

# SPANISH REGULATOR'S ANNUAL REPORT TO THE EUROPEAN COMMISSION 2007



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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 structured by the European Commission and European regulators in April 2007.

The most outstanding subjects in this report are:

- Behaviour and regulation of the agents in both electricity and gas network activities
- Competition in the electricity and gas wholesale markets
- Security of supply
- Questions related to the nature of electricity supply as a public service.

This year's report is also focused on unbundling. Although the implementation of legal and accountable unbundling was already made in the past, 2007 has introduced new unbundling requirements, especially for DSOs.

<sup>&</sup>lt;sup>1</sup> 2003/54/EC and 2003/55/EC



## 2 SUMMARY \ MAJOR DEVELOPMENTS IN THE LAST YEAR

# 2.1 Basic organisational structure 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.

#### 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 16/1989 of 17th July, it shall make this known to the Restrictive Practices Service, 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 a 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.

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



- b) Protection of the public interest in the energy sector and, particularly, the warranty of a proper defense 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 extrapeninsular 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:
  - 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:
  - 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 requirable services to guarantee supply
  - 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.

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**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 <u>electricity</u> <u>sector</u>, 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 <u>gas sector</u>, 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.

CNE has been granted new powers and specific mandates. Thus, in the International convention establishing the Iberian market of electricity between Spain and Portugal published in 22th May 2006, CNE is one of the monitoring entities of MIBEL and their representatives make up the Regulators' Board. Besides, CNE verifies the fulfilment of the distributors' obligation to buy in the future markets in OMIP-OMIClear (Orders ITC/2129/2006 and ITC/3990/2006). As well, the Royal-Decree 1634/2006 foresees the elaboration of a plan reinforcing its supervision functions in electricity markets.

Specifically, CNE approves 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 (RD 616/2007).

Furthermore CNE has been requested to make different specific studies about regulatory, technical and economical questions related to the gas and electricity sectors.

It is important to remark that CNE intervenes and is the organism in charge of the monitoring of 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), and so monitors the procedure for auctions of primary energy emissions (RD 1634/2006) and for electricity auctions for distributors with physical delivery (Order ITC/400/2007).

Furthermore, the Royal Decree 1204/2006, on 20 October 2006, modified the Royal Decree 1339/1999 dated July 31<sup>st</sup> on Commission's By-laws.

Recently, 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).



#### 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. During the year 2006 the point 14 of statutory objectives has been widened as addressed in the previous section.

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

#### Independence and accountability.

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 established in the second paragraph of this section 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.

<u>Information on the existence of overlapping jurisdictions with other governmental</u> <u>agencies/authorities (national and supranational).</u>

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.

## 2.2 Main developments in the gas and electricity markets

### Main regulatory developments in the electricity market

An important feature in regulation is 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. 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.
  - REE sole TSO.
  - 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 the "Office for switching supplier"
- > MIBEL

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- Adaptation in contracting possibilities.
- More flexible requirements for intra-community transactions.
- The "external agent" figure is eliminated.
- Amendment in the financing of the market operator.
- Modification of sanctions regime.

#### Electricity market structure

The electricity market structure has changed during 2006, not only because of the changes which have taken place in the market itself but also because of some modifications in the framework.

For the determination of the top five companies and the dominant operators, the CNE has determined, once again, the market shares having into account the physical units, rather than the monetary units. The Royal Decree-Law 5/2005 settles that the CNE will publish through telematic lines the lists including the top five companies and the dominant operators.

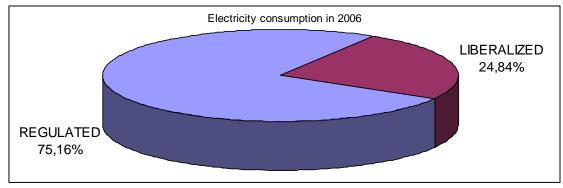
The top five companies<sup>3</sup> in this market, for 2006, were (in this order): Endesa, Iberdrola, EDP/Hidrocantábrico, Union Fenosa and Repsol YPF/Gas Natural. While as, for 2005, Unión Fenosa occupied the third place, Hidrocantábrico the forth and, Viesgo Generación was the fifth company instead of Repsol YPF/Gas Natural.

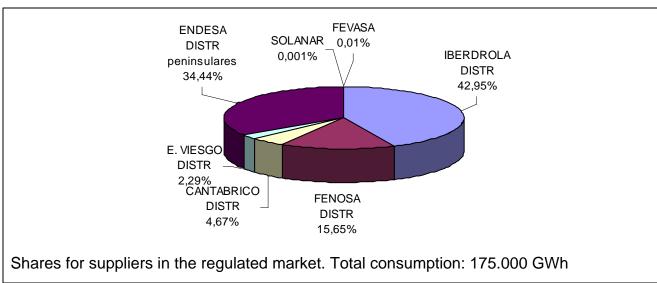
Until 2005 only the top five companies list was published. Nevertheless, the Royal Decree-Law 5/2005 introduces the concept of dominant operator as those companies within the energy sector with a market share above 10%. According to that, the dominant operators are, for 2006: Endesa, Iberdrola, EDP/Hidrocantábrico and Unión Fenosa. In 2005, Endesa, Iberdrola and Unión Fenosa were the only dominant operators.

Furthermore, figure 1 presents market shares for supplier in both regulated and liberalised markets.

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







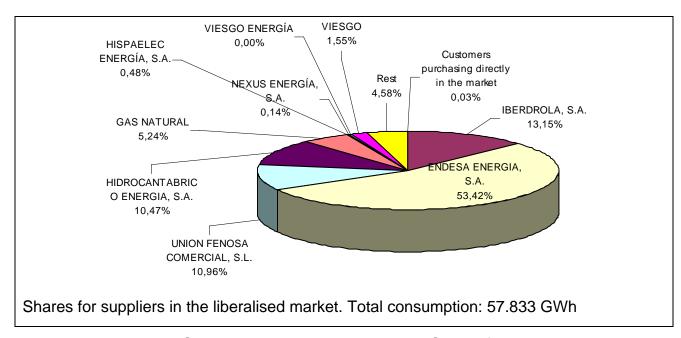


Figure 1. Spanish electricity market in 2006. Shares for suppliers.

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#### Main Regulatory developments in the gas market

The <u>Law 12/2007</u>, of <u>July 2nd</u>, amending Law 34/1998 of the Hydrocarbons Sector, published in the Official State Journal on 3 July 2007, transposed several aspects still pendent 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 January 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 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.

Other important regulatory developments during 2006:

- Important <u>developments of the network code and technical regulation</u> (the Detail Protocols):
  - Royal Decree 919/2006, 28<sup>th</sup> July, establishes Technical regulation of distribution and utilization of gas



- Resolutions of The Ministry of Industry, Tourism and Trade which passed on the 13<sup>th</sup> march 2006
- Resolutions of The Ministry of Industry, Tourism and Trade which passed on the 28<sup>th</sup> July 2006
- Creation of Interruptible TPA tariff (Resolutions of The Ministry of Industry, Tourism and Trade which passed on the 25<sup>th</sup> July 2006)
- Royal Decree Law 7/2006, 23rd June, establishes the <u>annual assignment of the</u> <u>capacity of Underground storage facilities</u>, based on the market share (before it was first come – first served)

#### Gas market structure

The gas market structure has changed for 2006. The top five companies<sup>4</sup> in this market, for 2006, were (in this order): Repsol YPF-Gas Natural, Iberdrola, Unión Fenosa, Endesa and BP. While as, for 2005, the top five companies were Repsol YPF-Gas Natural, Iberdrola, BP, Hidrocantábrico and Endesa. In 2005, Repsol YPF-Gas Natural, Iberdrola and BP were the only dominant operators.

Natural gas consumption in 2006 in Spain was 391.435 GWh, 4,3% higher than in 2005. The consumption of combined cycles represented 34% of total consumption, lower than last year (42%). Industrial sector represented 52% of total demand. The gas market structure is show in the next figure.

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<sup>&</sup>lt;sup>4</sup> The top five companies will be those within the energy sector with the highest market shares.



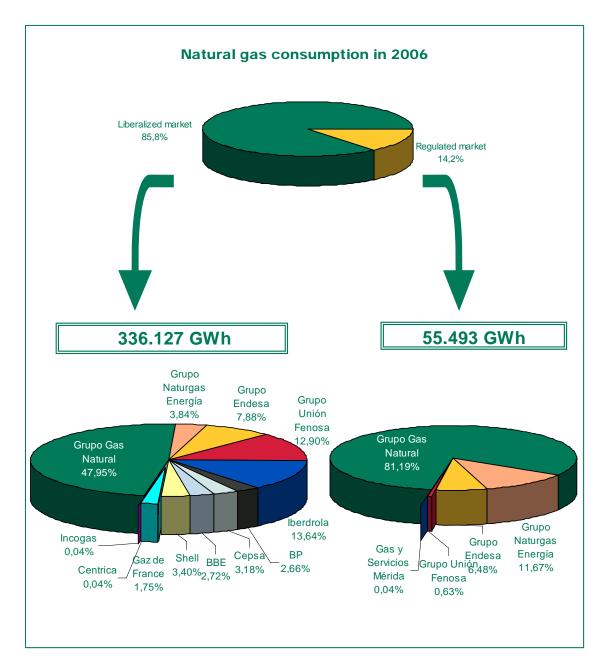


Figure 2. Spanish gas market in 2006. Shares for suppliers.

#### Price developments in the electricity market

The Royal Decree 3/2006, February 24<sup>th</sup>, referred to bilateral intergroups contracting and modifies the matching process of the supplies of sale and acquisition displayed simultaneously to the daily and intradaily market by subjects of the electrical sector belonging to the same enterprise group. Generators offered their energy in the market and the distributors demanded that energy; with the result of a certain amount of quantity in each group that had to be paid at 42.35 €/MWh. The Order ITC/400/2007, February 24<sup>th</sup>,



regulated bilateral contracting of electrical energy with physical delivery by the distributors which are responsible for the supply of regulated market in the peninsular territory, and developed the Royal Decree 3/2006.

Regarding price developments, another crucial step has been settled by the Royal Decree 1634/2006, December 29<sup>th</sup>, obliged Endesa and Iberdrola (as dominant operators) to hold five auctions offering virtual power plan capacity to members of the Spanish electricity market. Furthermore, this could contribute to increase the trading through bilateral contracts lasting some months and to stimulate liquidity in futures electricity markets.

Although the ownership of the plants belong to the seller, the Virtual Power Plant (VPP) capacity means that the buyer will be able to generate MWh at his disposal. The option has two prices. On the one hand the Option Premium which is determined in the auction and on the other hand the Strike Price which is paid when the buyer exercise the option. In this case the buyer will have part of the generation capacity<sup>5</sup>.

According to the Preliminary Information Memorandum in which the beforehand companies explain the virtual power plant auctions, the main features of the auctions will be:

"Ascending clock" auction method.

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>6</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.

• Two different products.

The two different products offered will be:

Base-load product: hourly options exercisable every hour of the day, and during the whole delivery period.

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<sup>&</sup>lt;sup>5</sup> Even if Endesa and Iberdrola own the plants.

<sup>&</sup>lt;sup>6</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.



➤ Peak-load product: hourly options exercisable only in the peak hours, i.e. from 8 a.m. to 24 p.m. every week days except Saturdays, Sundays and holidays, of the delivery period.

Both products will be available for three different durations: 3, 6 and 12 months.

- Three different durations for each product.
- Simultaneous auction of all products.
- Indifference curves.

All products will be offered simultaneously and Indifference curves will be used to allow the bidders to switch between the different product durations within the base and peak load product.

• Internet based auctions.

The auction will be Internet based; IBM will provide and manage the application.

Auction	Delivery period	Capacity auctioned	Delivery period beginning
	Quarter	150 MW	1 <sup>st</sup> July 2007
1	Semester	150 MW	
	Year	100 MW	
	Quarter	200 MW	
2	Semester	175 MW	1 <sup>st</sup> October 2007
	Year	175 MW	
	Quarter	400 MW	
3	Semester	350 MW	1 <sup>st</sup> January 2008
	Year	400 MW	
	Quarter	300 MW	
4	Semester	275 MW	1 <sup>st</sup> April 2008
	Year	400 MW	
	Quarter	150 MW	
5	Semester	200 MW	1 <sup>st</sup> July 2008
	Year	400 MW	

Table 1. Source: Royal Decree 1634/2006, December 29th

#### Market opening 2007.

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 next graph.



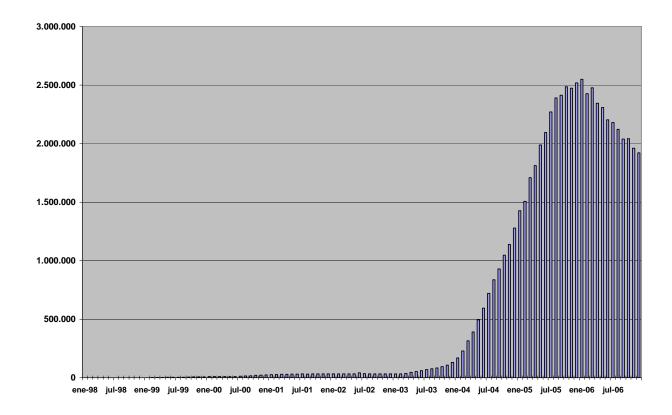


Figure 3. Evolution of electricity customers in free market 1998-2006

In December 2006, the 8% of electricity customers were supplied in free market representing almost 20% of the total electricity consumption. According to the Law 17/2007 tariffs of last resort will be established as from 1st January 2009.

The Spanish natural gas market is open since 1998. The evolution for the natural gas market, in terms of energy, is shown in the next graph:

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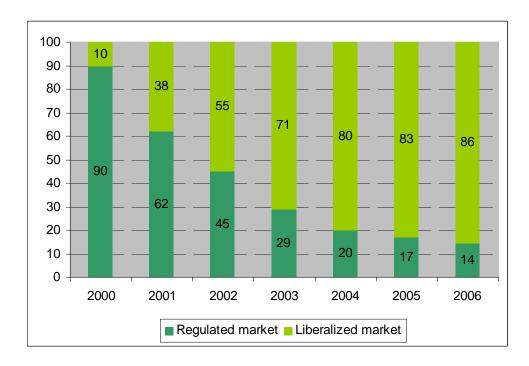


Figure 4. Evolution of market opening in terms of energy (%)

The Spanish natural gas market is 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 as shown below.

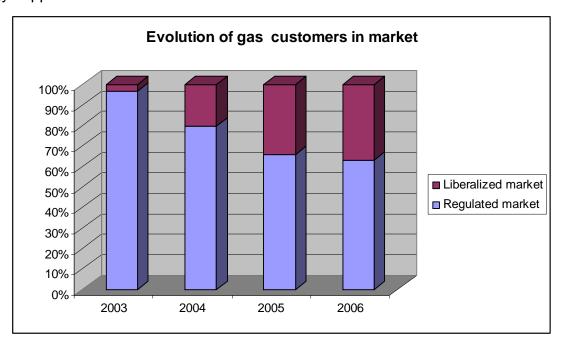


Figure 5. Evolution of market opening in terms of costumers (%)

In terms of natural gas customers, the eligibility process shows that 36,9% 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 1/1/2008, so distributors companies will not be able to retail gas energy to their clients anymore.

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.

However, regulated tariffs will disappear progressively:

- Since 1 July 2007, just consumers connected to a gas pipeline with design pressure equal to or below 4 bars, will be able to choose the regulated tariff.
- In January 2008, last resource tariffs are introduced.
- Since 1 July 2008, just consumers connected to a gas pipeline with design pressure equal to or below 4 bars and consumption below 3 GWh/ year, will be able to choose the last resource tariff.
- Since 1 July 2009, just consumers connected to a gas pipeline with design pressure equal to or below 4 bars and consumption below 2 GWh/ year, will be able to choose the 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.

#### Unbundling in electricity

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.

#### Unbundling in Gas

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.

#### Integration of electricity wholesale markets

The MIBEL Derivatives Market had a fully successful operational launch on July 3<sup>rd</sup> 2006. This concluded a fundamental step in the Iberian Electricity Market building process, where OMIP and OMIClear, entities created from Portugal and Spain's common desire, represent the unmistakable ability of two Iberian countries to implement an integrated regional electricity market, in line with those at a more advanced European Union level. The legal framework for the organisation of MIBEL and the Derivatives Market 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 October 1<sup>st</sup> 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 and the Derivatives Market.

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/2129/2006, 30<sup>th</sup> June, regulates the electricity future contracts by the Spanish distributors and EDP Distribução in the second quarter of 2006. In this normative, it is settled that the DSOs have to acquire in two auctions per month 5% of the annual demand in the regulated market within the MIBEL. So, the demand within the MIBEL is much lower than the one in OMEL.

The Order ITC/3990/2006, dated on December 28<sup>th</sup>, regulated future contracts among distributors during the first semester 2007, and extended the Order ITC/2129/2006 of July 4<sup>th</sup> 2006. The said percentage has risen to 10% in 2007 in line with the agreements adopted in the last Portuguese-Spanish Summit which took place in Badajoz on 24th and 25th November. Furthermore, there have been three auctions per month in the first semester of 2007 and there will be four per month in the second one.

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

The energy negotiated in the said market from its recent start-up (3rd July 2006) until the end of May 2007 amounts to 11,314.3 GWh and the number of participating agents is currently 21 trading members, 11 clearing members and 20 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 January 2007 a maximum level of 284 GWh, it only represented 19.8% of total negotiation in the futures market.



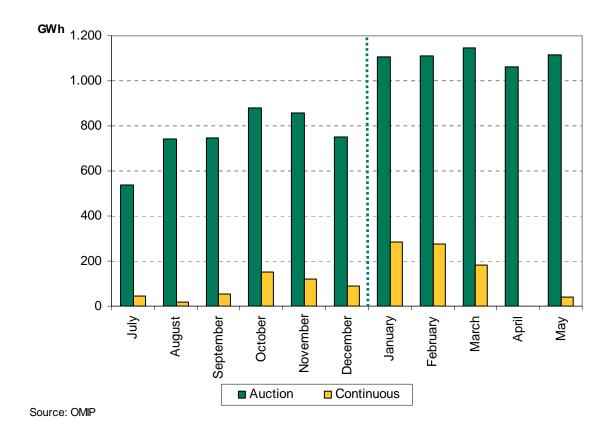


Figure 6. OMIP: Energy traded in auctions and continuous trading (GWh)

Energy (GWh)	Auction	Continuous
July	538,8	44,2
August	740,9	18,5
September	746,9	55,3
October	880,2	151,5
November	857,1	119,2
December	752,3	88,8
January	1.108,1	284,0
February	1.109,9	274,2
March	1.146,6	180,7
April	1.060,2	0,0
May	1.115,0	41,8

Source: OMIP

Table 2. OMIP: Energy traded in auctions and continuous trading (GWh)



Although initially the OMIP will act as the managing operator of the futures market and the OMEL as the managing operator of the daily market that has been operating since the 1st of January 1998, the creation of an Iberian Market Operator (OMI) has been planned for 2007.

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.

In the context of the ERGEG Regional Initiatives a South West Electricity Regional Energy Market 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

#### Integration of gas wholesale market

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

In March 2007 regulatory compatibility plan between Spain and Portugal, it is also agreed to have common work towards establishing MIBGAS.



Also in the context of ERGEG's REM, the CNE leads the South Gas Regional Energy Market comprising France, Spain and Portugal. Priorities of the South Gas REM will be developed in two phases. In the first phase, interconnection capacity, interoperability and transparency are discussed. In the second phase, the implementation of the Directive, market opening and hubs development and operation will be considered.

The actions to manage an adapted interconnection capacity are:

- Analysis of the current status of the interconnection infrastructures. This action has already been done.
- Analysis of future interconnection infrastructures need: 2007 2010 and 2011 2015. This action has already been done for France Spain. The second phase has been finished by 3<sup>rd</sup> SG on 15<sup>th</sup> June in Madrid.
- Decision on further actions to make possible the infrastructure projects. This action is already on process.

Regarding to interoperability, actions are:

- Study of practical cases of transit, with the aim to identify interoperability problems.

  This action has been done by 3<sup>rd</sup> SG on 15<sup>th</sup> June in Madrid.
- Study and action plan to solve interoperability problems. IG will agree on an action plan in June or July.

And for transparency management, actions have been:

- Study of the existing level of transparency and future or further capacity needs by the market. Comments were presented during 3<sup>rd</sup> SG on 15<sup>th</sup> June in Madrid.
- Action plan for the publication of information by TSO's, LNG operators and storage operators. It will be addressed in June or July.

On 30<sup>th</sup> May, Presidents of CNE, CRE and ERSE also agreed on working together to create an Iberian Hub as MIBGAS sets up.



On 15 June 2007, in the 3<sup>rd</sup> meeting of the Stakeholders Group, it was decided that new interconnection capacity will be allocated on a transparent and coordinated way and that Enagas, CRTgaz and TIGF will form a working group to define capacity allocation mechanisms and address interoperability problems.

## 2.3 Major issues dealt with by the regulator

The Royal Decree 1634/2006, dated December 29<sup>th</sup>, 2006, required the National Energy Commission to implement the required actions in order to reinforce the supervision electricity market function. CNE is reorganizing and enhancing its monitoring activities in order to fulfil this mandate.

The Royal Decree 1634/2006, dated December 29<sup>th</sup>, 2006, required the National Energy Commission to send to the Industry, Tourism and Trade Ministry, on the one hand, a proposal indicating the suitable geographical location of the generation plants. On the other hand, a proposal with the main criteria in order to settle in which cases the enlargement of the distribution network is natural.

At present the location signals given by the electricity market are too weak, and can lead to an inefficient allocation of resources, both in relation to production of electricity in the short run and particularly in relation to the location of new generators. CNE is in charge of preparing a proposal to reform the present market design so as to provide adequate location signals in the electricity market.

CNE has also drafted and proposed some amendments to present regulation in order to clarify where a new connection is merely part of the expected, progressive growth of the network and in which cases it should rather be deemed as a direct line (exclusive connection, subject to different provisions).

Concerning the Spanish hydrocarbons market, the legal regime concerning gaseous hydrocarbons only established the chronological criteria for allocating the capacity of natural gas underground storage facilities. As a consequence of the new technical management regulations, together with the fact that the Spanish gas system supply



exceeded the available capacity of underground storage facilities, the allocation system resulted to be inefficient and another allocation criteria was necessary.

In this regard, concerning natural gas injection and extraction schedules for the coming months, the Royal Decree-Law 7/2006 concerning urgent measures in the Spanish energy market has established a capacity distribution system which takes into account the total sales quotas of agents for the previous year and the necessary capacity reserve for the domestic-commercial market. As such, the available capacity will be allocated in an order fashion, capacity hoarding will be avoided and supply will be ensured in the coming winter period. The System Operator will allocate capacities in accordance with the capacity reserve requests presented by the interested subjects during the months of December and January of each year. Access contracts will have a duration period of one year, from April to March of the next one, with no right to any extension.

Additionally, this Royal Decree Law also adapted the linepack storage included in the transmission tariffs to the physical reality of the system, reducing it from 2 to ½ days of the contracted transmission capacity.



# 3 REGULATION AND PERFORMANCE OF THE ELECTRICITY MARKET

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

#### 3.1.1 General

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 electric energy production market was set in motion in January 1998. Since its beginnings, all electric energy production plants under the ordinary regime with a power in excess of 50 MW had the obligation of participating in the free 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. Thus, in January 1998, the retail electricity market's consumption threshold was established at 15 GWh/year, representing in the region of 26% of the demand. Later, during 1999, the eligibility threshold was extended on four occasions, as follows:

- As at 1st January 1999, consumers with consumption in excess of 5 GWh/year, representing approximately 33% of the demand, were eligible.
- On 1st April 1999, consumers with consumption in excess of 3 GWh/year, representing approximately 37% of the demand, were eligible.
- On 1st July 1999, consumers with consumption in excess of 2 GWh/year, representing approximately 40% of the demand, were eligible.
- On 1st October 1999, consumers with consumption in excess of 1 GWh/year, representing approximately 43% of the demand, were eligible.



During the year 2000, the eligibility level was again extended, with the effective date being 1st July 2000, with which all the consumers connected to high voltage (greater than 1 kV) were offered the possibility of renegotiating their supply contacts.

Finally, and 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 complete liberalisation to free competition (100% eligibility threshold). The foregoing notwithstanding, the prevailing regulation allows consumers to be supplied by the distributor under a regulated tariff, which could be reviewed and published four times a year by the Government.

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

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 marketcoupling 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 constitutes a significant improvement to the actual situation being fully compliant with Regulation 1228/2003.
- 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 futures 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.

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

In Spain, there is only one ownership unbundled System Operator which is the transmission company, 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 production and transmission system's correct co-ordination.

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.

#### 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 7th 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 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 integral tariffs to the Government, pursuant to the Royal Decree 871/2007, dated June 29th.



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

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

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 tarification 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 tarification 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.



In connection with the transport activity, the remuneration of new installations is carried out at the service's cost price, estimated at standard costs. Similarly, the remuneration base initially established in 1998 is up-dated using a CPI-x formula.

At the same time, remuneration of the global distribution activity, (not individually for each company), is established in accordance with a revenue cap formula, the initial basis of which was established in 1998. In this connection, it should be noted that the CNE is currently working on the development of a methodology for establishing the individual remuneration of each distributor company. 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 Procedurement 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.

#### Network charges

The Royal Decree 1955/2000, establish that the 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)
Dc (1)	3 500 (2)	4 - 9	5,33
lb	50 000	50	5,46
lg	24 000 000	4 000	1,13

- (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 3. Electricity Access Tariffs for Typical Consumers (cent€ /kWh). Year 2006



The prices shown in the above table, published in Royal Decree 1556/2005, correspond to the year 2006. 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 for 2001 and 2002, and the imbalance in revenues of 2005.

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

<u>Note</u>: 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), the mean Interruption time (TIM) and the grid availability index (ID). Last available data as of 2005 are: ENS, around 550 MWh; TIM, around 2.5 minutes, and ID=98,93%.



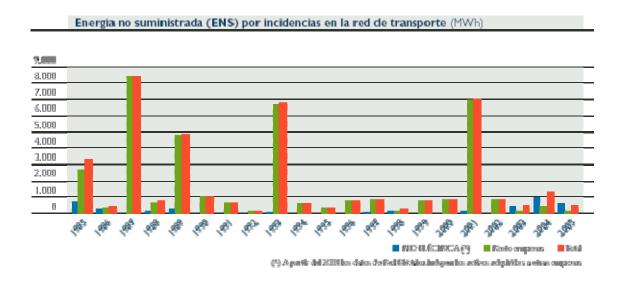


Figure 7. Power not Supplied (ENS) (MWh). Year 2005.



Figure 8. Average Interruption time (TIM). Year 2005

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).



	1998	1999	2000	2001	2002	2003	2004	2005	2006
ANDALUCÍA	2,57	2,46	2,37	3,59	3,28	3,28	3,85	2,72	2,39
ARAGÓN	1,55	2,36	2,32	1,87	1,53	2,34	1,47	1,24	1,32
ASTURIAS	1,36	2,37	1,70	1,52	1,17	1,19	1,32	1,19	1,86
BALEARES	2,53	2,09	6,78	9,60	2,95	6,65	2,32	1,88	1,83
CANARIAS	3,27	4,30	3,44	2,86	6,21	3,47	2,06	8,95	1,38
CANTÁBRIA	1,58	2,24	4,02	1,87	1,17	1,59	2,12	1,53	1,60
CASTILLA-LEÓN	2,24	2,69	1,96	1,92	1,33	1,68	1,39	1,49	2,12
CASTILLA-LA MANCHA	3,46	3,61	3,27	3,11	2,19	2,39	2,11	1,87	2,61
CATALUÑA	2,17	3,43	2,29	3,83	3,01	2,55	1,42	1,34	1,79
EXTREMADURA	3,87	3,17	3,72	3,38	2,54	3,10	2,74	2,13	2,62
GALICIA	3,31	2,69	3,85	5,17	2,64	2,04	2,11	1,59	2,62
MADRID	1,24	1,34	1,20	1,54	1,15	1,16	1,21	1,07	1,92
MURCIA	2,11	2,65	2,42	2,94	2,05	2,40	1,90	2,04	1,26
NAVARRA	1,23	1,89	1,16	0,99	0,91	1,85	2,35	1,29	3,56
LA RIOJA	1,19	2,28	1,05	1,10	1,37	1,10	1,70	1,26	1,40
PAIS VASCO	0,84	2,42	1,17	0,94	0,82	1,38	1,21	1,37	1,89
C.VALENCIANA	1,58	2,30	2,75	2,43	2,19	2,34	2,34	1,91	2,40

Table 4. 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.



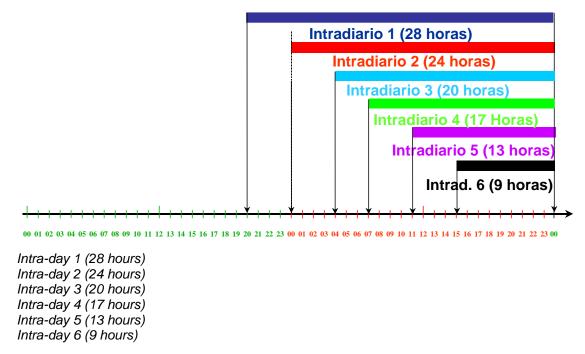


Figure 9. Intra-day markets times

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 6 regulation zones which coincide with the groupings of the units of each one of the 6 major generating groups currently in existence (Endesa, Iberdrola,



Hidrocantábrico, Unión Fenosa, Viesgo and Gas Natural), in which each company has its own plant control office or centre, which is automatically connected to that of the System Operator.

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 2006 in the system's technical operation processes amounted to 50.625 GWh and represented a cost of 972.238 k€ (including the cost of secondary tranche allocation), which represents a cost per unit of diverted energy of some 19 €/MWh.

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

In order to adapt Directive 2003/54/EC to the Spanish legislation system, the Spanish Government has recently approved the already mentioned Law 17/2007 of 4<sup>th</sup> July, that amends the previous Spanish Electric Power Act 54/1997.

Before the amendment, the Spanish Electric Power Act 54/1997, in article 14, required the legal unbundling of activities whereby regulated tasks, such as the technical management of the system, transmission and distribution, had to be separated from the rest of the activities. However, within a group of companies, activities might be carried out that are deemed incompatible by the Act, provided that they are actually performed by different companies in the group. Companies already adapted their structures following this legal framework; thus legal unbundling was implemented.

The new Law 17/2007, of 4<sup>th</sup> July, introduces modifications on such article 14 so as to include as well the independence of organisation and decision making of TSOs and DSOs where TSOs and DSOs are part of vertically integrated undertakings (adaptation of articles 10 and 15 of Directive 2003/54/EC). The modified 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 persons 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 persons 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 persons 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 information which be business sensitive 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 11<sup>th</sup> Transitory Provision of the Electric Power Act.

### TSOs and DSOs

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 <u>unique transmission company</u>. This means that only REE will act as an electricity transport company.

Actually, REE is the owner of almost the entire electricity transmission network in Spain mainland. In 2002, REE embarked upon the acquisition of the whole transmission network, which was owned by the Spanish distributors. In 2003, REE acquired the transmission assets of ENDESA DISTRIBUCION ELECTRICA and UNION FENOSA DISTRIBUCION, and 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. REE is ownership unbundled.



The Law 17/2007 establishes (9<sup>th</sup> Transitory Provision) that assets still owned by companies other than REE must be sold to REE within a maximum period of 3 years.

REE is the main TSO and owns 99% of the transmission network. The State Industrial Ownership Corporation (SEPI) was, on 31<sup>st</sup> December 2006, the direct owner of a significant share of the corporation, owning 27,054 thousand shares representing 20 % of the capital.

Law 17/2007 establishes new maximum limits on the share ownership and voting rights in REE. 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.

In order to comply with these requirements, REE shareholders have changed their participation percentages in the company. The REE shareholders structure at 31st December 2006 is shown in the following table:



RED ELECTRICA (REE) shareholders	% shareholding
Sociedad Estatal de Participaciones Industriales (SEPI)	20
Endesa	3
Iberdrola	3
Union Fenosa	3
Viesgo	1
Free float	70

Source: CNMV and REE Annual Report

Table 5. Shareholding of REE

Clear benefits are derived for both the electricity industry and 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., UNIÓN FENOSA DISTRIBUCIÓN, S.A., HIDROCANTÁBRICO DISTRIBUCIÓN ELÉCTRICA, S.A.U. (96,601% owned by EDP) and ELECTRA DE VIESGO DISTRIBUCIÓN, S.L.U. (100% owned by ENEL). The rest of the companies are small distributors which mainly operate in small municipalities and medium-sized towns. Approximately 17 of them are cooperatives.

The 100000 customer rule will only apply to distribution companies that have less than 100.000 customers and that are subject to the 11<sup>th</sup> Transitory Provision of the Electric Power Act. There are 320 DSOs with less than 100.000 customers.

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

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). The main shareholder of HIDROCANTÁBRICO GROUP is EDP (96,601% of its share capital). ELECTRA DE VIESGO DISTRIBUCIÓN, S.L.U. (VIESGO-ENEL GROUP) is 100% owned by ENEL.

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 [...]"

The following table shows the number of employees for the main companies:

Number of employees at 31/12/2006 of main DSOs and TSO			
ENDESA DISTRIBUCIÓN ELÉCTRICA, S.L.U.	DSO	5.335	
IBERDROLA DISTRIBUCIÓN ELÉCTRICA, S.A.	DSO	4.407	
UNIÓN FENOSA DISTRIBUCIÓN, S.A.	DSO	2.415	
HIDROCANTÁBRICO DISTRIBUCIÓN ELÉCTRICA, S.A.U.	DSO	402	
ELECTRA DE VIESGO DISTRIBUCIÓN, S.L.U.	DSO	1.579	
RED ELÉCTRICA DE ESPAÑA, S.A.	TSO	1.456	
TOTAL EMPLOYEES		15.594	

Source: Circular 4/1998 of CNE

Table 6. number of employees for the main companies

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 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, customer care telephone lines, 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.

#### Regulatory accountability

The Spanish Electric Power 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 specially 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 regulated subsidiary.



In addition to the rules included in article 20 of the Spanish Electric Power Act, the Royal Decree 437/1998 of 20th March, by virtue of which rules for the adaptation of Spain's Accounting System (PGC) to companies in the electricity sector were approved, incorporates 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 the specific information which is regulated in the aforesaid Royal Decree relating to the unbundling of activities included in the Report, following the legal principles established in the Spanish Electric Power 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. Of the major electricity groups operating in Spain, ENDESA, IBERDROLA, UNION FENOSA and HIDROCANTÁBRICO publish their consolidated information separated by activities.

As far as VIESGO-ENEL GROUP is concerned, the companies involved do not prepare consolidated accounts in Spain because they are 100% owned by the Italian ENEL. The REE GROUP also prepares consolidated accounts separated by activities and these are published in its annual report.

The public legal information relating to individual companies 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). Nevertheless, pursuant to the provisions of Royal Decree 437/1998, most part of the information requested in the above-mentioned Circular



is public. The information requested in the Circular has been adapted to such Royal Decree and incorporates only minimum additional information. 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.

Since the start of the unbundling of activities, 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.

During 2006 CNE has implemented Circular 1/2006 addressing electric distribution activity; the new Circular introduces four new informational tools leading to gain a detailed, deeper insight on this regulated activity:

- 1. Regulatory accountability: it's fed by normal statutory accounts and considers, per each pre-defined cost centre, the OPEX as well as financial and assimilable 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 georeferenced 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 Network Operators, but it will possible be extended during this year to all DNOs in a reduced format.



Examples of the type of disaggregated data available at CNE are the following two graphics, which represent all customers (a) and transformer centres (b) map for Spain. Each point is identified and characterized.

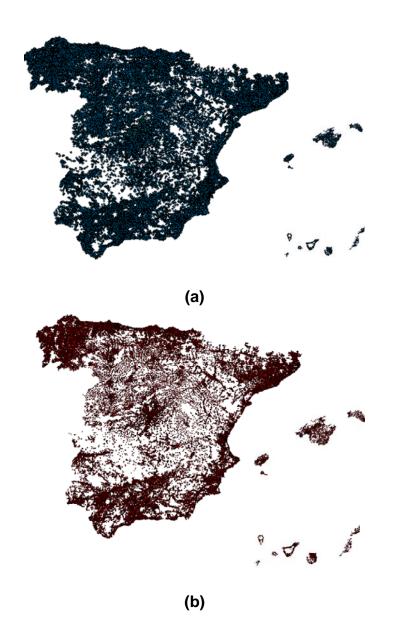


Figure 10. Customers location (a) and transformer centres location (b)



## 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 51.000 GWh in 2006, about 19% of total gross demand. As from the year 2002, the first combined cycles were commissioned, resulting in an increase in the installed capacity under the ordinary regime of 6% with respect to 2001. Combined cycles continue to be the main driver in new generation capacity, amounting now for 20% of nation's power mix. The following graph shows the evolution of installed power under the ordinary regime, segregated by technology, since 1996 until the end of 2006.

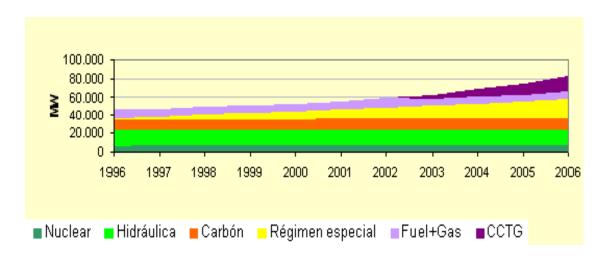


Figure 11. Installed power in the peninsular system. (MW)

At the end of 2006, the installed power structure in the Spanish electricity system by production technologies was as follows:



Technology	Power [MW]
CCGT (Combined Cycle)	16.376
Fuel+Gas (conventional)	9.048
Coal	11.934
Nuclear	7.716
Hydraulic	16.658
Special Regime	21.307
TOTAL	83.039

Table 7. Installed power structure in the Spanish electricity system

At 31<sup>st</sup> December 2006, the shares of the different companies in the Spanish electricity system's generator pool were as shown on the attached table. The power per company taken into consideration includes the production plants under the ordinary regime and the installed power under the special regime (without differentiating the company owning such plants) in operation at 31<sup>st</sup> December 2006. The properties of the special regime are considered in the calculations of the HHI index.

Net Power Share	Ordinary Regime + Special Regime	нні
IBERDROLA GENERACIÓN, S.A.	29,9%	
ENDESA GENERACIÓN, S.A.	25,8%	
UNIÓN FENOSA GENERACIÓN, S.A.	11,7%	
HIDROELÉCTRICA DEL CANTÁBRICO, S.A.	4,3%	1843
VIESGO GENERACIÓN, S.L.	3,4%	1043
GAS NATURAL SDG, S.A.	5,0%	
OTROS	7,7%	
Special Regime (Total)	12,3%	

Table 8. Market Shares in Net Power (year 2006)

As shown on the above table, the number of companies with more than 5% of the Spanish electricity system's installed power is 3, being Iberdrola, Endesa and Unión Fenosa.

At the same time, the evolution of total demand in plant bars in Spain between the years 1998 and 2006 was above 47%, representing a mean annual increase in this same period of 6%. During the last year, the total demand in plant bars amounted to 268.027 GWh, which was covered as follows:



Balance of Spanish electric energy system in 2006 (TWh)			
Hydroelectric	24.761		
Nuclear	60.184		
Coal	69.463		
Fuel+Gas (conventional)	14.253		
Gas (combined cycle)	66.986		
Special Regime	50.755		
International Exchanges	-3.303		
Consumption in generation	-9.578		
Consumption in pumping	-5.494		
Total demand	268.027		

Table 9. Balance of Spanish electric system, TWh (year 2006)

During this same year 2006, 30<sup>th</sup> January was the day on which the greatest demand for mean hourly power demand was recorded, with a value of 42.153 MW (about 1 GW below all-times peak reached that same week in 2005). The maximum daily energy value occured on 20<sup>th</sup> December and amounted to 854 GWh.

#### 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. Subsequently, and since its beginning up to the present day, attempts have been made for the merger or for the acquisition of two important companies which finally did not take place. There is an acquisition (takeover bid) process still open over Endesa by ENEL and Acciona: it's eventual impact on the resulting market estructure is not fully known yet.

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 are shown below.

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 2006 bilateral contracts corresponding to a volume of energy of 59.162 GWh, representing about 23% of the market's total volume, were executed.

An energy volume of 193.446 GWh, representing approximately 77% of the plant bar demand for electricity in the Spanish mainland system, has been negotiated in the production market. The final average market price was 6,100c€/kWh. The daily market price has represented in the region the 81,5% of the final price, the power guarantee in the



region of a further 7,6%, and the solution to technical restrictions, the secondary regulation and other technical operation processes account for the remaining 11%.

Based on the same hypotheses as those used above in power, the energy market shares are analysed below:

	Ordinary Regime + Special Regime	нні
IBERDROLA GENERACIÓN, S.A.	23,4%	
ENDESA GENERACIÓN, S.A.	25,9%	
UNIÓN FENOSA GENERACIÓN, S.A.	11,0%	
HIDROELÉCTRICA DEL CANTÁBRICO, S.A.	5,1%	1614
VIESGO GENERACIÓN, S.L.	2,1%	1014
GAS NATURAL SDG, S.A.	6,6%	
OTROS	8,2%	
Special Regime (Total)	17,7%	

<sup>\*</sup> Note: Companies under the ordinary regime are not allocated the energy of the plants under the special regime they own.

Table 10. Market Shares in Energy (year 2006)

There are 4 companies with market shares in excess of 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 powerplants 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	$\rightarrow$	base load plants
Coal and Combined Cycle	$\rightarrow$	mid merit plants
Modulated Hydroelectric and Fuel+Gas	$\rightarrow$	peak plants

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.

<u>Primary regulation</u> 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 <u>secondary regulation</u> 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 explotation 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 HHI concentration indices for these markets are analysed below, using for the purpose the following criteria:

- Secondary regulation HHI: share per agent calculated on the basis of the annual tranche allocation average, both to increase and to decrease. In this case the allocated energy is not used because, as has already been seen, it is remunerated at the tertiary regulation market's marginal price. Data for the year 2006.
- Tertiary regulation HHI: share per agent calculated on the basis of the use of energy without a sign, both to increase and to decrease. Data for the year 2006.



Secondary regulation	Share	HHI
IBERDROLA GENERACIÓN, S.A.	32,3%	
ENDESA GENERACIÓN, S.A.	28,2%	
UNIÓN FENOSA GENERACIÓN, S.A.	19,7%	2369
HIDROELÉCTRICA DEL CANTÁBRICO, S.A.	9,6%	2309
VIESGO GENERACIÓN, S.L.	5,2%	
GAS NATURAL SDG, S.A.	5,0%	

Table 11. Secondary regulation (year 2006)

Tertiary regulation	Share	HHI
IBERDROLA GENERACIÓN, S.A.	31,1%	
ENDESA GENERACIÓN, S.A.	30,5%	
UNIÓN FENOSA GENERACIÓN, S.A.	13,3%	
HIDROELÉCTRICA DEL CANTÁBRICO, S.A.	5,7%	2202
VIESGO GENERACIÓN, S.L.	4,7%	
GAS NATURAL SDG, S.A.	7,5%	
OTHERS	7,2%	

Table 12. Tertiary regulation (year 2006)

During 2006, 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:

	Portugal	France	Andorra	Morocco	TOTAL
Import (GWh)	3.150	16.037	0	27	19.214
Export (GWh)	8.779	1.518	223	1.999	12.519
TOTAL	11.929	17.555	223	2.026	31.733

Table 13. Energy exchange (year 2006)

The Spanish market is integrated with the Portuguese in the MIBEL (Iberian Electricity Market). OMEL is the spot market operator for the MIBEL. During 2006 the functioning rules for the daily and intra-daily market have been approved by the Resolution of May 24<sup>th</sup> from the Secretariat General of Energy.

Considering neighbour countries only in France there is a spot market, Powernext, the average price is shown below:



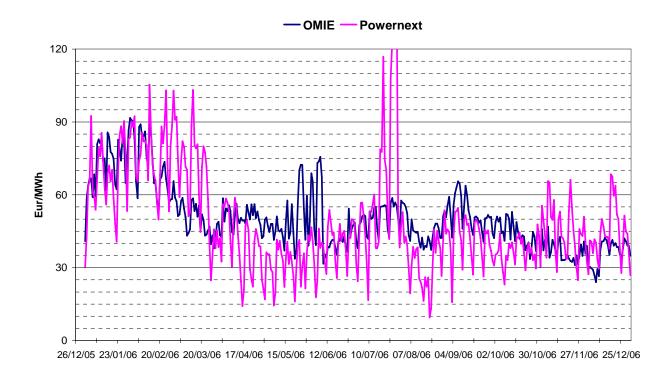


Figure 12. Average spot prices 2006

Omel and Powernext price index correlation during 2006 is determined as 0,53 considering daily base-load spot prices.

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 2006 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 2005	Number of customers Dec 2006	Difference 2006-2005	Difference 2006-2005 (%)
Large industry elegible before Jan 2003	30.027	16.474	-13.553	-45,1
Medium size industry elegible since Jan 2003	138.096	80.088	-58.008	-42,0
Households elegible since Jan 2003	2.395.611	1.845.761	-549.850	-23,0
Total	2.563.734	1.942.323	-621.411	-24,2

Table 14. Number of customers in the liberalised market and difference in 2005 - 2006

Market	Number of customers Dec 2006	(%)
Liberalised	1.942.323	8.15
Tariff based system	21.890.239	91.85
Total	23.832.562	100.00

Table 15. Number of customers in tariff and in the liberalised market in 2006

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 60

17th July 2007



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 2006; 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.

rtumbor or ongraio motor pom	TOTAL	Switching	Switching rate	re- negotiating	re- negotiating rate
large industry	1.796	311	17%	618	34%
medium sized industry	88.817	6.969	8%	22.295	25%
small industry and households	23.761.846	671.225	3%	2.422.684	10%
	23.852.459	678.505	3%	2.445.597	10%

#### By energy volume (GWh)

Ty energy verame (Crimy	TOTAL	Switching	Switching rate	re- negotiating	re- negotiating rate
large industry	49.401	4.639	9%	12.562	25%
medium sized industry	70.273	14.007	20%	44.830	64%
small industry and households	107.986	5.015	5%	18.792	17%
	227.660	23.661	10%	76.184	33%

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 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 76%. Gas Natural is the largest independent supplier company, sharing 4.16% 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.

Supplier company	Share
ENDESA ENERGÍA	43,94%
IBERDROLA COMERCIALIZADORA	14,12%
UNIÓN FENOSA COMERCIAL	9,47%
HIDROCANTABRICO ENERGÍA	8,27%
REDE ELECTRICA NACIONAL	5,46%
GAS NATURAL ELECTRICIDAD	4,16%
OFFICE NATIONAL DE L'ELECTRICITÉ	2,23%
NATURGAS COMERCIALIZADORA	2,10%
ENDESA GENERACIÓN	1,96%
IBERDROLA GENERACIÓN	1,12%
ENEL VIESGO ENERGIA	1,05%
CENTRICA ENERGIA	0,85%
GAS NATURAL COMERCIALIZADORA	0,78%
CANAL ENERGÍA COMERCIALIZACIÓN	0,72%
EDP-ENERGÍAS DE PORTUGAL	0,63%
EDP COMERCIAL-COMERCIALIZAÇÃO DE ENERGIA	0,61%
HISPAELEC ENERGÍA	0,42%
Others (share < 0,1%)	0,42%
ELEKTRIZITATS-GESELLSHAFT LAUFENBURG AG	0,39%
ELECTRICITÉ DE FRANCE	0,33%
ENEL VIESGO GENERACIÓN (as supplier)	0,25%
BARCLAYS BANK PLC	0,23%
NEXUS ENERGÍA	0,21%
DETISA (as supplier)	0,18%
FACTOR ENERGIA	0,13%

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 Vlesgo (controlled by EDP and ENEL, respectively). The sum of the external (or foreign-controlled) supplier companies' market share is of about 23%, 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.

#### 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 1556/2005:
  - o 2.0nA for Dc consumers



- o 3.0A for *lb*
- o 6.2 for *lg*
- 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, CNE, 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 regimen, the special regime surcharge, the imbalance in revenues prior to 2003, the imbalance in revenues of 2005, and the cost of extra-peninsular generation in 2001 and 2002). The percentage of these levies is a proportional distribution which is calculated in accordance with the 2006 cost pricing.
- The amount corresponding to "levies included in network costs" is that which is obtained by applying to each corresponding access tariff the cost percentage of the Market Operator, CNE, the System Operator, 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 extrapeninsular generation cost of 2001 and 2002.
- The energy component is calculated by adding to the average market price corresponding to the year 2006 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, with the exception of consumer type Dc, for which the charge profile defined in Resolution of 28<sup>th</sup> December 2005, by virtue of which the consumption profile and calculation method was established for the purpose of energy settlements applicable to type 4 and type 5 consumers which do not have nocturnal time register, has been used.



- 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)
Dc (1)	3,45	1,88	7,31	2,77	15,41
lb	3,54	1,92	7,15	1,85	14,46
lg	0,73	0,40	6,12	1,59	8,85

<sup>(1)</sup> This is not a representative domestic customer in Spain

Table 18. End Price by Components of Typical Consumers (cent€/kWh). Year 2006

<u>Note</u>: If, as requested in the questionnaire, each one of the end prices estimated by components is compared with the prices resulting from the application of the integral tariffs, the result would be that there is no commercial margin for any customer types.

It should be pointed out that the domestic consumer type defined in this questionnaire is not representative of domestic consumption in Spain given 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 price by components of type *Dc* consumers, without taking into account price time discrimination, that is, applying access tariff 2.0A, is that shown in the following chart. It should be noted that the end price published by Eurostat for this consumer type applies integral tariff 2.0N.

<sup>(2)</sup> Commercial margin not included



Typical Customers	Network Costs	Levies	Energy Cost	Taxes	End Prices (cent€kWh)
Dc (1)	3,26	1,77	8,14	2,77	15,95

<sup>(1)</sup> Invoiced at tariff 2.0A (without discrimination for nocturnal consumption)

Table 19. End Price by Components for tariff 2.0A (cent€/kWh). Year 2006

#### 3.2.3 Measures to avoid abuses of dominance

Spanish legislation contains various provisions and tools to avoid the abuse of market power.

Spanish competition authorities responsible for the enforcement of Competition Act are the Service for Defence of Competition (with investigative powers) and the Court for Defence of Competition (with decision powers). A new competition law has recently been approved which will set up only one independent competition commission. The new competition commission will be responsible for the institution of infringement proceedings in the field of competition and will be the decision-making body concerning restrictive practices, abuse of dominant position or distortion of free competition by unfair acts.

These bodies are responsible for the institution of disciplinary proceedings against abuses of market power or other restrictive practices prohibited by the Competition Law. These proceedings are initiated either "ex officio" or at the request of third parties or interested parties. Any agent acting in the electricity sector can report to the Service for Defence of Competition any situation which may involve practices that are contrary to free competition.

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 Service for Defence of Competition.



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 the Service for Defence of Competition, 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 production 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-transferrable 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, nondiscrimination 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 crossborder 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.

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 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 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. 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.

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 derivates 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 the organizations of supervision of the part in which these are constituted, in agreement with the legislation of each part in this matter.

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

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

- a) to pursue the application and development of MIBEL,
- b) to inform mandatorily 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.

During 2006, the chair of the CNE has assumed the presidency of the Board of Regulators.



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

#### > GAS NATURAL / ENDESA:

On September 2005, GAS NATURAL notified a merger, in which the Spanish natural gas company GAS NATURAL, would acquire 100% of the capital of the Spanish electricity company ENDESA, by way of public bid.

CNE has to elaborate a mandatory report on mergers or acquisitions of energy companies whenever these have to be submitted to the Government to take a decision. In accordance with this duty, in 2005 CNE analyzed the concentration case **GAS NATURAL / ENDESA**. CNE's report was published in the website (<a href="http://www.cne.es">http://www.cne.es</a>). The principal results of CNE's analyse are the following:

On 14 September 2005, CNE was notified a proposed merger, in which the Spanish natural gas company GAS NATURAL, would acquire 100% of the capital of the Spanish electricity company ENDESA, by way of public bid.

GAS NATURAL is the main natural gas operator in Spain. The principal activities of the company are the distribution and supply of natural gas in the Spanish national territory. It also carries out other business: generation and supply of electricity and international investments.

ENDESA is one of main electricity operators. The company is active as generator, distributor and supplier of electricity in the Spanish national territory. It also carries out other business: distribution and supply of natural gas and international investments.

CNE defined the following relevant markets:



Natural gas: relevant pro marke			vant product and ic markets
Transport:  Import infrastructures Peninsular natural gas networks	Spanish peninsular territory	-	-
Distribution (networks)	Administrative authorizations	Distribution (networks)	Administrative authorizations
Wholesale natural gas market	National/ Atlantic Area	Generation (technical restrictions)	National
Free retail gas market (the whole market, including both free and regulated segments was also analysed)  • Household and business customers • Industrial customers • Electricity generators	Spanish peninsular territory	Free retail gas market (the whole market, including both free and regulated segments was also analysed)  • Household customers  • Business customers  • Large industrial customers	Spanish peninsular territory

Table 20. Relevant markets for electricity and gas

CNE analyzed the impact of the merger on the natural gas and electricity relevant markets. It considered both the horizontal, vertical and conglomerate integration effects on the natural gas and electricity markets. CNE considered that the merger strengthened the new group's dominance in the relevant markets identified. Nevertheless, CNE concluded the merger could be authorized, subject to certain remedies aimed at solving the competition problems identified. The competitions problems identified and the remedies proposed by CNE are listed below:



# The wholesale market of natural gas:

- Competitions problems: horizontal and vertical overlap between the activities of supply to the wholesale market of natural gas and the production of electricity
  - Some foreclosure effect of the wholesale market of natural gas
  - Some foreclosure effect of market of generation of electricity
  - Capacity to affect at the same time prices in the electricity market and in the supply of natural gas to other consumptions

#### Conditions:

- Gas release program
  - GAS NATURAL to release to retail supply companies which are not integrated in its group the volume of natural gas of the Algerian gas contract (SAGANE I) which exceeds the supply to the regulated tariff market.
  - GAS NATURAL to release to retail supply companies which are not integrated in its group, the volume of natural gas of wholesale supply contracts of ENDESA

#### > The generation of electricity:

 Competitions problems: The transaction would increase the concentration in the generation market of electricity, and would eliminate GAS NATURAL as a strong competitor (GAS NATURAL had been the most active new entrant in the generation of electricity market):

#### o Conditions:

- Divestment plan would have to be greater than 3.100 MW proposed by GAS NATURAL, and include 1.200 MW more.
- Distribution and supply of electricity Distribution and supply of natural gas:
  - Competition problems:
    - Strengthening of the new group's dominance on the retail market
    - Elimination of an active competitor
    - Advantages of integration of the activities of distribution and supply

o Conditions:



# Option A:

- Temporary limitations on the gas and electricity supply to customers in the areas where electricity and natural gas distribution networks are overlap.
- Divestment of natural gas distribution assets, at least 1.500.000 supply points

## Option B:

• In the regions where the result of the merger is the overlap of the ownership of natural gas and electricity distribution networks, the process of divestment had to guarantee the existence of at least two additional operators in the activities of distribution of natural gas and electricity. The operators had to be ownership unbundled.

The Spanish Competition Authority issued a report which recommended that the acquisition of ENDESA by GAS NATURAL should not go forward. The Spanish Government finally decided to authorise the transaction subject to conditions that were similar in many respects to those that were suggested by the CNE. In any event, the remedies were not implemented as the acquisition was not carried out.

As regards to specific measures to avoid abuses of dominance, recent new legislation has established that Virtual Power Plant (VPP) auctions will be carried out over the period July 2007-june 2009. The programme will affect a limited portion of generation capacity

Electricity Act 54/1997 allows for the undertaking of VPPs under certain terms. According to the Sixteenth Additional Provision of the Act, the Government may establish through regulations market mechanisms to foster forward trading of electricity. Those mechanisms, which are not developed in the Act, should take the form of a primary auction of a certain amount of electricity equivalent to a constant capacity during a period of time. Also, such a primary energy auction should be carried out by those electricity producers that have the status of dominant operators in the electricity sector according to article 34 of Royal



Decree Law 6/2000.Dominant operator is an agent having a share of 10% or more in the energy market considered. The energy markets considered are the same as those defined by article 34. CNE draws up and publishes the list of operators regarded as dominant operators in the energy markets referred. According to the list of operators published by CNE on the 16th of February of 2006, ENDESA and IBERDROLA are dominant operators in the electricity market. The capacity affected in each auction for each dominant operator should not be higher than 20% of the installed electricity capacity that operator directly or indirectly holds. The production capacity that may be acquired individually in each auction for each participant is limited to a maximum of 10% of the total capacity issued.

Based on the above legislation, the Twentieth Additional Provision of Royal Decree 1634/2006 established that, before the 1st of July of 2007, ENDESA and IBERDROLA should arrange a primary energy auction. The primary energy auctions consist in purchasing electricity options related to a certain capacity of generation established by ENDESA and IBERDROLA, this capacity is shared at 50% for both companies. The capacity is to be allocated to market participants though a competitive auction process. The first auction took place the 13<sup>th</sup> of June of 2007.



# 4 REGULATION AND PERFORMANCE OF THE NATURAL GAS MARKET

# 4.1 Regulatory Issues [Article 25(1)]

## 4.1.1 General

At present there is no minimum level of consumption for exercising the right to obtain supplies on the free market. Since 1 January 2003, all customers are eligible, regardless their consumption level and the final use of gas.

Below is a figure with the evolution of eligibility levels:

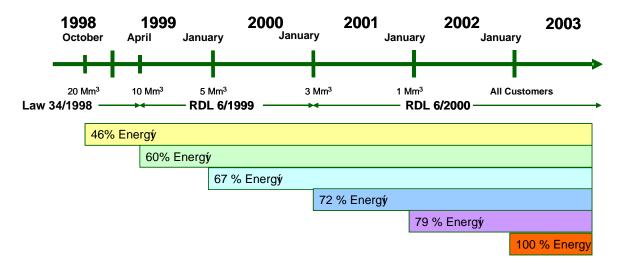


Figure 13. Evolution of eligibility levels.

#### Market opening:

In 2006, consumption supplied through the liberalised market totalled 86%. The figure below shows the evolution of the share of consumption between the regulated and the liberalised markets:



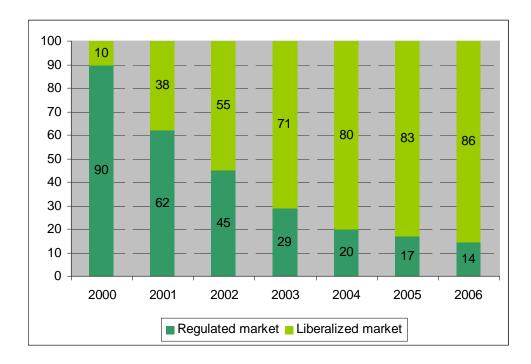


Figure 14. Evolution of market opening (%)

Source: Boletín informativo sobre la evolución del Mercado del gas natural en España

As regards shares of the liberalised market, it should be noted that 50,2 %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. The information required about it was explained in last year Spanish annual report to the European Commission.

Many changes are actually to happen in Spain. Tariffs are to disappear in 1/1/2008, so distributors companies will not be able to retail gas energy to their clients anymore. Distributors companies only will be dedicated to the distribution gas network.

The inherent obligations to retailing gas energy will be assumed by the marketer company associated to the distributor company where the supplier is connected.

In order to make easy for the supplier the switching, an Office of Switching will probably be created.



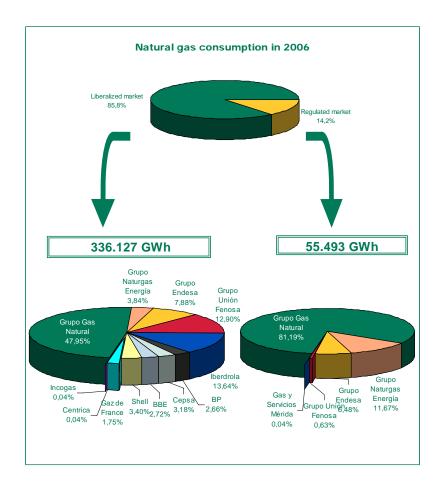


Figure 15. Opening of market in 2006. Shares of suppliers.

# 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 2006.

The regulatory measures that eliminated the contractual congestion consisted essentially of the posting of a bond when transport capacity is reserved, and the <u>loss of reserved</u> <u>capacity in case of continuous under use</u> 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 modified Royal Decree 949/2001 of 3 August.



In 2006, 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 at Irun and Larrau (between France and Spain) 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 Mugardos and Sagunto exist (although their capacity is full contracted) because there is not enough natural gas network capacity to transport the natural gas (especially in summer).

As regards congestion of a physical nature, it should be noted that the international connections at Tarifa and Larrau have nearly reached that point, though expansions of capacity are planned for Larrau. The capacities of Tarifa and 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 Mugardos and Sagunto exist (although their capacity is full contracted) because there is not enough natural gas network capacity to transport the natural gas.

Since April 2006, when the Sagunto regasification plant iniciated its activity, there has been physical congestion in the pipelines in the Levante Eje (pipeline Cartagena-Tivissa). It is due to the fact that the regasification capacity contracted by the supppliers in Sagunto and Cartagena plants is higher than the evacuation capacity of the natural gas regasified. The final motive of this is the limited transport capacity of the pipeline Cartagena-Tivissa.



This congestion is the result of the construction delay of the Alcázar-Montesa pipeline cross axe and the compression stations in Montesa (Valencia) and Alcázar de San Juan (Ciudad Real). The beforehand construction will allow the communication between the central region in Spain and the Eastern regions.

A Task Force has been created in order to implement a procedure in order to solve the congestion problem.

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 a duration greater or equal to two years, and access contracts with a 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.

## Congestion management procedures.

The National Energy Commission has powers 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 has resolved the first loss of long term reserved capacity in Bilbao – LNG terminal because of UIOLI reasons. ULIOLI measures are applied by the regulator, under a regulated administrative procedure in accordance with article 25.6 of the Directive 2003/55/EC.

The Spanish law (Law 12/2007) includes the possibility for secondary capacity markets yet, 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 are primary 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.

The cross border tariff access can be different depending on the entry and exit point of natural gas. As near as entry and exit points they are, a lower tariff access will be charged. For 2006, cross border tariffs access were published in the Ministerial Order ITC/4100/2005.

For international transit, access tariffs are multiplied by the coefficients which are shown on the next table:



Entry point	Portugal-	Portugal-		
Exit point	Extremadura	Galicia	Larrau	Irún
Cartagena	1	1	1	1
Huelva	0,62	1	1	1
Sagunto	1	1	0,833	1
Bilbao	1	1	0,515	0,35
Barcelona	1	1	0,773	1
Magreb	0,716	1	1	1
Portugal-Extremadura			1	1
Portugal-Galicia			1	1
Larrau	1	1		
Irún	1	1		

Table 21. international transit, coefficients to multiply access tariffs

#### Transit contracts

The only different arrangements for transit in Spain exists in the natural gas transit line from the entry point of Tarifa (Spain) to the exit through 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 form 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 do not pay any TPA charges for the gas in transit from Morocco to Portugal.

The Ministerial Order ITC/4100/2005 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 evaluate the maximum technical capacity available.

The National Energy Commission has powers 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 Detail Protocol - 10.

In order to clarify the abovementioned, the Detail Protocols (*Protocolos de Detalle*) *PD-07, PD-08, PD-09 and PD-10 de las Normas de Gestión Técnica del Sistema Gasista*, were approved the 20<sup>th</sup> 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 the tasks of transmission and distribution companies

In Spain there are not different types of transmission and distribution system operators (e.g. regional, national).

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

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

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

- Additive tariffs. The tariff 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

To undertake the studies necessary to underpin the reports on the Ministerial Order projects 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.

To calculate the income of the system, information is gathered from suppliers on projections for invoicing variables – number of customers, capacity contracted and



customer consumption – both in the regulated market and in the deregulated market, broken down by tariff groups. This information is gathered both for the end of the year in progress and for yearly rate forecasts. 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.

For transport, storage and regasification, remuneration for new facilities is set at service cost, calculated at standard levels. Operating costs are remunerated at standard levels. Further, the standard levels of investment and operating costs are updated through an IPH-X formula, where IPH 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, the basis of which was established in 2002.

#### Network charges

Type Consumers	Annual Consumption (KWh)	Access Toll (cent€kWh) (1)
D3	23 260	2,19
I1	116 300	1,13
I4-1	116 300 000	0,26

## (1) Not including tax

Table 22. Network tolls by types of natural gas consumers (cent€ /kWh). 2006

The prices in the above table are for 2006, as published in Order ITC/4101/2005, 27<sup>th</sup> December. They are the result of adding levies for regasification, transport and distribution and the underground storage fee<sup>7</sup> as applied to each type consumer. The prices also include network costs, other regulated costs included in levies and fees, such as the CNE

17th July 2007

<sup>&</sup>lt;sup>7</sup> Not including the LNG storage fee



quote, the GTS quota, the provisional re-routing owning to the settlement of 2004 and 2005, and the imbalance in revenues of 2002 and 2003.

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. The price in the below table are for 2006, and is calculated with the method and hypothesis used to estimated the prices for the D3 consumer.

Type Consumers	Annual Consumption (KWh)	Access Toll (cent€kWh) (1)
Typical household	10.000	2,52

(1) Not including tax

Table 23. Network tolls of the typical household consumers (cent€ /kWh). 2006

Storage charges: average value for the country

The Storage charges were determined, for 2006, in the Ministerial Order ITC/4100/2005, 27<sup>th</sup> December and they are unique for all the Spanish territory.

The operational storage, according to what is settled in the Royal Decree 949/2001, is included in the transport and distribution toll.

Regarding the underground storage toll, the prices for 2006 were:

- Fixed quantity: 0,000189 €/kWh/month.
- Variable quantity: 0,000174 €/kWh.

With regard to the variable quantity for LNG storage toll, the price for 2006 was 0,086873 €/kWh.



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

# Quality of supply

There is no Information about the evolution of quality of service indicators.

## **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 <u>LNG tanks</u>, 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 = 0,019073 €MWh/day.
- If the <u>monthly average gas</u> 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, the TSO and DSO, through auctions, have supply contracts with the suppliers for its 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 is revenue neutrality 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 <u>in real time</u> 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 renomination 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

In order to adapt Directive 2003/55/EC to the Spanish legislation system, the Spanish Government has recently approved a Law (Law 12/2007) that amends the previous Spanish Hydrocarbons Act (Law 34/1998).



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.
- c) 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.

Even before the amendments introduced by Law 12/2007, the Spanish Hydrocarbons Act (article 63) required legal unbundling for regulated activities, such as LNG regasification, storage, transmission and distribution, that had to be separated from marketing activities (which are liberalized activities). Companies had adapted their structures according to this legal framework; thus legal unbundling had already been implemented.

However, Law 12/2007 introduces modifications on article 63, so as to adapt it to the articles 9 and 13 of Directive 2003/55/EC. The modified article 63 states that:

- Companies that engage in one or more of the regulated activities regasification, strategic storage, transmission and distribution – must have as their sole corporate purpose the performance of such activities, where they may neither engage in production or commercialization nor be shareholders in companies that carry out such activities.
- 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 decisionmaking 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 take holdings 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.

#### TSOs and DSOs

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

Enagas is the main gas transmission company in Spain. According to Order ITC/3993/2006, the transmission companies 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. And 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 Sevicios Mérida. Only ENAGAS, the Spanish TSO, is ownership unbundled.

As for the 100.000 customer rule, Spain does not apply it.

The next 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.

The article 58 of the Spanish Hydrocarbons Act, as amended by Law 12/2007 establishes the following:

- 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 following table shows the number of employees for the main companies:



Number of employees at 31/12/2006 of main DSOs and TSO		
ENAGAS, S.A.	TSO	944
GAS NATURAL GROUP*		6.686
Distribution subsidiaries ENDESA	DSO	no available
NATURGAS GROUP*		258

<sup>\*</sup> Includes electric and international business

Source: Companies Annual Report

Table 24. Number of employees in the main companies

The Spanish Hydrocarbons Act, previous to the implementation of Directive 2003/55/EC, already established the legal unbundling through an obligation about the exclusive corporate purpose of firms carrying out one of more regulated activities. However, this Act didn't establish the requirement of legal unbundling of TSOs from transmission companies and DSOs from distribution companies. Currently, the new Hydrocarbons Act, which recently came into force, doesn't establish these obligations either.

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, NATURGAS, ENDESA, UNIÓN FENOSA and IBERDROLA.

ENAGAS is the main gas transmission company in Spain and it has more than 7,600 km of high-pressure gas pipelines, three of the existing regasification plants (Barcelona, Cartagena and Huelva) among its assets, as well as the property or management of the natural gas storage.

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).

<sup>\*\*</sup> Corresponding to year 2005



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.

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 its 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 Hydrocarbons Act, after the implementation of Directive 2003/55/EC, amends the 20<sup>th</sup> Additional Provision of the Hydrocarbons Act. In accordance with the new 20<sup>th</sup> Additional Provision, ENAGAS must create a legal and accounting independent Specific Unit to operate as the Technical Manager of the Gas System, in which no physical or legal entity will be allowed to participate directly or indirectly in a share ownership 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. 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.

The following chart shows the shareholding structure of ENAGÁS as to 26/06/2007:



ENAGÁS shareholders	% direct	% indirect	% total
	shareholding	shareholding	shareholding
Atalaya Inversiones, S.R.L.	0,000	5,022	5,022
Caja de Ahorros de Asturias	0,000	5,000	5,000
Cantábrica de Inversiones de Cartera, S.L.	5,000	0,000	5,000
Chase Nominees LTD.	9,923	0,000	9,923
Fidelity Internacional Limited	0,000	3,018	3,018
Gas Natural SDG, S.A.	5,000	0,000	5,000
Inversiones Cotizadas del Mediterráneo, S.L.	5,027	0,000	5,027
Sagane Inversiones, S.L.	5,000	0,000	5,000
State Street Bank and Trust Co	5,595	0,000	5,595

Source: CNMV and ENAGAS website

Table 25. Shareholding structure of ENAGÁS, mid year 2007.

The leading distributors are under the ownership of the groups GAS NATURAL, NATURGAS and ENDESA. It should be noted that not in all cases are they 100% held by their respective parent companies. For example, in the group NATURGAS ENERGÍA, the parent company holds 40% of the equity of TOLOSA GASA.

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.

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, there are separate registered offices for each company performing a different activity in the same business group.

There is legal unbundling, so each company bills its customers separately and each subsidiary has its own company name. Distributors have their own logo for each company; however, they have a common website for their operations.



#### Regulatory accountability

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 from 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, specially 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 Activies), which is already in force, by which transmission and distribution companies must submit to the Ministry and to the National Energy Commission their audited accounts. The CNE also receives, by virtue of Order ITC/2348/2006, regular accounting and economic-financial information, which is required to perform the functions allocated to the regulator. Nevertheless, most part of the information requested in the above-mentioned Order is public. 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, commercialization, other gas activities and other activities.

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 they are of concern to the regulator (measuring equipment, etc).

From the start of the unbundling of activities, documentation has been checked that accredits 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 activities which as per the provisions of the Law are incompatible, i.e. non-fulfilment of the obligation of juridical 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.

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 grave infractions are sanctioned with a maximum fine of 30,000,000 euros, and grave infractions with a maximum fine of 6,000,000 euros, as envisaged in article 113 of the Hydrocarbons Act. Moreover, commission of a very grave infraction 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 grave sanctions shall be levied by the Council of Ministers, and grave sanctions by the Minister.



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

# 4.2.1 Description of the wholesale market

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

	2006		
	TWh % <sup>(1)</sup>		
TOTAL	410		
NG	127	31%	
LNG	283	69%	

(1) Based on supply GNL/GN rate in 2005.

Table 26. 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 accomplices 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 (1)	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
$O_2$	mol %		0.01
CO <sub>2</sub>	mol %		2.5
H <sub>2</sub> 0 (condensation point)	°C at 70 bar		+2
HC (condensation point)	°C at 70 bar		+5

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

Table 27. 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 it 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 (8)</sup>.

There is a great uniformity in average calorific value for different entrances, but in Sagunto, where gas is provided from Egypt and it registers the minimum (11,67 kWh/Nm³).

# Production and import capacity (Tm<sup>3</sup>/year)

# A) Capacity of regasification plants

In these installations, after following a physical procedure, for which sea water vaporizers are normally used, the temperature of liquefied natural gas (LNG) is increased and it is thus transformed into a gaseous state. Natural gas is injected in gas pipelines to be transported all over the Peninsula.

Regasification plant	LNG tanks capacity (m³)	Vaporisation capacity (Mm³(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
TOTAL	2.046.500	147,91

<sup>\*</sup> Reganosa plant started up in may of 2007.

Source: Enagás

Table 28. Capacity of regasification plants,

Capacity utilization ratio is around 50% for these plants.

<sup>8</sup> Based on annual report of ENAGAS 2006.



# B) Capacity of international connections by gas pipeline

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 is planned for 2008-2009.

Location	Transmission capacity (Mm³/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 29. 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) 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.

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

Table 30. Production in the Spanish gas fields





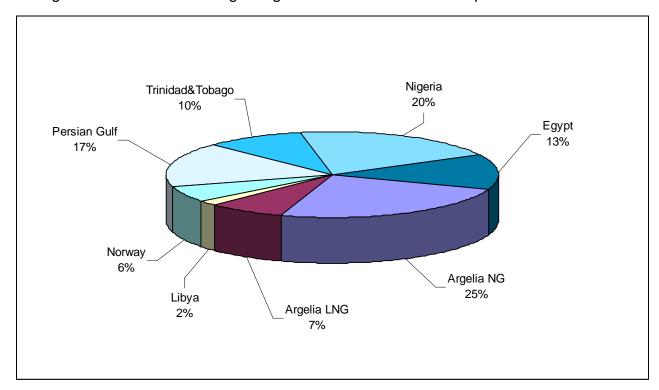


Figure 16. Origin of gas imports in 2006 in the Spanish market

NG imports are from Algeria and Norway. The remaining imports are in the form of LNG (Algeria, Nigeria, Egypt, Trinidad & Tobago, Libya, Middle East...).

Gas Natural, Iberdrola, Unión Fenosa and Endesa held in 2006 more than 5% of gas available for the Spanish market.

Company	Share (%)
Gas Natural	49
Iberdrola	14
Unión FENOSA	12
Endesa	8
TOTAL	83

Table 31. Companies with shares higher than 5%



The figure bellow shows the share of gas available for every company for the Spanish market in 2006.

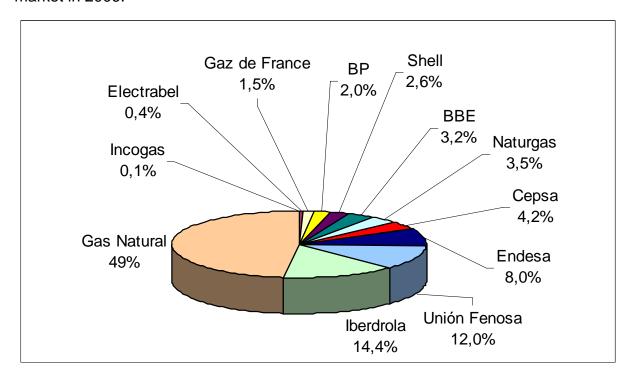


Figure 17. Share of gas available by company in 2006 in the Spanish market

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

Company	Share (%)
Gas Natural	49
Iberdrola	14
Unión FENOSA	12
TOTAL	75

Table 32. Three top companies according to market share.

One of these companies, Gas Natural, owns the entirety of Spanish domestic production, which in 2006 accounted for 0,21% of the value of total procurement (326 GWh for Marismas field, and 489 GWh for Poseidón), 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.



Company	Proportion of production respect to national consumption (%)
Gas Natural	0,21
Iberdrola	0
Unión FENOSA	0
TOTAL	0,21

Table 33. Proportion of production allocated to the largest three companies

Gas Natural Comercializadora, with 34.5% of capacity contracted in the deregulated market, is the marketer with the largest capacity of access reserved. Iberdrola stands second in terms of capacity contracted, with 15.5% and then Unión Fenosa, with 9.2%, stands as the third largest agent in terms of capacity contracted.

Company	Proportion of import capacity (%)
Gas Natural	34,5
lberdrola	15,5
Unión FENOSA	9,2
TOTAL	59,2

Table 34. Proportion of import capacity allocated to the largest three companies

The figure below shows the proportion of capacity contracted in the deregulated market for all companies.



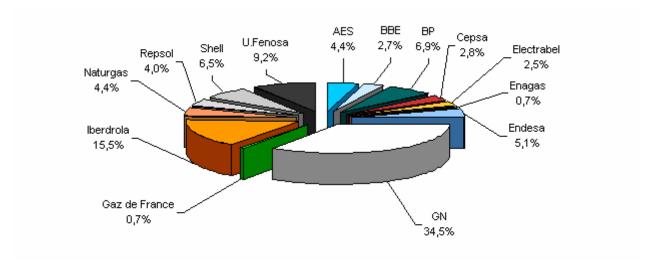


Figure 18. Contracted entry capacity in the free market

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

	Market share	Main Shareholding nationality
Gas Natural	47,95%	Spain
Iberdrola	13,64%	Spain
Unión Fenosa	12,90%	Spain 50 % - Italy 50 %
Endesa	7,88%	Spain – Italy
Naturgas	3,84%	Portuguese
Shell	3,40%	UK – Dutch
Cepsa	3,18%	France
BBE	2,72	Spain (25 % UK)
BP	2,66%	UK
Gaz de France	1,75%	France
Centrica	0,04 %	UK
Incogas	0,04 %	Spain

Table 35. 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 <u>level playing field</u> with Spanish companies. In Spain, all installations have 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 deregulated market.

An organized secondary market is in operation since early 2006, but transactions through this mean have been scarce until now, as traders prefer to use the OTC gas Market.



Most of energy is negotiated in bilateral OTC trading.

In 2006, the volume of energy negotiated over the counter amounted to 281.558 GWh (72% of total consumption).

This energy is negotiated in the Spanish secondary market, which is run over an electronic trading platform operation developed by ENAGAS, called "MS-ATR"

The tendency for negotiated energy in the Spanish secondary gas market over MS-ATR is growing. In 2007, the volume of negotiated energy has become bigger than the total gas consumption.

In 2006, 4.538 transactions were registered over MS-ATR. The figure below shows the growing volume of energy which was negotiated over the counter in 2006. Trading is conducted in three system infrastructures, namely: the transmission network (the national balance point), regasification plants and underground storage. However, most of energy is traded at a national balancing point.



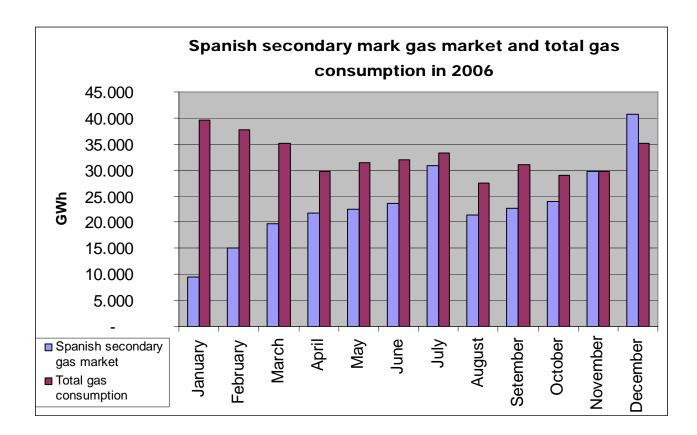


Figure 19. Volume of energy negotiated over the counter in 2006

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 peculiar nature of the Spanish market compared to other European markets, as procurement of LNG accounts for 69% of total procurement, and given the nature of these shipments, it must be remembered 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 is planned for 2008-2009.



The interconnection with Morocco is solely for imports (100.337 GWh for Spain and 23.676 GWh for Portugal), as the new connection 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 2006.

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 Irun is limited at present due to the congestion of existing capacity.

Existing interconnections to 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 could be expected.

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. In fact, in 2006 specific access rates have been designed for gas in transit to neighbouring countries.

#### Rules governing the conduct of gas producers and importers in the wholesale markets

Marketers must provide their annual, quarterly, monthly and daily forecasts to the System Technical Manager. Daily nominations for inputs and monthly ones for unloading of ships of LNG are contractually binding. Since the Network Code passing, System Technical Manager, ENAGAS, must publish monthly in its web page information on unloading of ships, gas to be unloaded and free unloading slots. Demand and operational information is also available, together with capacity. It lasted from 2000 to 2003.

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 a duration greater or equal to two years, and access contracts with a 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, Bilbao and Barcelona LNG plants. So, there is capacity available to new entrants.

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

The National Energy Commission has a department which is in charge of the market surveillance.

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).

National Energy Commission has resolved 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 2006 was 6.411.033 (+357.515 consumers in 2006), and the gas demand was 391.620 GWh (+3,8 %)



The figure below shows the volume of annual consumption in the Spanish market in 2006 by type of supply, whether regulated or deregulated, as well as by supplying business group:

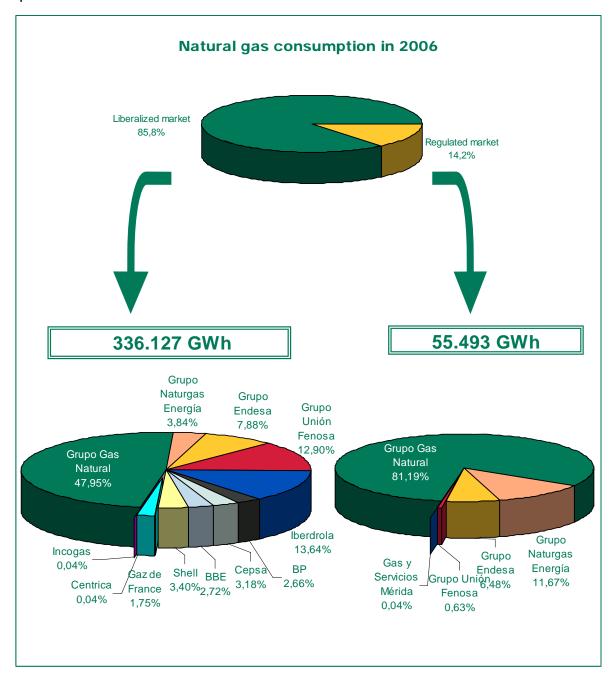
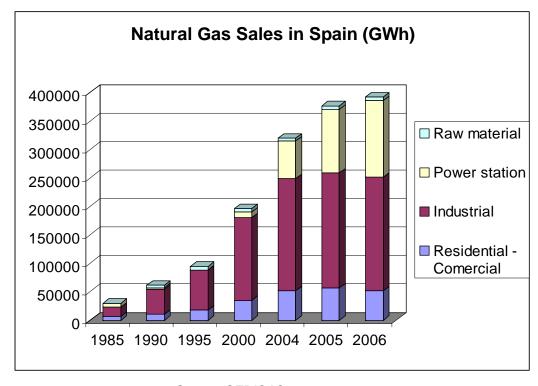


Figure 20. Spanish gas market in 2006. Shares of suppliers.

At the end of 2006, there are 26 companies inscribed in the registry of marketers. In the figure below, natural gas sales in Spain are shown according to the consumers groups.





Source: SEDIGAS

Figure 21. Natural gas sales in Spain by consumer

Consumption of natural gas by sectors in 2006 was:

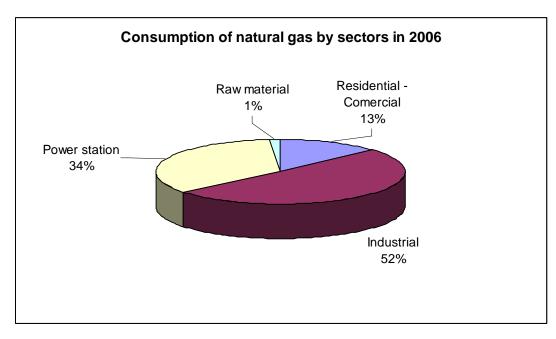
Residential-commercial sector: 13%

- Industrial sector: 52%

- Use of natural gas as raw material: 1%

- Electrical generation (combined cycles and bi-propellant plants): 34%





Source: SEDIGAS

Figure 22. Consumption of natural gas by sectors. 2006

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:

Groups	Number of Consumers 2006	Total Natural Gas Consumption 2006 (MWh)
Group 1 (Pressure >60 bars)		
1.1 Consumption =< 200 GWh/year	16	1.926.423
1.2 Consumption > 200 GWh/year y =< 1000 GWh/year	39	22.553.935
1.3 Consumption > 1000 GWh/year	103	131.855.377
TOTAL GROUP 1	158	156.335.735
Group 2 (Pressure > 4 bars y =< 60 bars)		
2.1 Consumption =< 500.000 KWh/year	668	187.161
2.2 Consumption > 500.000 KWh/year y =< 5 GWh/year	1.874	4.203.151
2.3 Consumption > 5 GWh/year y =< 30 GWh/year	1.424	17.934.995
2.4 Consumption > 30 GWh/year y =< 100 GWh/year	652	32.930.231
2.5 Consumption > 100 GWh/year y =< 500 GWh/year	321	63.563.605
2.6 Consumption > 500 GWh/year	34	44.968.872
TOTAL GROUP 2	4973	163.788.013
Group 3 (Pressure =< 4 bars)		
3.1 Consumption =< 5.000 KWh/year	2.875.878	8.058.613



Groups	Number of Consumers 2006	Total Natural Gas Consumption 2006 (MWh)
3.2 Consumption > 5.000 KWh/year y =< 50.000 kWh/year	3.474.823	29.071.569
3.3 Consumption > 50.000 KWh/year y =< 100.000 kWh/year	20.016	1.148.429
3.4 Consumption > 100.000 kWh/year	35.237	8.254.875
TOTAL GROUP 3	6.405.954	30.120.356
Group 4 (Interrumpible)		
4.1. Pressure >4 bars y =< 60 bars	0	712.688
4.2. Pressure > 60 bars	0	2.287.230
TOTAL GROUP 4	0	2.999.918
RAW MATERIAL	3	5.698.254
LNG satellite plants		8.793.184
TOTAL GENERAL	6.411.033	391.620.108

Table 36. 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 2006. The first list is the market share, based on sales volumes to final customers at the regulated market. Gas Natural is the incumbent company. The second list shows the distribution system share respect to the total Spanish Grid. Gas Natural is the most important DSO. The third list illustrates the transmission system share respect to the total Spanish Grid. Enagás is the mainly TSO. And the last column reveals the share of LNG emission capacity. Enagás is also the largest company in this subject.

	Market share	Distribution System share of total Spanish Grid	Transmission System share of total Spanish Grid	LNG regasification share of total Spanish LNG terminals
Gas Natural	47,95%	85,00%	6,00%	4,00%
Iberdrola	13,64%	=	=	10,00%
Unión Fenosa	12,90%	-	-	16,00%
Endesa	7,88%	10,00%	3,00%	8,00%
Naturgas	3,84%	5,00%	2,00%	4,00%
Shell	3,40%	=	=	-
Cepsa	3,18%	-	-	4,00%
BBE	2,72	-	-	-
BP	2,66%	-	-	-
Gaz de France	1,75%	-	-	-



Market share		Distribution Transmission System share of total Spanish Grid total Spanish Grid		LNG regasification share of total Spanish LNG terminals	
Centrica	0,04 %	-	-	-	
Incogas	0,04 %	-	-	-	
Enagás	-	-	89,00%	50,00%	

Table 37. Shares of different company groups at the end of 2006.

Leaving aside an analysis of domestic production (0.2% of total procurements in 2006), 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) have international production of gas outside Spain in different countries over the world.

#### **Switching**

Natural gas consumption in 2006 in Spain was 391.435 GWh, 4,3 % higher than in 2005. The number of customers in 2006 surpassed 6,4 millions in Spain, with 357.515 new customers.

In terms of energy, about a 90 % of the total gas market have change supplier since the beginning of liberalization, and in terms of number of clients, 2.368.586 clients have change supplier the opening of the domestic market in 2003 (37 % of the clients).

The rate of change was lower in 2006 than in previous years: **25.000 clients per month switched** their supplier. 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 easy for the supplier the switching, an Office of Switching will probably be created.

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 or the Cities of Ceuta and Melilla, wherever the supply is provided, regardless of the jurisdictional actions that may occur at the request of any of the parties.

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

Because the commercialisation of natural gas has been deregulated and can be practised by agents freely, precise information is not available on the gas supply contracts signed



with consumers. However, in 2006 the duration of signed contracts, in so far as information is available, does not generally exceed two years.

Information is provided on the proportion of long term capacity access contracts— with a more than two year duration — which will not necessarily match with supply contracts length.

At the end of 2006, long term capacity contracted for supply the deregulated market 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.

# Anti-competitive bundling

In 2006 no practices restricting competition have been detected related to the joint offer of products and/or services. Actions carried out by National Energy Commission regarding to this issue were described two years ago in the Spanish annual report to the European Commission.

Below, details are provided on the hypotheses included in the calculation of the final price by components of consumer types of natural gas as defined in the questionnaire. The timeframe for these prices is the year 2006.

- The cost of energy is calculated on the basis of the costs of raw materials as published quarterly by the Ministry. To calculate the cost of raw material for 2006, the different levels published in 2006 have been weighted according to the number of days they were in effect. This price has been modified by the pertinent losses as specified in Order ITC/102/2005.
- Network costs have been calculated by applying the tolls published in Order ITC/103/2005 for regasification, transport and distribution and underground storage to each consumer type. From the total network costs, a calculation has been made



of levies included in network costs, namely, the CNE levy, the fee of the System Technical Manager, the provisional re-routing owning to the settlement of 2004 and 2005, and the imbalance in revenues of 2002 and 2003.

- An entry load factor of 85% has been estimated for billing the regasification toll and the capacity reserve term of the transport and distribution toll.
- Billing of underground storage has assumed strategic storage of 21 days for each of the consumer types. For the household type, seasonal storage of 17.1% of firm annual consumption has also been included.
- o The item "levies included in network costs" is obtained by deducting from the total amount of tolls and levies the percentage reflecting other costs, as such as the CNE levy, and the fee of the System Technical Manager. The percentage to deduct, in every case, has been taken from the provisional cost table of 2006.
- Calculation of the final price did not include the supply profit margin. Nevertheless, if each of the prices calculated is compared by cost aggregation tolls, levies, Raw material unit price and losses with the price resulting from the application of sales tariffs, the result for the D3 consumer and typical customer would be about 3%, for I1 it would be 17%.
  - The Order ITC/4101/2005, set up the suppression of the regulate tariff for the customer connected to a gas pipeline whose maximum design pressure is higher than 60 bars, so the I4-1 consumer have to receive their supply in the liberalized market.
- The tax item is a result of applying 16% for VAT to the final price before taxes as calculated for the aggregation of applicable tolls and levies, losses and Raw material unit price.



Type Consumers	Cost of Energy (1)	Regulatory Costs	Network Costs	Taxes	Total Prices (cent€kWh)
D3	2,06	0,01	2,18	0,68	4,94
I1	2,05	0,01	1,12	0,51	3,69
I4-1	2,05	0,00	0,25	0,37	2,68
Typical household (10.000 kWh/year)	2,06	0,02	2,50	0,73	5,32

Table 38. Final consumer price by type of components (cent€/kWh). 2005

Note: It should be pointed out that consumer type I1 as defined in this questionnaire is not representative of 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% of the number of total consumers in the tariff group to which the type belongs –customers connected at pressure levels between 4 and 60 bars), and solely 0.11% of the consumption of this tariff group.



# 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 installations, and shall be carried out by the government with the participation of the Autonomous Communities. Planning shall be mandatory in the case of transmission installations.

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 planning process for electricity and gas transportation infrastructures is being revised for its forthcoming update by the Ministry of Industry, Tourism and Trade.

In addition, as a result of concern regarding security of supply, the National Energy Commission 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 (i.e. 2006-08)

Energy demand reports constant annual growth. The average increase in last years stands at 2.6%, considering both mainland and ex-mainland demand. During 2006, gross domestic demand virtually reached 270 TWh.

Demand for electrical power has also increased gradually. The peak demand for maximum power was recorded in January 2005: 43.378 MW. It is important to highlight the increased demand for power in the summer months, 40.275 MW being reached during summer 2006.

The evolution of peak hourly power demand, from 1999 to 2006, including the forecast to 2010, is as follows:



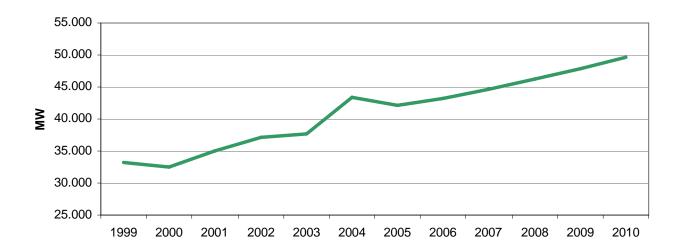


Figure 23. Peak hourly demand in MW (winter)

• Currently available generation capacity

At the end of 2006, power capacity in Spain stood at 33.000 MW, according to figures of the System Operator and the National Energy Commission. The breakdown of this power by technologies is as follows:

Technology	MW
Hydro	16.658
Nuclear	7.716
Coal	11.934
Fuel / gas	9.048
CCTG	16.376
CHP	5.937
Wind power	11.680
Small hydro	1.815
Others	1.875
TOTAL	83.039

Source: REE and CNE

Table 39. Available generation capacity

## 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 2006 on, already authorised combined cycle power plants comprise a total of 18.200 MW split over the following three-year period in the following way:

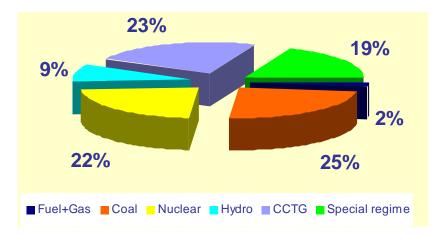
2007	2008	2009
7.920 MW	7.030 MW	3.250 MW

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 2006, mainland electrical generation derived from the following fuels/technologies, as per the percentages displayed in the chart:



Source: REE

Figure 24. 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 2006:

During 2006, variation in power capacity on mainland Spain was positive, yielding a figure of more than 5.000 MW. Approximately 3.100 MW of this increase was due to the start-up of combined cycle plants, and 1.600 MW arose from the installation of new wind power.

The increase in power by technologies is as follows:

Increases in power in 2006 (MW)			
Combined cycle	3.132		
Cogeneration	128		
Wind	1.600		
Mini hydroelectric	74		
Other	221		
Total	5.155		

Table 40. Increases in power in the year 2006.

## 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.

#### 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. These 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.

The National Energy Commission's Framework Report for 2006 addresses possible initiatives to be carried out to reinforce international interconnections, among those an increase in interconnection capacity with Portugal and France. Moreover, it is expected that congestions in the interconnection with Portugal will disappear in three years.

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.

. . . .

I) 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 automatisms" approved by Decision of 24 June 1999.
- P.O.-11.3 "Analysis and monitoring of the operation of system protection and automatisms", 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 2006 was 391.435 GWh, 4,3% higher than demand in 2005. The demand forecasts for 2007-2009 are the following:

	2007	2008	2009	Average increase [%]
TOTAL annual demand (GWh)	412.520	431.495	457.640	5,33%

Source: Planification of gas and electricity sectors 2002-2011. Revision 2005-2011

Table 41. 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 (m³)	Vaporisation capacity (Mm³(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
TOTAL	2.046.500	147,91

<sup>\*</sup> Reganosa plant started up in may of 2007.

Source: Enagás

Table 42. Capacity of the regasification plants

# B) Capacity of international connections by gas pipeline

Location	Transmission capacity (Mm³/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
NET ENTRIES TO THE SPANISH SYSTEM	42,71

Source: Enagás

Table 43. 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.

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

Table 44. Production of national gas fields

## Import investment for the next three years

No investments in new natural gas production fields are expected over the next three years.

The new projects for increasing entry capacity over the next three years are specified below. All of them are included in the Ministry of Industry planning document. Those in which construction is under way are indicated:

# A) Regasification plants

Transmission Operator	New infrastructures	Current new infrastructures state			
	2007				
	Huelva				
ENAGAS	Increase in emission capacity to 72 bar network to a final capacity of 11.83 bcm/year.				
Barcelona					
	6 <sup>th</sup> storage tank with 0.087 bcm capacity. Final capacity of 0.32 bcm.	In operation			
Sagunto					
Increase in emission capacity to 72 bar network to a final capacity of 8.76 bcm/year.		In project			
	Mugardos				
REGANOSA	New regasification plant with a emission capacity to 72 bar of 3.6 bcm and two storage tank with 0.087 capacity each one (0.16 of total storage capacity)	In operation			



Transmission Operator	New infrastructures	Current new infrastructures state	
	2008		
	Cartagena		
	4 <sup>th</sup> storage tank with 0.087 bcm capacity. Final capacity of 0.36 bcm.	In construction	
ENAGAS	Increase in emission capacity to 72 bar network to a final capacity of 11.83 bcm/year.	In construction	
	Barcelona regasication plant		
	Increase in emission capacity to 72 bar network to a final capacity of 11.83 bcm/year.	In operation	
	Bilbao		
BBG	3 <sup>th</sup> storage tank with 0.087 bcm capacity. Final capacity of 0.26 bcm.	In project	
Increase in emission capacity to 72 bar network to a final capacity of 10.51 bcm/year.		In project	
	2009		
	Barcelona regasification plant		
ENAGAS	7 <sup>th</sup> storage tank with 0.087 bcm capacity. Final capacity of 0.36 bcm.	In project	
	Sagunto regasification plant		
SAGGAS	3 <sup>th</sup> storage tank with 0.087 bcm capacity. Final capacity of 0.26 bcm.	In project	
	Increase in emission capacity to 72 bar network to a final capacity of 10.51 bcma	In project	
GASCAN	Gran Canaria regasification plant		
CAUCAIT	Initial dimension	In project	

Table 45. Developments of new regasification plants,

# B) Interconnections by gas pipeline

- <u>Capacity Increase of France Spain connection at Irún</u> (Sociedad de Gas de Euskadi). It is expected for 2007 the start up of the new Spanish Vergara-Irún pipeline which would allow an increase of Irun interconnection capacity. The final capacity of this interconnection is nor available and depends, as well, of French infrastructure developments.
- <u>Larrau connection (Enagas)</u> The increase in interconnection capacity via Larrau is associated with the construction of the Navarra compression station (formerly known as Lumbier), which according to its developer should be ready



on 31/12/2008. Transportation capacity via this interconnection could be increased to 4.5 bcm/year.

Medgaz connection According to the information at the CNE disposal, this project is expected to start up, commercially, at the end of 2008 or in early 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.

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

Several regulatory Authorities and Bodies take part in determining and supervising security of supply in different ways.

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 and the establishing of general criteria for setting up retail oil product supply installations, in which case it shall be on a mandatory and minimum enforceable basis for guaranteed supply of hydrocarbons. The document deals, *inter alia*, with the following areas:

- Demand forecast for oil and natural gas derivative products over the stipulated period (ten years).
- Development forecast of the basic 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 fuel transmission and storage installations, and liquefy natural gas reception and regasification plants. It assures gas system stability and regular and continuous gas supplies.
- Environmental protection criteria are established.

Furthermore, it is important to note, in relation with security of supply, proposal of the Royal Decree which modifies the Royal Decree 1716/2004<sup>9</sup>, which establishes for all agents incorporating gas to the system:

- The obligation of maintaining a minimum security stocks of 12 days the firm sales to final consumers all the year, but on October 20 days.
- The obligation of diversifying supplies, so that the proportion thereof deriving from a single country should not exceed 50%. Supplies used for the consumption of installations with alternative fuels, and under certain circumstances, are exempted from this requirement, so as not to hinder the entry of new agents and also taking into account global diversification conditions of all imports.

The Corporación de Reservas Estratégicas de Productos Petrolíferos (*Oil Products Strategic Reserves Corporation*), CORES, is responsible for the compliance with these conditions.

This Commission also 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, which it's not a substitute for the Government Planning, but a complement, 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;

Main legislation concerning security of supply establishes these obligations:

<sup>&</sup>lt;sup>9</sup> Actual legislation (Royal Decree 1716/2004) concerning security of supply establishes for agents that introduce gas into the system to supply final customers, 35 days stocks of firm it sales or consumption and a 60% diversification of the supplies coming from the main country that supplies the Spanish Gas Market.



- Stocks: 35 days of its firm sales or consumption
- Diversification: 60% of the supplies coming from the main country that supplies the Spanish Gas Market.
- Agents obliged to comply: companies that introduce gas into the system to supply final customers

Companies selling gas, need to book underground storage capacity to comply with the regulation regarding strategic reserves (35 days)

There is a new proposal of the Royal Decree which modifies the Royal Decree 1716/2004, regarding public service obligation in relation to strategic storage, which establishes for all agents incorporating gas to the system the obligation of maintaining a minimum security stocks.

According to that proposal of Royal Decree, all agents incorporating gas to the system are obligated to maintain a minimum strategic stock of 12 days the firm sales to final consumers at underground storage.

It also obligates all agents to maintain a minimum operative stock of 2 days the firm sales all the year, but on October 10 days. These stocks can be stored at underground storage, LNG tanks, ships and pumps.

In order to adjust offer to demand and face consumption peaks brought on by seasonal variations, interruptions in supply, etc., it is necessary to store large quantities of gas.

Gas, in these cases, is stored underground taking advantage of old deposits, or it is injected in deep water stratum or in cavities generated in salt formations. Enagás manages two underground stores: 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 Mm³(n)			Maximum Intake/Offtake Mm³(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	
TOTAL	2166	1415	3581	8,3	12,5	

Source: ENAGAS

Table 46.. Capacity of underground storages Serrablo and Gaviota.

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

New storage	Foreseen
capacity	starting date
Marismas (Fase I)	2005
Marismas (Fase II)	2009
Poseidón	2009
Gaviota	2009
Yela	2009
Castor	2009
Reus	2011

Source: CNE

Table 47. 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
LIVO taliks	capacity m3
HUELVA	460.00
BILBAO	300.000
SAGUNTO	300.000
MUGARDOS	300.000
TOTAL	1.727.000

Table 48. 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
TOTAL	39.000

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

#### Long-term gas supply contracts

In the Spanish market, supplying is a free activity carried out by companies that acquire natural gas for clients who consume natural gas.

Most of the supply 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 it is unknown the remaining duration of the long-term gas supply contracts. However, most of gas supply contracts are long-term.

Next figure illustrates the anticipated situation of the natural gas supply based on the acquired commitments, or in negotiation, according to the information facilitated by the agents who participate in the Spanish gas market.



GWh	2006	2007	2008	2009	2010
Compromised Supply Contract	445.825	478.168	475.586	547.457	547.529
Uncompromised Supply Contract	6.279	25.349	34.006	55.316	83.609
Total Supply	452.104	503.517	509.592	602.773	631.138

Table 50. 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 negotiated by traders, based on picked up clients, in competition with other agents in the international market.

<u>Incentives for new investment in exploration and production, storage, LNG and transport of gas.</u>

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 particular access regime is contemplated for any of the new infrastructures, except for the Medgaz that could have total or partial exemption for some years; for the others, access of third parties shall be regulated in the same way as for the existing infrastructures.

Future regasification plants in Canarias Islands will be able to be included in remunerative system singular investments, and also get funds FEDER.



# 6 PUBLIC SERVICE ISSUES [ARTICLE 3(9) ELECTRICITY AND 3(6) GAS]

In the electricity and gas sector, all consumers have the possibility to receive their supply in the regulated market, through a distributor, or in the liberalised market at the full rate established for each customer. Nonetheless, the Act 24/2005 includes the cancellation of high-voltage electricity supply rates as from 1 January 2010.

The tariff applied in the regulated <u>electricity</u> 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). They have been regulated by Royal Decree 1556/2005 for the first half of 2006 and Royal Decree 809/2006 for the second half of 2006

As regards the last resort supplier, at present the distributors are in charge of supplying customers in the regulated market.

The Order ITC/4101/2005, which establishes <u>natural gas</u> prices, meter rental and connection rights for consumers connected to networks with a supply pressure of equal to or less than 4 bars applicable from the 1 of January of 2006, set up the suppression of the following regulated tariffs:

- Regulates tariffs 1.1, 1.2 and 1.3. Regulates tariffs for the customers connected to a gas pipeline whose maximum design pressure is higher than 60 bars.
- ➤ Regulates tariffs 2.5 and 2.6. Regulates tariffs for consumers connected to a gas pipeline whose design pressure is higher than 4 bars and lower than or equal to 60 bars, with consumption higher than 100.000.000 kWh/year.
- > Regulates tariffs for industrial natural gas consumers with interruptibility.

The rest of consumers have the possibility of continuing to receive their supply in the regulated market, through a distributor at the relevant sale price.



The sale prices applied in the regulated market are updated every three months, in accordance with Order ITC/4101/2005, but this year reviews have not taken place.

As regards the last resort supplier, at present the distributors are in charge of supplying customers in the regulated market.

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

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

- Contribution of each primary energy source to the mix during the previous year.
- Reference to the complete published information about environmental impact, at least regarding CO2 emissions and radioactive waste.

## 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 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 industry.

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.
  - i) 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 or the Cities of Ceuta and Melilla, 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 electricity

In Spain, vulnerable electricity customers are not explicitly regulated. It is considered that the regulated tariff is enough to protect the whole of the customers.

## Appropriate treatment of vulnerable customers in gas

A new project of the Hydrocarbons Act will come into effect from July, which includes new aspects about vulnerable gas customers:

- Appoint a supplier of last resort for customers connected to the gas network.



- From January 1, 2008 there remains suppressed the actual tariff system of natural gas, there being established the tariffs of last resort in which the connected consumers will be able to take refuge, exclusively, pipes whose pressure is minor or equal to 4 bar, with independence of annual consumption.
- Creation of the Office of Supplier Switching.

There are no available data on the number of disconnections for non payment.

## Maintenance of end user price regulation in electricity

In the electricity sector, all consumers have the possibility of continuing to receive their supply in the regulated market, through a distributor and at the full rate established for each customer.

Nonetheless, the law 17/2007, dated 4<sup>th</sup> July, establishes the schedule of the suppression of the integral tariffs and the characteristics and principles for setting up the last resource tariff. In particular, the law 17/2007 establishes from 1 of January of 2009 the last resource tariffs and the cancellation of high voltage electricity tariffs. Also, it's established than, from 1<sup>st</sup> of January of 2010, the last resource tariff will be only applied to low voltage customers and, from 1 of January of 2011, to low voltage customer with contracted power lower to 50 kW.

Nevertheless the Royal Decree 871/2007 brings forward the cancellation of high-voltage electricity tariffs to 1<sup>st</sup> July 2008.

The full rates applied in the regulated 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).



Until the effectiveness of the last resort supplier, the distributors are in charge of supplying customers in the regulated market.

The following table shows the percentage of customers in each segment, both domestic and other (commercial and industrial)<sup>10</sup> who receive their supply in the regulated market.

Consumer Segments	2006
	% of customers in regulated market
Domestic	92,5%
Rest	88,6%

Table 51. Share of customers in the regulated electricity market

## Maintenance of end user price regulation in gas

In the new project Royal Decree of which establishes electricity prices for 2007, the supplier of last resort for customers connected to the gas network is the company supplier/trader associated with the distributor to whom the supply is connected. This situation affects 4 million consumers who will happen to the supplier of last resort, in case they do not choose before another supplier.

The distributor stops selling gas and your business is the extension of the net

The tariff of last resort is maximum price will be able to receive. The tariff of last resource will be unique in the whole Spanish territory without prejudice of his specialities for levels of pressure and volume of consumption.

The system of calculation of the mentioned tariff will add up the cost of the raw material, the tolls of access that correspond, the costs of marketing and the costs derived from the safety of supply and it shall establish a mechanism of auction that allows to fix the cost of

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<sup>&</sup>lt;sup>10</sup> Domestic consumers include customers subject to rates 2.0, 2.0 N and 1.0.



the raw material. They will be fixed so that they do not cause distortions of the competition on the market.

Article 79 of the project of the Hydrocarbons Act, following aspects shall be regulated through regulations covering:

- a) The types and conditions of supply to the consumers as well as the procedures of refusal, suspension or privation of the same one.
- b) The arrangements for verification and inspection of consumer reception facilities.
- c) The procedure and conditions of billing and collection of payment for the supplies and services rendered.
- d) The protection measures of the consumer that must be gathered in the contractual conditions for the supply of those consumers who for your volume of consumption or conditions of supply need a contractual specific treatment.
- e) Procedures of switching.
- f) Procedure of solving of the claims.

From the 1<sup>st</sup> of July of 2007, and in accordance to the Order ITC/3992/2006 and Order ITC/4101/2005, only the consumers connected to a gas pipeline whose maximum design pressure is lower than 4 bars have the possibility of continuing to receive their supply in the regulated market, through a distributor at the relevant sale price.

The Law 12/2007, dated 2<sup>nd</sup> July, establishes the characteristic and the principles for setting up the last resource tariff. From 1 of January of 2008, the last resource tariff will apply to consumers connected to a gas pipeline whose maximum design pressure is lower than 4 bars. The Law 12/2007 also establishes the customers that will still subject to last resource tariffs in the near future:

- From 1<sup>st</sup> of July of 2008: consumers connected to a gas pipeline whose maximum design pressure is lower than 4 bars and annual consumption less than 3 GWh
- From 1<sup>st</sup> of July of 2009: consumers connected to a gas pipeline whose maximum design pressure is lower than 4 bars and annual consumption less than 2 GWh



• From 1<sup>st</sup> of July of 2010: consumers connected to a gas pipeline whose maximum design pressure is lower than 4 bars and annual consumption less than 1 GWh

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).

Until the effectiveness of the last resort supplier, the 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>11</sup> who receive their supply in the regulated market.

Consumer Segments	2006
	% of customers in regulated market
Domestic	36,9%
Rest	41,5%

Table 52. Share of customers in the regulated gas market

## Activities of regulators in ensuring transparency

In the free market, the terms and condition in supply contracts are negotiated by the parts (consumer and marketer) and consequently they have a private and confidential character. Therefore, there're no actions undertaken by the regulator or other authorities to give transparency to these private contracts. In any case, if a consumer does not agree with the terms proposed by the marketer, he can look for other offers in the free market or can choose being supplied in the regulated market.

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<sup>&</sup>lt;sup>11</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.



In the regulated market, the supply contract content is defined in Royal Decree 1434/2002.

If the consumer does not agree with the contract terms, he can complain to the regulatory authority competent in the area where the supply would take place.

The Office for Switching Supplier, which is the independent gas and electricity watchdog, will be created by end 2007. It must be solely to carry out protecting and promoting the interests of all gas and electricity consumers. Distributors and trader take the total stakes in this company. It will guarantee the right of switching supplier for all consumers under proper conditions on transparency, objectivity and independence.