



## OUTLOOK OF THE SPANISH NATURAL GAS SECTOR IN 2009

### 1. DEMAND

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Provisional figures for 2009 show that total demand for natural gas in Spain has dropped to 402 Twh, 34.6 BCM (450 TWh in 2008). These figures, very close to those recorded in 2007, indicate a reduction of 10.5% over the previous year. To some extent, we could state that demand has moved back to its situation by the end of 2007.

It is well known that last year was tough for many sectors, among them, the energy sector and of course, the natural gas market. The most important reason to explain this is well known: the decrease in the economic activity has led to a decrease in industrial market (outstanding in building relate industries) and a lower demand of electricity from combined cycle power plants (on account of the drop of the electricity consumption, around 4.4%).

Approximately 40% of natural gas consumption in Spain was used by power plants (97% combined cycle power plants) and this figure follows an stable pattern (41.7% in 2008). By the end of 2009, 55 combined cycle power plant operated in Spain (one more than in 2008), reaching 22,000MW of power generation as a whole. As a result, electric generation in combined cycle power plants is the most used technology to generate electricity in Spain. 30% of the electricity consumed in Spain came from this source; nuclear production is the second one (20%), wind power is the third (13.7%) and coal in the last position with 12.8% of electricity produced in Spain.

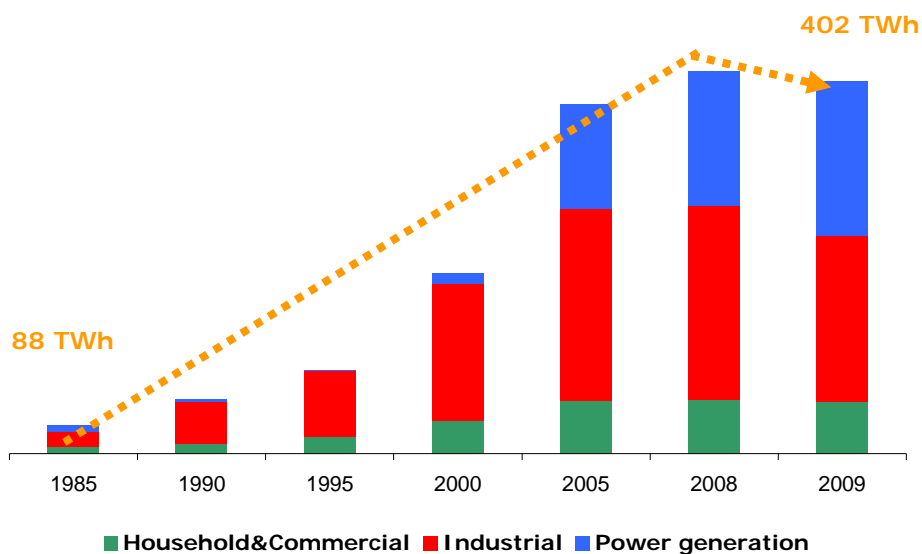
Other reasons explain a bigger reduction in the role of natural gas in the generation scene: the rise of electricity produced by renewables. Electricity produced by Hydraulics grew by 11.5% whereas wind power grew by 15.6%. Both sources generated 60 Twh of electricity, a 13.6% higher than the nuclear generation and



around 77% of the electricity produced with natural gas in combined cycle power plants.

As far as coal is concerned, its consumption in electric generation dropped one more year (only 33.8 TWh in 2009, 68TWh in 2007). The main reason is that its price is still too much influenced by the trend of oil, triggering its substitution as fuel in power generation (this situation was not followed by natural gas markets).

Focussing on natural gas market, natural gas consumed by combined cycles plants dropped by 14.2% and conventional consumption (commercial, households and industry) decreased by 7.9%. Although definitive data are not available yet, it is reasonable to estimate that commercial&household demand has risen and industrial demand has fallen; in fact, this pattern was followed during the three first quarters of 2009.



## 2. OFFER AND SUPPLY

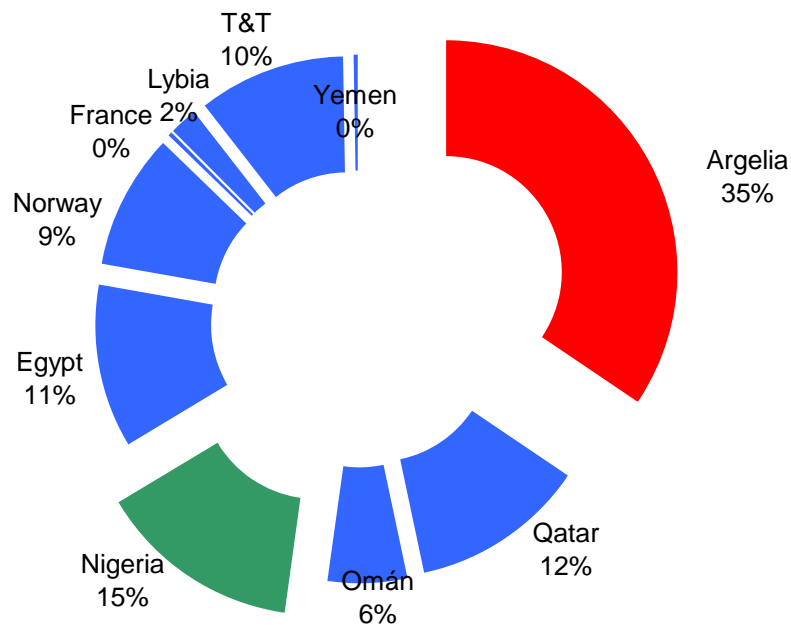
The Spanish production of natural gas is negligible due to our lack of fossil fuels, so almost all natural gas consumed in Spain has to be imported. As a result, natural gas imports felt by 10%, following the pattern of consumption.



The imports basket of the Spanish gas system keeps mostly the structure and shares of previous years, resulting in one of the most diversified countries in the World. 99.7% of the gas marketed in Spain came from imports from 10 countries, with Algeria standing out for another year with a share of 34% of the imports of the Spanish gas system. Nigeria (14%, 5 points lower than in 2008), Qatar (12%), Egypt (11%), Trinidad and Tobago (10%), Norway (9%, 2 points higher than the previous year) and 6% from Yemen, complete the group of the most important countries in the supply structure.

It is important to remark the beginning of supplies from Yemen; this country began its exports of LNG last year. As a result, the Spanish supply scheme has a new support.

74% of natural gas reached the national grid through LNG ships and the remaining 26% came via the international connections (Larrau, Tarifa and Badajoz). The shipments unloaded from LNG ships continued at high levels and kept our country among the most important LNG destinations in the world.





Finally, it is important to point out that exports to France and Portugal were 5.4 times the volume exported in 2008. Exports to France through Larrau interconnection were 4.4 times the exports during 2008 while exports through Irun were 7.1 times. This figures state the interest and capacity of shippers established in Spain to enlarge their business internationally.

All data stated above have been taken from provisional reports by SEDIGAS, from the 2009 Annual Report Advance by the Gas Technical Network Manager (ENAGAS) and from the previews for 2010 by the Electric Technical Network Manager (REE).

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### 3. INFRASTRUCTURE AND NEW DEVELOPMENTS

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In the last ten years, the Spanish TSO's have invested more than 10,000 million € in new infrastructures. During 2009 and in spite of the economic situation, this big effort continued in order to improve and to enlarge the facilities of the Spanish natural gas system, namely LNG terminals, pipelines, underground storages and compression stations.

As a significant development of the gas system, it is remarkable the commissioning of the pipeline that connects the Iberian peninsula with the Balearic Islands. Last September 23<sup>th</sup>, gas supply to Majorca began, integrating the Balearic Island into the peninsular gas network, enhancing the reliability of the gas supply. Moreover, a reduction in CO<sub>2</sub> emission into the atmosphere of around 225,000 tons per year is expected when natural gas fuelled power plants enter into operation.

Another important pipeline that became operational last year was the Lemona-Haro pipeline as well as the Haro and Navarra compression stations. These new facilities allow a higher capacity to import and export natural gas trough the Larrau international connection (up to 100 GWh per day for imports).

Last but not least, the MEDGAZ deepwater pipeline between Beni-Saf, in the Algerian coast, and Almería, in the Spanish coast, will become operative in the second half of the year. This is a crucial facility to reinforce and diversify the supply



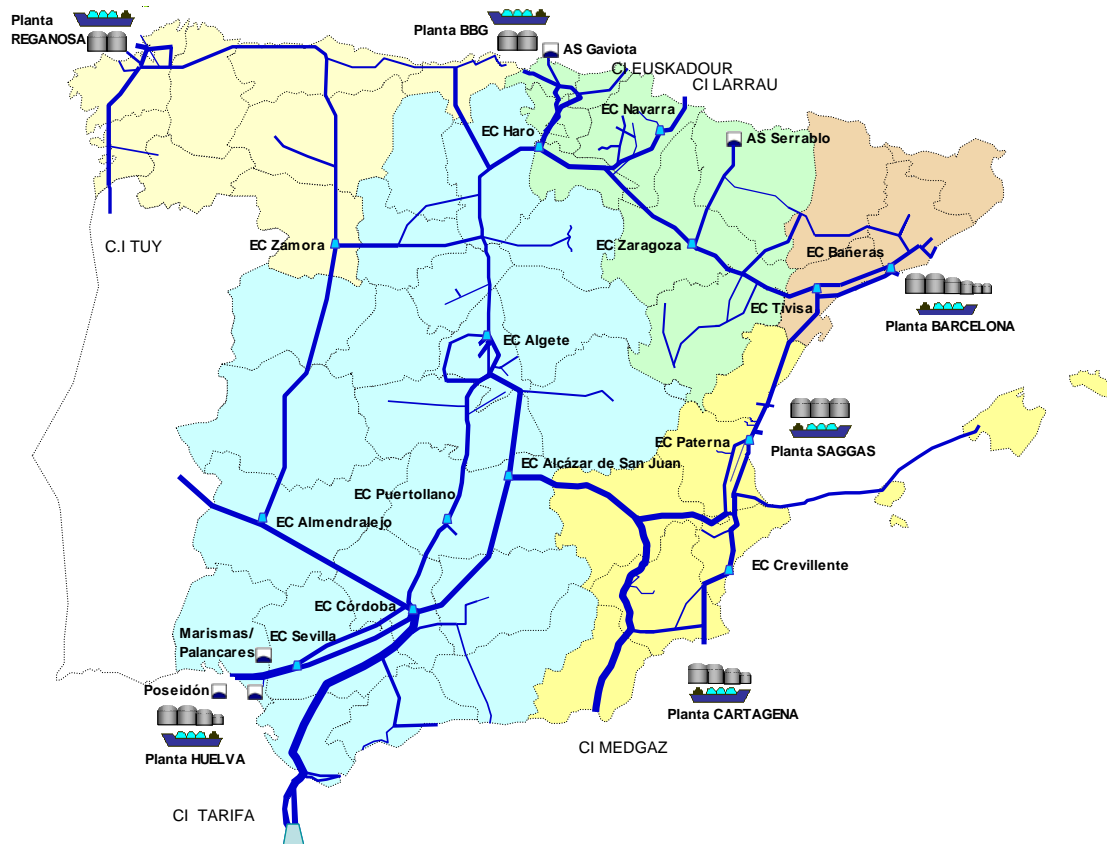
to Southern Europe. When operational, natural gas will be supplied directly from Algeria, without requiring transit through third countries. Moreover, it is a very cost-effective way of delivering natural gas to Southern Europe and the Iberian Peninsula could become a new European gas hub as long as interconnection capacity with France is enlarged.

After the REGANOSA LNG terminal became operative in November 2007, 6 LNG terminals are operative in the Spanish gas system. These plants amount a LNG storage capacity of 2.496.500 m<sup>3</sup> and an emission capacity of 6.863.500 m<sup>3</sup>/h.

The storage capacity in LNG terminals has increased in 150.000 m<sup>3</sup> since the commissioning of the third LNG tank in the Sagunto plant. Barcelona terminal was upgraded with additional emission capacity reaching 1.950.000m<sup>3</sup>/h.

As a significant development of the gas system for next years, it is worth pointing out that ENAGAS was awarded the administrative license to build up a new LNG terminal located in El Musel (Asturias). Moreover, two new LNG plants are planned in the Canary Islands (Tenerife and Las Palmas de Gran Canaria).

The length of the gas network has reached 75,000 km and towns with service of natural gas are around 1.475.



Infrastructure in operation. Source: ENAGAS

As shown in the image above, other important infrastructures planned for the next years are basically:

- Axis from the North-West coast to the peninsula centre.
- New pipeline parallel to the existing Ebro axis to duplicate the whole transmission capacity in this axis.
- Huelva-Almendralejo pipeline, to complete the “Ruta de la Plata” pipeline, as a new axis to connect the existing regasification plan of Huelva to the planned one in El Musel (North coast).

Once this new infrastructures are built, the Spanish gas network will be shaped by three basic axis South-North (Ruta de la Plata, Central Axis and Levante Axis), interconnected among them thanks to other three West-East axis (Ebro axis,



Galicia axis and transversal axis Alcázar-Montesa). All of them will be part of a grid that will enable the network to supply the needs of the peninsula centre from any entry point, reinforcing the flexibility of the system.

With regard to underground storages, Serrablo and Gaviota are the only underground storages currently under operation. Other two storages will enter into operation in the next few years: Yela and Castor. Yela (ENAGAS) underground storage was authorised last year and its construction works began in May 2008; it will be fully operational in June 2012.

Escal UGS will be awarded in the coming three months the administrative license to build the underground storage named "Castor". This facility located in Vinaroz (east coast of Spain), with a capacity of 1.9 bcm, will be the biggest underground storage in the Iberian Peninsula. Finally, it is important to point out that Marismas underground storage concession is expected to be awarded soon.

#### 4. RELEVANT LEGISLATIVE ISSUES

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Last summer, Directive 2009/73/EC, concerning common rules for the natural gas internal market and repealing Directive 2003/55/EC, was passed. This new Directive, which continues with the ideas of the Directive 2003/55/EC, aims at creating a natural gas market at European level and will imply some changes in the Spanish legislative framework in the next few months.

On the other hand, the most important legislative issues at a national level approved during 2009 were:

March, 9th, Instruction from the Energy Policy and Mining Director General which establishes some rules for the auction in order to allocate the surplus capacity of the underground storages, for the period between April 1<sup>st</sup> 2009 and March 31<sup>th</sup> 2010. This action allocated 4,257 Gwh (three times the amount allocated for the previous period).



April 2009, 2nd, Order ITC/863/2009, establishing the action procedure in order to buy natural gas, whose price will be the reference to set the so called "last resource tariff".

Royal Decree-Law 6/2009, April 30<sup>th</sup>, establishing measures in the energy sector and creating the social bonus. Among other important measures in order to make energy cost-affordable for people with economic difficulties, it establishes that all pipelines belonging to the basic grid will be allocated to the technical manager.

June 2009, 26<sup>th</sup>: Order ITC/1724/2009, revising tariffs and fees related to third-parties access to the natural gas facilities.

## 5. REGIONAL INITIATIVES

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The Russia-Ukraine crisis which affected many countries of the EU, triggered a big interest concerning the security of supply of member states. As a result, the development of the enlargement and improvement of the interconnection capacity between France and Spain was pointed out as a priority in the framework of the regional initiatives (South Gas Regional Initiative) in order to integrate the Spanish, Portuguese and French markets in a bigger European market.

Because of this, an Open Season Procedure was launch in order to asses market's interest and allocate future gas interconnection capacity between Spain and France and inside France. Capacity would be available from 2013 and 2015. This process ended last September, 15<sup>th</sup> when the results of the Open Season 2013 (Western Corridor) to develop Larrau and Irun interconnection as well as then connection between GRTgaz South and TIGF were published. This process generated a big interest in the market as the main figures show (demand was 200% of capacity offered for the connections ES-TIGF). As a result, the construction of the Larrau interconnection was decided whereas an agreement for the Irun interconnection hasn't been reached for the moment.



Moreover, as indicated in the "Procedures for the commercialisation of existing and committed capacity at the cross border point of Larrau between France and Spain", ENAGAS and TIGF launched the Open subscription period for short-term capacity for the period between April 1<sup>st</sup>, 2010 and March 31<sup>st</sup>, 2011. 100% of the capacity offered was contracted.

On the other hand, and in order to reinforce the interconnection capacity with Portugal, a big effort is being done to develop MIBGAS. Last January 2009, it was decided to build a new high pressure pipeline to connect the North-East area of Portugal with Northern Spain.

## 6. MARKET OPENING

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Hydrocarbons Act 34/98 meant the beginning of the liberalization of the natural gas sector by means of the progressive removal of regulated tariffs for end-users. As a result, all Spanish customers are eligible since January 1<sup>st</sup> 2003. From then onwards, the Government has gone on with the trend to develop the TPA market with the progressive removal of regulated tariffs for end-users. On July 1<sup>st</sup> 2008, the last existing tariffs were removed so that nowadays the Spanish Gas Market is fully liberalized. To protect the smaller consumers a "last resource" tariff has been created. The "last resource" tariff is the maximum price that the last resource suppliers can charge small customers.

As from July 1<sup>st</sup> 2008, the consumers connected to gas pipelines with a pressure equal to or less than 4 bar and an annual consumption of less than 3 GWh can apply for this tariff (14% of the market). From 1 July 2009, the limit was reduced to 2 GWh and, this year to 1 GWh, according to temporary provision five of Act 12/2007, which modifies the Hydrocarbons Act.

Due to the liberalization process formerly described and in order to protect consumer's rights and to avoid barriers to competence, Hydrocarbons Act 12/2007 created the Bureau for supplier exchanges. On August 2008, the Secretary of Energy authorised this Bureau to begin to work, aiming at overseeing the supplier



exchanges in accordance with the principles of transparency, objectivity and independence.