>	85	85	85	85	85	60	70
<b>Auction price (€/MWh)</b>	65,15	65,79	63,36	63,73	64,65	38,45	46,27
<b>Base load products</b>	Q3-08	Q3-08+Q4-08	Q2-08	Q2-08+Q3-08	Q1-08	Q4-07	Q3-07

*Table 3. CESUR Results*

On March 8<sup>th</sup> 2007, the Spanish and Portuguese governments have signed a regulatory compatibility plan to make their regulation compatible and to allow MIBEL work efficiently as from October 2007.

#### Promoting regional integration in SW Europe

In the context of the ERGEG Regional Initiatives, a South West Electricity Regional Energy Market (SW Electricity REM) has been established comprising France, Spain and Portugal. The South-West electricity REM is led by the Spanish Energy Regulator (CNE) and aims to integrate the electricity markets of France and the Iberian Peninsula (MIBEL) into one electricity regional market. The priorities in the region are:

- Priority I: Interconnections and available transmission capacity
- Priority II: Transparency
- Priority III: Evolution of the mechanism for congestion management in the France-Spain interconnection

- Priority: IV Analysis of the administrative procedures for the changing of the legislation in force in each country
- Priority V: The compatibility of the rules of the market

2007 was an important year for this region since a detailed action plan (2007-2009) was finally agreed with stakeholders and first works were delivered.

Key achievements so far for the region are:

- Proposal of new capacity allocation rules for the Spanish-French border by regulators.
- Transparency report similar to others produced in other regions. Preliminary results higher degree of transparency in the SW Electricity REM compared with others.
- Analysis of the administrative procedures for the changing of the legislation in force in each country. The lack of competences of CNE in cross-border issues (compared to CRE and ERSE) is a key result of the study.
- Market coupling between MIBEL and current Trilateral coupling (and forthcoming CWE). TSOs and PXs will present a timetable for implementation of market coupling between MIBEL and CWE.
- Proposals to improve intraday capacity allocation.
- Proposal of a single auction office (for cross-border capacities) for the SW region.

Further information on the SW Electricity REM and relevant papers are available at [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_INITIATIVES/ERI/South-West](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_INITIATIVES/ERI/South-West)

### Retail market

The Spanish electricity and natural gas markets are fully opened since January 2003 for all consumers (100% eligibility threshold). Since then, the evolution of the number of

consumers and energy supplied in the liberalised markets has been different for electricity and natural gas. The evolution for the electricity market is shown in the following figure.

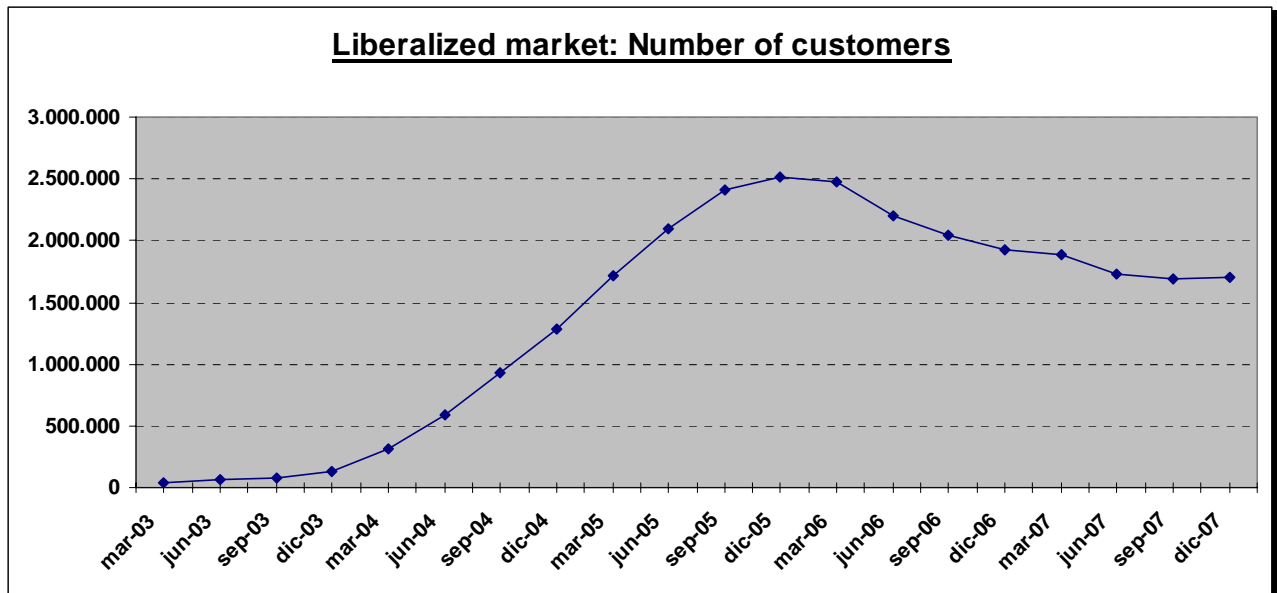


Figure 3. Evolution of electricity customers in free market 2003-2007

In December 2007, 6,91% of electricity customers were supplied in free market representing almost 27% of the total electricity consumption. According to the Law 17/2007 tariffs of last resort will be established as from 1st January 2009. In this regard, a first major step has been accomplished by Ministerial Order ITC/1857/2008, with the abolition of integral (TPA plus energy) tariffs for high voltage (greater than 1 kV) supplies; this means that all non-households or SMEs customers must negotiate their electricity supply in the free market. Expectations are that these measures will definitely boost the growth of liberalized market, which has experienced a drop in terms of number of customers since the end of year 2005, when it reached its maximum. Switching has also been kept so far within modest rates, in a scenario where suppliers could hardly compete with regulated tariffs' prices in low consumption segments. In this context, a five-years-long freedom of choice has not satisfactorily been translated in real incentives to either jump into free market or change supplier, as long as "massive" market is concerned.

### Infrastructure

Two major regulatory changes have taken place recently as regards regulated activities. In February 2008, Royal Decrees 222/2008 and 325/2008 regulate distribution and transmission activities respectively, both with an impact on infrastructure issues.

Distribution business has been finally given a framework which acknowledges geographical specificities as regards company-by-company network deployment and demand growth, as well as an incentive scheme including quality of services indexes and loss reduction targets. New methodology relies mostly in a Network Reference Model, whose development has been commissioned by CNE, and in an exhaustive set of information duties on financial and asset-inventory issues imposed on DNOs. Aim is to provide distributors with economic signals to favour efficient network operating and planning, taking into consideration drivers such as scatter population, environmental concern, increasing undergrounding rates, extreme weather, woody or salty (coastal) locations, etc. All these factors should turn into fine-tuning of activity remuneration, eventually recovered through TPA tariffs and allow for a sounder infrastructure development.

On the other hand, Royal Decree 325/2008 sets up the new transmission remuneration for transmission facilities coming into operation from 1st January 2008 onwards. The methodology is a refinement of the one applied so far, also based in a range of unit costs yearly updated, and includes a rate of return linked to 10-year-maturity State Bonds plus 375 basic points. This Decree is intended to endorse a most ambitious investment planning allowing for more than 7.000 km of 400 kV circuits and above 4.000 km of 220 kV ones for the period 2008-2016.

As for interconnections, French and Spanish Governments have signed late June 2008 a formal agreement to almost double the capacity of the link through the Pyrenees, where no new transmission lines have been built in the last 25 years. TSOs REE and RTE will jointly develop the project, which will include an underground cable of about 50 km, in accordance with recommendations by Mr Mario Monti, the mediator appointed by European Commission.

In the Portuguese border, the reinforcement of Mibel internal links follows foreseen deadlines; capacity will be close to 2.000 MW in two years, and is expected to reach 3.000 MW by 2014, thus alleviating today's structural congestions.

### Regulation / Unbundling

As already reflected, the Law 17/2007, of July 4th, amending Law 54/1997 of the Spanish Electric Power Sector (published in the Official State Journal on 5 July 2007) has transposed several aspects of European Directive 2003/54/EC, in particular the following regarding unbundling:

- Unbundling of supply and distribution activities.
- Transmission and System Operation.
- REE sole TSO.
- Accounts and functional unbundling of activities
- Solution to REE's international contracts.

### Security of Supply

In terms of system adequacy, no particular stress is foreseen in the short and medium term for both Spanish and Iberian market. Although demand is still growing above European average, Spain is (with Italy) the EU-27 country where a highest number of new generation MW are expected to enter service in next years, mostly gas-fired combined cycles, on-shore wind turbines and, now also in a sharp raise, solar PV.

In order to preserve this situation, a new scheme of "capacity payments" has been passed in the second half of 2007. 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.

Nevertheless, incidents like the major blackout suffered by Barcelona in July 23<sup>rd</sup> 2007 reveal that some parts of heavily loaded networks in metropolitan areas are still weak. Apart from the aforementioned enhancement of incentives to grid investment, other working streams lead to draw more flexible limits between transmission and distribution

there where very high load concentration calls for extra high voltage facilities performing close-to-distribution duties.

The French interconnection, scarce as it is, plays also a very important role for Iberian security of supply. In this regard, the CNE welcomed the appointment of a European Coordinator as a mediator between the French and Spanish Governments for the building of a new interconnection between both countries. Spain and France have reached an agreement on 27 June 2008 and a partially undergrounded cable thorough the Eastern Pyrenees will be a reality in the coming years. Since the underground part of the cable is more that 20 Km, an AC cable is not feasible. In this regard, the CNE has stated that a DC cable will not just make the technical management of the transmission system much more difficult but also it will not increase the SoS of the Iberian Peninsula as initially expected.

### Highlights

After Nord Pool, MIBEL has been the second successful experience in Europe of full electricity markets integration between different Member States going far beyond of any market coupling solution. A joint derivatives market for the Iberian Peninsula started in June 2006 and we have a joint wholesale spot market since July 2007. Currently, the Regulatory Council of MIBEL, where not only energy regulators of Portugal and Spain but also the securities market authorities of both countries are represented, is committed to implement a regulatory harmonisation plan, agreed by the Spanish and Portuguese governments in March 2007. The CNE, as lead regulator for the SW Electricity region, is ensuring full proper between MIBEL and this ERGEG's region.

### **2.2.2. Gas markets in 2007**

The Law 12/2007, of July 2<sup>nd</sup>, amending Law 34/1998 of the Hydrocarbons Sector, published in the Official State Journal on 3 July 2007, transposed several aspects still pending of European Directive 2003/55/EC, in particular:

- Legal unbundling of DSO, according with article 13.1 of 2003/55/EC.

- Measures to ensure independence where the DSO is a part of a vertically integrated undertaking, according with article 13.2 of 2003/55/EC.
- Creation of “supplier of last resort”, according article 3 of 2003/55/EC
- Tariffs of last resort will be established as from 1st July 2009.
- Set up of the “Office for switching supplier”, to facilitate switching.
- New limits established in the shareholding of ENAGAS (TSO ownership unbundled). This measure goes further than article 9 of 2003/55/EC.
- Access of storage could be regulated or negotiated, according with article 19 of 2003/55/EC. General rule is regulated.
- Possibility to grant TPA exceptions for mayor new gas infrastructures, according with article 22 of 2003/55/EC.
- Reduction in deadlines for network operation conflicts’ resolution, according with article 25.5 of 2003/55/EC.
- Modification of sanctions penalties
- 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).
- Some changes in the measures of security of supply: diversifications of gas imports and minimum levels of gas stocks.

### Gas wholesale markets

Furthermore, in 2007 new auction-based forward contracting mechanisms were developed for gas acquisition. Specifically, on 29<sup>th</sup> May 2007, the first gas auction was held for the acquisition of natural gas allocated for the operation and the minimum fill level of transport, regasification and underground storage facilities, for the period stretching from 1<sup>st</sup> July 2007 to 30<sup>th</sup> June 2008.

The Ruling of 12<sup>th</sup> April 2007 of the Secretariat General for Energy, which sets forth the auction procedure for the acquisition of natural gas allocated for the operation and minimum fill level of transport, regasification and underground storage facilities was published in the BOE (Official State Gazette) on 18<sup>th</sup> April 2007.

This Resolution establishes the general characteristics and criteria of the aforementioned auction procedure, known as a “sealed-bid auction”, as well as the participation method of the parties authorised for the auction, their rights, obligations and responsibilities, and lastly, the conditions under which the supply of the gas subject to auction must be carried out.

Subsequently to this Ruling, the Ruling of 18<sup>th</sup> April by the Directorate General for Energy Policy and Mines, which establishes the operational rules for the carrying out of the auction for the acquisition of operating gas and cushion gas for the period stretching from 1<sup>st</sup> July 2007 to 30<sup>th</sup> June 2008, was published in the BOE on 20<sup>th</sup> April 2007.

The auction was held at the facilities of the Ministry for Industry, Tourism and Trade on 29<sup>th</sup> May 2007. The presented bids were opened in line with the terms stipulated in the Ruling by the Directorate General for Energy Policy and Mines of 18<sup>th</sup> April 2007. Prior to the deadline established for this purpose in the aforementioned Ruling, the CNE, as the supervisory body of the auction, issued an Announcement on 29<sup>th</sup> May itself confirming that the auction process had been carried out objectively, competitively and non-discriminatorily, and validating the results of the auction.

This forward contracting mechanism has continued to be employed in 2008 with the holding of the second auction for the acquisition of natural gas allocated for the operation



and minimum fill level of transport, regasification and underground storage facilities, which took place on 12<sup>th</sup> June 2008 and applies to the period stretching from 1<sup>st</sup> July 2008 to 30<sup>th</sup> June 2009.

The first additional provision of Order ITC/3863/2007, of 28<sup>th</sup> December, which establishes the tolls and levies for third-party access to gas facilities for 2008 and updates certain aspects concerning the payment of the regulated activities of the gas sector, sets forth that on an annual basis, through auction, carriers will acquire the natural gas necessary for their own consumption (operating gas) and for the minimum fill level of the gas pipelines (cushion gas) of the transport network and regasification plants.

The Ruling of the Secretariat General for Energy of 19<sup>th</sup> May 2008, which establishes the auction procedure for the acquisition of natural gas allocated for the operation and minimum fill level of transport, regasification and underground storage facilities, stipulates a multiple-round descending-price auction mechanism. This auction mechanism is different from that applied in the first operating gas and cushion gas auction, held on 29<sup>th</sup> May 2007, which was a sealed-bid auction.

Furthermore, the said Ruling designates the CNE as the supervisor of the auction and the Operador del Mercado Ibérico de Energía, Polo Español, S.A. (OMEL) as the body responsible for organising the 2008 auction.

Meanwhile, on 29<sup>th</sup> December 2007 Order ITC/3862/2007, of 28<sup>th</sup> December, was published in the BOE (Official State Gazette). This Order establishes the mechanism for allocating the underground storage capacity of natural gas and creates a market of capacity. Amongst other things, the said order stipulates that the underground storage capacity of natural gas that has not been allocated in accordance with the established criteria will be allocated annually through a competitive auction organised by an independent body designated by the technical manager of the system and supervised by the National Energy Commission.

The first auction, for which the Operador del Mercado Ibérico de Energía, Polo Español, S.A. (OMEL) was designated as organiser, was held on 10<sup>th</sup> April 2008.

Imports of gas

Spain has nearly no domestic gas production, so natural gas is imported to Spain through pipe and LNG regasification plants. Imports of natural gas as LNG represents 68% of total supply and the main origins are: Nigeria, Qatar, Algeria, Egypt, Trinidad & Tobago, Libya. The remaining natural gas (32%) is imported through pipe from Algeria and Norway. The figure below shows the origin of gas sources in 2007 in the Spanish market.

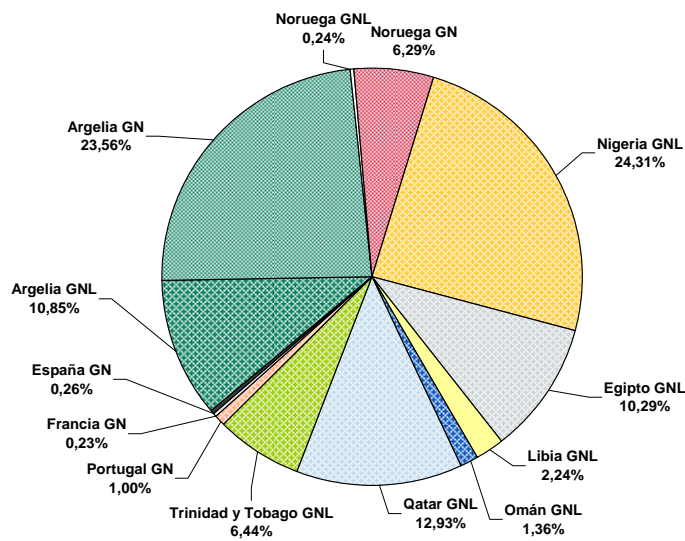


Figure 4. Origin of gas imports in 2007 in the Spanish market

Gas Natural, Iberdrola, Unión Fenosa, Endesa and Cepsa held in 2007 more than 5% of gas available for the Spanish market (Naturgas held 4%).

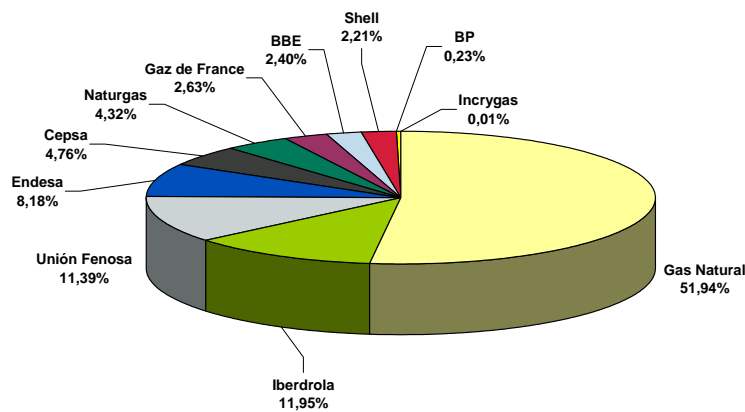


Figure 5. Share of gas available (imports) by company in 2007 in the Spanish market

Development of gas trading and hubs

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”.

The tendency for negotiated energy in the Spanish OTC gas market over MS-ATR is growing. In 2007, 4.538 transactions were registered over MS-ATR. The volume of energy traded over the counter amounted to 443.909 GWh, which represents 108% of total gas consumption.

Trading is conducted at three system infrastructures: the transmission network (a national balance point, called “Almacenamiento Operativo Comercial”: AOC), regasification plants and underground storage.

In 2007, 97% of energy was traded at the six regasification plants, 2% at the AOC, and 1% at the underground gas storage. However, most of the transactions are at the AOC.

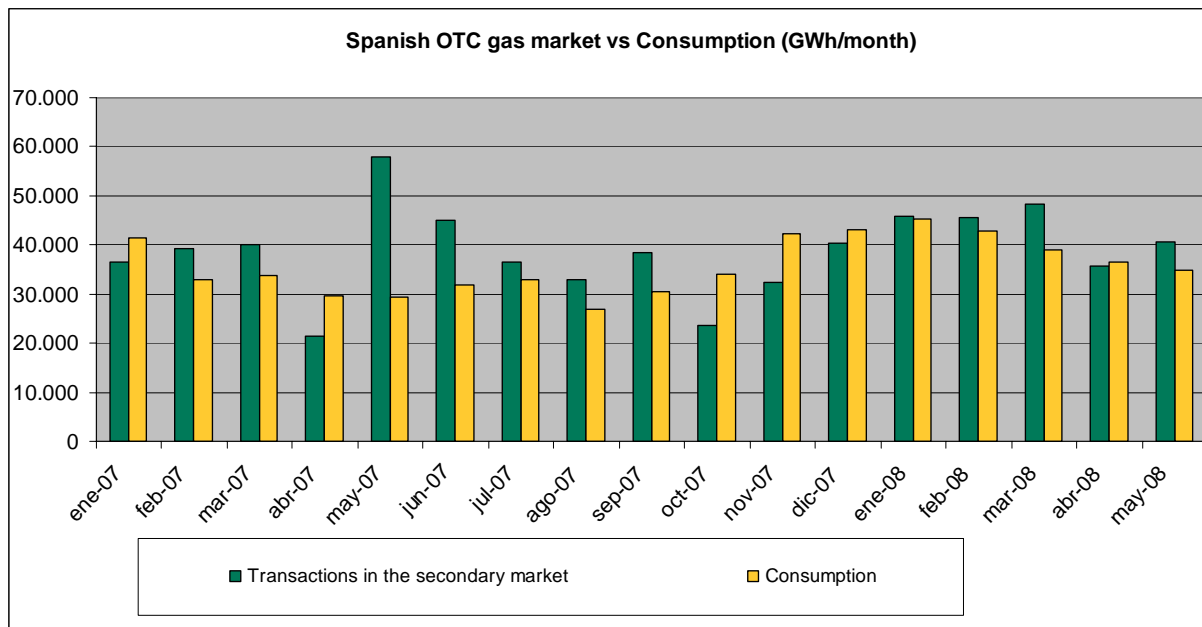


Figure 6. Volume of energy negotiated over the counter vs Consumption since January 2007

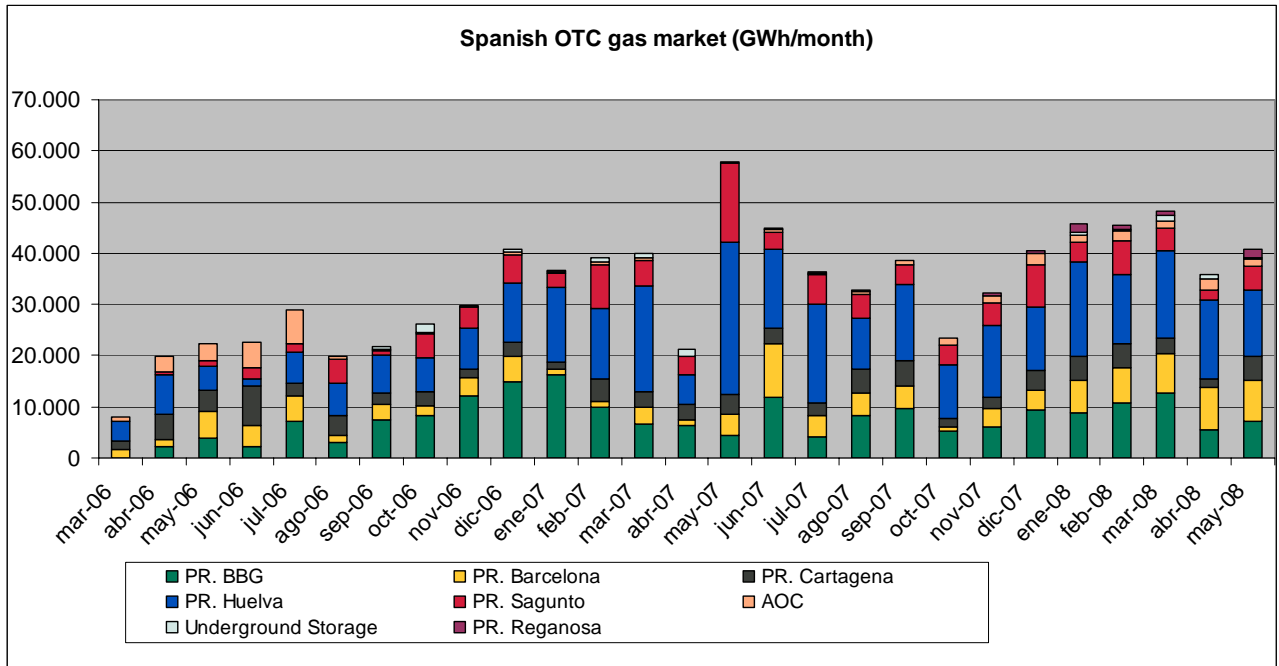


Figure 7. Volume of energy negotiated over the counter since January 2007

The shares in the Spanish OTC gas market in 2007 are shown below.

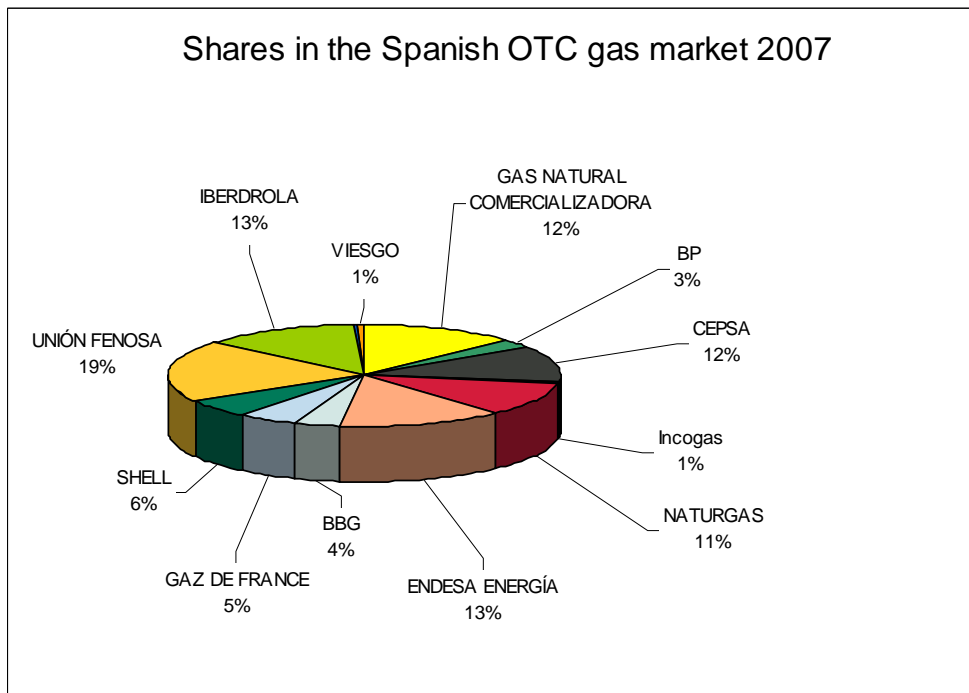


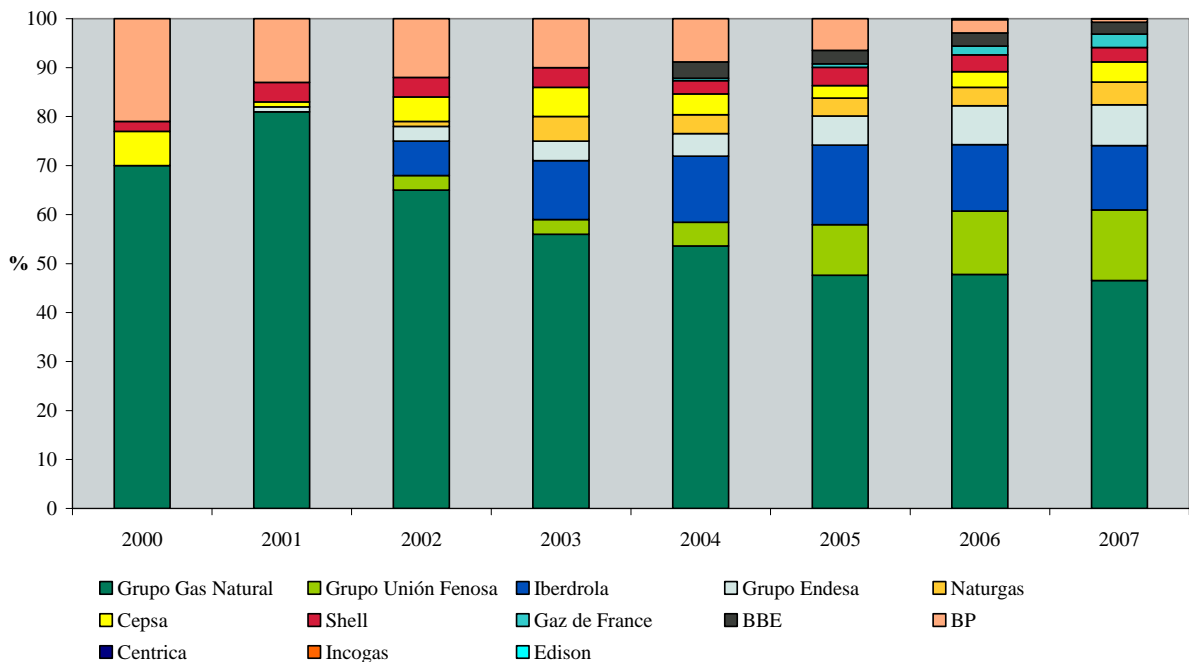
Figure 8. Shares in the Spanish OTC gas market 2007

Evolution of gas Retail markets

Natural gas consumption in 2007 in Spain was 407.665 GWh, 4,4% higher than in 2006. The consumption of combined cycles represented 35% of total consumption, upper than last year (5%). Industrial sector represented 54% of total demand. The gas market structure is show in the next figure.

The Spanish natural gas market has been opened since 1998. Industrial market has been opened since 1999. Residential market fully opened since 2003. Actually there are 17 active marketers in the gas market. New entrants have nearly 50% of market share and there is a strong competence. The structure has changed for last years in the retailing gas market. The top five companies<sup>5</sup> in this market, for 2007, were (in this order): Repsol YPF-Gas Natural, Unión Fenosa, Iberdrola, Endesa and Naturgas. In the residential market there are 5 active shippers. Cumulative switching since 2003 is: 2,7 Millions of clients.

**Evolution of gas market shares**



*Figure 9. Spanish gas retail market in 2007. Shares in terms of energy*

<sup>5</sup> The top five companies will be those within the energy sector with the highest market shares.

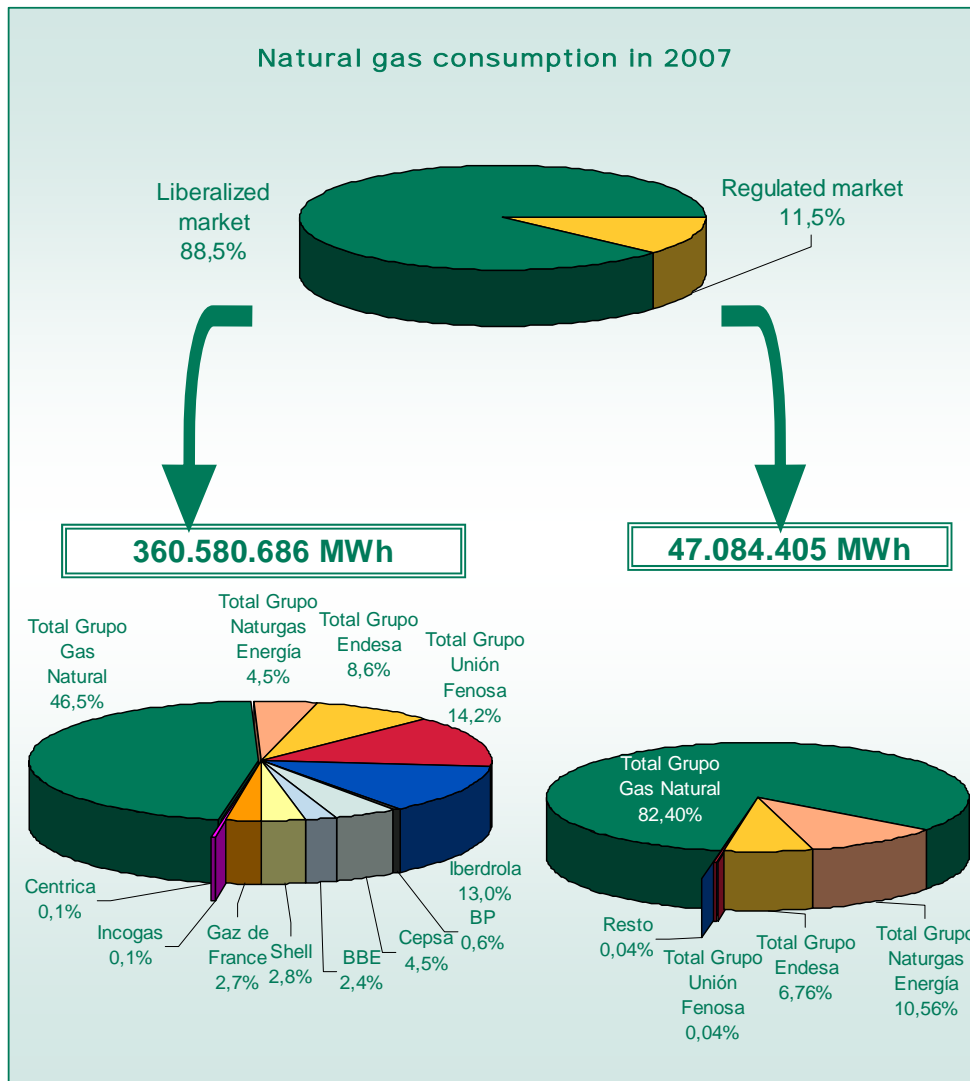


Figure 10. Spanish gas retail market in 2007. Shares in terms of energy.

The following table shows many shares of the different company groups at the end of 2007. The first list is the share of available gas, based on the imports to Spain. The second one 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 list shows the distribution system share respect to the total Spanish Grid. The fifth list 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 Infrastructures Activities		
	Share of Available Gas (Imports)	Share of Negotiated Gas in the OTC Spanish 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
<b>Gas Natural</b>	52%	12%	47%	86%	6%	4%
<b>Iberdrola</b>	12%	13%	13%	-	-	10%
<b>Unión Fenosa</b>	11%	19%	14%	-	-	16%
<b>Endesa</b>	8%	13%	9%	9%	3%	8%
<b>Naturgas</b>	4%	11%	5%	5%	2%	4%
<b>Shell</b>	2%	6%	3%	-	-	-
<b>Cepsa</b>	5%	12%	5%	-	-	4%
<b>BBE/BBG</b>	2%	4%	2%	-	-	-
<b>BP</b>	1%	3%	3%	-	-	-
<b>Gaz de France</b>	3%	5%	3%	-	-	-
<b>Enagás</b>	-	-	-	-	89%	50%

*Table 4. Shares of different company groups in 2007.*

#### Evolution of gas infrastructures.

In 2007, the largest new facility brought into service was the Reganosa LNG regasification plant, in Mugardos, A Coruña, which is the sixth plant in the Spanish system and the seventh in the Iberian Peninsula. The first carrier finished unloading its cargo on 12 May, the plant began supplying gas to the system on 16 May and commercial operations commenced on 7 November. In addition, the Huelva plant increased its regasification capacity from 1,200,000 to 1,350,000 Nm<sup>3</sup>/h.

In April 2007, MEDGAZ has 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 2009. The initial capacity of this infrastructure will be 8bcm/year, although by 2015 it is expected to be increased to 16 bcm/year.

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

We may highlight the Gas System Planning procedure, responsibility of the Government. Last approved planning document is from May 2008. *Total gas investments for 2007 -2016*

*period are estimated on 10,2 Billion of euros. 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.



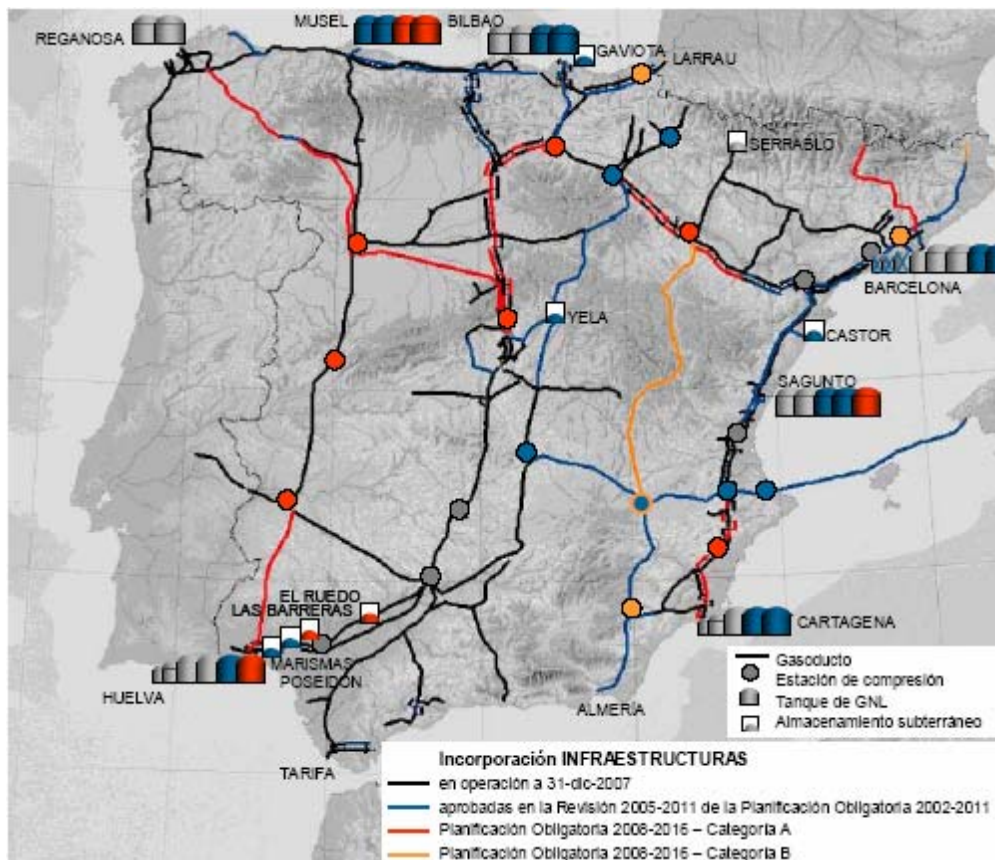


Figure 11. Map of gas infrastructures. Planning of gas system. 2007-2016. Total gas investments for 2007 -2016 period are estimated on 10,2 Billion of euros.

### Development of the Iberian gas Market

On January 2008, CNE and ERSE approved the final document about "The proposal for the Organization Model and Principles of the Iberian Gas Market (MIBGAS)".

The proposal for the Organization Model and Principles of the Iberian Gas Market (MIBGAS) is the final document resulting from the public consultation which was held in 2007 by both Regulatory Commissions (CNE and ERSE). Nineteen companies and organizations sent contributions and comments. The final document has been published along with the views of companies and organizations and analysis thereof. These documents are available on the web of CNE and ERSE.

The proposal suggests a process of harmonization and construction of MIBGAS, to be developed gradually in mutual agreement between Spain and Portugal. This development

represents an active contribution of both countries for the achievement of the European natural gas market.

An action plan for 2008 has been proposed in order to develop the Iberian Gas Market, which is focused on:

- The harmonization of gas marketing licenses in the Iberian area
- Convergence in the structure of access tariffs
- Coordinated planning of networks.

*Promoting regional integration in SW Europe.*

The South REM is led by the Spanish Energy Commission (CNE) and aims to integrate Portugal, France and Spain into one gas regional market. The main target of the Initiatives is to achieve an internal energy market for Europe, through the preliminary creation of regional markets.

The priorities of South REM are, in a first phase: Interconnection capacity, interoperability and transparency.

*Priority I: Development of Interconnections*

French, Spanish and Portuguese TSOs have published a common plan on the interconnection capacities needed until 2015, describing the new infrastructures to be built, planned dates and investments required.

There is available capacity in Portugal-Spain interconnections and there is no need for new investments. Therefore, the working groups have decided to focus on SP-FR interconnection needs, promoting a common Open Subscription Procedure (OSP) to allocate the existing and already decided/under construction capacities and a future Open Season (OS) to evaluate market needs for new interconnection capacities.

In relation with Interconnection capacity, decisions taken so far are:

- Change the “first come, first served” allocation mechanism: Spanish Government has modified the Regulation (already accomplished) in order to allow a different allocation mechanism in interconnections (detailed procedures ongoing).
- Principles of a harmonized CAM agreed for the French-Spanish interconnections under construction, based on an Open Subscription Process. The OSP to allocate the planned capacity of the two French-Spanish interconnections will be made before by June 2008.
- An Open Season procedure is being developed now by TSOs to identified market needs of future Spanish/French interconnection capacity

*Priority II: Interoperability.*

Key achievements so far are:

- Stakeholders report on interoperability problems
- Five internal working groups among TSOs to solve interoperability difficulties already identified in all interconnections. The Spanish Network Code will be modified to adapt to the CBP of EASEE-gas.
- Some interoperability agreements have been reached with regard to the Larrau and Irún interconnections.
- Portugal has already accomplished the harmonization of units (measurement temperature 25°C) and is also progressing towards the implementation of other CBPs.

*Priority III: Transparency.*

Key achievements so far with regard to transparency are:

- Regulators study of Regulation 1775/2005 accomplishment by TSOs, and also LSOs and SSOs (transparency) as information published checked; public consultation with shippers, good level of compliance and identified improvement areas.
- Publication on TSOs and ERGEG web pages of information on current building status of new interconnection capacities.

Market opening in the retailing market

The evolution for the natural gas market, in terms of energy, is shown in the following chart

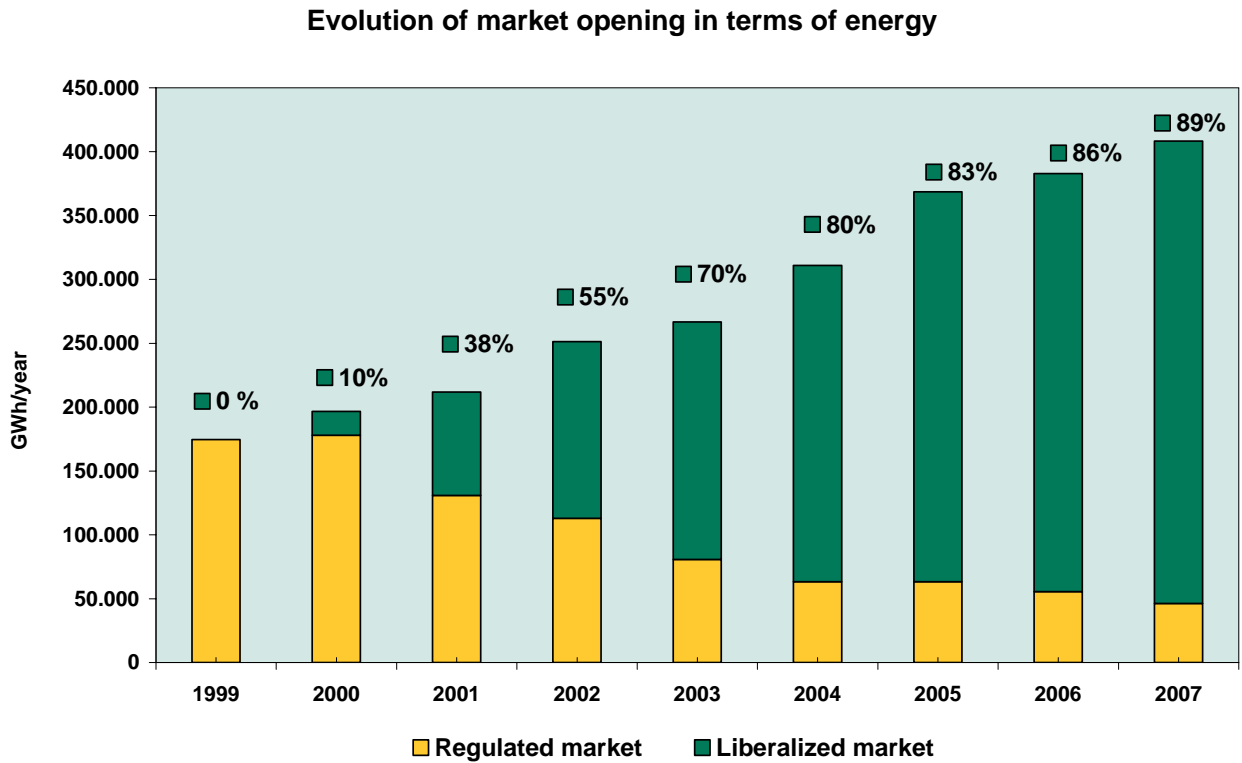


Figure 12. Evolution of market opening in terms of energy

The Spanish natural gas market has been fully opened since January 2003, for all customers (100% eligibility threshold). Since then, the evolution of the number of consumers and energy supplied in the liberalised markets has been as shown below.

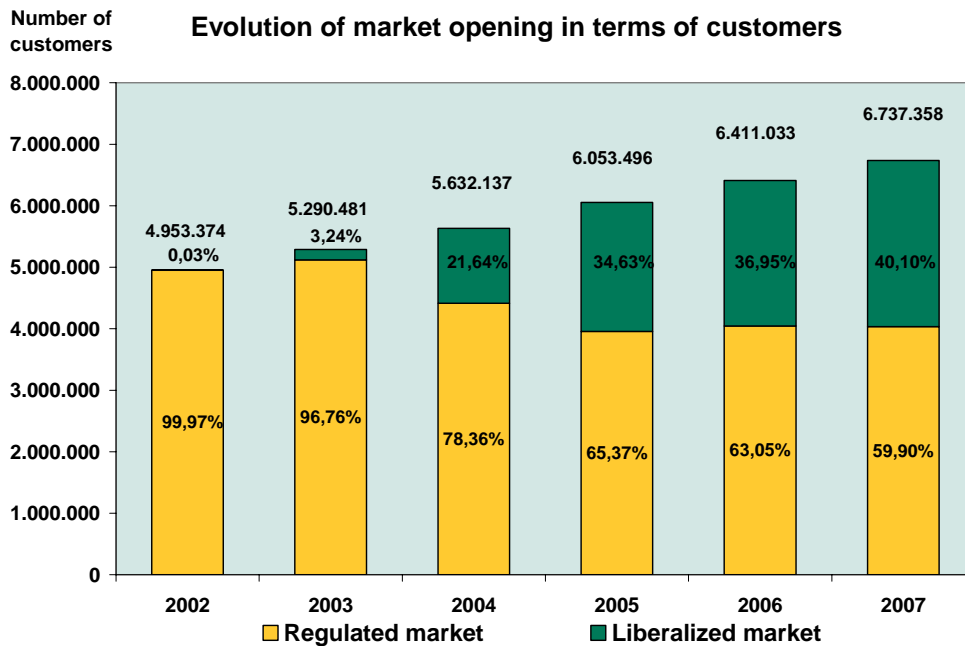


Figure 13. Evolution of market opening in terms of customers

In terms of natural gas customers, the eligibility process shows that 40% of the eligible customers are being supplied in the liberalised market (86% of the total gas consumption).

According to the Law 12/2007, consumers connected to a gas pipeline with design pressure above 4 bars and equal to or below 60 bars have been passed to the liberalized market since July 2007. Some group tariffs have also disappeared since 1 July 2007, and all tariffs will disappear in 1/7/2008, so distributors companies will not be able to retail gas energy to their clients anymore.

The new Law 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.

Royal Decree 1068/2007 designates the markets that are to assume the obligation of last-resource supplies and lays down the obligations for promoting the choice of a marketer by consumers. Order ITC/2309/2007 lays down the transfer mechanism for changing clients

with current contracts from the tariff market to the marketing companies that are to assume the obligation of last-resource supplies from 1 July 2008.

Order ITC/3861/2007 laid down the last-resource tariff for the natural gas system for 2008. This Order lays down the mechanism for setting the maximum price of the last-resource tariff and the tariff to be applied to consumers that do not have a current contract with any marketer.

Temporary provision five of Act 12/2007, which modified the Hydrocarbons Act, laid down the schedule with the deadlines for applying for the last-resource tariff. As from 1 July 2008, consumers connected to gas pipelines with a pressure that is equal to or less than 4 bar and an annual consumption of less than 3 GWh can apply. From 1 July 2009, the limit is reduced to 2 GWh and, one year later, to 1 GWh.

A retailer will be assigned as the last resource supplier for costumers who do not choose the liberalized market. The energy will be sold at a last resource tariff.

Since 1 July 2010, just consumers connected to a gas pipeline with design pressure equal to or below 4 bars and consumption below 1 GWh/ year, will be able to choose the last resource tariff.

### Regulation/Unbundling

The Law 12/2007, of July 2nd, amending Law 34/1998 of the Hydrocarbons Sector, published in the Official State Journal on July, 3<sup>rd</sup>, 2007, transposed several aspects still pendent of European Directive 2003/55/EC, in particular with regard to unbundling:

- Legal unbundling of DSO, according with article 13.1 of 2003/55/EC.
- Measures to ensure independence where the DSO is a part of a vertically integrated undertaking, according with article 13.2 of 2003/55/EC.
- New limits established in the shareholding of ENAGAS (TSO ownership unbundled). Shareholding voting rights in ENAGAS are limited to 1 % for integrated gas companies, and to 3 % to any other company. This measure goes further than article 9 of 2003/55/EC.

### Security of Supply

The Spanish regulation establishes 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. On October the security gas stocks must be 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%. Application of the diversification obligation has been limited to those agents that import more than 7% of the Spanish total gas supply

### Highlights

Actually there are 17 active market players in the gas market. New entrants have nearly 50% of market share and there is a strong competence. In the residential market there are 5 active shippers. Cumulative switching since 2003 is around 2,7 Millions of clients

The main regulatory measures taken in Spain have resulted efficient to promote the competence in the gas market:

- Ownership unbundling of the main TSO (ENAGAS).
- Strong investment in new infrastructures.
- Available LNG entry capacity allows access to international gas markets for new players
- Regulated access to gas infrastructures, including LNG regasification plants and basic underground storage.
- Entry – Exit contractual system (entry -exit tariff are postalized)
- A single virtual balancing point for all Spanish transport system (including several small TSO). Biggest single balancing zone in Europe by area covered

- Daily balancing period and width tolerance band. Principle of neutrality of penalties to TSO
- Measures to achieve security of supply

There is a strong need of a big gas interconnection infrastructure between France and Spain, in order to facilitate the development of the European Gas Market.

### ***2.3 Major issues dealt with by the regulator***

In late 2006, the CNE was already empowered with new competences regarding market monitoring. This key role for the CNE was strengthened again in 2007 by Laws 12/2007 and 17/2007 aiming to ensure an effective functioning of energy markets. In this context, the CNE publishes through its web page relevant reports on the functioning of the electricity and gas markets:

#### *Electricity markets monitoring*

- Weekly monitoring report on wholesale electricity markets.
- Weekly monitoring report on forward and OTC markets.
- Monthly monitoring report on forward and OTC markets.
- Monthly report on MIBEL.

#### *Gas market monitoring*

- Monthly monitoring report on wholesale gas market
- Monthly monitoring report on gas supplies and on diversification of supply.
- Monthly monitoring report on technical management of the Spanish gas system.
- Quarterly and Annual monitoring reports on retail NG market in Spain
- Annual monitoring report on retail markets by regions.

All these reports are available at:



[http://www.cne.es/cne/contenido.jsp?id\\_nodo=279&&keyword=&auditoria=F](http://www.cne.es/cne/contenido.jsp?id_nodo=279&&keyword=&auditoria=F)

In general terms, the CNE has been particularly active during 2007 with the publication at [www.cne.es](http://www.cne.es) of more than 80 reports on a wide range of regulatory issues. Some of the most relevant reports, in line with the tasks assigned to the CNE's by-laws are:

- Acting as consultative body to the administration in all matters related to energy regulation (*Function 1*)
- Participating, through a proposal or report, in the process of drafting general provisions affecting energy markets, more particularly In the regulations developing the Hydrocarbons Act (*Function 2*)
- Participating through proposals or reports, in the energy planning process. (*Function 3*)
- Participating, through a proposal or report, in the process of drafting projects on the determination of tariffs, tolls rates and the remuneration of sectoral activities (*Function 4*)
- Issues any reports as requested by the Autonomous Regions whenever they deem it appropriate in the exercise of their authority in questions relating to energy (*Function 6*)
- Solving disputes submitted to it with regard to contracts on Third Party Access (TPA) to the transmission and distribution networks on any terms that may be set in regulations (*function 13*)
- Authorising the acquisition of stakes carried out by companies with regulated activities or activities subject to administrative intervention which implying a special relationship (*Function 14*)

### 3 REGULATION AND PERFORMANCE OF THE ELECTRICITY MARKET

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

##### 3.1.1 General

###### Market opening

The Spanish electricity market is fully opened since January 2003 for all consumers (100% eligibility threshold). The opening process was developed as follows:

The Spanish electricity production market was set in motion in January 1998. Since its beginnings, all electricity production plants under the ordinary regime with a power in excess of 50 MW had the obligation of participating in the free wholesale market, with only the plants under the special regime and those under the ordinary regime which had joined the bilateral contracting system being released from this obligation. Subsequently, in 2002, it was established that the production units under the special regime whose power exceeded the 50 MW threshold also had the obligation of participating in the free market.

In connection with electricity supplies, initially a progressive liberalisation calendar was established, which has been modified on several occasions. The eligibility threshold was extended as follows:

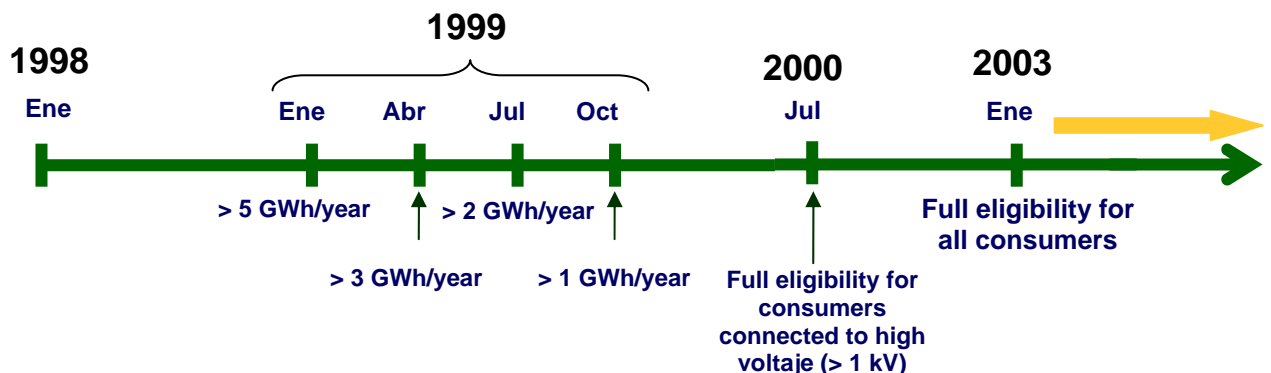


Figure 14. A progressive liberalisation calendar

Since January 2003, the Spanish regulation grants the right to all consumers to freely negotiate their supply contracts with any duly authorized electric energy supplier in Spain, as a result of which this date represents the retail market's full liberalisation (100% eligibility threshold). Law 17/2007 imposes the establishment of last resort tariffs as of January 1<sup>st</sup> 2009. Since July 1<sup>st</sup> 2008, there are no longer regulated high-voltage tariffs.

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

#### Congestion management

The relevant congestions in Spain exist in the cross-border links. Internal congestions are not significant and they are treated as network constraints.

The capacity of the international interconnections is allocated differently depending on agreements reached with each of the countries sharing Spanish borders. As for Morocco and Andorra, provisions laid down in Order of 14th July 1998 are valid, by virtue of which the legal regime applicable to external agents for carrying out international electric energy exchanges is established. The allocation mechanism comprises two related processes, one based on implicit auctions, executed within the Daily Market, and the other explicit auctions for the allocation of capacity to bilateral transactions. The distribution of capacity between the two processes takes place in proportion to the capacity requested in them.

In the interconnection with France, the Order ITC/4112/2005, dated December 30th, introduced a co-ordinated allocation on the two sides of this interconnection, in accordance with the common position on a new joint allocation mechanism reached by the Spanish and French regulators, CNE and CRE, at the mini Forum held on 21st January 2005 in Madrid. This method consists on:

- Explicit auctions before the day-ahead to allocate physical capacity rights.
- Completed by a day-ahead market coupling mechanism allowing the best use of the safely available capacity.

The consistency between these two “market-based” allocation mechanisms would be ensured by a “use it or get paid for it” rule. Thus, market actors who have obtained capacity rights in the previous explicit auctions will freely choose between the two following options:

- using their physical rights by scheduling firm bilateral contracts before the market-coupling mechanism or
- not using them, automatically transferring them in the market-coupling process and receiving the corresponding day-ahead PXs price differential

However, while agreeing on this common target, both regulators anticipate some practical difficulties to implement it in the short term, recommending a progressive approach with 3 different steps;

- Step 1: Implementation of an Explicit Auction mechanism, comprising auctions at different time frames (annual to day-ahead) with the application of a pure “use it or lose it” rule. This first step provided a significant improvement to the previous situation, being fully compliant with Regulation 1228/2003. This first step is the only one that has been achieved. The following steps have not progressed yet although, in the context of the ERGEG ERI (SW REM), there is an ongoing effort to advance in this path.
- Step 2: Introduction of a day-ahead market –coupling mechanism with a cap (about 15%) on the percentage of capacity reserved for this mechanism.
- Step 3: the full features of the proposed mechanisms shall be implemented, transforming the “use it or lose it” rule into a “use it or get paid for it” rule and suppressing the cap to the capacity management by the market coupling mechanism in order to allow the market actors to freely choose the best way to use their rights.

Within the framework of the Iberian Electricity Market (MIBEL) there are two coordinated system operators and one market operator consisting of two contracting so-called “poles” which correspond to day-ahead and intraday (OMEL) and futures (OMIP) markets, respectively. The common position between CNE and ERSE based on a market splitting mechanism in order to manage the cross border congestion has been legally implemented by Order ITC/843/2007 and the new System Operational Procedure 4.2, dealing with the Portuguese-Spanish interconnection congestion management. New functioning rules for the day ahead and intra-day market have been approved by the Resolution of June 26<sup>th</sup> from the Secretariat General of Energy. These provisions have paved the way to the integration of both Iberian wholesale markets as of July 1<sup>st</sup> 2007. Besides, a regulatory compatibility plan for MIBEL dated 8<sup>th</sup> March 2007 is being developed aiming to harmonise the aspects of the Spanish and Portuguese regulations that are needed in order to achieve an integrated single electricity market for the Iberian Peninsula.

#### Further development of mechanisms to deal with congestions

The new rules for congestion management between Portugal and Spain (IPE rules) have been agreed by CNE and ERSE in 2007. It is foreseen that during 2008, they will enter into force (after approval by the Spanish Government). An important development embedded in the IPE rules is the long-term explicit auctions for capacity in the Spanish-Portuguese border.

In the Spanish-French border, in the context of the ERGEG Electricity regional initiative, the action plan of the SW REM has provided a framework to study the obstacles and solutions related to the implementation of day-ahead market coupling between MIBEL and the current TLC<sup>6</sup> and forthcoming CWE<sup>7</sup>.

#### Computation of transmission capacity by the TSOs.

As regards cross-border capacity calculation criteria, Chapter 4 of System Operational Procedure 4 is devoted to this topic, and eventual values are regularly published in

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<sup>6</sup> Trilateral Coupling: comprises France, Netherlands and Belgium.

<sup>7</sup> CWE: Central-West Europe refers to the market coupling of the five countries included in the region: France, Netherlands, Belgium, Germany and Luxembourg. They should be coupled by January 2009.

<http://www.esios.ree.es/web-publica/>. Also, in the context of the action plan of the SW region of the ERGEG ERI, the allocation of capacities across different time frames is under study. It is a complex issue that requires a thorough work and analysis, directly related to the power system security policy (security general standards are exhaustively treated by the first series of Operational Procedures, numbers 1.1 to 1.6, whereas reliability margin and system adequacy forecast under secure conditions are main topics to Op.Procs. 2.1 & 2.2).

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

#### *TSOs and DSOs – Main features*

In Spain, there is only one TSO, which is ownership unbundled: REE. As the authority responsible for the system's technical management, its purpose is to guarantee the electricity supply's continuity and security and the generation and transmission system's correct co-ordination. As of December 2007, Spanish mainland transmission system amounts to 17.180 km of 440 kV lines and cables (circuit length) and 16.809 km (also circuit length) at 220 kV and below. These assets are owned by REE itself; just 300 km of EHV conductors belong to other companies.

There are 5 main distribution companies, which are part of the five main electricity groups they act as well as distribution system operators: ENDESA GROUP, IBERDROLA GROUP, UNION FENOSA GROUP, EDP-HIDROCANTÁBRICO GROUP and VIESGO-ENEL GROUP. Distribution assets comprise more than 285.000 km of low voltage (<1 kV) networks and about 400.000 km of high voltage ones.

Figure 14 shows the split of Spain in different distribution areas.



Figura 15. Different distribution areas in Spain.

Network Tariffs. Methodology and procedure for setting transmission network tariffs

Each year the Government approves both the access tariffs and the so called “integral tariffs” (end-user regulated tariffs), through the publication of a Royal Decree. The tariffs are unique and maximum throughout Spanish territory. Similarly, pursuant to Hydrocarbons Act 34/1998 of 7<sup>th</sup> October, 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 energy activities.

Nevertheless, the Royal Decree 1634/2006, dated December 29<sup>th</sup>, set that from 1<sup>st</sup> July 2007 the end-user (integral) tariffs could be updated every three months. And also, from 1<sup>st</sup> July 2008 and every three months, the CNE has to send a proposal of review of the access tariffs and end-user (integral) tariffs to the Government, pursuant to the Royal Decree 871/2007, dated June 29<sup>th</sup>.

The proposal of review has to take into account the following principles:

- Additive tariffs: 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

#### Last resort tariff

The supply activity with regulated end-user tariffs will be suppressed as of 1<sup>st</sup> January 2009. From that moment on, the supply activity will only be developed by suppliers (distributors will not be able to perform supply).

As of this date, a last resort tariff scheme will be set up. So far only the principles are specified by Law 17/2007:

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

Calendar for implementation<sup>8</sup>:

- Enter into force on 1st January 2009.
- As of 1<sup>st</sup> January 2010, only consumers connected at low voltage will be allowed to remain in the last resort tariff.
- As of 1<sup>st</sup> January 2011 only consumers connected at low voltage with a contracted power below 50 kW will be allowed to remain in the last resort tariff.

In order to obtain a basis for the reports on the draft electricity tariff Royal Decrees which could be sent every three months to the Ministry or for making proposals to the Ministry, the CNE requests from the different agents in the sector the necessary information for

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<sup>8</sup> Law 17/2007. 24<sup>th</sup> Additional provision.



estimating not only the system's costs but also the revenue corresponding to the forecast year.

### Information collected

In particular, the requested information is the cost of the transport and distribution installations of each one of the companies, the installations' 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 power) 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 by this regulated activity settlement Commission. Likewise, information is requested on forecast generation under the Special Regime, which is compared with the information in the Commission's possession.

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

### Transmission

Regarding the transmission activity, there are currently three different remunerations regimes which apply to facilities coming into operation before 1998, between 1998 and 2007, and from 2008 onwards, respectively.

Installations coming into operation before 1998 are globally remunerated by means of a fund which is yearly updated according to a revenue cap (IPC-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”

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

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

$VI_i$  = 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

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

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

$TR_i$  = 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

$X$  = 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, they are spent mostly on tariff reduction (98% in 2007). The rest was spent on countertrading (TSO's coordinated redispatching) costs incurred in order to give firmness to nominated transactions (this latter use is prioritised).

### 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 restrictions for developing its functions when the new regulatory period of the incentive regulation starts.

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 gauge, 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.

The regulatory period is four years (subject to yearly update)

### 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	Annual Consumption (KWh)	Power (kW)	Access Tariffs (cent€/kWh) (3)
<b>Dc (1)</b>	3 500 (2)	4 - 9	5,31
<b>Ib</b>	50 000	50	4,73
<b>Ig</b>	24 000 000	4 000	0,63

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

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

(3) Without tax.

*Table 5. Electricity Access Tariffs for Typical Consumers (cent€/kWh). Year 2007*

The prices shown in the above table, published in Royal Decree 1634/2006, correspond to the year 2007. 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, Royal Decree 1164/2001 and Royal Decree 1432/2002. In particular, the following costs are included: the Market Operator, the CNE, the System Operator, Off-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 surcharge, 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.

Note: In connection with the three typical consumers selected in the questionnaire, it should be noted that the domestic consumer *Dc*, with nocturnal discrimination, is not representative of domestic consumers' electricity consumption in Spain.

#### Quality of supply

The Royal Decree 1955/2000, dated December 1<sup>st</sup>, regulating transmission, distribution, trading and supply activities and authorisation procedures for electric power installation, established a series of representative parameters of the service quality in the transmission grid, that are used for the establishment of incentives and penalties. The service quality in transmission is a general requirement per frontier point and installation.

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 2006) are: ENS, 936 MWh; TIM 1.95 minutes, and ID=98,27%.

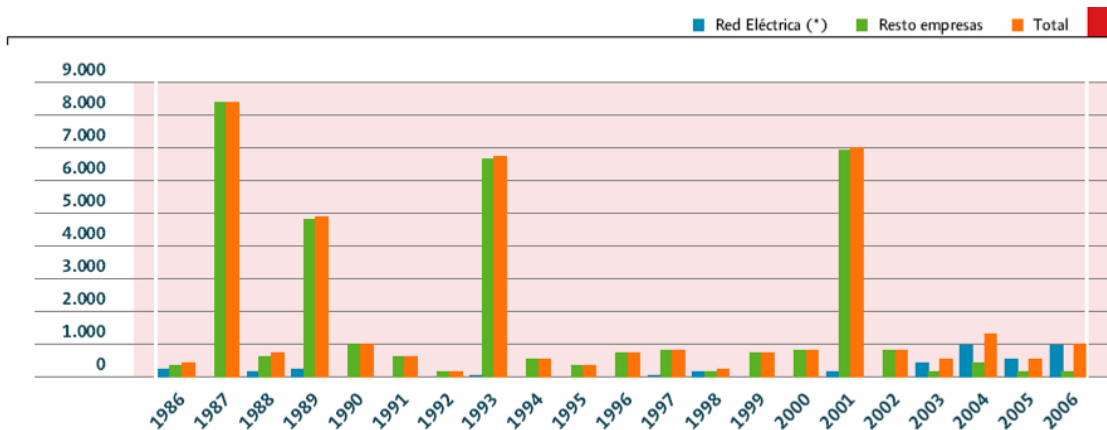


Figure 16. Power not Supplied (ENS) (MWh). Year 2006.

**■ Tiempo de interrupción medio (TIM) por incidencias en la red de transporte (minutos)**

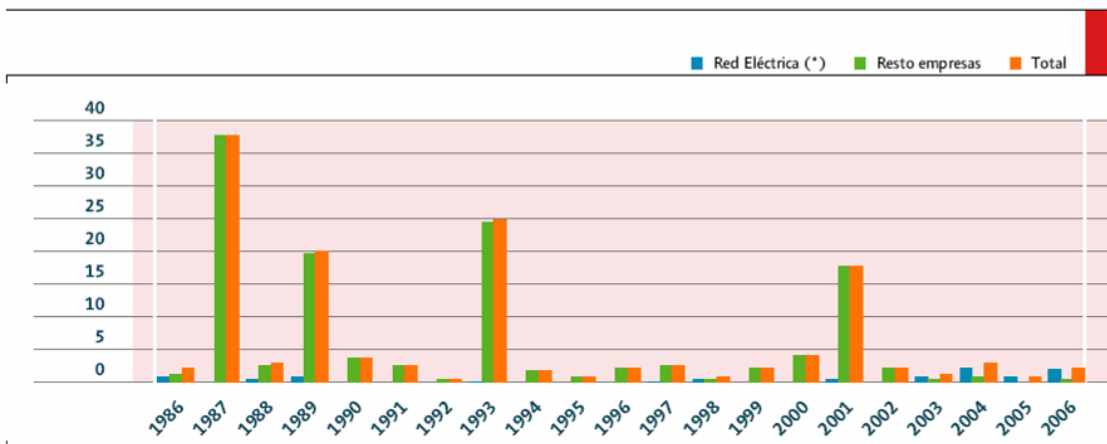


Figure 17. Average Interruption time (TIM). Year 2006

The distribution companies are forced to maintain the area quality levels assigned to those zones where they develop its activity.

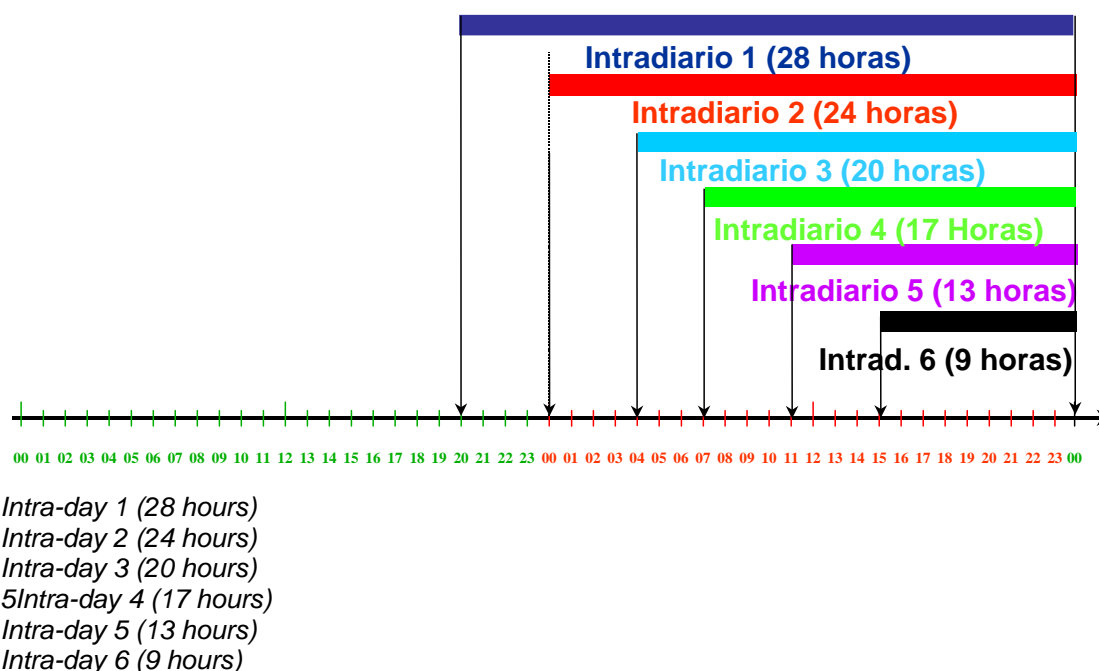
The measurement of the area quality are the TIEPI (time of interruption equivalent to the installed capacity), the percentile of the TIEPI (value of the TIEPI that is not exceeded by 80 per cent of the municipal districts in the provincial scope), and the NIEPI (number of interruptions equivalent to the installed capacity).

	2001	2002	2003	2004	2005	2006	2007		
							Total	Planned	Unplanned
<b>ANDALUCÍA</b>	3,59	3,28	3,28	3,85	2,72	2,39	2,39	0,24	2,14
<b>ARAGÓN</b>	1,87	1,53	2,34	1,47	1,24	1,32	1,46	0,36	1.11
<b>ASTURIAS</b>	1,52	1,17	1,19	1,32	1,19	1,86	1,23	0,09	1.14
<b>BALEARES</b>	9,60	2,95	6,65	2,32	1,88	1,83	2,00	0,15	1.85
<b>CANARIAS</b>	2,86	6,21	3,47	2,06	8,95	1,38	1,12	0,16	0.95
<b>CANTÁBRIA</b>	1,87	1,17	1,59	2,12	1,53	1,60	1,35	0,06	1.29
<b>CASTILLA-LEÓN</b>	1,92	1,33	1,68	1,39	1,49	2,12	2,14	0,14	2.00
<b>CASTILLA-LA MANCHA</b>	3,11	2,19	2,39	2,11	1,87	2,61	2,38	0,18	2.20
<b>CATALUÑA</b>	3,83	3,01	2,55	1,42	1,34	1,79	1,67	0,19	1.48
<b>EXTREMADURA</b>	3,38	2,54	3,10	2,74	2,13	2,62	2,15	0,41	1.74
<b>GALICIA</b>	5,17	2,64	2,04	2,11	1,59	2,62	1,48	0,06	1.41
<b>MADRID</b>	1,54	1,15	1,16	1,21	1,07	1,92	0,91	0,00	0.91
<b>MURCIA</b>	2,94	2,05	2,40	1,90	2,04	1,26	3,56	0,33	3.23
<b>NAVARRA</b>	0,99	0,91	1,85	2,35	1,29	3,56	1,54	0,22	1.32
<b>LA RIOJA</b>	1,10	1,37	1,10	1,70	1,26	1,40	1,34	0,22	1.13
<b>PAIS VASCO</b>	0,94	0,82	1,38	1,21	1,37	1,89	1,56	0,28	1.27
<b>C.VALENCIANA</b>	2,43	2,19	2,34	2,34	1,91	2,40	2,95	0,32	2.62

*Table 6. Evolution of the TIEPI.*

### Balancing

Subsequent to the holding of the daily market, and for the purpose of adjusting as close to real time as possible any deviations forecast by the agents, the possibility exists of being able to modify the programming (managed by the market operator) established in the market through the presentation of offers to the intra-day market. For this purpose there are currently six sessions in the intra-day market with programming periods which vary between 28 hours (first intra-day) and 9 hours (sixth intra-day), as shown on the attached graph, and with a period for the reception of offers which, depending on the market session, varies between 2.15 and 3.15 hours.



*Figure 18. Intra-day markets times*

At the same time and in order to guarantee the electricity system's security, Spanish Electricity Power Act 54/1997 establishes that the objective of the System Operator is to guarantee the supply's continuity and security under principles of transparency, non-discrimination and independence. For this, and in accordance with section 1 of Article 31 of Royal Decree 2019/1997 of 26th December, by virtue of which the electric energy production market is organized and regulated, the System Operator proposed the organisation of the management of the complementary services markets and the solving of the system's technical restrictions in accordance with operating procedures which were approved by means of a Resolution approved by the Ministry of Industry, Trade and Tourism, after the report of the Spanish National Energy Commission.

In these procedures all the Spanish electricity system's balancing markets, in addition to the spot market mechanisms for offering these services, are established and defined. Moreover, it is the System Operator itself which grants to the agents with the capacity to offer these services the necessary authorization for offering complementary services through effective technical accreditation. For the rendering of the secondary regulation service, there are 9 regulation zones which coincide with the groupings of the units of each one of 6 major generating groups (Endesa, Iberdrola, Hidrocantábrico, Unión Fenosa,



Viesgo and Gas Natural) plus 3 new entrants (Electrabel, Global3, Bahía Bizkaia). Each company has its own plant control office or centre, which is automatically connected to that of the System Operator. The participation of smaller agents have been eased by 19<sup>th</sup> Additional disposition to Ministerial Order 1634/2006, which lowered the minimum size of secondary regulation areas to only 300 MW, below the usual installed power of CCGTs.

The allocation of complementary services, specifically the allocation of secondary and tertiary reserves, is carried out in a competitive market environment. Two hours prior to the holding of each market, the System Operator informs the market agents of the minimum needs or requirements for fulfilling these services. These markets are held on the day prior to and on the same day as the supply date and cover the following day's 24 hours of programming in 60-minute periods.

The energy used in 2007 in the system's technical operation processes amounted to 9.292 GWh and represented a cost of 373,8 M€. The average price of the energy sold for the year 2007 in all the technical operating processes was 5.8 c€/kWh; its share on the weighted average final hourly price, including regulation cost and technical constrains cost, was 0.2 c€/kWh.

So as to establish the correct allocation of payments for the agents' balancing markets, it is necessary to know exactly the metering of each one of them. For this the maximum terms for the reception of metering figures in the System Operator's main concentrator have been established in the corresponding operating procedure (these terms vary depending on the type of metering point) and, as from the fifteenth calendar day of the month following that to which these metering figures correspond, they are no longer accepted or taken into account for calculating the corresponding estimates which have to be made by the System Operator. In principle, and failing the necessary metering data for calculating the correct settlement of system deviations, a provisional settlement is made based on the generation and consumption programmes, so that subsequently, and no later than the nine months subsequent to the month to which the metering figures correspond, final settlements based on firm or estimated (failing real data) metering figures can be made.

### 3.1.4 Effective unbundling

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

#### *New functional and informational unbundling requirements for regulated activities*

Prior to the amendments introduced, article 14 already required the legal unbundling of activities whereby regulated tasks such as the technical management of the system, transmission and distribution should be separated from the rest of the activities. Within a group of companies however, activities could be carried out that were declared incompatible by the Act, provided that they were actually performed by different companies in the group. Companies had already adapted their structures according to this legal framework; thus legal unbundling had already been implemented.

In 2007, article 14 of the Spanish Electricity Act was modified so as to include functional and informational unbundling to ensure the independence of organisation and decision making of transmission companies and distributors belonging to vertically integrated undertakings (adaptation of articles 10 and 15 of Directive 2003/54/EC).

Thus, the new article 14 states that:

1. Companies that engage in one or more of the regulated activities – system management, transmission and distribution – must have as their sole corporate purpose the performance of such activities, where they may not engage in generation and commercialisation.
2. 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

responsible, directly or indirectly, for the day-to-day operation of the generation and commercialisation activities;

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 generation and commercialisation.

Besides, companies that engage in regulated activities, as well as their employees, may not share business sensitive information with those other subsidiaries of the integrated undertaking that carry out liberalized activities.

c) Companies carrying out regulated activities shall have effective decision-making rights, independent from the integrated undertaking, with respect to assets necessary to operate, maintain or develop the electricity transmission and distribution network.

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 transmission and distribution facilities, 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 and to the National Energy Commission, and shall be published.

3. Companies that engage in regulated activities may participate in the share capital of other companies that perform activities in economic sectors other than the electricity sector, provided they obtain authorization by the Eleventh Additional Provision, Third, 1, of the Hydrocarbons Act.
4. Requirements established in the first and second section will not be applied to distribution companies that have less than 100.000 customers and that are subject to the 11th Transitory Provision of the Electric Power Act.

#### *New ownership unbundling requirements for the TSO*

The Spanish Electricity Act 2007 has established an obligation to create a subsidiary to develop all regulated activities: operation of the system, management of the transmission grid and transmission activity. It has also established an obligation to transfer all grid assets to REE and has increased the limits to ownership of REE share capital. Furthermore it has incorporated the general legal and functional unbundling requirements of the 2003 EU electricity internal market Directive.

Law 17/2007, dated 4<sup>th</sup> July, that amends the previous Spanish Electricity Act 54/1997 establishes 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 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.

The Third Transitory Provision of Law 17/2007 establishes a dateline of a year for Red Eléctrica de España to comply with these requirements since the entry in force of the Law.

In order to meet this dateline, the Board of Red Eléctrica de España agreed to constitute the company Red Eléctrica de España TSO, S.L., and transfer to it all material and personal effects dedicated to the Transmission and Transmission System Management and Operation. This agreement has also been recently ratified by the General Stockholder's Meeting celebrated in May 2008.

This operation was approved by the Board of the CNE on the 12th 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.

Within this subsidiary for regulated activities, the law mandates functional unbundling between SO and management of the transmission grid 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 will be 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.

### Current TSOs –DSOs' situation

In accordance with the 9<sup>th</sup> Transitory Provision of the Electric Power Act, Red Eléctrica de España (REE) is the only transmission system operator in the Spanish electricity sector. In addition, article 35 of the Spanish Electric Power Act, as amended by the Law 17/2007, has granted to REE the mission of being the unique transmission company. This means that only REE will act as an electricity transmission company.

Actually, REE is the owner of almost the entire electricity transmission network in Spain mainland. REE had been entering into voluntary purchasing agreements of assets with electricity companies since its creation and until 2006. For example, between 2002 and 2003 REE reached agreements with Endesa Distribución Eléctrica, Unión Fenosa Distribución to acquire their transmission assets. REE also bought a 25% of the share capital of the company which owned the transmission assets of IBERDROLA DISTRIBUCION ELECTRICA. In February 2005, REE reached an agreement for the acquisition of the remaining 75%. In 2005, VIESGO also sold its transmission assets to REE. Due to the above described purchasing process, REE owns, currently, 99% of the transmission grid in the Peninsula. Only the acquisition of Hidrocantábrico's transmission assets is still pending.

However, in 2007 the Law declares that there would be a sole transmission company, REE, and that this company will own the whole network. So, from 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.

Clear benefits are derived for both the electricity industry and the end consumers from this process, which is basically striving for quality improvement and supply reliability.

As for DSOs, there are 326 distributors registered in the Ministry of Industry, Tourism and Trade Registry. These distributors are the owners of their own networks. The main 5

distribution companies are: ENDESA DISTRIBUCIÓN ELÉCTRICA, S.L.U., IBERDROLA DISTRIBUCIÓN ELÉCTRICA, S.A., HIDROCANTÁBRICO DISTRIBUCIÓN ELÉCTRICA, S.A.U., UNIÓN FENOSA DISTRIBUCIÓN, S.A., and ELECTRA DE VIESGO DISTRIBUCIÓN, S.L.U.

The rest of the companies are small distributors which operate mainly in small municipalities and medium-sized towns. Approximately 17 of them are cooperatives. Therefore, there are 320 DSOs with less than 100.000 customers.

Some of the largest European electricity companies hold a significant share in the capital of the holding company of the main groups carrying out distribution activities in Spain: ENEL owns the majority of shares in ENDESA, EDP in HIDROCANTÁBRICO and E-ON has recently completed the acquisition of ELECTRA DE VIESGO.

#### Further unbundling measures

Only REE, the Spanish TSO, is ownership unbundled. The Spanish Electric Power Act establishes, in article 35, that a sole transmission company will be the exclusive manager of the transmission network assets (REE). Actually, REE is the owner of almost the entire electricity transmission network.

As explained before, Law 17/2007 establishes (9<sup>th</sup> Transitory Provision) that transmission assets still owned by companies other than REE must be sold to REE within a maximum period of 3 years. Previously, REE had been acquiring transmission assets via voluntary agreements with electricity companies. However, Electricity act 2007 mandates that REE will be the only carrier and that all transmission assets should be compulsorily sold to REE. In the case there is no agreement on the price, the CNE will designate an arbitrator.

The State Industrial Ownership Corporation (SEPI) was, on 31<sup>st</sup> December 2007, the direct owner of a significant share of the corporation, owning shares representing 20 % of the capital. The rest of the shares (80%) are private owned.

In order to increase REE independence Law 17/2007 establishes new maximum limits on the share capital ownership and voting rights. In general, the maximum share ownership is

established at five per cent. However, voting rights are limited to one per cent for those companies operating in the electricity sector and for 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.

This limitation does not affect the SEPI. The Royal Decree Law 5/2005 (hereinafter “the RDL”) dated March 11, on urgent reforms to drive productivity and improve public procurement, maintains the special regime for SEPI, which must keep, in any case, a minimum participation of ten per cent (10%).

The RDL also introduced the prohibition of syndicating shares acquired under the previous regime, and also re-established the joint limit of forty per cent (40%) for the whole joint participation of shareholders carrying out activities in the electricity sector.

During 2007 significant changes have taken place on the percentages held by its shareholders: IBERDROLA has sold its 3%, and ENDESA and UNION FENOSA have reduced their shares from 3% to 1% each. The rest (77%) is free – float.

The REE shareholders structure at 31st December 2007 is shown in the following table:

<b>RED ELECTRICA (REE) shareholders</b>	<b>% shareholding</b>
Sociedad Estatal de Participaciones Industriales (SEPI)	20
Endesa	1
Union Fenosa	1
Viesgo	1
Free float	77

Source: CNMV and REE Annual Report

*Table 7. REE shareholders*



As for DSO, there is no obligation of ownership unbundling. Spanish distributors own the assets necessary to carry out their activities. Article 39, section 1 of the Spanish Electric Power Act, as amended by Law 17/2007 states that:

“Distribution companies will be the managers of the distribution networks they operate [...]”

In fulfilment of the requirement of the legal unbundling of activities, the corporate groups and small distributors have carried out corporate reorganisations so that the companies devoted to the distribution activity within the group, only conduct this regulated activity, although they could hold shares in companies which carry out non-regulated activities.

Currently, there are 5 main distribution companies that are 100 % owned by the parent companies of their respective groups. ENDESA DISTRIBUCIÓN ELÉCTRICA, S.L.U. belongs to ENDESA GROUP, IBERDROLA DISTRIBUCIÓN ELÉCTRICA, S.A.U (IBERDROLA GROUP), UNIÓN FENOSA DISTRIBUCIÓN, S.A. (UNION FENOSA GROUP), HIDROCANTÁBRICO DISTRIBUCIÓN ELÉCTRICA, S.A.U. (HIDROCANTÁBRICO GROUP) and ELECTRA DE VIESGO DISTRIBUCIÓN, S.L.U (VIESGO-ENEL GROUP and now E.ON).

The main shareholder of HIDROCANTÁBRICO GROUP is EDP (96,601% of its share capital). ELECTRA DE VIESGO DISTRIBUCIÓN, S.L.U. (VIESGO-ENEL GROUP) was 100% owned by ENEL and has been recently sold to EON.

Therefore, DSOs are usually part of vertical undertakings that carry out various activities. In most cases, they have the same registered office as the parent company and other subsidiaries. The Spanish regulation does not impose for the moment any obligation to keep separate registered offices. Therefore vertical undertakings follow business efficiency criteria and take advantage of centralised services.

The unbundling of activities required by Law means that regulated and non-regulated activities have to be carried out by different subsidiaries, although both types of activity can be conducted within the same business group.

Although the legal unbundling is effective in Spain, companies belonging to vertical undertakings share the same group logo, website, publicity campaigns, etc, so as to maintain the corporate image, regardless of the activity, particularly now that electricity operators also conduct activities in the gas and other non-energy related markets. In this way, the vertical undertakings may enjoy the benefits associated with the use of the trademark's image, presence-based and virtual sales channels, customer relationship management and advisory services.

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.

#### Unbundling of accounts

The Spanish Electricity Act establishes (article 20) that entities engaged in one or more activities in the electricity sector 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. Those companies whose corporate purpose is to conduct regulated activities must keep separate accounts, differentiating between the revenues and costs that are strictly attributable to the transmission activity, those attributable to the distribution activity and, when applicable, those corresponding to trading activities and tariff-based sales to customers.

It also establishes that companies which conduct non-regulated electricity-related activities shall keep separate accounts for their production and trading activities, for their non-electricity related activities conducted in Spain and for all their foreign activities.

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

The companies 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 the case of vertical undertakings, the obligation to inform also applies 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 regulated subsidiary.

In addition to the rules included in article 20 of the Spanish Electricity Act, the Royal Decree 437/1998 of 20th March, adapting the Spanish Accounting System (PGC) to companies in the electricity sector, incorporated specific rules on public information separated by activities. It lays down that the consolidated accounts of groups comprising one or several companies carrying out electricity-related activities must incorporate specific information relating to the unbundling of activities, following the legal principles established in the Spanish Electricity Act.

Thus, business groups operating in the electricity sector which conduct regulated activities publish their consolidated annual accounts with information separated by activities, as established in the Accounting System adapted to the electricity sector. Major electricity groups operating in Spain, ENDESA, IBERDROLA, UNION FENOSA and HIDROCANTÁBRICO, publish their consolidated information separated by activities.

As far as VIESGO is concerned, the companies involved did not prepare consolidated accounts in Spain in 2007 because they were 100% owned by the Italian ENEL. (Now they are 100% owned by the German E-ON).

The REE GROUP also prepares consolidated accounts separated by activities and these are published in its annual report.

The legal information relating to individual companies that is publicly available is not broken down by activities. Independent distributors, which do not prepare consolidated annual accounts, do not provide information broken down by activities.

Companies are audited by independent companies according to the existing auditing regulation. In addition, 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 it is of concern to the regulator (measuring equipment, etc).

Companies must submit to the CNE regular accounting and economic-financial information, which is required for performing the functions allocated to the regulator (Circular 4/1998 of 10th November). 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 Circular establishes that the information must be presented separately for the following activities: generation, transmission, distribution, trading, non-electric activities, activities carried out abroad and sales to tariff-based customers

Besides, CNE has prepared a new regulatory model for the electricity distribution activity. This model is based on management accounting that CNE calls “regulatory accounting”. Rules and guidelines information for regulatory accounting were published on the 16<sup>th</sup> of February 2006 in Circular 1/2006. This type of information is audited and mandatory only for electricity distribution companies.

In addition to this, Companies must submit also to the Secretary of Energy of the Ministry of Industry, Tourism and Trade regular accounting and economic- financial information, in order to comply with the Order of 19th October 2000. The formats established to report the information are different to those established on the Circular 4/1998 of the CNE.

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 CNE (Circular 4/1998) and to the Ministry of Industry, Tourism and Trade (Order of 19<sup>th</sup> October 2000) have to be adapted. Both bodies are currently working on those matters.

Also, during 2006 CNE implemented Circular 1/2006 addressing electric distribution activity; This Circular introduced four new informational tools leading to gain a detailed, deeper insight on this regulated activity:

1. Regulatory accountability: it is fed by normal statutory accounts and considers, per each pre-defined cost centre, the OPEX as well as financial and assimilated expenses and revenues (A cost centre is defined as the minimum unit in which it is possible to split the organizational structure of the company from a managerial and economical surveillance point of view).
2. Technical and economical inventory of assets and markets characterization: Customers and transmission & distribution substations geo-referenced data (coordinates, contracted power and billed energy), standardized equipment (substations, transformers, lines, cables, capacitors, maintenance crews, protective devices...) fed by SCADA systems files and statutory accounts.
3. Network's Business Plan: Each firm has to declare for the next four years forecasted investments by type of asset in order to cover market growth.
4. Reference Network Model allows designing a whole distribution network that connects customers of electricity to the transmission substations, taking into account technical and geographical constraints and commonly accepted planning principles.

This four informational tools has been developed for monitoring main Distribution System Operators, but it will possible be extended for next years to all DSOs in a reduced format. Examples of the type of disaggregated data available at CNE are the following three graphics, which represent all customers (a), all transformer centres (b) and all distribution network (c) map for Spain. Each point and line is individually identified and characterized. Data for year 2004, 2005 and 2006 has been received from DSO's.

Data provided by DSO's to CNE of real customers and inventory to the new informational tool is completely consistent with previous database and allow CNE to comply with its supervision mandates for Distribution activity established in Law 17/2007.

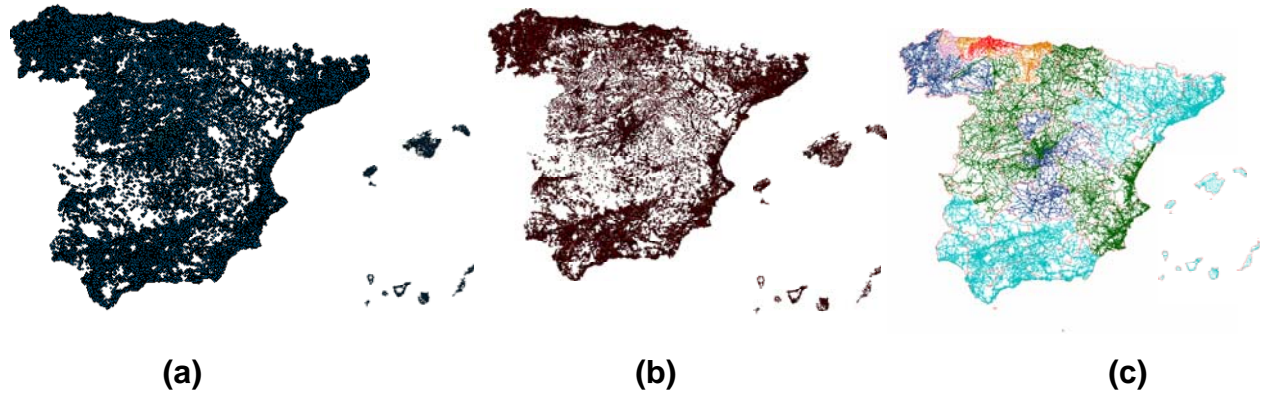
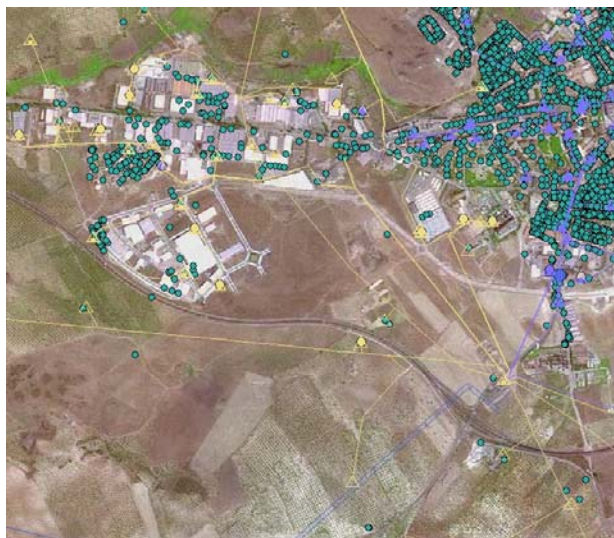


Figure 19. (a) Customers location (b) transformer centres location (c) and distribution network over 1 kV



<b>Lines</b>		<b>Voltage</b>	
<u>Type</u>			
simple	—	Less or equal to 1 kV	
double	==	from 1 kV to 20 kV	
other	---	from 20 kV to 25 kV	
underground	----	from 25 kV to 30 kV	
<b>Customers</b>	●	from 30 kV to 36 kV	
<b>Transformer centres</b>		from 36 kV to 50 kV	
<u>Type</u>		from 50 kV to 66 kV	
outdoor	▲	from 66 kV to 75 kV	
underground	△	from 75 kV to 132 kV	
shelter	△	from 132 kV to 220 kV	
indoor	△	more than 220 kV	

Figure 20. Real network, customer and transformer centre in a rural area.

Offences and Sanctions

Since the beginning of the unbundling of activities process, documentation to support the incorporation of new companies whose sole corporate purpose is the regulated activity is being checked, and the CNE, in the performance of its duties, authorizes the implementation of corporate transactions designed to make the legal unbundling effective.

The Spanish Electric Power Act assigns specifically to CNE the function of verifying the effective unbundling of accounts.

Failure to make available to CNE the information requested in the aforesaid Circular 4/1998, when this is not merely occasional or an isolated case, may be penalised as a very serious offence, whereas the occasional or isolated failure to do so constitutes a serious offence, as per the provisions of the Spanish Electric Power Act.

Apart from what has been indicated above on the obligation to submit information to CNE, the Spanish Electric Power Act specifies the actions and omissions which constitute administrative offences.

Thus, the performance of activities which as per the provisions of the Law are incompatible, i.e. non-fulfilment of the obligation of legal unbundling of activities, is treated as a very serious offence.

As regards the authority to impose penalties, within the scope of the General State Administration, penalties for very serious offences will be imposed by the Council of Ministers and penalties for serious offences by the Ministry of Industry, Tourism and Trade. The application of penalties 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.

Law 17/2007 establishes on its Article Sixty five, which amends Article Sixty four of the Spanish Electric Power Act, the following sanctions that apply for legal as well as for functional and informational unbundling:

- For very serious offences, sanctions can reach up to 30.000.000 euros
- For serious offences, sanctions can reach up to 6.000.000 euros
- For slight offences, sanctions can reach up to 600.000 euros.

As for the outcome of article 14 (Electricity Act) new 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.

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

#### 3.2.1 Description of the wholesale market

##### Structure of Spain's Electricity System

Spain's generation equipment has a structure based on highly diversified technologies, encompassing nuclear, coal-fired (Spanish and imported coal), fuel oil, conventional cycle fuel oil and gas, combined cycle gas and hydraulic (conventional and pumping) plants and producers under the special regime (wind, photovoltaic, biomass, etc.). With the introduction of liberalisation in the electricity market in 1998, the demand increase in Spain's electricity system was accompanied by an increase in production under the special regime, the output of which has reached some 56.433 GWh in 2007, 20,5% of total gross demand. Combined cycles continue to be the main driver in new generation capacity, amounting now for 24% of nation's power mix. The following graph shows the shares by technology of installed power under the ordinary regime in 2007; total values reached 90.722 MW.

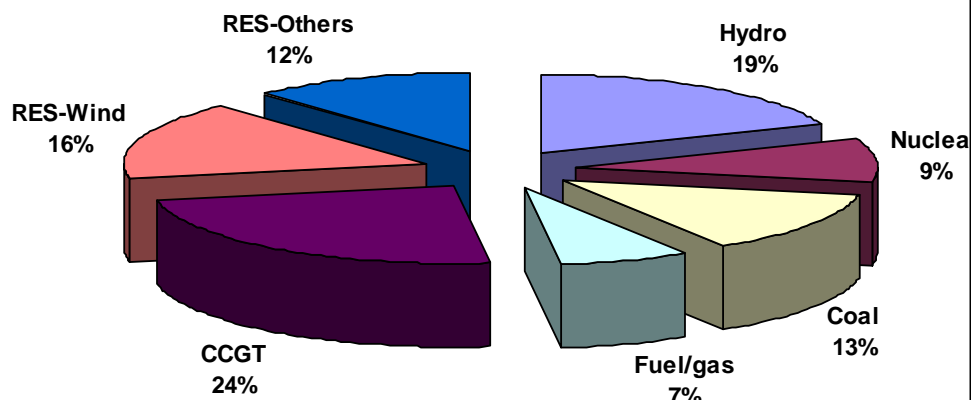


Figure 21. Installed power in the Spanish system

At the end of 2007, the installed power structure in the Spanish electricity system by production technologies was as follows:



Technology	Power [MW]
CCGT (Combined Cycle)	22.097
Fuel+Gas (conventional)	8.758
Coal	11.867
Nuclear	7.716
Hydraulic	16.658
Special Regime	23.626
<b>TOTAL</b>	<b>90.722</b>

*Table 8. Installed power structure in the Spanish electricity system*

On 31<sup>st</sup> December 2007, the power shares of the different companies in the “ordinary regime” (non-renewable) of Spanish mainland electricity system were as shown on the attached table:

	Net Power Share	HHI
IBERDROLA GENERACIÓN, S.A.	31,9%	2269
ENDESA GENERACIÓN, S.A.	29,8%	
UNIÓN FENOSA GENERACIÓN, S.A.	14,3%	
GAS NATURAL SDG, S.A.	6,5%	
HIDROELÉCTRICA DEL CANTÁBRICO, S.A.	5,2%	
VIESGO GENERACIÓN, S.L.	3,4%	
OTROS	9,0%	

*Table 9. Market Shares in Net Power (year 2007)*

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, Unión Fenosa, Gas Natural and HidroCantábrico.

In 2007 the total demand in power plant bars increased a 2,8% and amounted to 276.344 GWh, which was covered as follows:

Balance of Spanish electric energy system in 2007 (TWh)	
Hydroelectric	26.381
Nuclear	55.046
Coal	74.946
Fuel+Gas (conventional)	10.771

Gas (combined cycle)	72.461
Special Regime	56.422
International Exchanges	-5.803
Consumption in generation	-9.460
Consumption in pumping	-4.421
<b>Total demand</b>	<b>276.344</b>

*Table 10. Balance of Spanish electric system, TWh (year 2007)*

During this same year 2007, 17<sup>th</sup> December was the day on which the greatest demand ever for mean hourly power demand was recorded, with a value of 44.786 MW. The maximum daily energy value occurred the day afterwards and amounted to 902 GWh. On the other hand, the summer peak didn't reach the 40 GW range, thanks to a milder summer temperatures than the ones reached in 2006.

#### Structure of the Generation Market

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, Unión Fenosa and Hidrocantábrico. In 2007 ENEL and Acciona took over Endesa, defeating another competing bid from E.ON; E.ON is now about to take full control over formerly ENEL-owned Viesgo, as well as over a minor stake of Endesa Spanish generation facilities.

At present there are six groups of a significant size competing in the market, which are Endesa, Iberdrola, Unión Fenosa, (Repsol-YPF)/Gas Natural, Hidrocantábrico and Viesgo, whose market shares in energy are shown below:

	Energy Share	HHI
ENDESA GENERACIÓN, S.A.	34,7%	2325
IBERDROLA GENERACIÓN, S.A.	27,1%	
UNIÓN FENOSA GENERACIÓN, S.A.	15,7%	
GAS NATURAL SDG, S.A.	7,5%	
HIDROELÉCTRICA DEL CANTÁBRICO, S.A.	6,3%	
VIESGO GENERACIÓN, S.L.	2,5%	
OTROS	6,2%	

*Table 11. Market Shares in Energy (year 2007)*

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

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.

Sellers in the market are the electricity producers (generator companies), external agents (electricity imports) and supplier companies (electricity imports and energy from bilateral contracts); buyers in the market are the distributors (tariff-based supply), supplier companies (sale to qualified consumers), external agents (electricity exports) and the qualified consumers themselves.

The producers, external agents, qualified consumers and, since the publication of Royal Decree-Law 6/2000, the supplier companies too, can choose between going to the organized market, presenting economic offers or signing and implementing physical bilateral contracts.

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 2007 bilateral contracts corresponding to a volume of energy of 82.935 GWh, representing about 30% of the market's total volume, were executed.

An energy volume of 221.150 GWh, —corresponding to a trading volume of 8.975 millions €, up 59% and 19.2% respectively on the previous year—, has been negotiated in the day-ahead and intraday market. The final average market price was 4,567 c€/kWh (about a 25% below previous year average). The daily market price has represented in the region the 87,7% of the final price, the capacity payments a further 7,8%, and the solution to technical restrictions, the secondary regulation and other technical operation processes account for the remaining 4,5%.

For each hour of the daily programming horizon, the Market Operator establishes the order of economic precedence of the sales offers, starting with the cheapest and going up to the most expensive that is necessary for meeting the electric energy demand in this hourly programming period. The entry into operation of the power plants occurs on the basis of their variable cost; thus, the first units to enter into operation are those which do not have the capacity or have only limited capacity to modify their dispatches and low fuel costs, as is the case of hydroelectric and mini-hydroelectric flow plants, nuclear power plants and wind farms. Coal-fired and combined cycle power plants enter into operation in second place and the dispatch of units with the most expensive fuels, such as fuel+gas plants and hydroelectric plants with modulation capacity, takes place last. Co-generation plants are dispatched on the basis of their variable production costs and the conditioning factors of the production processes with which they are associated. Thus, in general terms, the coverage of demand in the system follows the order of economic precedence determined by fuel costs. Consequently, the order in which the plants enter into operation is covered as follows:

Hydraulic Flow and Nuclear, Co-generation and other Renewable Fuels	→	base load plants
Coal and Combined Cycle	→	mid merit plants
Modulated Hydroelectric and Fuel+Gas	→	peak plants

### Market for ancillary services

At the same time, competitive markets managed by the System Operator exist within the organized production market in Spain; these are the markets which correspond to the system's technical operation processes (balancing markets), the aim of which is to guarantee the electricity generation and transport system's reliability and security.

Three types of regulation reserve have been defined in the Spanish market: primary reserve, secondary reserve and tertiary reserve.

Primary regulation has been established as a complementary service to the system, which is obligatory and not remunerated and, consequently, there is no market.

As already indicated above, the rendering of the secondary regulation service has been broken down into regulation zones, which group together several generation units within the same automatic generation control system. This service's contracting process consists of two phases: provisioning of the regulation tranche made on the day prior to the system's real exploitation and this regulation tranche's use in real time. The System Operator establishes the regulation tranche that needs to be maintained in each one of the 24 hours of the following day, using as criteria possible errors in forecast demand, the size of the programmed groups and their fault rates, and the programmed power's hourly variation. The market agents whose units have the technical capacity to provide this service submit their offers indicating, per production unit, the offer of increase or decrease in power together with the price at which they are prepared to provide this tranche. Tranche allocation to the different units is based on economic criteria and is remunerated at the highest price of all the offers accepted in the auction. At the same time and, in this case, during exploitation in real time, the energy that is needed to cover positive and negative system deviations is remunerated at the marginal hourly price, which is calculated as the price which would have resulted for the equivalent tertiary energy which ideally it would have been able to replace (tertiary energy marginal price).

The tertiary regulation reserve's function is to maintain the balance of generation-demand when faced with unscheduled variations in demand or faults in the generator equipment. Its use in time is situated after the use of the primary and secondary reserves and it can be

provided by those groups which can vary their power with respect to the allocated generating programme in a maximum time of 15 minutes and that can be maintained for at least 2 consecutive hours. There is no payment per tranche in the tertiary regulation market, with only the reserve's use being remunerated. The System Operator establishes the value of the minimum tertiary regulation reserve which must exist in the system so that it can simultaneously withstand faults in any generator unit and errors in forecast demand. The agents whose units have the technical capacity to provide this service have the obligation of submitting hourly regulation tranche offers to cover possible positive (increase) or negative (decrease) deviations. If the deviation is positive, the System Operator will give the order to increase the scheduled power in the units which have submitted offers to increase, starting with the cheapest, until the detected deviation has been covered. At the end of the hour, the price at which all the tertiary energy used is to be remunerated is set at the price of the most expensive offer which has had to be used within that hour. In the case of negative deviations, the System Operator issues the order to reduce the power with respect to the programme in the units which have submitted offers to decrease, with the price being the lowest (energy buyback price) of those of the offers which have been used (allocation in descending order of price).

The following table shows maximum commercial capacity in main Spanish interconnections, assuming full network availability; data are estimated for peak and valley periods, in both importing and exporting directions:

	<b>Portugal</b>		<b>France</b>		<b>Morocco</b>	
	Peak	Valley	Peak	Valley	Peak	Valley
<b>Import (MW)</b>	700-1.300	900-1.700	700-1.400	0-1.400	400-400	400-400
<b>Export (MW)</b>	1.200-1.700	300-1.500	0-500	300-500	400-400	0-400

*Table 12. Interconnections capacity*

Taking maximum peak importing capacities, and dividing them by maximum Spanish mainland generation capacity, a mere 3,6% degree of network interconnection is reached, far away from EU market integration targets — a further call for increasing interconnection capacity, specially through Pyrenees.

During 2007, trade volumes exchanged with neighbouring states represented about 12.6% of the energy in the wholesale market. The amount of energy exchange in each border is shown below (net importing result: positive; net exporting, as negative):

	Portugal	France	Andorra	Morocco	TOTAL
<b>Import (GWh)</b>	2.315	6.425	0	12	<b>8.752</b>
<b>Export (GWh)</b>	9.696	1.069	260	3.530	<b>14.554</b>
<b>TOTAL</b>	<b>7.381</b>	<b>-5.356</b>	<b>260</b>	<b>3.518</b>	<b>-5.803</b>

Table 13. Energy exchange (year 2007)

Considering neighbour countries only in France there is a spot market. Differences between French Powernext and Iberian OMIE are showed in following figures; quite a high degree of correlation was kept in the first three quarters of 2007, but in October and November sharp surges in Powernext broke this trend:

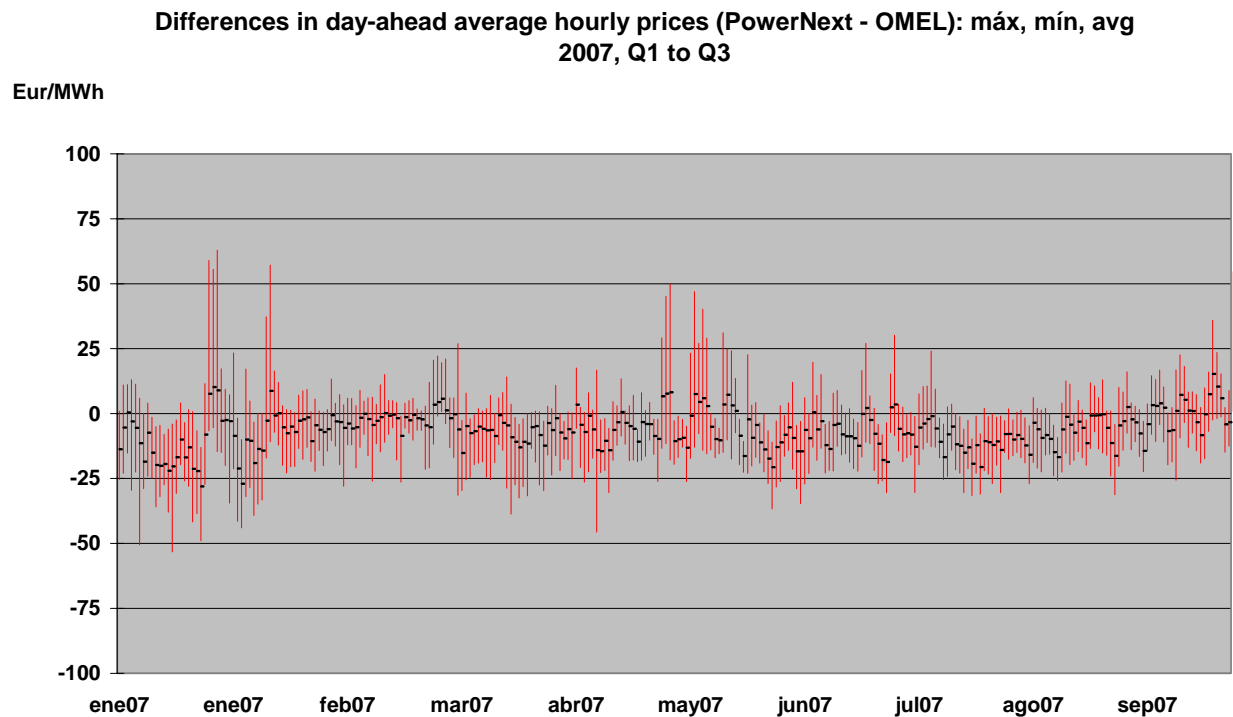
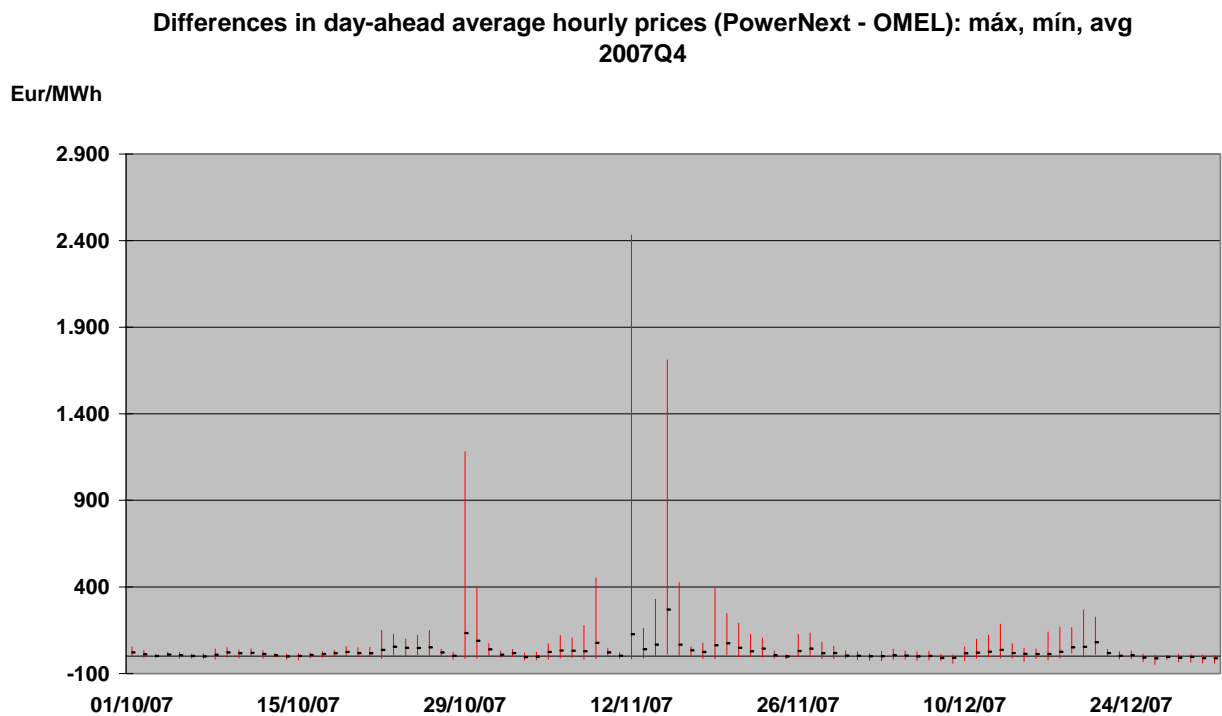


Figure 22. OMIE vs Powernext - 2007, Q1 to Q3



*Figure 23. OMIE vs Powenext - 2007, Q4*

Not only prices but also interconnection capacity determines in each period trade volumes. Congestion usually exists, this means that there is coordination between the French and Iberian markets but not integration.

### 3.2.2 Description of the retail market

As already indicated, in connection with the hiring of energy, the existing regulations allow qualified consumers to choose from amongst a range of possibilities. Basically, these can be classified as follows:

- To exercise their condition of qualified consumer. For this they can acquire all the energy in the market, negotiate it through other hiring modalities or through a combination of different energy hiring modalities. This can be materialised in the following way:



- Through a supplier company (the most common way)
- Buy them directly in the market, making the corresponding offers to the Market Operator

There are other possibilities, which do not normally arise, such as purchasing energy by signing a bilateral agreement with a producer or through an external agent.

- To remain tariff-based.

In this regard, during the year 2007 a massive return from liberalised market to tariff based scheme has happened (24.2% of the customers changed to tariff based).

Consumer group	Number of customers Dec 2006	Number of customers Dec 2007	Difference 2007-2006	Difference 2007-2006 (%)
Large industry eligible before Jan 2003	16.474	19.559	3.085	18.7
Medium size industry eligible since Jan 2003	80.088	85.761	5.673	7.1
Households eligible since Jan 2003	1.845.761	1.663.545	-182.216	-9.9
<b>Total</b>	<b>1.942.323</b>	<b>1.768.865</b>	<b>-173.458</b>	<b>-8.9</b>

Table 14. Number of customers in the liberalised market and difference in 2006 – 2007

Market	Number of customers Dec 2007	(%)
Liberalised	1.768.865	7.23
Tariff based system	22.705.821	92.77
<b>Total</b>	<b>24.474.686</b>	<b>100.00</b>

Table 15. Number of customers in tariff and in the liberalised market in 2007

The information on the situation in the market and tariffs as regards number of customers and consumption, which is analysed in the following section, corresponds to the information that is made available to this Commission every six months by the five major

distribution companies and which reflects the situation of customers in the market and tariffs on two specific dates of the year (30<sup>th</sup> June and 31<sup>st</sup> December) and includes information on the energy consumed by these consumers during the last calendar year as at the corresponding date. Consequently, the data provided reflect neither the number of times a consumer has changed throughout the year nor the accumulated number of changes since the deregulation of each tranche analysed. The provided information corresponds to the situation of customers in the liberalised market and in tariff-based market as at 30<sup>th</sup> June 2007; therefore, all the data on customer loyalty and capture relate to that date, where 'loyal' is deemed to be the number of consumers (or, when applicable, the associated volume of energy) which have renegotiated their contracts with the supplier company in the same business group as the distributor which makes the supply and 'captured' the number of consumers which have changed supplier (or, when applicable, the associated volume of energy). In addition, this information is sent aggregated by type of consumer.

In order to analyse the market shares, as regards both number of customers and energy, and with three categories were considered:

- Large industry: Very large consumers connected in High Voltage above 36kV.
- Medium size industry: All other High Voltage consumers connected below 36 kV.
- Small industry and households: Consumers connected in Low Voltage (below 1 kV) businesses, small companies and domestic consumers.

**Number of eligible meter point.**

	<b>TOTAL</b>	<b>Switching</b>	<b>Switching rate</b>	<b>re-negotiating</b>	<b>re-negotiating rate</b>
large industry	1.830	337	18%	498	27%
medium sized industry	92.166	6.593	7%	16.366	18%
small industry and households	24.437.314	505.824	2%	1.823.932	7%
	<b>24.531.310</b>	<b>512.754</b>	<b>2%</b>	<b>1.840.796</b>	<b>8%</b>

**By energy volume (GWh)**

<b>TOTAL</b>	<b>Switching</b>	<b>Switching rate</b>	<b>re-negotiating</b>	<b>re-negotiating rate</b>
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large industry	40.603	4.050	10%	8.075	20%
medium sized industry	56.349	12.572	22%	32.109	57%
small industry and households	107.528	3.609	3%	13.569	13%
	<b>204.480</b>	<b>20.231</b>	<b>10%</b>	<b>53.753</b>	<b>26%</b>

*Table 16. Percentage of Energy Volume involved in the Change of Supplier (with the Supplier Company from a different business group to that of the Distributor)*

The companies with the largest liberalised market shares are those which belong to the large electricity business groups, i.e. Endesa, Iberdrola, Unión Fenosa, and Hidrocantábrico, whose market shares add up to 91%. Gas Natural is the largest independent supplier company, sharing 2.6% of the market.

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. At the same time, the company Gas Natural is the largest Spanish business group as regards sales and distribution in the gas sector in Spain. It started to operate in the electricity market in the year 2000 in the supplier business, taking advantage of its gas sales commercial infrastructure, and in the year 2002 in the generation business with the installation of combined cycles.

<b>Supplier company</b>	<b>Share</b>
ENDESA ENERGÍA	56,34%
UNIÓN FENOSA COMERCIAL	14,54%
HIDROCANTABRICO ENERGÍA	13,11%
IBERDROLA COMERCIALIZADORA	7,37%
Others (<0,1%)	3,38%
GAS NATURAL ELECTRICIDAD	2,61%
ENEL VIESGO ENERGIA	1,48%
HISPAELEC ENERGÍA	0,71%
NEXUS ENERGÍA	0,10%

*Table 17. Market shares of supply companies*

There are many supplier companies of a non-Spanish scope which have penetrated the retail market, the most important are Hidrocantábrico and Viesgo (controlled by EDP and ENEL, respectively). The sum of the external (or foreign-controlled) supplier companies' market share lies above 15%, considering also as such Portuguese enterprises.

Procedures currently exist for the change of supplier prepared by the Spanish Energy Commission, not yet published in the Official State Gazette. At present no charge is being applied for a change in the energy hiring modality (tariff to market or vice versa) or for a change of supplier. The Law 17/2007 foresees the setting up of the "Office for switching supplier".

For low voltage, the maximum time allowed for the change of supplier to be implemented has been laid down in Article 6 of Royal Decree 1435/2002, which establishes that, in general, the change of supplier must take place within 15 days of the request for a change, with the option of this change coinciding with the supply reading cycle.

As of March 2008, both CNE and ERSE launched a public consultation process aiming at a harmonization of switching procedures within Iberian market scope, in which up to 20 relevant stakeholders took part. Now publication of a joint position paper including a set of recommendations for Governments regarding further legal development is pending.

### Retail price levels

In Spain the 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 29<sup>th</sup>:
  - 2.0nA for *Dc (domestic consumer)*
  - 3.0A for *Ib (small industrial consumer)*
  - 6.2 for *Ig (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 2<sup>nd</sup> part of the nuclear fuel cycle, compensation to distributors included under the 11th Temporary Provision for interruption 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, 2006 and 2007, 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 2007 cost pricing.
- 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 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 surcharge), the imbalance in revenues prior to 2003, the imbalance in revenues of 2005 and the review of the extra-peninsular generation cost of 2001 and 2002.
- The energy component is calculated by adding to the average market price corresponding to the year 2007 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>Dc (1)</b>	3,16	2,15	5,74	2,41	13,46
<b>Ib</b>	2,82	1,91	5,73	1,45	11,90
<b>Ig</b>	0,38	0,26	4,63	1,15	6,42

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

(2) Commercial margin not included.

*Table 18. End User Price by Components of Typical Consumers (cent€/kWh). Year 2007*

Note: If, as requested in the questionnaire, each one of the end user prices estimated by components is compared with the prices resulting from the application of the end user tariffs, the result would be that there is commercial margin of 8% for Dc customer, of 6% for Ib customer, and of 31% for Ig customer.

It should be pointed out that the domestic consumer type defined in this questionnaire is not representative of the domestic consumption registered in Spain due to the fact that it is a consumer 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 *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)
Dc (1)	3,16	2,14	6,48	2,41	14,19

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

*Table 19. End Price by Components for tariff 2.0A (cent€/kWh). Year 2007*

### 3.2.3 Measures to avoid abuses of dominance

Spanish legislation considers different provisions and tools to avoid market abuse. In 2007, the new Competition Act was a major change in this context.

#### The new Spanish Competition Act

The Competition Act 15/2007, of 3<sup>rd</sup> July, entered into force on 1 September 2007, and abolishing the previous Competition Act 16/1989, of 17<sup>th</sup> July.

The object of this new Act is the reform of the Spanish competition system in order to strengthen the existing mechanisms and to provide it with new instruments as well as with the proper institutional scheme to protect effective competition in markets, taking into account the new European system of regulation and the Autonomous Regions' competences.

The National Competition Commission is the new body responsible for applying the Competition Act, promoting and protecting the maintenance of effective competition in all the production sectors and throughout the national territory.

The National Competition Commission is created by the Competition Act 15/2007 and is a Public Law institution with its own legal personality and full public and private capacity, attached to the Ministry of Economy and Finance.

The organs of the National Competition Commission are the Chairman of the National Competition Commission, who manages and represents the Commission and chairs the Council; the Council of the National Competition Commission, collegiate resolution organ,

comprising the Chairman of the National Competition Commission and six Council Members, one of whom is the Vice Chairman, and the Directorate of Investigation, which carries out the functions of case handling, investigation, study and drafting of reports of the National Competition Commission.

The new competition law sets up only one independent competition commission substituting the previous competition organisms responsible for the enforcement of Competition Act: the Service for Defence of Competition (with investigative powers) and the Court for Defence of Competition (with decision powers).

The National Competition Commission is the competent body to handle and resolve on matters attributed to it by this Act and, in particular, to apply the provisions of this Act in terms of conduct restrictive of competition, the provisions of this Act in terms of economic concentration control, to apply Articles 81 and 82 of the Treaty of the European Community and its secondary law in Spain, to adopt the measures and decisions to apply the mechanisms of cooperation and allocation of proceedings with the European Commission and other national competition authorities of the Member States laid down in the Community regulations and to carry out the functions of arbitration.

The National Competition Commission shall act as consultative body on questions relating to competition. In particular, it may be consulted in matters of competition by the Legislative Chambers, the Government, the various Ministerial Departments, the Autonomous Communities, the Local Corporations, the Professional Bodies, the Chambers of Commerce and the business or consumer organisations.

The new competition act establishes the coordination with sectorial regulators such as CNE. The National Competition Commission and the sectorial regulators shall cooperate in exercising their functions in matters of common interest. The information shall be transmitted mutually *ex officio* or at the request of the respective body regarding its respective actions, as well as non-binding opinions within the framework of the applicable procedures of sectorial regulation and of the Act.



So, regulatory authorities shall inform the National Competition Commission about the acts, agreements, practices or conduct that they may know of, while exercising their powers, which present signs of being contrary to the Competition Act, providing any matter of fact available to them and, as the case may be, attaching the corresponding opinion.

The sectorial regulators shall also request a report from the National Competition Commission, before its adoption, on the circulars, instructions or general decisions pursuant to the corresponding sectorial regulations that may significantly impact on the competition conditions in the markets and shall request the sectorial regulators to issue the corresponding non-binding report within the framework of proceedings of concentration control between undertakings that carry out activities in the sector of its competence.

The National Competition Commission or the competent bodies of the Autonomous Communities shall request the sectorial regulators to issue the corresponding nonbinding report within the framework of proceedings instituted due to conduct restrictive of competition pursuant to Articles 1 to 3 of this Act (collusive conduct, abuse of a dominant position and distortion of free competition by unfair acts).

The Competition Law establishes that the Chairmen of the National Competition Commission and the respective sectorial regulators shall meet at least once a year to analyse the guidelines that shall guide the actions of the bodies that they chair and, as the case may be, establish formal and informal mechanisms for the coordination of their actions.

### *The role of CNE*

Hydrocarbons Act 34/1998 created the Spanish National Energy Commission (CNE) with the aim to ensure that agents carry out their activities according to the principles of free competition. To this end, whenever CNE detects the existence of evidence of restrictive practices, prohibited by the Competition Act, it will report it to the competition authority.

In the exercise of the aforementioned function and in connection with the electricity wholesale market, CNE has drafted numerous reports, approved by its Council of

Commissioners and submitted to Competition authorities, indicating the existence of signs of abuse of power by certain companies in the electricity market.

In connection with the electricity and gas distribution and trading activities, CNE receives complaints regarding market behaviour which could be contrary to free competition. In the exercise of the aforementioned function, CNE analyses these complaints which usually refer to difficulties in gaining access to the distribution network, unfair practices in the capture of customers for the deregulated market, discriminatory treatment in the access to the distribution network, application of discriminatory prices, incidents in the change of supplier procedure.

With regard to the electricity generation activity, the Spanish Electricity Act establishes that the market operator shall exercise its functions respecting the principles of transparency, non-discrimination and independence, under the control and monitoring of the so-called Market Agents Committee, thereby constituting another instrument for controlling the working of the electricity wholesale market.

The functions that the legislation confers to such Committee are the following: supervision of the working of the system's economic management, proposal of measures that may result in the production market's better working. This Committee is composed by representatives from all the agents with access to the market, qualified consumers and the market and system operators.

Among the Market Agents Committee's specific functions, one of the most important is to obtain regular information from the market operator on all aspects of the system's economic management that allow the degree of competition of the electricity market to be analysed.

Special rules exist regarding the working of the electricity market (Market Rules), which buyers and sellers in the electricity market must expressly abide by, through the signing of the corresponding adhesion agreement.

Thus, market rules establish that market agents will act in the market in compliance with legal and regulatory provisions and in accordance with what is established therein.

Likewise, it is established that market agents may demand both the result of the validations and the result of the different markets, in addition to the settlements, as established in the rules.

Complaints will be made known to all agents, with the exception of those which, owing to their nature, the agent may decide to establish as confidential. All disputes, disagreements, claims and differences that may arise shall be settled by the CNE.

In short, market agents can lodge claims relating to the market's working, at the first sign or suspicion of incorrect behaviour.

Although electricity market rules do not include specific rules relating to the behaviour of the buying and selling companies, they do include guidelines for its working which represent a guarantee for the correct energy matching process and, consequently, for the avoidance of obligations contrary to the markets correct working, including behaviour that is contrary to free competition:

- Obligation of abidance by the electricity market's Working Rules through the signing of the adhesion agreement.
- Obligation of registering the electricity production and buying units in the market operator's data system, through which offers are made. Authorization for the use of the market operator's electronic means of communication is conferred on a personal and non-transferable basis to the physical person appointed to act in the name and on behalf of the selling agent. Nobody can be authorized to act on behalf of more than one agent simultaneously or to act on behalf of an agent other than the one with which it maintains a dependent services relationship. To this end, whoever wishes to act on behalf of an agent, before being registered in the market operator's electronic means of communication, must present a declaration to the latter certifying that he/she does not maintain a dependent services relationship with any other agents.

In general, it can be concluded that these measures have been designed, amongst other objectives, to avoid the abuse of power.

- Once buyers and sellers have submitted their offers to the market operator, the latter checks them, as a condition prior to their possible acceptance.
- Information about unavailability is sent by the system operator to the market operator. The market operator assumes that all the production units not included in the last information about unavailability sent by the system operator are available.

Once the final matching of selling and buying offers has taken place, the market operator informs the system operator of the data relating to the results of the match, in the daily and intra-daily markets, and sends to the agents a notification with data corresponding to their production and buying units.

The final result of the match is adjusted by the energy supplies which the market and system operators agree on to overcome any technical restrictions, referring not only to the Spanish electricity system but also to international interconnections and any exceptional situations in the transport or distribution networks.

Finally, another instrument designed to guarantee the good working of the gas and electricity markets are the codes of conduct of the companies involved, established for the purpose of ensuring legal, ethical and transparent behaviour. In general, all the large Spanish operators have codes of conduct.

In turn, and in connection with the electricity market, Spanish legislation established for the market operator, which is responsible for the wholesale market's working, the obligation to draw up and publish a code of conduct applicable to this company, available since 1998.

The above-mentioned code of conduct establishes the principles of action in the market for the IBERIAN ELECTRICITY MARKET OPERATOR, POLO ESPAÑOL, S.A., indicating that it must act at all times with full respect for the principles of transparency, non-discrimination and independence, of which the following should be highlighted:

- Discriminatory treatment of any of the Electricity Market Agents shall not be allowed.
- Any preference shall be given to the orders issued by Market Agents.
- Avoidance of arbitrary actions, being guided by the legally established procedural requirements.
- Obligation not to reveal to some Market Agents the selling and buying offers made by other Market Agents, except in those cases in which this is authorized by the applicable rules and standards.
- Not to stimulate the preparation of an offer by one Agent for the purpose of benefiting another.
- To reject transactions involving any physical person or body corporate which does not have the legal consideration of Market Agent and to reject any transaction of which it has knowledge that infringes the applicable regulations.
- Not to request or accept direct or indirect gifts or incentives, the aim of which is to influence the transactions or which may create conflicts of interest with other Market Agents.
- To foster transparency in the price establishment and diffusion process, avoiding the disclosure of false or inaccurate data.
- To safeguard market information, avoiding and correcting cases of abusive or unfair use of such information and their consequences.
- Duty of strict confidentiality of the information handled.

In connection with professional relations, except when expressly authorized, neither directors nor employees can have a labour relationship of any type nor can it carry out any orders, work or duties for any of the Electricity Market's Agents.

A register of the securities issued by entities with the legal consideration of Electricity Market or System Operator Agents that are in the possession of their board members, directors and employees shall be kept up-dated, with such securities portfolios being monitored on an annual basis.

At the same time, the market operator shall carry out a permanent activity of transfer of information on the market, its working and its results. Thus, it immediately publishes the market's results and places at the disposal of the general public the following information, as indicated in the prevailing legislation:

- Publication of market supply and demand aggregate curves
- Publication of commercial capacities and intra-community and international cross-border capacities
- Monthly publication of the results of the energy programmes aggregated by agent and calendar month of the electricity market, once one month has elapsed since the last day of that to which they refer.
- Monthly publication, once three months have elapsed since the last day of that to which they refer, of the offers submitted by the market agents.

*Specific structural measures to promote competition ex ante*

Royal Decree-Law 6/2000, of 23<sup>rd</sup> June, of urgent measures for the intensification of free competition in goods and services markets, amended by Royal Decree-Law 5/2005, established in its article 34 a limitation on the voting rights corresponding to shares in excess of 3 per cent held by any physical or legal entity in more than one main operator in the energy sectors. Main operator is deemed to be any operator which, having the condition of operator in such markets and sectors is in possession of one of the five largest shares in the market or sector in question. The Law 17/2007, of July 4, adopted to incorporate into Spanish Law the Directive 2003/54/CE, of the European Parliament and of the Council, of June 26, introduces a change in this field, establishing that the geographical area for the determination of the relation of the main operators in the electricity sector is the national area.

The physical persons and bodies to whom the excess referred to above is attributed shall inform the Spanish National Energy Commission, within one month from the date on which such circumstance arises, of the company in respect of which they wish to exercise their voting rights without any limitations.

Likewise, without prejudice to the provision relating to the exercising of voting rights, no physical person or body corporate may directly or indirectly appoint members of the administrative bodies of more than one company with the condition of main operator in the same market or sector of those affected by the rule.

The aim of those limitations is to prevent the adoption of decisions or the development of commercial practices between the most important operators in the energy markets, which could distort effective competition, in terms of exchange of information or coordination of their commercial strategy.

Royal Decree-Law 5/2005 introduced a new figure, the dominant operator in the above-mentioned energy markets, which is defined as any company or group of companies with a market share in excess of 10 per cent.

The geographical area for the determination of the relation of dominant operators in the electricity sector is the MIBEL, and the National Commission of Energy, previous agreement with the Council of Regulators of the MIBEL(Iberian Electricity Market), will publish the list of dominant operators.

Legislation refers to certain limitations to be applied to dominant operators such as the prohibition of electricity purchases in other Community countries outside the scope of the Iberian Electricity Market or in third countries. Or the obligation to participate in electricity release programmes. The limitations and prohibitions which affect dominant operators have also been designed to exercise a certain control over the activities carried out by these operators, for the purpose of protecting free competition, thereby avoiding situations of abuse of power by the agents with the largest market share which operate in the energy sectors.

Another measure to enhance competition was introduced by Royal Decree 1634/2006 (later modified by Royal Decree 324/2008) which obliges ENDESA and IBERDROLA (as dominant operators) to hold a series of seven auctions offering virtual power plant capacity to members of the Spanish electricity market.

The virtual power plant (VPP) capacity auctions were introduced in order to help to develop a forward electricity market. The main objective is to increase the proportion of electricity that is purchased through bilateral contracts and to stimulate liquidity in forward electricity markets. Nevertheless, the VPP capacity auctions are also an instrument to improve the competition in the electricity market, indirectly as a better way to manage the risk, and directly through the impact on the strategic behaviour of the operators and as a means to provide temporary access to capacity to new entrants.

The capacity is sold in a series of auctions as virtual power plants, which are options for energy. The auctions are equivalent to call options, in which the sellers (ENDESA and IBERDROLA) sell virtual capacity. In other words, the ownership of the plants belongs to the sellers but the successful bidders have the right to buy a certain quantity of capacity to generate electricity at a specified price (the strike price) up to a specified date. At the expiration date, successful bidders can decide to call up the capacity, paying a price for the power (the strike price). Independently of whether they use the capacity they will pay a fixed charge established through the auction.

To date, five auctions have taken place. The first auction was in July 2007 and the last (fifth auction) in July 2008. Two auctions more are planned, the sixth will be held in September 2008 and the seventh in March 2009. The results of these VPPs are shown in table 2.

#### *New supervision functions attributed to CNE in Law 17/2007*

As already described, the law 17/2007, of July 4 establishes that, 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 the absence of discrimination, an authentic competition and an effective functioning of the market, will supervise:

- a) The management and assignment of capacity of interconnection.
- b) The mechanisms to settle the congestion of the capacity in the networks.



- c) The time used by the transmission and distribution companies in effecting connections and repairs.
- d) The publication of information by transmission and distribution network operators about the interconnections, the use of the network and the assignment of capacities to the interested parts.
- e) The effective separation of accounts in order to avoid cross subsidies between activities of generation, transmission, distribution and supply.
- f) The conditions and tariffs of connection applicable to the new producers of electricity.
- g) The measure in which the transmission and distribution network operators are fulfilling their functions.
- h) The level of transparency and of competition.
- i) The fulfilment of the obligations of information that is provided to the consumers over of the origin of the energy that they consume, as well as of the environmental impacts of the different used sources of energy.

To that end, the CNE will be able to adopt information by-laws, which will have to be published in the Official Bulletin of the State, to request from the agents that operate on the market of electricity production all the information needed to carry out the supervision.

The Iberian Electricity Market (MIBEL) constitutes a joint initiative by Portuguese and Spanish Governments, and is an important step in the development of an internal electricity market.

On July 3<sup>rd</sup>, 2006 Mibel derivatives market began its trading activity, under the responsibility of the Portuguese division (OMIP), constituting the launch of MIBEL.

The organisation of Mibel is based on the principles of transparency, free competition, objectivity, liquidity, self-financing and self-organisation.

At the XXI Iberian Summit, November 18th and 19th 2005 in Évora, the Governments of Portugal and Spain re-stated their commitment to build the Iberian Electricity Market and the Iberian Natural Gas Market (MIBGAS), according to Santiago Agreement, signed on October 1st 2004.

Santiago Agreement obligates the parties to develop, in a coordinated way, the legislation needed for the functioning of an integrated market and for the establishment of the powers of the MIBEL's Regulatory Board (integrates the energy regulators of the two countries), the Market Agents Committee (integrates representatives from all the entities who participate in the market) and the MIBEL Economic and Technical Management Committee (integrates the Market and System Operators of the two countries) and defines issues related to regulation, consultation, supervision and management of MIBEL, as well as the legal regime relative to infringements, sanctions and jurisdiction area.

In Spain, according to article 10 of Santiago agreement, bodies empowered for the supervision of MIBEL are the National Energy Commission and the National Stock Market Commission (CNMV).

The mentioned article indicates that the supervision of the markets defined in the MIBEL will be made by supervisory bodies of the geographical area in which these are constituted, in agreement with the legislation of each party in this matter.

With the entry into force of Santiago Agreement, it has immediately been constituted a Board of Regulators, under the terms defined in article 11 of that Agreement.

The Board of Regulators will have the following functions, established in article 11 of the Santiago Agreement:

- a) to pursue the application and development of MIBEL,
- b) to inform before the imposition of sanctions, in case of serious breaches of the Law,
- c) coordination of the behaviour of its members, in the exercise of its powers of supervision,
- d) to inform on proposals for new regulation about MIBEL operation or its modification and on the regulations proposed by the governing societies the markets constituted,
- e) any others decided by the parts.

A general plan for making both electricity regulations compatible was signed between the Governments of Spain and Portugal on 8 March 2007, establishing a set of regulatory matters on which it is necessary to present a common proposal of regulation by CNE and ERSE. A common definition of the concept of dominant operator and the methodology for its calculation is among those matters previously mentioned in which a common agreement is required.

The above mentioned general harmonisation plan defines that a dominant operator will be any company or holding company with a market share equal or higher than 10 per cent of the electricity produced in the MIBEL

This concept of dominant operator agreed by both Governments has required some changes of the so called Santiago Agreement between the Kingdom of Spain and the Portuguese Republic regarding the constitution of an Iberian Market of electricity, modification signed on January 18, 2008 (not yet ratified), to acknowledge at the rank of International Treaty the abovementioned concept of dominant operator, by introducing a new section that relates to those agents.

There will have the condition of dominant operator of the market any company or holding company that, direct or indirectly, has a market share equal or higher than ten per cent, measured in terms of electricity produced in the MIBEL area, without taking in consideration the Special Regime (renewables and cogeneration) and in terms of electricity traded.

To these effects, the company or managerial group will have the consideration of dominant when it exceeds the above mentioned threshold in any of two activities mentioned (generation or supply) or in both simultaneously.

Limitations and obligations imposed on the dominant operators are the following:

a) Possibility of implementation of electricity release programmes (VPPs) or other instruments that promote the vertical unbundling.

- b) Restrictions on the acquisition of energy from other European Community countries out of the area of the MIBEL, as long as there exist congestions in the capacity of interconnection.
- c) Prohibition of representation by dominant agents of other agents in the Special Regime (renewables and cogeneration) providing that its participation, direct or indirect, in their equity is lower than 50 per cent.
- d) Limitations on their rights to apply either for authorizations for the construction of new electricity generation plants or for the evacuation of energy, when situations of congestion exist in concrete points of the networks.

In execution of the Harmonisation Plan (Plan de Compatibilización Regulatoria) agreed between both Governments, in February 2008 Spanish and Portuguese Regulators (CNE and ERSE) have handed out a document that propose a common concept of “Dominant Operator” of the Iberian Market, as well as a common methodology of calculation and a common set of limitations, available in the web page of the CNE.

Finally, a brief reference should be made in this document to the various projects of mergers analysed by CNE this last year.

Regarding merger operations in the electricity sector undertaken in 2007, a special mention should be made to the acquisition of control by ENEL and ACCIONA of the Spanish society ENDESA.

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.

ENEL is an Italian electricity operator, active in the generation, distribution and supply of electricity mainly in Italy, where it is the main provider of electricity to both domestic and industrial users, and also in Spain, Bulgaria, Romania, Slovakia, Russia, France, and North and South America. It is also active in the purchase and sale of natural gas for domestic electricity generation and gas operations in Italy.

ACCIONA is a corporate group primarily based in Spain, whose main lines of business are the development and management of infrastructure and real estate projects, the provision of transport, urban and environmental services, as well as the development and operation of renewable energies.

ENDESA is a Spanish electricity operator that is to a limited extent also active in other European countries, in particular in Portugal, France, Italy, Germany and Poland. In addition, ENDESA is active in South America and North Africa. In Spain, ENDESA is also present in the gas sector. ENDESA's shares are listed on the Madrid and the New York stock exchanges.

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 has approved under the EU Merger Regulation the acquisition of sole 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.

## 4 REGULATION AND PERFORMANCE OF THE NATURAL GAS MARKET

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

#### 4.1.1 General

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

The figure below shows the evolution of eligibility levels:

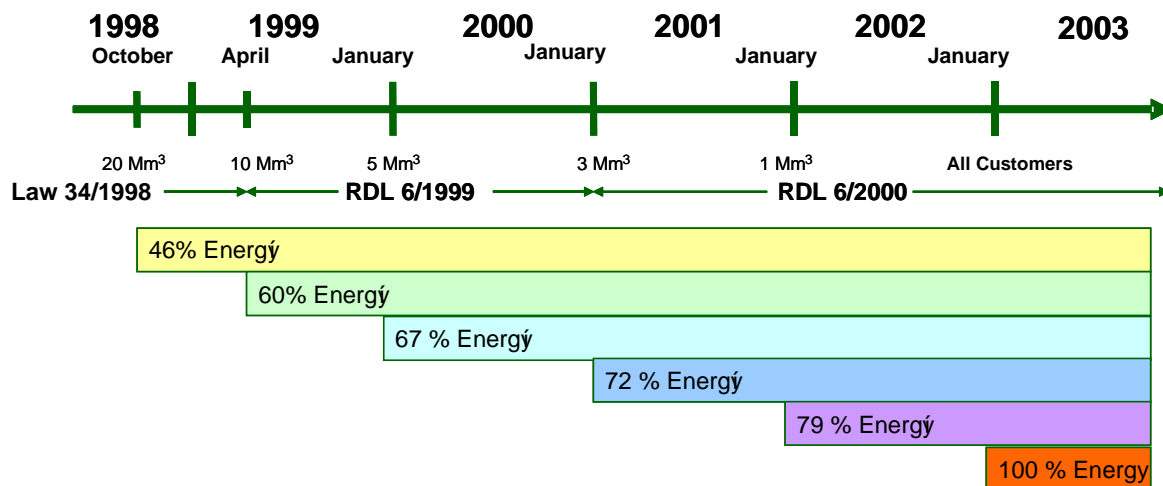


Figure 24. Evolution of eligibility levels.

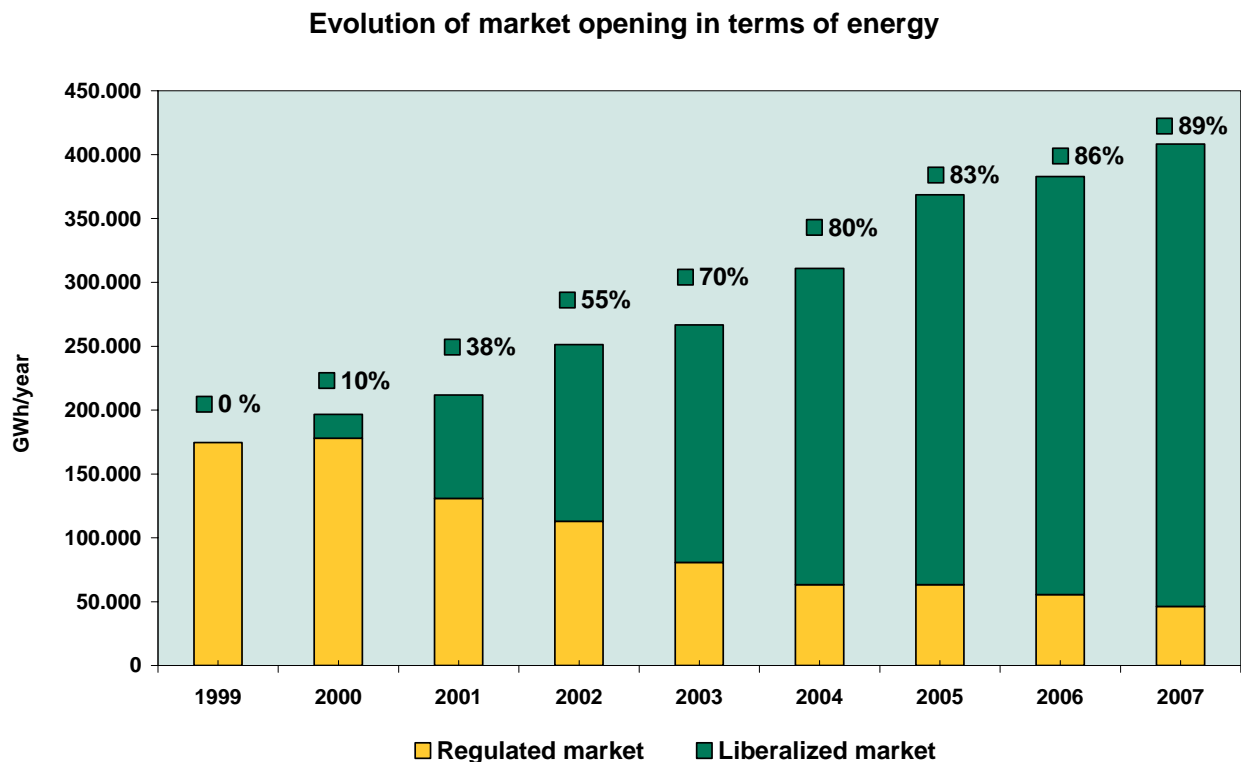
This calendar was followed by a set of regulatory measures: The core is Royal Decree 949/2001, which established the basics rights and requirements for TPA access and set the economic framework for all markets players, including a TPA tariff. The other milestone was the Royal Decree 1434/2002, which regulated the activities of transmission, distribution and supply of natural gas.

The effects of all these regulatory measures, complemented with several reductions the level of TPA tariffs have lead to an impressive growth of the market share of shippers and significant discounts in the price paid for final consumers.

Along 2007 the Ministry has gone on 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.

Market opening

In 2007, consumption supplied through the liberalised market totalled 89%. The figure below shows the evolution of the share of consumption between the regulated and the liberalized markets:



*Figure 25. Evolution of market opening (%)*

As regards shares of the liberalised market, it should be noted that 53,5% of this market was supplied by companies other than the incumbent (Gas Natural).



The procedure for customer change is regulated under Royal Decree 1434/2002 of 27 December.

Distribution companies are not able to retail gas to their clients anymore since 1 July 2008. They will only be dedicated to the distribution gas network. Royal Decree 1068/2007 establishes the basic principles for the last resource supply which has replaced the regulated tariff in July 2008. Order ITC/2309/2007, establishes the procedure to transfer customers from the regulated tariff to the last resource scheme.

The inherent obligations to retailing gas energy have been assumed by the marketer company associated to the distributor company where the supplier was connected.

In order to facilitate the switching, an Office of Switching is expected to be created very soon.

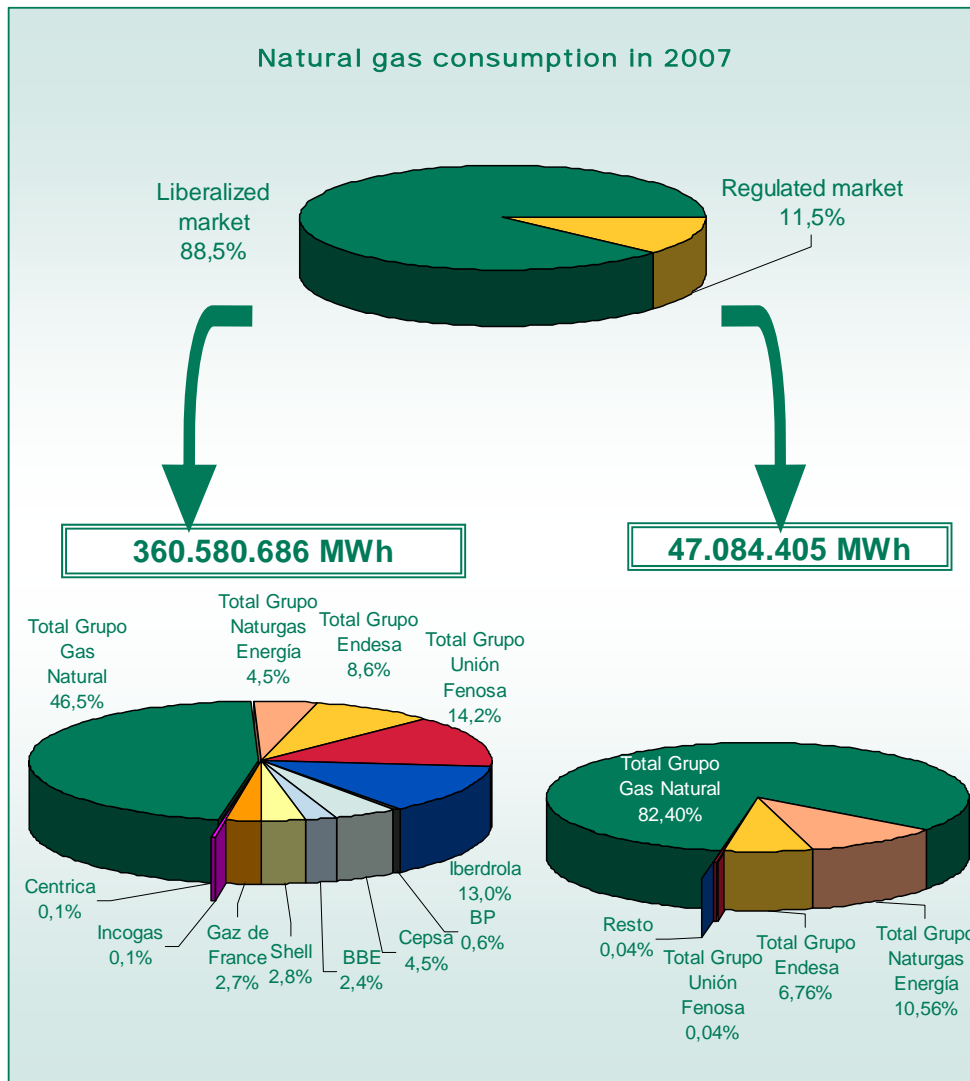


Figure 26. Opening of market in 2007. Shares of suppliers.

In 2007, a total of 350.000 clients of natural gas have switch supplier. Cumulative switching since 2003 is 2,7 millions of clients (from a total of 6,7 clients at the end of 2007)

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

Regulatory measures related to contractual congestion avoid situations of congestion owing to contractual capacity at the system's input points during 2007.

The regulatory measures that eliminated the contractual congestion consisted essentially of the posting of a bond when transport capacity is reserved, and the loss of reserved capacity in case of continuous under use or when congestion might cause a denial of access to other actors (UIOLI). These measures were established by the Royal Decree 1434/2002 of 27 December, which amended Royal Decree 949/2001 of 3 August.

In 2007, National Energy Commission has resolved the first loss of long term reserved capacity in Bilbao – LNG terminal because of UIOLI reasons.

As regards congestion of a physical nature, it should be noted that the international connections between SP and FR at Irun and Larrau have nearly reached that point, though expansions of capacity are planned for Larrau. The capacities of Larrau are intended for long-term contracts; but this capacity is being used. The international connection at Irún, in operation since 2005, presents physical congestion which requires the development of more Spanish and French gas infrastructures.

In general, the regasification plants have available capacity to contract. Actually, there is available capacity at Huelva, Bilbao and Barcelona LNG plants. Nevertheless, physical congestion in Mugarodos and Sagunto exist (although their capacity is fully contracted) because there is not enough natural gas network capacity to transport the natural gas (especially in summer).

Since the beginning of 2006, when Sagunto regasification plant initiated its activity, there has been physical congestion in the pipelines in the Levante Axis (pipeline Cartagena-Tivissa). It is due to the limited transport capacity of the pipeline Cartagena-Tivissa.

This congestion is the result of the construction delay of the Alcázar-Montesa pipeline cross axis and the compression stations in Montesa (Valencia) and Alcázar de San Juan (Ciudad Real). These new infrastructures will allow the connection between the central region and the Eastern regions. The reinforcement will be in place in 2008, resolving the congestion.

At present, transmission, regasification and storage facilities operators must publish a quarterly report on contracted and available capacity in each of their facilities, wherein they must distinguish between capacity assigned to access contracts with duration greater or equal to two years, and access contracts with duration of less than two years.

In particular, operators publish on their websites this information by entry-points for a timeframe of 10 years, broken down by quarters for the first four years and in annual figures for the remaining period.

#### Congestion management procedures.

The National Energy Commission has authority to rule about congestions management under a regulated administrative procedure in accordance with article 25.6 of the Directive 2003/55/EC.

As mentioned above, in 2006, the National Energy Commission dealt with the first loss of long term reserved capacity in Bilbao – LNG terminal because of UIOLI reasons. UIOLI measures are applied by the regulator, under a regulated administrative procedure.

The Spanish law (Law 12/2007) includes the possibility for secondary capacity markets, but the date of implementation has not been determined yet. In Spain, all primary TPA charges are fixed by the regulator, not by the TSO. There have been some few secondary sales or transfers of capacity between marketers, but capacity trading is scarce, as there is capacity available, except at the international connections with France.

Under present regulations, transmission companies must set aside at least 25% of their capacity to contracts of less than two years' duration (regasification, storage and input to the transmission system). No single marketer may accede to more than 50% of these capacities. These percentages may be revised by the Ministry of Industry, Tourism and Trade according to trends in the market. As noted above, the capacity of Larrau and Tarifa interconnections is reserved for long-term contracts that predate the regulation requiring assignment at least 25% of capacity for short-term contracts, though it should be born in mind that there is no under use of these infrastructures.

As indicated above, transporters are compelled to publish the capacities contracted and available for each of their facilities, with a distinction between capacity assigned to contracts with a duration longer or equal to two years and contracts of less than two years, respectively. As special measures to prevent congestion, the law envisages the posting of bonds and the loss of both, the bonds and the capacities reserved, in case of under use.

At the international connections of Larrau, numerous applications are being presented for short time reverse flow and they are accepted when possible: eg. the application for a reverse flow in Larrau (export to France) can be accepted only if other marketer nominates enough primary flow (import from France), as the connection of Larrau is not prepared to export a net gas flow to France.

Cross border access tariff can be different depending on the entry and exit points. The nearer the entry and exit points are, the lower the access tariffs will be. For 2007, cross border access tariffs were published by Ministerial Order ITC/3993/2006.

For international transit, access tariffs are multiplied by the coefficients which are shown on the next table, in order to be cost-reflective:

Entry point \ Exit point	Portugal-Extremadura	Portugal-Galicia	Larrau	Irún	Tarifa
Cartagena	1	1	1	1	0,567
Huelva	0,682	1	1	1	0,385
Sagunto	1	1	0,567	0,385	1
Bilbao	1	1	0,85	1	1
Barcelona	1	1	0,773	1	1
Mugardos	0,567	0,385	1	1	1
Magreb	0,788	1	1	1	
Portugal-Extremadura			1	1	0,567
Portugal-Galicia			1	1	1
Larrau	1	1			1
Irún	1	1			1

*Table 20. International transit, coefficients to multiply access tariffs*

### Transit contracts

The only different transit is the line from the entry point of Tarifa (Spain) to the exit in Campo Maior (Portugal), through gas pipelines that have been jointly developed and owned by Spanish (ENAGAS) and Portuguese (TRANSGAS) TSO's. This transit is governed by a private contract negotiated between the parties. The transport contract signed by the Portuguese company TRANSGAS with Spanish transporters is prior to 1998, the year in which EC Directive 98/30 was transposed. It is a long-term contract. Only capacity reserved in the Spanish pipelines to supply the Portuguese market is excluded from TPA.

The transit line is the result of some collaboration agreements between ENAGAS and TRANSGAS to develop the Maghreb-Europe connection, which enabled the supply of Algerian natural gas to the Portuguese and Spanish markets.

As a result of these agreements, Portuguese TRANSGAS does not pay any TPA charges for the gas in transit from Morocco to Portugal.

The Ministerial Order ITC/3993/2006 settled the international transit toll for the rest of transit contracts. The transport and distribution toll is applied multiplied by the fixed and the variable terms and, by a determined coefficient which is different depending on the entrance and exit point.

### Assessing technical capacity

There is no reason to doubt the reliability of the current method used by TSO's to assess the maximum technical capacity available.

The CNE has authority to rule about technical capacity calculations under a regulated administrative procedure in accordance with article 25.6 of the Directive 2003/55/EC. As an example, the technical capacity of the international connection of Irun has been assessed by the CNE in 2005, by checking the TSO simulations at the TSO offices.

Additionally, regarding to the Network Code, some working groups have been created to develop the network code. One of these groups is focused on the standard methodology to

establish the technical capacity of gas facilities and the result of this work was the Detailed Protocol - 10.

Also the Detailed Protocols *PD-07, PD-08, PD-09 and PD-10 of the Network Code* (“*Normas de Gestión Técnica del Sistema Gasista*” in Spanish), were approved on 20 April 2007.

The PD-07 specifies the planning needs required by the transport, regasification and storage facilities in order to make the planning and operation of the system.

The PD-08 specifies the consumption programming needs required by the distribution system operators in order to make the planning and operation of the system. Furthermore, it develops the coupling procedures in order to set out the most adequate forecast and communicate it to the system operators.

The PD-09 sets out the calculation procedure in order to fix the admissible range of the basic control variables.

The PD-10 sets out the calculation of the installations capacity.

### **4.1.3 The regulation 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.

Nevertheless, starting on 1 July 2008 and every three months, the CNE should send a proposal of rates, tolls and fees to the Government, pursuant to the Royal Decree 871/2007, dated July 1<sup>st</sup>.

The proposal by the CNE should fulfil the following principles:

- Additive tariffs: tariffs should include the access tariffs and forecasted energy costs.
- Sufficiency of revenues in the short – medium term.
- Recovery of regulated activities' costs through access tariffs.
- Efficient allocation of access costs among customers.

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 2007, remuneration system for regasification and storage of natural gas has been updated in the Order ITC/3994/2006 and in the Order ITC/3995/2006 respectively. 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	Annual Consumption (KWh)	Access Toll (cent€/kWh) (1)
<b>D3</b>	23 260	2,28
<b>I1</b>	116 300	1,14
<b>I4-1</b>	116 300 000	0,26

(1) Not including tax

*Table 21. Network tolls by types of natural gas consumers (cent€/kWh). 2007*

Prices shown in the table above correspond to year 2007, as published in the Order ITC/3992/2006, 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>9</sup> as applied to each type of 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 D3. For I1 and I4-1 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 2007, and is calculated with the method and hypothesis used to estimate prices for the D3 consumer.

<sup>9</sup> Not including the LNG storage fee

Type Consumers	Annual Consumption (KWh)	Access Toll (cent€/kWh) (1)
<b>Typical household</b>	10.000	2,61

(1) Not including tax

*Table 22. Network tolls of the typical household consumers (cent€/kWh). 2007*

- Storage charges: average value for the country

Storage charges were determined for 2007 in the Ministerial Order ITC/3996/2006 and they are unique for the Spanish territory.

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

Regarding the underground storage toll, the prices for 2007 were:

- Fixed quantity: 0,000227 €/kWh/month.
- Variable quantity: 0,000174 €/kWh.

Regarding the variable term of the LNG storage toll, the price for 2007 was 0,019073 €/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.

### Balancing

Balancing regime and penalties are defined by the regulatory authority, under the common principles of transparency, cost-reflective and non discriminations of users. Balancing charges are revised annually.

This includes:

- Tolerance levels.
- Penalties for imbalances.
- Access tariff for gas storage and LNG storage.

Balancing period is daily.

For LNG tanks, there are penalties depending on the gas stock levels:

- If the daily gas stock level is below five days contracted capacity, there is no charge for LNG storage – no penalty.
- If the daily gas stock level is above 5 days contracted capacity, there is a charge  $T = 0,02098 \text{ €/MWh/day}$ .
- If the monthly average gas stock level is above 8 days, there is a penalty nine times bigger than T.

For pipes, the tolerance band is between 0 and 50 % of the daily contracted capacity (equivalent to  $\pm 25 \%$  tolerance band).

- If the daily stock level is above 50 % and below 70 %, the penalty is 1,1 T
- If the daily stock level is above 70 % and below 100 %, the penalty is 1,5 T
- If the daily stock level is above 100 %, the penalty is 15 T
- If the daily stock level is below 0 %, the penalty is 1,1 T (assuming the marketer has LNG inside the Spanish system)
- If the daily stock level is below 0 %, and the marketer don't has stock of LNG inside the Spanish system, it must pay a daily fine equivalent of 15 % of the Henry Hub gas price or NBP gas price.

From 2007, TSOs and DSOs (through auctions) have supply contracts with suppliers for their self consumption of gas.

Balancing regime and penalties are defined by the regulatory authority, under the common principles of transparency, cost –reflective and non discriminations of users. All resources, including line pack, are offered to the agents (this is reflected in the wide tolerance band).

The TSO's revenue is neutral as regard balancing actions it takes: penalties paid by users will reflect lower TPA charges in the next year.

There is a single virtual balance point for the whole Spanish transport and distribution system. Besides, each LNG plant makes a balance of LNG. There is just one balancing area, the whole Spanish transport and distribution system. Energy is traded at a virtual national balancing point.

As there is a single virtual balance point for the whole Spanish transport and distribution system, the individual balance of a user is calculated pooling all transport and distribution contracts of the user.

All users can buy /sell gas at the Spanish balancing point in real time to adjust his balance. They can also trade gas at LGN terminals and underground storage.

Also they can re- nominate his daily regasification program during the day of gas to adjust his balance. The re-nomination process requires validation by the TSO.

Spanish Daily balancing is elaborated for every gas day, and it must be public for agents two days after, as too late.

There are more than 5 different TSO and 15 DSO involved in the process of assignment of gas, which is coordinated by ENAGAS, under a common IT platform for all marketers, DSO and TSO.

The same IT platform is used to trade gas in the system.

- Information for market participants to be provided by the TSOs regarding the balancing mechanism.

The system operator provides information about LNG, entry and exit points:

- LNG terminals: Unloading ship program schedule is available one month ahead of daily gas.
- Entry points: The TSO publishes the real aggregate volumes of every single entry point.
- Exit points: TSO published aggregated demand in real time.
- Marketers have daily access to telemetering data of his clients.

Balance rules include allocation rules of gas for transport and distribution grids, including clients without telemeter. All detailed balance process and allocations rules are settled in the Network Code.

The system operator elaborates a balance for each one of the market participants. Daily balancing is elaborated for every gas day, and it must be public for agents two days after as too late.

#### **4.1.4 Effective Unbundling**

Law 12/2007 was adopted in July 2007 amending Spanish Hydrocarbons Act (Law 34/1998. The amended Spanish Hydrocarbons Act introduces new unbundling requirements.

##### *New functional and informational unbundling requirements for regulated activities*

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, Tourism and Trade and to the National Energy Commission, 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 TSO and DSO's situation

In Spain, the main gas transmission operator is the company ENAGAS. ENAGAS was set up in 1972 with the objective of developing the gas pipeline network in the Iberian Peninsula.

At the moment Enagas is the only system operator 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, UNIÓN 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 LSE 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.

### 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.

The following chart shows the shareholding structure of ENAGÁS as to 08/07/2007:

<b>ENAGÁS shareholders</b>	<b>% total shareholding</b>
Gas Natural SDG, S.A.	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

Source: ENAGAS website

*Table 23. Shareholding structure of ENAGAS*

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

Therefore, all DSOs own their distribution assets.

The 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).

UNIÓN FENOSA operates the Sagunto plant and the liquefied Damietta (Egypt) and Qalhat (Oman) plants. Besides, Unión 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 infraction.

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, commission of 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.

As for the outcome of the new article 63 of the Hydrocarbons Act on 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.

## **4.2**



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

### 4.2.1 Description of the wholesale market

#### Evolution of gas demand

The table below shows the evolution of gas demand in the Spanish market in 2007

	2006	2007	Annual increase
<b>Demand of gas (except power generation (GWh))</b>	256.777	266.286	3,7%
<b>Demand of power generation (GWh)</b>	134.658	142.012	5,5%
<b>Total Demand in Spain (GWh)</b>	<b>391.435</b>	<b>408.298</b>	<b>4,3%</b>

*Table 24. Evolution of gas demand in Spain*

The following table shows the evolution of gas procurement in the Spanish market, including both domestic production and imports. Data is provided in TWh.

	2007	
	TWh	%
Natural gas through pipe	129	32%
LNG	281	68%
<b>TOTAL</b>	<b>410</b>	<b>100%</b>

*Table 25. Evolution of gas procurement in Spain*

Quality specifications for natural gas supply are specified in the Royal Decree 1434/2002. According to this, the quality of gas supplied must comply with the limits established for the H group specified in the normative UNE-EN-437, and what the Network Code determines about it.

Until now, the quality limits for gas in Spanish entry points have been reflected in the access contract, being the same for every agent. Recently, the required specifications have been collected and completed in the Resolution of the Ministry of Industry, Tourism and Trade, which passed on the 13<sup>th</sup> march 2006, reflected below:

Characteristic <sup>(1)</sup>	Unit	Minimum	Maximum
Wobbe Index	KWh/m <sup>3</sup>	13.368	16.016
Superior Calorific Power	KWh/m <sup>3</sup>	10.23	12.23
Density	m <sup>3</sup> /m <sup>3</sup>	0.555	0.700
Total solids	mg/m <sup>3</sup>	---	50
H <sub>2</sub> D + COS (as S)	mg/m <sup>3</sup>	---	15
RHS (as S)	mg/m <sup>3</sup>	---	17
O <sub>2</sub>	mol %	---	0.01
CO <sub>2</sub>	mol %	---	2.5
H <sub>2</sub> O (condensation point)	°C at 70 bar	---	+2
HC (condensation point)	°C at 70 bar	---	+5

<sup>(1)</sup> Reference conditions: [25 °C, V (0 °C and 1,01325 bar)]

*Table 26. Quality specifications for natural gas. Resolution of the Ministry of Industry, Tourism and Trade of 13<sup>th</sup> March 2006*

The gas which does not fulfil these characteristics may be rejected by TSO's.

Average calorific value is calculated considering the volume of the gas incorporated and its average calorific value in each one of the entry points to the System. It is obtained therefore a calorific average value of 11.858 KWh/m<sup>3</sup> <sup>(10)</sup>.

### Production and 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 favoured the development of gas competition in Spain. Capacity utilization ratio is around 50% for these plants.

Regasification plant	LNG tanks capacity (m <sup>3</sup> )	Vaporisation capacity (Mm <sup>3</sup> (n)/h)
Barcelona	540.000	39,60
Huelva	469.500	32,40
Cartagena	287.000	28,80
Bilbao	300.000	19,20
Sagunto	300.000	18,00
Reganosa*	150.000	9,91

<sup>10</sup> Based on annual report of ENAGAS 2006.

Regasification plant	LNG tanks capacity (m <sup>3</sup> )	Vaporisation capacity (Mm <sup>3</sup> (n)/h)
<b>TOTAL</b>	<b>2.046.500</b>	<b>147,91</b>

\* Reganosa plant started up in may of 2007. Source: Enagás

*Table 27. Capacity of regasification plants*

## B) Capacity of international connections by gas pipeline

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

A new connection with Algeria, MEDGAZ, is planned for 2008-2009. MEDGAZ is a strategic project for Algeria and Spain. On the one hand, 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.

Location	Transmission capacity (Mm <sup>3</sup> /day)
Larrau (entry from France to Spain)	7,92
Irún (exit towards France)	1,06
Tarifa (entry from Morocco to Spain)	30,51
Badajoz (exit towards Portugal)	1,67
Tuy (entry towards Spain)	1,55

Source: Enagás

*Table 28. Transmission capacity of pipeline interconnections.*

## C) Production capacity of domestic fields

Solely two natural gas fields are currently in production in Spain, Poseidón, which is offshore, in the Gulf of Cadiz and Marismas, onshore in the Guadalquivir valley. The other gas fields in operation in 2004 (Palancares, in the Guadalquivir valley as well) are

depleted. Tests are being carried out to use Marismas and Palancares fields as underground storage.

Production levels at Marismas and Poseidon are declining, evidenced by the reduction in peak production capacity (and annual production) against former years.

Field	Production capacity (GWh/day)
Marismas (Guadalquivir valley)	1,63
Poseidón (Gulf of Cadiz)	16,74
<b>TOTAL</b>	<b>18,37</b>

Table 29. Production in the Spanish gas fields

Origin of gas sources in 2007 (imports)

The figure below shows the origin of gas sources in 2007 in the Spanish market:

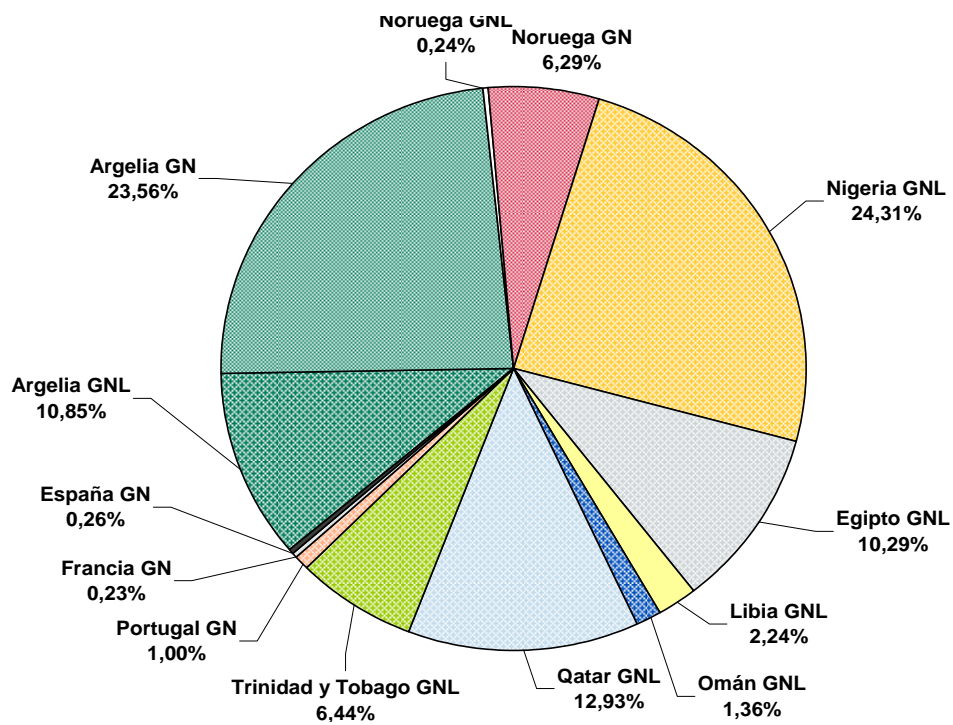


Figure 27. Origin of gas imports in 2007 in the Spanish market

Imports of natural gas as LNG represents 68% of total supply and the main origins are: Nigeria, Qatar, Algeria, Egypt, Trinidad & Tobago, Libya. The remaining natural gas (32%) is imported through pipelines from Algeria and Norway.

Gas Natural, Iberdrola, Unión Fenosa, Endesa and Cepsa held in 2007 more than 5% of gas imports for the Spanish market (Naturgas held 4%).

Company	Share (%)
Gas Natural	52
Iberdrola	12
Unión FENOSA	11
Endesa	8
Cepsa	5
Naturgas	4
<b>TOTAL</b>	<b>93</b>

Table 30. Companies with shares higher than 5%

The figure below shows the share of gas imports for every company to the Spanish market in 2007.

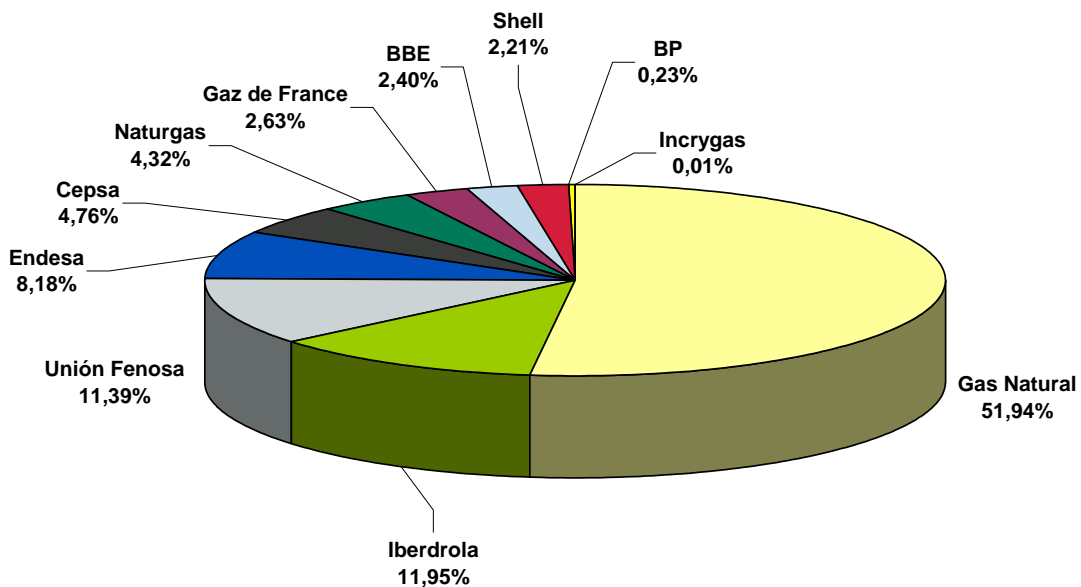


Figure 28 Share of gas imports by company in 2007 in the Spanish market

The largest three companies in the market concerned are shown below:

<b>Company</b>	<b>Share (%)</b>
Gas Natural	52
Iberdrola	12
Unión FENOSA	11
<b>TOTAL</b>	<b>75</b>

*Table 31. Three top companies according to market share.*

Gas Natural owns the two small gas fields (Marismas and Poseidon fields), which in 2007 accounted for 0,3% of the value of total procurement for Spain, where the remainder of its contribution to the Spanish market based on imports. The other companies have no domestic production, and are instead supplied through gas imports in short and long-term procurement contracts.

<b>Company</b>	<b>Proportion of production respect to national consumption (%)</b>
Gas Natural	0,3
<b>TOTAL</b>	<b>0,3</b>

*Table 32. Proportion of gas production allocated to the largest three companies*

Gas Natural Comercializadora, with 46% of capacity contracted in the market, is the marketer with the largest entry capacity booked. Unión Fenosa stands second in terms of capacity contracted, with 12% and then Iberdrola, with 12%, stands as the third largest agent in terms of capacity contracted.

<b>Company</b>	<b>Proportion of import capacity (%)</b>
Gas Natural	46
Iberdrola	12

Unión FENOSA	12
<b>TOTAL</b>	<b>70</b>

Table 33. Proportion of import capacity allocated to the largest three companies

The figure below shows the proportion of import capacity contracted for all companies.

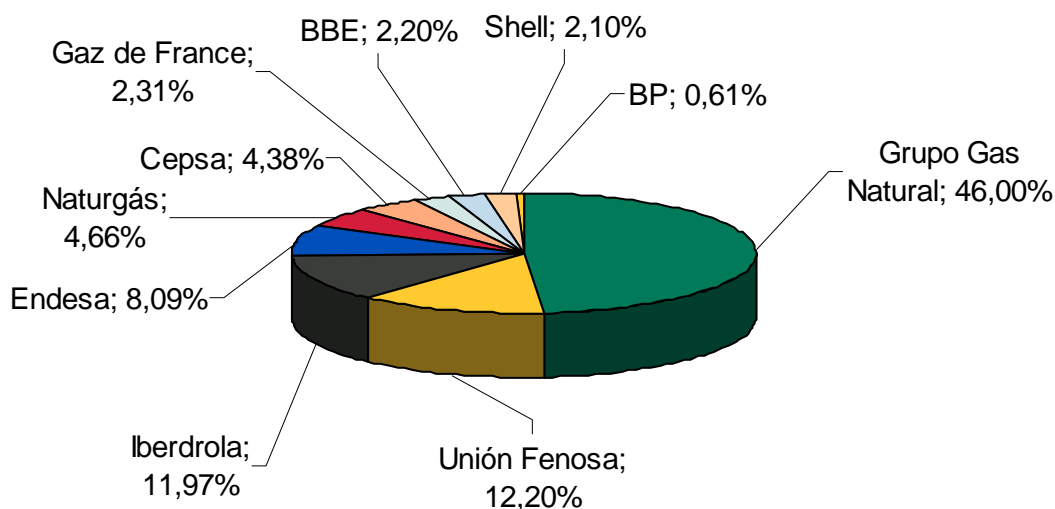


Figure 29. Booked entry capacity in Spain

As shown below, there are large companies in the retailing market whose shareholders are not all of them from Spain.

	Market share	Main Shareholding nationality
<b>Gas Natural</b>	46,5%	Spain
<b>Unión Fenosa</b>	14,2%	Spain 50 % - Italy 50 %
<b>Iberdrola</b>	13,0%	Spain
<b>Endesa</b>	8,6%	Spain – Italy
<b>Naturgas</b>	4,5%	Portugal
<b>Cepsa</b>	4,5%	France
<b>Shell</b>	2,8%	UK – Germany
<b>Gaz de France</b>	2,7%	France
<b>BBE</b>	2,4%	Spain (25 % UK)
<b>BP</b>	2,66%	UK
<b>Centrica</b>	0,1 %	UK
<b>Incogas</b>	0,1 %	Spain

Table 34. Nationality shareholding in the main companies operating in Spain

Foreign companies operating in the Spanish market are fully integrated and participate in the market as other actors do, on a same level playing field with Spanish companies. In Spain, all facilities are under regulated TPA, including LNG terminals and underground storages. This is why they are able to act as marketers, procuring gas on international markets and then marketing and supplying it to final customers in the liberalized market.

Development of gas trading and hubs

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”.

The tendency for negotiated energy in the Spanish OTC gas market over MS-ATR is growing. In 2007, 4.538 transactions were registered over MS-ATR. The volume of energy traded over the counter amounted to 443.909 GWh, which represents 108% of total gas consumption.

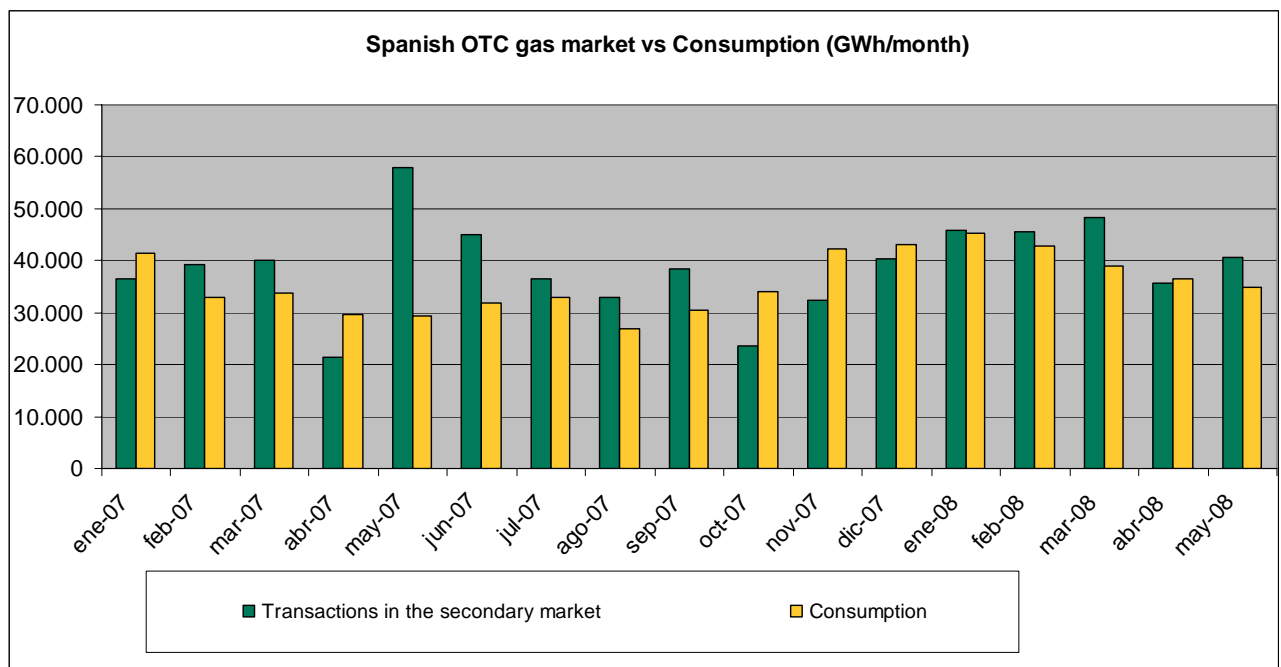


Figure 30. Volume of energy negotiated over the counter vs Consumption since Jan. 2007

Trading is conducted at three system infrastructures: the transmission network (a national balance point, called “Commercial Operative Storgae” – AOC, Spanish acronym),



regasification plants and underground storage. However, most of energy is traded at the AOC.

In 2007, 97% of energy was traded at the six regasification plants, 2% at the AOC, and 1% at the underground gas storage.

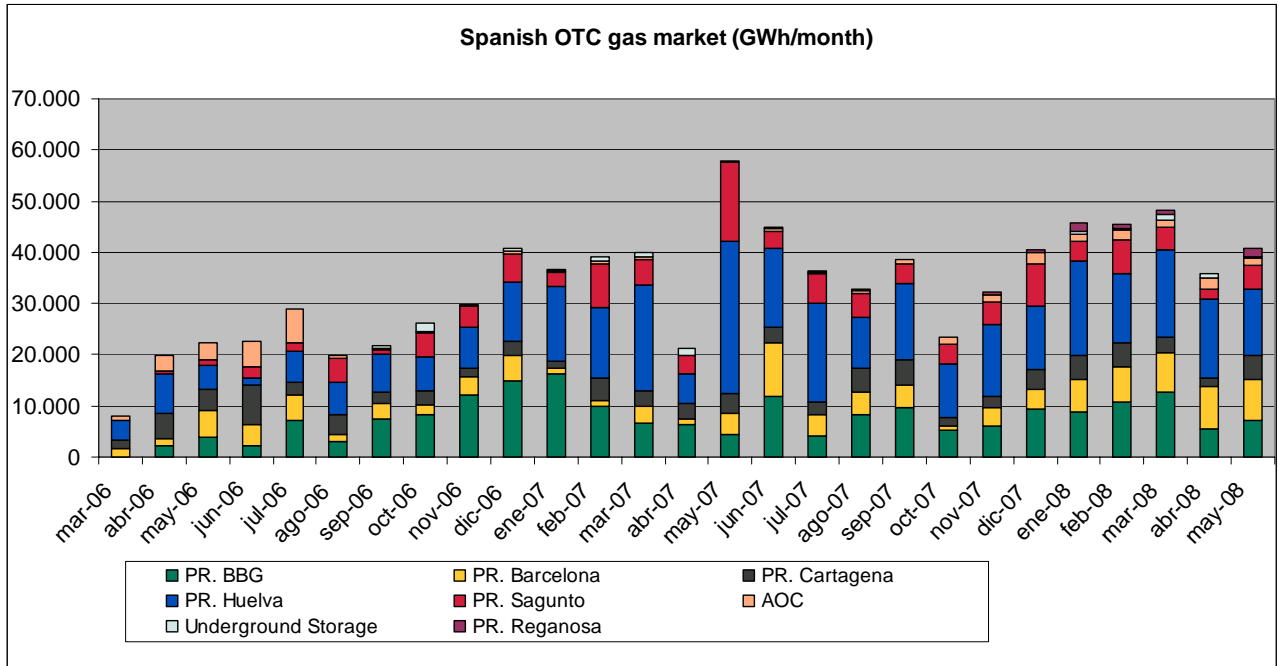


Figure 31. Volume of energy negotiated over the counter since January 2007

However most of transactions were conducted at the AOC. In 2007, 69% of transactions were allocated at the AOC, 30% at the regasification plants, and 1% at the underground gas storage.

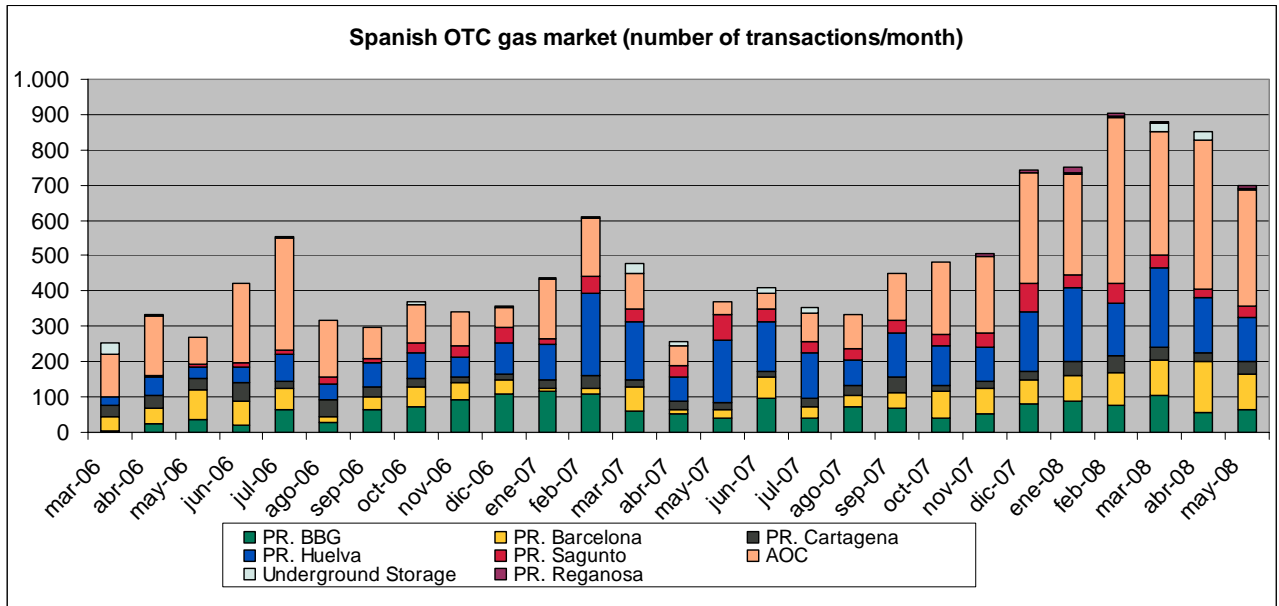


Figure 32. Number of transactions over the counter since January 2007

The graphic below shows the shares in the OTC gas market for 2007, in terms of % energy. The highest share belongs to Unión Fenosa, with 19%.

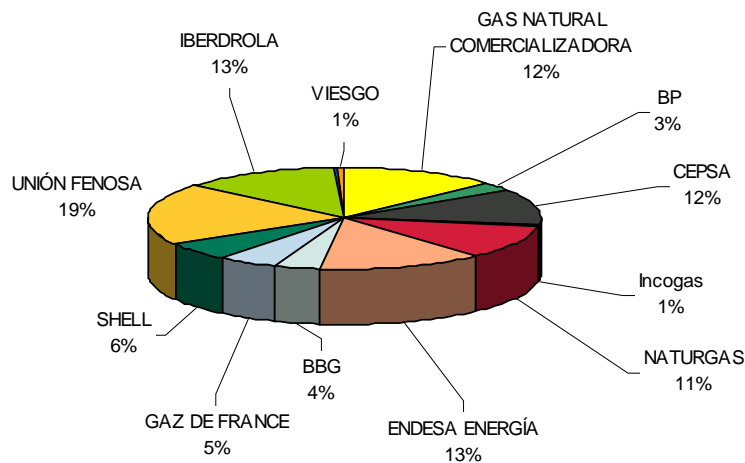


Figure 33. Shares in the Spanish OTC gas market 2007

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.

Bearing in mind the particular nature of the Spanish market compared to other European markets, as procurement of LNG accounts for 68% of total procurement, and given the nature of these shipments, it should be recalled that there is a major international LNG market prior to the unloading of gas in regasification terminals. This market accounts for a growing volume of buying and selling.

#### Market integration with neighbouring countries

Spain has several international gas pipeline connections to other countries: to Morocco through Tarifa, to Portugal through Tuy and Campo Maior and to France through Larrau and Irún. A new connection with Algeria, MEDGAZ, is planned for 2009.

The interconnection with Morocco is solely for imports (100.337 GWh for Spain and 23.676 GWh for Portugal). This will also be the case for the new undersea pipeline with Algeria. There are no plans for a gas market with Morocco in the short term. Gas from this connection accounted for 25% of supplies to the Spanish market in 2007.

The interconnection with France in Larrau is importer (24.570 GWh) from the Norwegian supply contract, though there have been short-term contracts for supplies in the reverse flow. The connection in Irún is limited at present due to the congestion of existing capacity.

Existing interconnections with Portugal do in fact have sufficient capacity to develop an authentic Iberian gas market. The system can be considered fully integrated in terms of infrastructures. A future Iberian gas market is expected to be developed.

The specific nature of the Spanish market, in which gas supply in the form of LNG accounts for more than 60% of the total, also promotes the possibility of establishing an LNG market with neighbouring countries.

The ERGEG South Gas REM has undertaken an important work aiming to increase the interconnection capacity between Spain and France. Relevant TSOs are fully engaged in the agreed plan until 2009. Details on work by the region in this regard are in point 2.2. of this report.

*Rules governing the conduct 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.

At present, transmission, regasification and storage facilities operators must publish a quarterly report on contracted and available capacity in each of their facilities, wherein they must distinguish between capacity assigned to access contracts with duration greater or equal to two years, and access contracts with duration of less than two years.

In particular, operators of input points currently in operation publish on their websites this information for a timeframe of 10 years, broken down by quarters for the first four years and in annual figures for the remaining period.

In general, the regasification plants have available capacity to contract. Actually, there is available capacity at Huelva, Cartagena, Bilbao and Barcelona LNG plants. So, there is capacity available to new entrants.

New incumbents can buy LNG at the international LNG market (producing countries) and delivered to the Spanish market, without restrictions.

The regulatory measures that eliminated the contractual congestion consisted essentially of the posting of a bond when transport capacity is reserved, and the loss of reserved capacity in case of continuous under use or when congestion might cause a denial of access to other actors (UIOLI). The CNE dealt with a loss of long-term reserved capacity in Bilbao because of UIOLI.

These measures were established by the Royal Decree 1434/2002 of 27 December, which modified Royal Decree 949/2001 of 3 August.

### 4.2.2 Description of the retail market

The total number of gas consumers at December 2007 was 6.737.358 (+326.325 consumers in 2006), and the gas demand was 407.665 GWh (+4,1 %).

The figure below shows the volume of annual consumption in the Spanish market in 2007 by type of supply, whether regulated or deregulated, as well as by supplying business group:

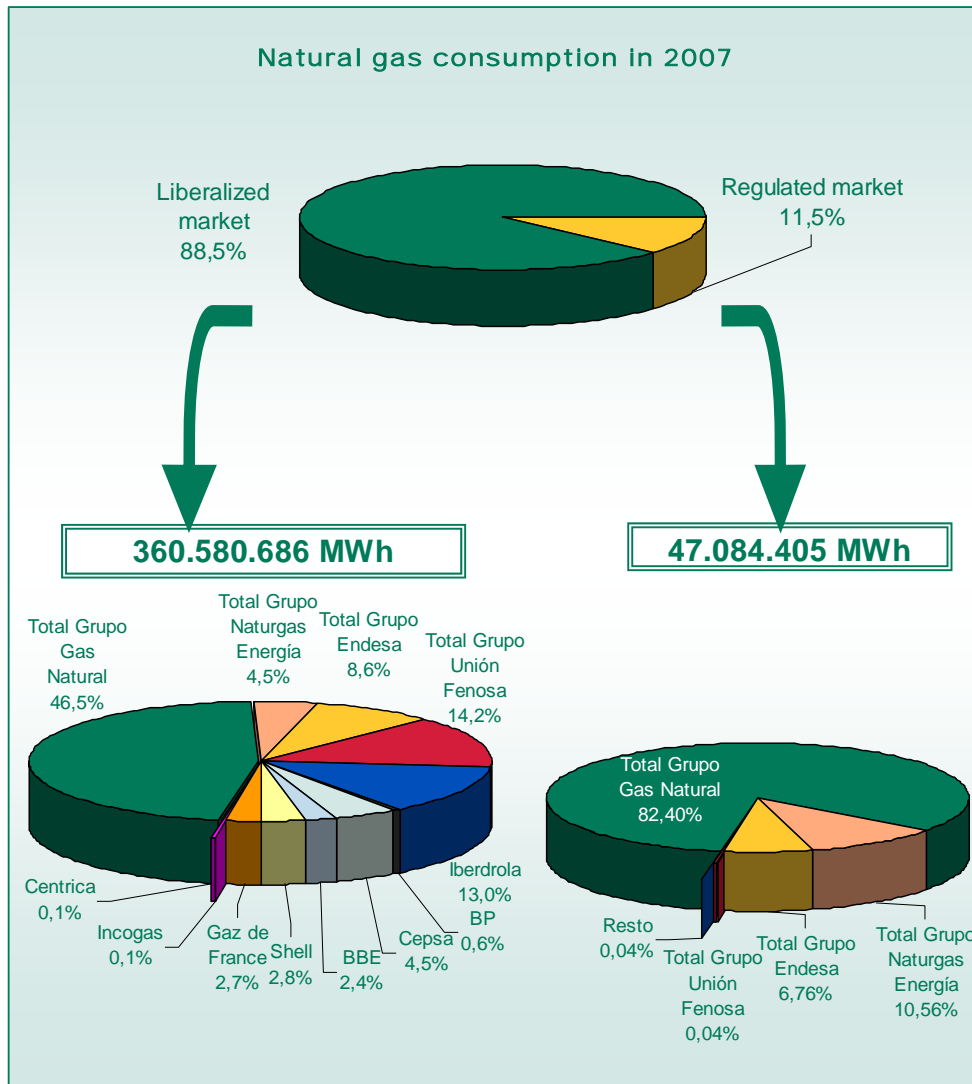
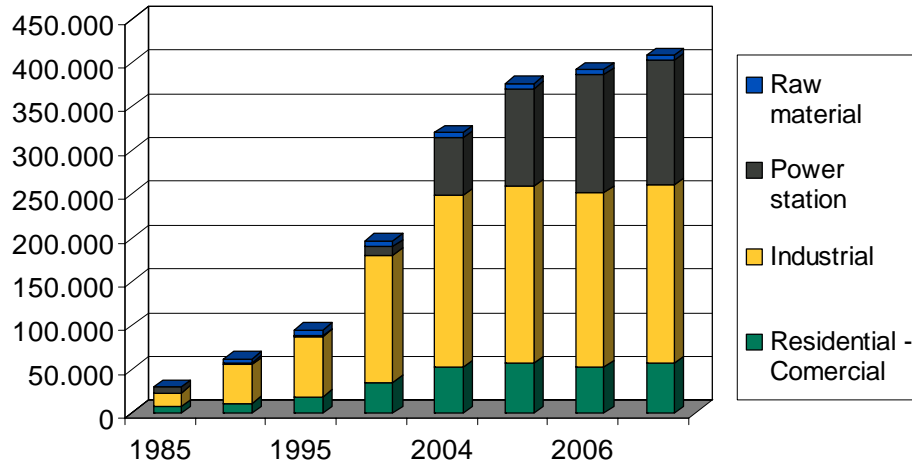


Figure 34. Spanish gas market in 2007. Shares of suppliers.

There have been 32 companies inscribed in the registry of marketers since October 2007.

In the figure below, natural gas sales in Spain are shown according to the consumers groups.

**Natural Gas Sales in Spain (GWh)**

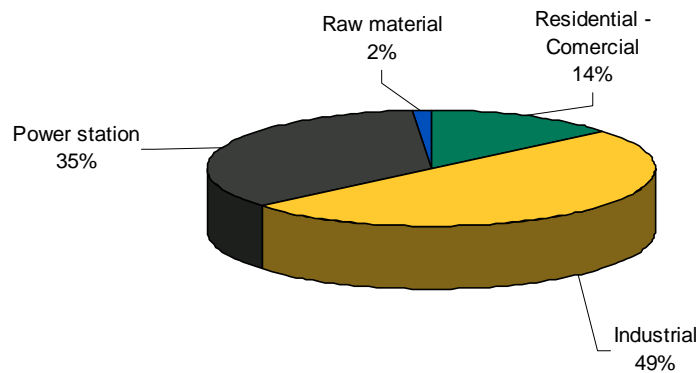


Source: SEDIGAS

Figure 35. Natural gas sales in Spain by consumer

Consumption of natural gas by sectors in 2007 was:

- Residential-commercial sector: 14%
- Industrial sector: 49%
- Use of natural gas as raw material: 2%
- Electrical generation (combined cycles and bi-propellant plants): 35%



Source: SEDIGAS

Figure 36. Consumption of natural gas by sectors. 2007

The figure below 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:

<b>Groups</b>	<b>Number of Consumers 2007</b>	<b>Total Natural Gas Consumption 2007 (MWh)</b>
<b>Group 1 (Pressure &gt;60 bars)</b>		
1.1 Consumption =< 200 GWh/year	<b>20</b>	2.276.972
1.2 Consumption > 200 GWh/year y =< 1000 GWh/year	<b>33</b>	22.806.520
1.3 Consumption > 1000 GWh/year	<b>53</b>	138.583.444
<b>TOTAL GROUP 1</b>	<b>106</b>	<b>163.666.935</b>
<b>Group 2 (Pressure &gt; 4 bars y =&lt; 60 bars)</b>		
2.1 Consumption =< 500.000 KWh/year	<b>717</b>	211.423
2.2 Consumption > 500.000 KWh/year y =< 5 GWh/year	<b>1.850</b>	4.223.351
2.3 Consumption > 5 GWh/year y =< 30 GWh/year	<b>1.412</b>	18.780.212
2.4 Consumption > 30 GWh/year y =< 100 GWh/year	<b>629</b>	38.264.062
2.5 Consumption > 100 GWh/year y =< 500 GWh/year	<b>312</b>	61.963.027
2.6 Consumption > 500 GWh/year	<b>35</b>	44.408.844
<b>TOTAL GROUP 2</b>	<b>4.955</b>	<b>167.850.918</b>
<b>Group 3 (Pressure =&lt; 4 bars)</b>		
3.1 Consumption =< 5.000 KWh/year	<b>3.057.306</b>	8.827.335
3.2 Consumption > 5.000 KWh/year y =< 50.000 kWh/year	<b>3.616.572</b>	30.881.456
3.3 Consumption > 50.000 KWh/year y =< 100.000kWh/year	<b>20.471</b>	1.264.829
3.4 Consumption > 100.000 kWh/year	<b>37.889</b>	18.626.225
3.5 Consumption > 10 GWh/year	<b>56</b>	636.218
<b>TOTAL GROUP 3</b>	<b>6.732.294</b>	<b>60.236.064</b>
<b>Group 4 (Interruptible)</b>		
4.1. Pressure >4 bars y =< 60 bars	<b>0</b>	0
4.2. Pressure > 60 bars	<b>0</b>	0
<b>TOTAL GROUP 4</b>	<b>0</b>	<b>0</b>
<b>RAW MATERIAL</b>	<b>3</b>	<b>6.158.360</b>
<b>LNG satellite plants</b>	<b>-</b>	<b>9.752.814</b>
<b>TOTAL GENERAL</b>	<b>6.737.358</b>	<b>407.665.091</b>

*Table 35. Consumption in the Spanish market by levels of pressure and consumption, according to the different tariff groups*

The table below shows many shares of the different company groups at the end of 2007. 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 Infrastructures Activities		
	Share of Available Gas (Imports)	Share of Negotiated Gas in the OTC Spanish 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
<b>Gas Natural</b>	52%	12%	47%	86%	6%	4%
<b>Iberdrola</b>	12%	13%	13%	-	-	10%
<b>Unión Fenosa</b>	11%	19%	14%	-	-	16%
<b>Endesa</b>	8%	13%	9%	9%	3%	8%
<b>Naturgas</b>	4%	11%	5%	5%	2%	4%
<b>Shell</b>	2%	6%	3%	-	-	-
<b>Cepsa</b>	5%	12%	5%	-	-	4%
<b>BBE/BBG</b>	2%	4%	2%	-	-	-
<b>BP</b>	1%	3%	3%	-	-	-
<b>Gaz de France</b>	3%	5%	3%	-	-	-
<b>Enagás</b>	-	-	-	-	89%	50%

*Table 36. Shares of different company groups in 2007.*

Gas Natural is the incumbent company in the gas market, with the highest share in import of natural gas and in the retailing gas market (nearly 50%). However, Unión Fenosa is the most active company in the OTC gas market, with a share of 19%.

Gas Natural has 86% of the distribution system.

Enagás is the main TSO, as it has 89% of the transmission system and 50% of LNG regasification plants.

Leaving aside an analysis of domestic production (0,3% of total procurements in 2007), it can be said that there is a great correlation between shares of imports and shares of supply of different agents, given that they generally go directly to international markets to



obtain stocks of the natural gas necessary to supply their customers. Nevertheless, there are small differences in the buying and selling of natural gas in the system between agents.

Several marketing agents (as BP, Shell, Total-Cepsa, Repsol-YPF, Unión Fenosa) have international production of gas outside Spain in different countries over the world.

#### Switching and evolution of market shares

Natural gas consumption in 2007 in Spain was 407.665 GWh, 4,3 % higher than in 2006. The number of customers in 2007 surpassed 6,7 millions in Spain, with 326.325 new customers.

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 40% of clients have changed supplier since the opening of the domestic market in 2003 (2.700.127 clients).

The Spanish gas market has been opened since 1998. Gas market has been opened to industrial customers since 1999, and has been fully opened to residential customers since 2003. Actually there are 17 active retailing companies in the gas market and new entrants have nearly 50% market share, so that there is a strong competence.

**Evolution of gas market shares**

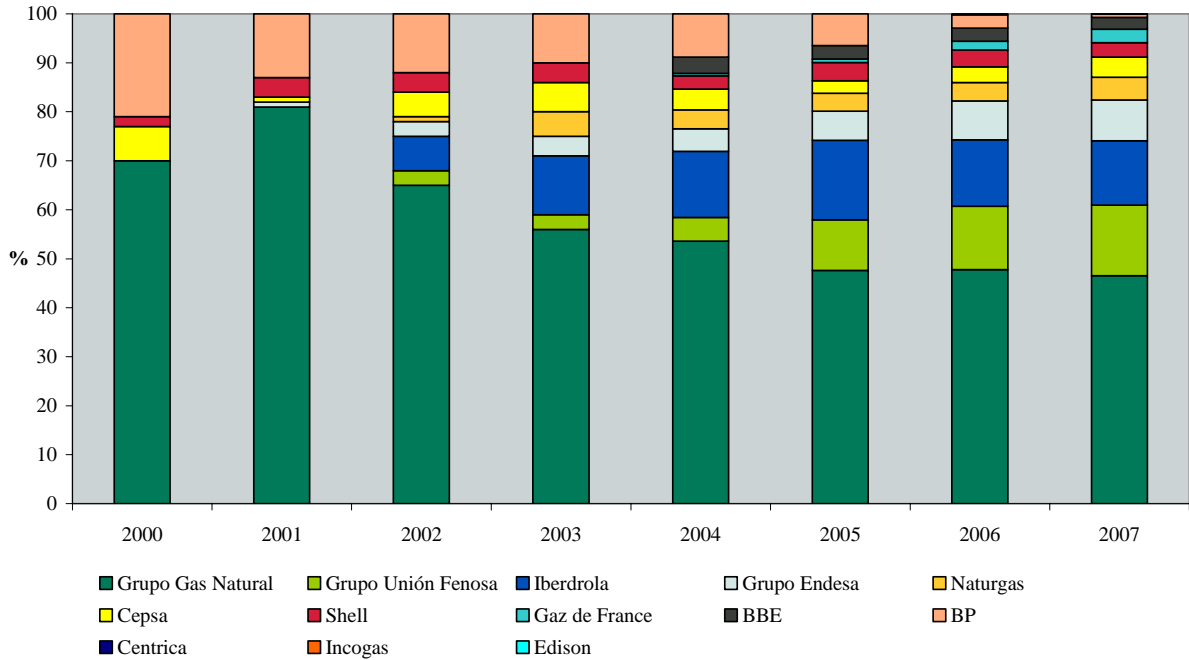


Figure 37. Spanish retailing gas market in 2007. Shares in terms of energy

In the residential market there are 5 active shippers and 2,7 Million customers has already switched it supplier.

**Annual switching rate (number of customers / year)**

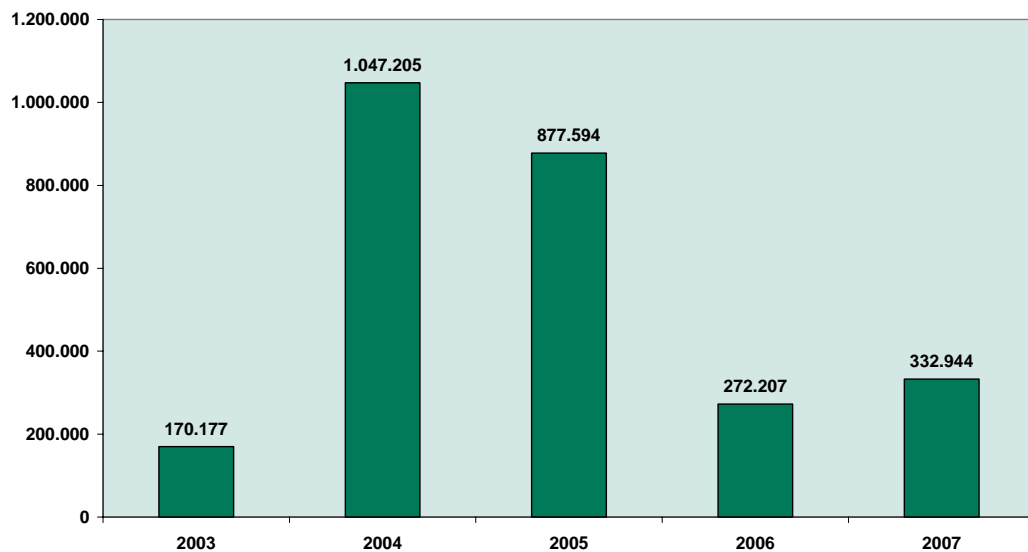


Table 38. Annual switching rate.

The rate of change was higher in 2007 than in previous year: 27.700 clients per month switched their supplier (332.944 switching of clients in the year 2007). The maximum rate was in 2004, with 150.000 switching of clients in a single month.

The procedure for customer change 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 is being developed.

#### Retailing market and long-term contracts.

At the end of 2007, long term capacity contracted at different entry points was as follows:

- In regasification plants, in commercial operation: about 67% of capacity contracted.
- At the entry point of Larrau: about 95% of the capacity reserved.
- At the entry point of Tarifa: about 95% of the capacity reserved.

All the regasification plants in Spain are subject to regulated TPA, and there is available capacity to contract, so no part of the market is foreclosed for new suppliers.

#### Retail prices

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 2007.

- 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 2007, 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/3393/2006.
- Network costs have been calculated by applying tolls published in Order ITC/3996/2006 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 17.1% of firm annual consumption has also been included.
- The item "*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 2007.
- 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%.

From 1<sup>st</sup> July of 2007, and in accordance to the Order ITC/3992/2006 and Order ITC/4101/2005, the consumers connected to a gas pipeline pressure higher than 4 bars, the I4-1 consumer and I1 consumer, may be supplied in the liberalized market.

- 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>D3</b>	2,08	0,02	2,26	0,70	5,05
<b>I1</b>	2,06	0,01	1,13	0,51	3,72
<b>I4-1</b>	2,06	0,00	0,26	0,37	2,69
<b>Typical household (10.000 kWh/year)</b>	2,08	0,02	2,59	0,75	5,43

Table 38. Final consumer price by type of components (cent€/kWh). 2007

Note: It should be pointed out that consumer type I1 as defined in this questionnaire 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.

### 4.2.3 Measures to avoid abuses of dominance

All general measures and provisions contained in the new Competition Law, exposed in the paragraph 3.2.3. for the electricity sector, apply also to the natural gas sector.

On the other hand, the Law 12/2007, of July 2, that modified the Law 34/1998, of October 7, of the Sector of Hydrocarbons, in order to adapt it to the Directive 2003/55/CE of the European Parliament and of the Council, of June 26<sup>th</sup>, establishes in its Fifth additional provision the need to supervise the market of hydrocarbons, entrusting the CNE with that task

So, the CNE, in the exercise of the functions of supervision that has been granted, will send to the Department of Industry, Tourism and Trade an annual report analyzing the degree of development of competition in the market of hydrocarbons, including, in its case, proposals of regulatory reform aimed at reinforcing the degree of effective competition in the sector.

The law 17/2007, of July 4 establishes that, without prejudice to the powers attributed to the different bodies of Defence of Competition, the National Energy Commission, 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 the absence of discrimination, an authentic competition and an effective functioning of the market, will supervise:

- a) The management and assignment of capacity of interconnection.
- b) The mechanisms to settle the congestion of the capacity in the networks.
- c) The time used by the transmission and distribution companies in effecting connections and repairs.
- d) The publication of information by transmission and distribution network operators about the interconnections, the use of the network and the assignment of capacities to the interested parts.
- e) Conditions of access to the storage.
- f) The effective separation of accounts in order to avoid cross subsidies between activities of transport, distribution, storage and supply.
- g) The measure in which the transmission and distribution network operators are fulfilling their functions.
- h) The level of transparency and of competition.
- i) The fulfilment of the rules and procedures that are established for the supplier's changes, as well as the activity of the Office of Supplier's Changes.

To that end, the CNE will be able to adopt information by-laws, which will have to be published in the Official Bulletin of the State, to request from the agents that operate on the market of electricity production all the information needed to carry out the supervision.

The functioning of the natural gas market in Spain is conditioned by the lack of national production and the limited interconnections with the rest of Europe. In 2007 the total supply was 401.560 GWh (imports represent 99,7%). In this context, the wholesale market has two dimensions.

The primary market includes the transactions among gas producers and buyers / import gas operators. Given the negligible quantity of gas produced in Spain, almost all the transactions take place out of the Spanish gas market. Most of them take the form of long term bilateral contracts, with take-or-pay clauses and prices indexed to oil prices. The geographical dimension of this market includes the Mediterranean basin and the LNG international market. Nevertheless, buyers' effective ability to choose depends on the capacity of import infrastructures and on their long term contractual commitments.

The secondary market includes transactions among buyers / import gas operators in producing countries, suppliers and traders. In the past, most transactions took the form of long term contracts between the principal gas importer (Group GAS NATURAL) and other suppliers. Over the last years, the volume of trading and the number of participants have increased notably, nevertheless there is not an organized gas market with visible prices and standard contracts.

As already presented, a non-organized market of bilateral trading has developed, mainly around the regasification plants, as a response to the scarce underground storage capacity and to meet the logistic problems of small suppliers, who do not have sufficient volumes of gas, nor electricity generation or a portfolio of diversified contracts. In December 2007, the volume of trading in this non-organized market was 442.711 GWh, 8% higher than the level of demand.

Finally, Royal Decree-Law 6/2000, of 23<sup>rd</sup> June, of urgent measures for the intensification of free competition in goods and services markets, amended by Royal Decree-Law 5/2005, established in its article 34 a limitation on the voting rights corresponding to shares in excess of 3 per cent held by any physical or legal entity in more than one main operator in the energy sector, including natural gas sector. Main operator is deemed to be any operator which, having the condition of operator in such markets and sectors is in possession of one of the five largest shares in the market or sector in question.

On 25 April 2007, the CNE agreed to approve the Resolution by which they are established and made public the lists of main and dominant operators in the energy sectors.

Regarding the natural gas sector, the five groups of societies with major market shares were, in this order, REPSOL NATURAL YPF-GAS NATURAL, IBERDROLA, UNION FENOSA, ENDESA and BP.

As for the dominant operators, figure introduced by means of the Royal Decree- Law 5/2005, the mentioned Resolution grants that condition to REPSOL NATURAL YPF-GAS NATURAL and IBERDROLA.

It should be mentioned that in the natural gas sector, dominant operators are so far not affected by any restrictions or limitations as it happens with the electricity sector.



## 5 SECURITY OF SUPPLY

### 5.1 Electricity [Article 4]

Article 4 of the Spanish Electric Power Act refers to electrical planning, which shall be indicative, except in relation to transmission facilities, and shall be carried out by the government with the participation of the Autonomous Communities.

Furthermore, a planning procedure was established in Royal Decree 1955/2000, leading in 2002 to the drawing up of a Planning Document for the 2002 – 2011 period; the current version of this public document disseminated by the Ministry of Industry, Tourism and Trade covers now period 2008-2016.

In addition, as a result of concern regarding security of supply, the CNE has drawn up, on an annual basis, a study for short term electrical coverage. This is a specific report on demand for electricity and gas over a five year timescale.

#### Ongoing supply-demand situation

- Current levels of electricity peak demand (MW) and expectations for the next three years

Energy demand reports constant annual growth. The average increase in last year stands at 2,2% (below values recorded in previous years but still well ahead main EU-27 economies) , considering both mainland and ex-mainland demand. During 2007, gross domestic demand virtually scaled over 276 TWh.

Demand for electrical power has also increased gradually. The peak demand for maximum power was recorded in December 2007: 44.876 MW.

The evolution of peak hourly power demand, from 1999 to 2007, including the forecast to 2010, is as follows:

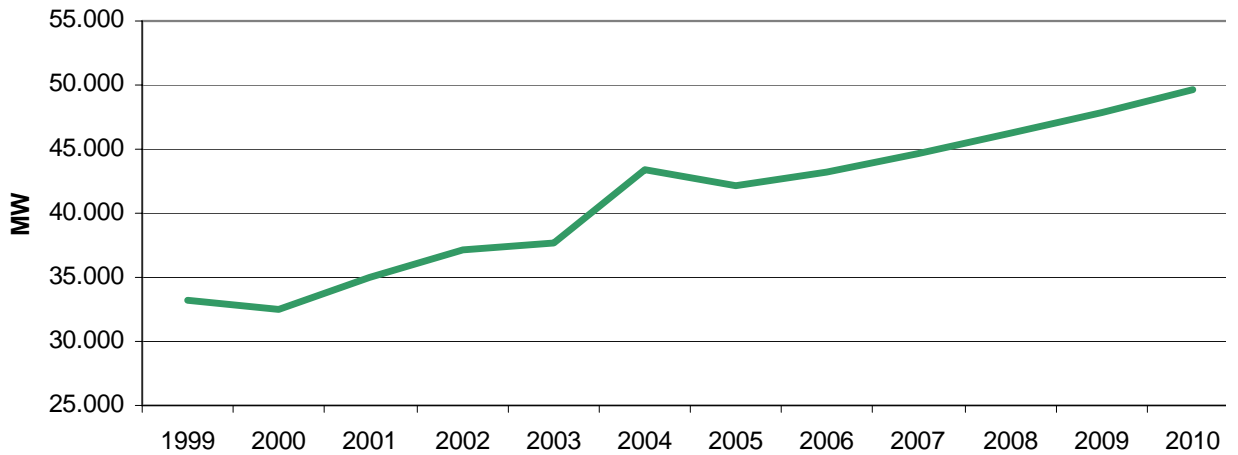


Figure 39. Peak hourly demand in MW (winter)

- Currently available generation capacity

At the end of 2007, power capacity in mainland Spain stood at 86.000 MW, according to figures of the System Operator. The breakdown of this power by technologies is as follows:

Technology	MW
Hydro	16.657
Nuclear	7.716
Coal	11.357
Fuel / gas	5.894
CCTG	20.955
Wind power	13.467
CHP + RES (others than wind)	9.913
<b>TOTAL</b>	<b>85.959</b>

Source: REE

Table 37. Spain (mainland) generation capacity

Out of this about net generating 86 GW, a conservative estimate might mark some 30-32 GW as unavailable (mainly because of non-usable capacity due to low hydro potential or

wind stall period), which would left still some 10 GW of remaining capacity between years 2008-2010. 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.

*Generation investment for the next three years:*

Investments in new capacity in the ordinary regime are expected to be in combined cycle power plants.

From 2007 onwards, expected CCGTs in next three years (in accordance with half-yearly review of the CNE's Framework Report on Gas and Electricity System Adequacy) comprise a total over 24.000 MW split as follows:

<b>2008</b>	<b>2009</b>	<b>2010</b>
2.825 MW	11.675 MW	9.720

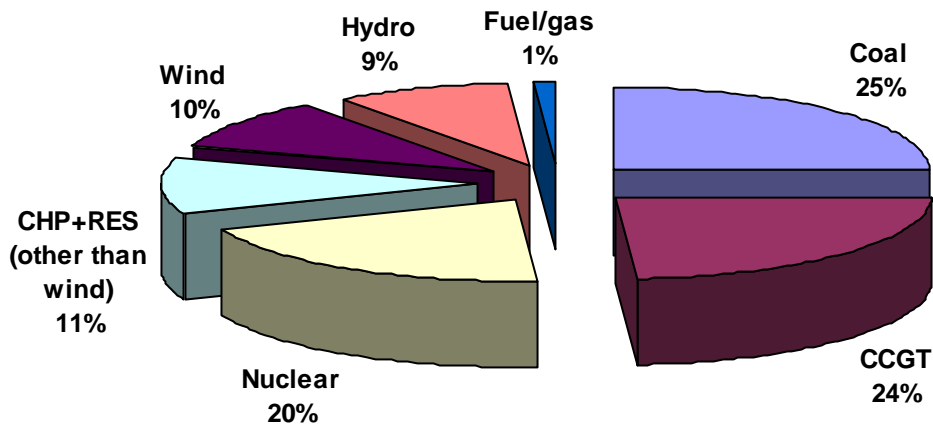
*Table 38. CCGTs' MW in next three years*

For virtually all this future power in combined cycles, contracts are signed for access to the gas network. These two aspects – the holding of administrative permits and access contracts – allow a certain degree of assurance that these new stations will be incorporated to the domestic generation system.

The National Energy Commission monitors the fulfilment of the forecasted schedule for combined cycle installations under construction There are also authorisations 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 2007, mainland electrical generation derived from the following fuels/technologies, as per the percentages displayed in the chart:



Source: REE

*Figure 40. Generation mix in the mainland electrical system.*

In the future, the proportion of coal-based generation is expected to decrease, 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 2007:

During 2007, variation in power capacity in Spain was positive, yielding a figure of almost 8.000 MW. Approximately 5.700 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 2007 (MW)	
Combined cycle	5.692
Wind	1.997
CHP+RES (other than wind)	158
Total	7.847

*Table 39. Increases in power in the year 2007.*

### Regulation and authorisations

The Spanish Electric Power Act stipulates that prior administrative authorisation is required for the construction of electricity generation installations. The granting of this authorisation must be governed by the principles of objectivity, transparency and non-discrimination.

Administrative permit applicants will have to provide evidence of the following:

- a) Energy efficiency, technical and safety conditions of the proposed installations.
- b) Proper compliance with conditions for environmental protection and minimising of environmental impacts.
- c) The particulars of the location for the installation.
- d) Their legal, technical and economic-financial capacity for the carrying-out of the project.

These administrative permits shall be granted by the competent Administration, subject to the concessions and authorisations which may be required pursuant to other provisions. Furthermore, all authorised electricity production installations must be recorded in the Registry of the Ministry, providing information on the conditions and power thereof.

It is also stipulated that generation activity shall include the transformation of electricity and connection with the transport and distribution network.

Regulation of the procedure for granting permits 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 – in other words, if the

power plant does not affect more than one Autonomous Community - the pertinent Autonomous Government shall be responsible. Electrical generation through nuclear power plants is an exception, given that these plants are governed by a specific regulation.

Furthermore, in accordance with the type of plant and its power, it must comply with law in force regarding:

1. Environmental impact.
2. Integrated pollution prevention and control.
3. Trading of greenhouse effect gas emission rights.

It is important to note that the Electricity Sector Act stipulates that long term planning is indicative (except in relation to transmission installations) and is made by the State with the co-operation of the Autonomous Communities. The Act mentions that planning will have to refer to the forecast for electrical demand, the minimum power capacity that must be installed to cover the expected demand, the forecasts relating to transport and distribution installations, lines of action regarding service quality, energy saving and efficiency measures, evolution of market conditions and criteria for environmental protection.

Furthermore, on an annual basis this Commission draws up the Framework Report, which includes forecasts for the evolution in electricity and gas demand, and the situation and outlook in energy supply.

A new scheme of “capacity payments” has been passed in the second half of 2007. 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.

### *Incentives to build capacity*

The implicit incentive for installation of new power is the market price obtained from the sale of electricity production.

The power guarantee payment (or capacity payment) is an explicit generation incentive. This payment completes the market price, remunerating the installation's fixed costs in accordance with availability, without considering its operation. The power guarantee is therefore a long-term indication for the installation of new generation.

As far the special regime is concerned, there are special tariffs or premiums on market prices. The objective is for this regime to meet the targets laid down in the plan. This regime regulation has been recently updated in May 2007, with the Royal Decree 661/2007. This new regulation has replaced the previous Royal Decree 436/2004 and has introduced retribution for new technologies and set a cap and floor system for the retribution of some renewable plants.

### *Progress on major infrastructure projects*

The basic object of the Spanish Electric Power Act is threefold: guaranteeing the electricity supply, the quality of that supply, and ensuring the supply is offered at the lowest possible price, without overlooking the environment. The Act also stipulates that all consumers are entitled to the supply of electricity, nation-wide, under quality and safety requirements laid down by regulation.

The electricity transport grid must therefore be conceived and planned in such a way that the continuity of supply is assured in the operation of the electrical system with the required level of quality.

The parameters whereby the state of the electrical system is supervised are basically: frequency, the node voltages and the load levels of the different components of the transport grid (lines, transformers and associated switchgear).

Under normal system operation, load levels should not exceed the nominal capacity of the transformers, nor the permanent thermal capacity of the lines defined for the different seasons of the year.

Furthermore, the system must maintain its control parameters within certain limits, even in the event of contingencies. The contingencies which must be taken into account in safety analyses are:

- The simple failure of any of the system components (criterion N-1).
- The simultaneous failure of two circuits of the double circuit lines which share supports over more than 30 km of their length.
- In special situations, when the testing of post-contingency operational measures requires an excessive period of time, the failure of the largest generation set in the area and its interconnection lines with the rest of the system must also be considered.

Planning of the transport grid is in accordance with three types of criteria: technical, economical and strategic, which are interrelated.

The object of the technical criteria is compliance with safety and reliability requirements for future grid configurations. These requirements must be consistent with the technical criteria set out in the system operation procedures.

The economic criteria allow for decision making between the different alternative options arising after the application of the technical criteria. The benefits of a particular action are evaluated in accordance with:

- More efficient management derived from:
  - Reducing transport losses.
  - Eliminating restrictions which could generate a higher global cost of the energy supplied.
  - The efficient incorporation of new generators to the system.
- More reliable and safer management keeping non-supplied energy to a minimum.



Strategic criteria comprise a set of general principles of a miscellaneous nature:

- Obligation to supply on the part of the distributors.
- Need to integrate environmental criteria in selecting developmental solutions, so keeping the global environmental impact to a minimum.
- Absence of capacity reserve in the electrical transport grid for generators.
- Co-ordinating the evolution of the transport grid with that of the distribution network and with the entry of new producers and consumers, with the aim of ensuring coherence in the development of the electrical system overall.
- Increase in international interconnection capacity.

The National Energy Commission draws up a Framework Report on an annual basis including forecasts on evolution in electricity demand and the situation and outlook for energy supply.

Said report includes the short-term forecasts shaping actions for the development of minimum infrastructures thought to be necessary to allow gas and electricity supply under appropriate quality and safety conditions.

Furthermore, the report explicitly identifies the areas of the electricity and gas system which might require high levels of investment due to the special development of demand at regional level or which could entail bottlenecks for the system in the mid-long term.

In addition, the National Energy Commission monitors the infrastructures referred to in the Framework Report. To this end, communication is held with the developers of said infrastructures.

Since the *2002 Planning Document* the objective is to promote “*explicitly the development of international interconnections especially those shaped towards fostering the single European market*”. This Planning Document is periodically updated.

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

Article 34.1 of Spanish Electric Power Act 54/1997, of 27 November, provides that:

*“1. The objective of the system operator, as supervisor of the technical management of the system, will be to guarantee the continuity and safety of the electrical supply and the correct co-ordination of the production and transport system.”*

Furthermore, article 22.7 of Royal Decree 5/2005, of 11 May, on urgent reforms for the promotion of productivity and to improve public contracting, which amends article 34.2 of the aforesaid Spanish Electric Power Act, includes the following amendments regarding the functions of the system operator:

“...

*d) Co-ordinate and modify, as the case may be, transport installation maintenance plans, in order to assure their compatibility with the generation set maintenance plans and assure an appropriate position of availability on the grid which might guarantee the security of the system.*

*e) Set up and control reliability measures for the production and transport system, affecting any component in the electrical system which might be necessary, and manoeuvre plans for service replacement in the event of general failures in the electricity supply and co-ordinate and control the execution thereof.*

*f) Provide operating instructions for the transport grid, including international interconnections, for real time manoeuvres.*

....

*l) Provide instructions required for the correct operation of the production and transport in accordance with the reliability and security criteria established, and manage the system adjustment service markets which may be required for that purpose.*

...”

These functions are also complemented by those set forth in article 30.2 of Royal Decree 2019/1997, of 26 December, organising and regulating the electricity production market, which include the following:

“... ”

*g) Establishing, in conjunction with transport agents, producers and distributors, manoeuvre plans for replacing the service in the event of general failures in the electricity supply and controlling the execution thereof, affecting any component of the electrical system which may be necessary. The foregoing shall be carried out pursuant to the regulation established for that purpose, and, in the absence thereof, with generally accepted criteria known to agents, subsequently justifying its actions before the affected agents, the National Electrical System Commission and the competent Administration.*

...”

Likewise, in 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:*

.....

*d) 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:

- P.O. 1.1 “Operating and security criteria for the operation of the electrical system”, approved by Decision of 30 July 1998.
- P.O. 1.2 “Admitted network load levels” approved by Decision of 30 July 1998.
- P.O. 1.3 “Admitted network node voltages”, approved by Decision of 30 July 1998.
- P.O. 1.6 “Establishment of security plans for system operation”, approved by Decision of 30 July 1998.
- P.O. 2.2 “Forecast of coverage and analysis of security in the electrical system”, approved by Decision of 17 March 2004.
- P.O. 3.4 “Transport Grid maintenance program”, approved by Decision of 17 March 2004
- P.O.-4.0 “Management of International Interconnections” approved by Decision of 17 March 2004.
- P.O. 6.1 “Operating measures to assure coverage of demand in warning and emergency situations”, approved by Decision of 31 October 2002
- P.O.-7.4 “Transport Grid Voltage Control complementary service”
- P.O.-8.1 “Grid managed by the System Operator”, approved by Decision of 30 July 1998.
- P.O.-8.2 “Network operation”, approved by Decision of 18 December 1998.
- P.O.-8.3 “Voltage control” approved by Decision of 18 December 1998.
- P.O.-11.1 “General protection criteria in the managed grid” approved by Decision of 24 June 1999.
- P.O.-11.2 “Criteria for installation and operation of automatism” approved by Decision of 24 June 1999.
- P.O.-11.3 “Analysis and monitoring of the operation of system protection and automatism”, approved by Decision of 24 June 1999.

Revenues from transmission and distribution activities are included in the regulated revenues of the electricity sector and the remuneration by company is established, in order to subsequently finance from these items the future projects for the construction of new installations.

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

### Ongoing supply-demand situation

Natural gas consumption in 2007 was 408.298 GWh, 4,1% higher than demand in 2006. 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.

However, the last two months of 2007 were colder than the same month in 2006. This coincided with a greater demand for gas for the generation of electricity 21,2% up on the fourth quarter of 2006

The demand forecasts for 2008-2011 are the following:

	2006	2008	2011	Average increase [%]
TOTAL annual demand (TWh)	391	446	526	5%

Source: Planification of gas and electricity sectors 2008-2016.

*Table 40. Annual demand of natural gas*

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> )	Regasificacion capacity (Mm <sup>3</sup> (n)/h)
Barcelona	540.000	39.60

Regasification plant	Storage capacity (m <sup>3</sup> )	Regasification capacity (Mm <sup>3</sup> (n)/h)
Huelva	469.500	32.40
Cartagena	287.000	36,45
Bilbao	300.000	19.20
Sagunto	300.000	19,20
Reganosa	300.000	9,91
<b>TOTAL</b>	<b>2.196.500</b>	<b>156.76</b>

Source: Enagás

*Table 41. Capacity of the regasification plants*

B) Capacity of international connections by gas pipeline

Location	Transmission capacity (Mm <sup>3</sup> /day)
Larrau	7,92
Irún (exit towards France)	1,06
Tarifa (Spain & Portugal)	30,51
Badajoz (exit towards Portugal)	1,67
Tuy (entry towards Spain)	1,55
<b>NET ENTRIES TO THE SPANISH SYSTEM</b>	<b>42,71</b>

Source: Enagás

*Table 42. Capacity of international connections by gas pipeline*

C) Production capacity of domestic fields

Solely two natural gas fields are currently in production in Spain, Poseidón, which is offshore, in the Gulf of Cadiz and Marismas, onshore in the Guadalquivir valley. The other gas fields in operation in 2004 (Palancares, in the Guadalquivir valley as well) is depleted. Tests are being carried out to use Marismas and Palancares fields as underground storage.

Production levels at Marismas and Poseidon are declining, evidenced by the reduction in peak production capacity (and annual production) against former years. Production of gas only accounts for 0,3% of Spanish gas demand.

Field	Production capacity (GWh/day)
Marismas (Guadalquivir valley)	1,63
Poseidón (Gulf of Cadiz)	16,74
<b>TOTAL</b>	<b>18,37</b>

*Table 43. Production of national gas fields*

#### Gas Infrastructure investment in 2007

Further new facilities were incorporated within the Spanish gas system in 2007, including both regasification plants and new transportation pipelines.

The largest new facility brought into service was the Reganosa LNG regasification plant, in Mugardos, A Coruña, which is the sixth plant in the Spanish system and the seventh in the Iberian Peninsula. The first carrier finished unloading its cargo on 12 May 2007, the plant began supplying gas to the system on May 16<sup>th</sup> and commercial operations started on November 7<sup>th</sup>.

In addition, the Huelva plant increased its regasification capacity from 1,200,000 to 1,350,000 Nm<sup>3</sup>/h.

With regards to new high-pressure pipelines, in February Enagás brought into service the Falces-Irurzun pipeline that improved the pressure for natural gas arriving in Pamplona.

Reganosa brought into service the Mugardos-As Pontes-Guitiriz pipeline and the branch pipeline connecting it to the As Pontes combined cycle plant in May, and the Abegondo-Sabón pipeline in July.

Also in 2007, Endesa Gas Transportista brought the Teruel-Calamocha pipeline into service.

In April 2007, MEDGAZ has 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 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.

The construction method to be used by MEDGAZ is the so-called S-lay. Overall, the construction process in shallow waters (up to a depth of 550 meters) will last roughly 4 months. A second semi-submersible vessel, the Saipem 7000, will be in charge of completing the pipe-lay operations in deepwater areas (down to 2,160 meters) during 3Q 2008.

MEDGAZ is a strategic project for Algeria, Spain, and the rest of Europe. Natural gas will be supplied directly from Algeria, without requiring transit through third countries, which will considerably enhance security of supply.

In Europe, MEDGAZ has been approved by the European Commission as a "Project of Priority Interest within Trans-European Networks in the Energy Sector" (Decision 1229/2003/EC); MEDGAZ has also been classified under the "Quick Start" program of the European Commission.

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

We may highlight the Gas System Planning procedure, responsibility of the Government, in which the Autonomous Communities, the Technical System Manager, 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, hydrocarbon strategic reserve storage plants, in which case it 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 brought into service was the Reganosa plant, in Mugaros, A Coruña. New infrastructures are:

Transmission Operator	New infrastructures	Current new infrastructures state
<b>2008</b>		
<b>ENAGAS</b>	<b>Cartagena</b>	
	4 <sup>th</sup> storage tank with 0.087 bcm capacity. Final capacity of 0.36 bcm.	In construction
	Increase in emission capacity to 72 bar network to a final capacity of 11.83 bcm/year.	In construction
	<b>Barcelona</b>	
	Increase in emission capacity to 72 bar network to a final capacity of 12.90 bcm/year.	In construction
	Increase in emission capacity to 72 bar network to a final capacity of 13.98 bcm/year.	In project
<b>BBG</b>	<b>Bilbao</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 bcm/year.	In construction
<b>SAGGAS</b>	<b>Sagunto</b>	

Transmission Operator	New infrastructures	Current new infrastructures state
	Increase in emission capacity to 72 bar network to a final capacity of 8.76 bcm/year.	In project
	Increase storage tank with 0.624 bcm capacity.	In project
<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>	
	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>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

*Table 44. Developments of new regasification plants*

B) Interconnections by gas pipeline

In April 2007, MEDGAZ has 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 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.

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/d 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.

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.

*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).

The Spanish regulation establishes 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. On October the security gas stocks must be 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.

As a complement of the Planning document already mentioned, the National Energy Commission performs a study, updated on an annual basis, analysing electrical demand and the coverage thereof, in the short term, under a five-year timescale. This report, consist in a detailed analysis of foreseen demand and supply, and the adequacy of infrastructures to assure that demand will be covered over the next five years.

*Storage capacity:*

Enagás 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)	820	280	1.100	3,8	6,8
GAVIOTA	1.346	1.135	2.481	4,5	5,7
<b>TOTAL</b>	<b>2166</b>	<b>1415</b>	<b>3581</b>	<b>8,3</b>	<b>12,5</b>

Source: ENAGAS

*Table 45. Capacity of underground storages Serrablo and Gaviota.*

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

New storage capacity	Foreseen starting date
Marismas	2009
Poseidón	2009
Gaviota	2009
Yela	2009
Castor	2009
Reus	2011
Las Barreras	2011
El Ruedo	2011

Source: CNE

*Table 46. Foreseen dates for new underground storages.*

Other way to store gas is by LNG tanks.

LNG tanks	Gas storage capacity m3
BARCELONA	540.000
CARTAGENA	287.000

LNG tanks	Gas storage capacity m3
HUELVA	460.000
BILBAO	300.000
SAGUNTO	300.000
MUGARDOS	300.000
<b>TOTAL</b>	<b>1.727.000</b>

*Table 47. Capacity of LNG tanks.*

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

	Maximum storage capacity (GWh)
UNDERGROUND STORAGES	26.000
LNG TANKS	12.000
PIPELINES	1.000
<b>TOTAL</b>	<b>39.000</b>

*Table 48. Storage capacity of underground storages, LNG tanks and pipelines..*

### Long-term gas supply contracts

Most of the imports contracts in the international gas markets are long term and they incorporate clauses "take-or-pay". However, spot and hub markets are developed every time more to solve the problems of deficit or excess of supplying. In last winters number of LNG ships bought in the spot market to take care of peak demand has become greater.

In Spain the information of the duration of the individual long-term gas supply contracts is not public. However, most of gas supply contracts are long-term.

Next figure illustrates the situation of the natural gas imports based on the acquired commitments, or in negotiation, according to the information facilitated by the agents who participate in the Spanish gas market.

GWh	2008	2009	2010	2011	2012
Compromised Imports of gas to Spain	441.974	499.217	529.886	551.911	572.659

Possible Additional imports (not already contracted)	8.930	10.740	17.960	26.960	30.560
------------------------------------------------------	-------	--------	--------	--------	--------

*Table 49. Long term gas supply contracts.*

Forecasts show a situation of the market in which, on the one hand, there are natural gas compromised contracts, and, on the other hand, there are new contracts which are been negotiated by traders.

*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 each year in order to collect retribution 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 in remunerative system singular investments.

*Progress on major infrastructure projects*

The current entry capacity and the degree of progress of the new infrastructure projects and new interconnection infrastructures with other countries have been specified in previous sections.

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

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

### **6.1. Electricity**

The Act 24/2005 laid down the cancellation of electricity end-user regulated prices for High-Voltage consumers as from 1 January 2010.

The tariff applied in the regulated electricity market are published on an annual basis by Royal Decree and are revised in accordance with the provisions of Royal Decree 1432/2002, which establishes the method to approve or change the average or reference electricity rate (please see point 3.1.3).

#### Implementation of Annex A (Directive) criteria in electricity

In the chapter III of the Royal Decree 1454/2005 the customer's protection measures are specified.

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

#### Appropriate treatment of vulnerable customers in electricity

In the Spanish regulation, vulnerable electricity customers do not exist as such



### Maintenance of end user price regulation in electricity

In the electricity sector, all consumers may be supplied either in the regulated market or in the liberalised market in 2007.

Nonetheless, the law 17/2007, dated 4<sup>th</sup> July, establishes the schedule for the elimination of the end-user tariffs (the so-called “integral tariffs”) and the principles for setting up last resort tariffs in the electricity sector. In particular, the law 17/2007 sets up the implementation of last resort tariffs on 1 January 2009.

Law 17/2007 also establishes that, starting on 1 January 2010, last resort tariff will only be applied to low voltage customers (less than 1kV) and from 1 January 2011 onwards, they will be applied only to low voltage customer with contracted capacity lower than 50 kW.

The Royal Decree 871/2007 advanced the elimination of high-voltage electricity tariffs to July, 1<sup>st</sup> 2008.

Until last resort tariffs are in place, the distributors are in charge of supplying customers in the regulated market in both the electricity and gas sectors.

Full rates applied in the regulated market are updated every three months by Ministerial Order, starting July, 1 2007, as established by the Royal Decree 1634/2006. End-user regulated prices for electricity in 2007 were determined in the Royal Decree 1634/2006 and updated in the Order ITC/871/2007.

The following table shows the percentage of customers in each segment, both domestic and other (commercial and industrial)<sup>11</sup> who receive their supply in the regulated market.

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<sup>11</sup> Domestic consumers include customers subject to rates 2.0, 2.0 N and 1.0.

Consumer Segments	2007
	% of customers in the regulated market
Domestic	99,7%
Rest	56,6%

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

## 6.2. Gas

End-user tariffs applied in the regulated market are updated every three months, in accordance with Order ITC/4101/2005.

On 1 January 2006, end-user tariffs already disappeared for some consumers with supply pressure over 4 bar and for those industrial with the so-called interruptibility tariffs.

### Implementation of Annex A (Directive) criteria in gas

In the natural gas industry, the consumer protection measures specified in Annex A of Directive 2003/55/CE are gathered in the project of the Hydrocarbons Act. Royal Decree 1434/2002 regulates all matters relating switching supplier in the natural gas sector.

Article 44 of Royal Decree 1434/2002, modified by Royal Decree 942/2005, provides for the following, relating switching supplier:

- Any consumer with a natural gas supply who has a qualified status may request, either themselves or through a marketer, to switch supplier.
- Applications for switching must include the following information at least:
  - a) Date of request or notification.
  - b) Consumer's ID: Customer's ID or tax ID number, name, address.
  - c) Identification of the supply point.

- d) Customer's consent to the supplier switch.
  - e) Company which the supply is being provided by.
  - f) Company that is going to provide the supply.
  - g) Company in charge of metering.
  - h) Characteristics and owner of measuring equipment.
  - i) Conditions of the new contract (Rate, Tolls, etc.), that allow the consumption and the associated tolls to be billed.
  - j) Contract duration and type.
- For supplies at a pressure equal to or less than 16 bars, the application shall be submitted to the distributor, who shall validate the latter, checking that the information contained therein matches that stored in the database to which article 43 refers, and that the new supplier is duly authorised to carry out this activity. As regards supplies that involve an annual unitary consumption over 10 GWh, they must obtain the validation of the transporters that own the installations, at the entry point of the transmission and distribution system.

The transporters shall check applications with annual consumptions of less than 10 GWh, grouped by dealer and entry point.

The maximum term to validate applications shall be six working days, as from the date on which the application is received, notifying the applicant of possible shortcomings within this period.

- For supplies at a pressure of over 16 bars, applications to switch suppliers shall be validated and processed in accordance with Royal Decree 949/2001, of 3 August, which regulates third party access to gas installations and establishes an integrated economic system for the natural gas industry.
- When there is an installation (metering) where the gas is received which belongs to a distribution company and a consumer is supplied by a marketer, the marketer must invoice the consumer for the use and pay the money collected to the distributor company.

Article 45 of Royal Decree 1434/2002 establishes the following with regard to a consumer who switches from the regulated market to the deregulated market, article 46 of establishes the following with regard to marketer switching in the deregulated market and article 47, modified by Royal Decree-Law 5/2005, establishes the following with regard to consumers switching from the deregulated market to the regulated market.

Article 61 of Royal Decree 1434/2002 establishes the following with regard to making claims:

Claims or disagreements that are caused by the full-tariff supply contract or the resulting bills shall be settled by administrative procedures by the competent energy authority of the Autonomous Region, wherever the supply is provided, regardless of the jurisdictional actions that may occur at the request of any of the parties.

*Appropriate treatment of vulnerable customers in gas*

Vulnerable customers do not exist under Spanish gas regulation

*Maintenance of end user price regulation in gas*

From July, 1 2007, and in accordance to the Order ITC/3992/2006 and Order ITC/4101/2005, only consumers connected to a gas pipeline pressure lower than 4 bars may be supplied in the regulated market by a distributor at the relevant sale price.

Law 12/2007 establishes the schedule for both the elimination of end-user regulated prices and the introduction of last resort tariffs. From January, 1 2008 onwards end-user regulated prices in the gas sector are eliminated and last resort tariffs are introduced according to the following schedule:

- From July, 1 2008: only consumers connected to a gas pipeline pressure lower than 4 bars and annual consumption less than 3 GWh may be supplied at last resort tariffs.

- From July, 1 2009: only consumers connected to a gas pipeline pressure lower than 4 bars and annual consumption less than 2 GWh may be supplied at last resort tariffs.
- From July, 1 2010: consumers connected to a gas pipeline pressure lower than 4 bars and annual consumption less than 1 GWh may be supplied at last resort tariffs.

The sale prices applied in the regulated market are updated every three months, in January, April, July and October, in accordance with Order ITC/3992/2006 (please see point 4.1.3). Regulated prices for natural gas in 2007 were established in the Order ITC/3992/2006 and they were updated in April and October.

As in the electricity sector and until the effectiveness of the last resort supplier, distributors are in charge of supplying customers in the regulated market.

The following table shows the percentage of consumers in each segment, both domestic and other (commercial and industrial)<sup>12</sup> who receive their supply in the regulated market.

Consumer Segments	2007
	% of customers in the regulated market
Domestic	59,9%
Rest	56,9%

*Table 51. Share of customers in each segment supplied in the regulated gas market*

<sup>12</sup> The pricing system in force does not distinguish between uses, therefore the following distinction has been established considering the rates that are generally applied to domestic customers (3.1 and 3.2) and the other rates.