



# OVERVIEW OF THE SPANISH NATURAL GAS MARKET IN YEAR 2007

## CONSUMPTION

- In year 2007 natural gas demand in Spain reached a total consumption figure of 408 298 GWh (391 435 in 2006) with a growth rate of 4.3%, similar to the growth of 2006, and very different from the growth pace of past years (17.6% growth in 2005, 16% in 2004 and 13.3% in 2003).
- The highly rainy and windy first six months of the year led to a 37% and a 22% increase in wind-power and hydraulic generation which turned into a low consumption of natural gas in this period, however, a change in this trend during the second semester of the year, together with a colder winter in comparison with 2006, recovered greatly the demand during the last months of the year.
- 362 607 GWh were sold in the liberalized market and only the 11.9% was sold in the market with regulated tariff (45 691 GWh), 17% less than previous year because of the abolition of the remaining tariffs for industrial users in July 2007.
- Like 2006, in the year 2007 the growth of gas consumption was driven by power plants, that purchased 142 012 GWh, a 5.5% more than previous year (134 664 GWh in 2006). Power plants raised its share in the total consumption from 30.5% in 2006 to 32.73% in 2007, while conventional consumption (commercial, households and industry) only had a 3.7% growth.
- The increase in consumption for power generation was due to the put into service of 14 new gas fired units (combined-cycle) with an average power of 400 MWh power each. The year 2007 ended with 54 operational units and a installed power capacity of 22 900 MW, that produced the 25.2% of the Spanish electricity and for that reason natural gas has become the second fuel for power generation plants, after coal with a 26.5% share.
- First estimations of 2007 shows a 4.7% increase in the number of customers, reaching a figure of nearly 6 780 000.

## INFRASTRUCTURE & BUSINESS DEVELOPMENT

- In year 2007 a new LNG terminal, located in the town of Ferrol, in the North-west coast of Spain, became operational. It includes two 150 000 m<sup>3</sup> LNG tanks and an emission capacity worth of 412.000 m<sup>3</sup>/h. It is owned by two power companies: ENDESA and UNION FENOSA (with a 21% share each), the regional investor Tojeiro Group 18% and the rest belongs to the regional government (10%), Sonatrach (10%) and several banks.



This additional 300 000 m<sup>3</sup> storage increases by a 16% the available LNG storage capacity up to 1 896 500 m<sup>3</sup>.

- Also existing Huelva terminal was upgraded with additional emission capacity of 150 000 m<sup>3</sup>/h, and 2007 finished with a total emission of the seven operational terminals of 6 212 800 m<sup>3</sup>/h, 11% more than previous year.
- Important investments in repowering six compression stations were carried throughout the year.
- During 2007 more than 600 km of new high pressure gas pipes were put into service, 264 Km belong to the so-called cross axis, which connect the peninsula centre with the East coast. Another important investment was the 54 Km gas pipe "Falces-Irurzun" intended to reinforce the supply facilities to the town of Pamplona.

The total length of the network have reached 62 500 km and the municipalities with service of natural or manufactured gas are already close to 1 290.

- All this new infrastructures increased the safety margin of the gas network, which had an average use rate in 2007 of 58%, but that in the day of peak demand it raised up to 86%. This wide safety margin allowed a continuous supply without disruption throughout the year, and it was not needed to use interruptible contracts at all.
- In year 2007, ENAGAS has been awarded with the administrative licence to exploit the future subterranean storage of "Yela", with an expected capacity of 1 025 million m<sup>3</sup> and a maximum emission capacity of 15 million m<sup>3</sup>/day. The storage is located in the centre of the country, at a deep of 2 300 m, and it will need an investment of 184 million € in the facility and 216 million in the cushion gas. Also in 2007 continued the works to double the storage capacity of "Gaviota", a off-shore depleted field that will increase its capacity from 779 to 1 558 million m<sup>3</sup>.
- Other projects currently under development are the "Castor" and "Poseidon" projects, both are off-shore storages in the Mediterranean coast (one close to the town of Valencia and another next to Cadiz) and they are depleted oil and gas fields respectively. Other projects currently under development are the depleted gas field known as "Marismas" (600 million m<sup>3</sup>) in the South region and Reus, and an aquifer deposit close to the town of Tarragona ("Reus").

## **MARKET OPENING**

- All Spanish customers (including residential sector) are eligible since January 1st 2003, in accordance with Royal Decree 6/2000. This regulation set the liberalization calendar and it gradually lowers the threshold to become eligible customer: From three million m<sup>3</sup> in August 2000, one million in January 2002 and fully aperture in January 1st 2003.
- This calendar was followed by a set of regulatory measures: The core is Royal Decree 949/2001 that established the basics rights and requirements for TPA access and set the economic framework for all markets players, including a TPA tariff. The other milestone was the Royal Decree 1434/2002, which regulated the activities of transmission, distribution and supply of natural gas.



- The effects of all these regulatory measures, complemented with several reductions in the level of TPA tariffs have led to an impressive growth of the market share of new shippers and significant discounts in the price paid for final consumers.
- Along 2007 the Ministry has gone on with the trend to develop the TPA market with the progressive removal of regulated tariffs for end-users, and on 1st July, the remaining medium pressure tariffs (supply pressure between 4-60 bar) were removed.

## **SUPPLIES**

- Total natural gas imports (LNG + NG) in 2007 has increased by 0,48% amounting to 409.620 GWh (407.660 GWh in 2006).
- During year 2007, Algeria with 139 216 GWh continued as the main supplier of natural gas to Spain with 34% of total imports, similar figure of year 2006, although its weight in the imports basket has decreased comparing it to years 2004 and 2005 with 51% and 43,3% respectively.
- Nigeria is the second supplier of Spain after Algeria, LNG from this country has risen by 16% (96 250GWh in year 2007), being his weight in the imports basket 23.5%.
- Other suppliers are Qatar, Egypt, Trinidad & Tobago and Libya.

## **REGULATORY POLICIES**

The main regulations approved during 2007 are the following ones:

- March 9<sup>th</sup>, Instruction of the Secretary of Energy setting the percentages of allocation for the subterranean storage capacity.
- April 12<sup>th</sup>, Instruction of the Secretary of Energy establishing the auction procedure for the procurement of natural gas for the operation and minimum filling level of the transport / storage / LNG Terminal facilities.
- June 25<sup>th</sup>, Instruction of the General Secretary of Energy, that establishes the procedure for the provision of consumers qualified for the “last resource supply”.
- July 2<sup>nd</sup>, Law 12/2007, which modifies Law 34/1998, of the Hydrocarbon Sector, with the purpose of adapt it to the Directive 2003/55/CE of the European Parliament and the Council, of 26 of June of 2003.
- July 27<sup>th</sup>, Decree 1068/2007, establishing the basic principles for the “last resource” supply which will replace the regulated tariff in July 2008.
- July 30<sup>th</sup>, Order ITC/2309/2007, establishing the procedure to transfer customers from the regulated tariff to the last resource scheme.



- December 4th, Instruction of the Energy Director which set the annual “Winter Plan”, that includes mandatory provisions for all shippers, in order to reinforce the safety of supply: like a minimum entry flow in the Spain-France connection of Larrau, minimum stock levels in LNG terminals, and restrains in the use of subterranean storages in order to build a stock for the cold spells.
- December 28<sup>th</sup>, Order ITC/3862/2007, that establishes the allocation procedure for the underground storage, and creates a secondary capacity market.
- December 28<sup>th</sup>, Order ITC/3861/2007, that establish the tariff of last resource for the natural gas
- December 28<sup>th</sup>, Order ITC/3863/2007, that set the TPA tariff for 2008 and update certain aspects relative to the revenue regimen of the regulated activities of the natural gas.

### **SPANISH NATURAL GAS CONSUMPTION**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007 (*)
HOUSEHOLD-COMMERCIAL	21 648	26 488	31 979	34 253	40 183	42 855	47 300	51 483	55 856	51 494	53 533
INDUSTRIAL	93 938	111 309	128 825	144 993	152 933	167 006	181 914	196 230	202 278	199 167	207 053
RAW MATERIAL FOR FERTILIZER	6 825	6 807	6 103	6 130	6 087	5 752	6 086	5 687	6 199	5 698	5 700
POWER PLANTS	20 425	7 206	7 673	10 378	12 730	27 375	40 045	66 092	111 320	134 664	142 012
<b>TOTAL</b>	<b>142 836</b>	<b>151 810</b>	<b>174 580</b>	<b>195 754</b>	<b>211 933</b>	<b>243 525</b>	<b>275 345</b>	<b>319 492</b>	<b>375 653</b>	<b>391 524</b>	<b>408 298</b>

Unit: GWh (\*) Provisional

### **TOTAL NUMBER OF NATURAL GAS CUSTOMERS**

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007 (*)
3 219 280	3 492 660	3 845 653	4 203 385	4 606 335	4 935 784	5 305 297	5 661 057	6 041 207	6 476 779	6 780 000

(\*) Provisional

### **SPANISH NATURAL GAS SUPPLIES**



IMPORTS	2000	2001	2002	2003	2004	2005	2006	2007 (*)
ALGERIA LNG	48 273	55 773	68 422	84 732	75 364	59 074	31.762	43.120
ALGERIA NG	72 009	62 587	74 634	74 329	87 664	110 113	100.042	96.096
LIBYA LNG	9 292	9 463	7 100	8 442	7 765	10 641	7.914	9.199
NORWAY NG	26 864	26 841	26 433	26 640	25 884	24 723	23.768	26.176
QATAR LNG	3 457	8 148	24 434	22 340	44 483	54 355	62.602	53.588
U.A.E. LNG	2 758	1 989	4 510	4 394	3 672	2 759	-	-
TRINIDAD Y TOBAGO	10 096	5 470	5 309	977	-	4 532	37.255	25.857
NIGERIA LNG	20 966	18 858	18 695	46 345	56 299	61 279	83.161	96.250
AUSTRALIA LNG	-	-	487	892	-	-	-	-
OMAN LNG	-	11 967	12 602	6 450	14 807	19 824	9.675	5.648
EGYPT LNG	-	-	-	-	-	39 545	50.468	49.249
OTHERS LNG	4 274	2 676	2 061	139	912	3 041	-	-
OTHERS NG	-	-	-	-	1 177	921	1.013	4.437
<b>TOTAL IMPORTED</b>	<b>197 989</b>	<b>203 772</b>	<b>244 687</b>	<b>275 680</b>	<b>318 027</b>	<b>390 807</b>	<b>407.660</b>	<b>409.620</b>
<b>TOTAL LNG</b>	<b>99 116</b>	<b>114 344</b>	<b>143 620</b>	<b>174 711</b>	<b>203 302</b>	<b>255 050</b>	<b>282.837</b>	<b>282.911</b>
<b>TOTAL NG</b>	<b>98 873</b>	<b>89 428</b>	<b>101 067</b>	<b>100 969</b>	<b>114 725</b>	<b>135 757</b>	<b>124.823</b>	<b>126.708</b>

Unit: GWh (\*) From November 2005 to October 2006

**Regulated vs liberalized market**

