

20 March 2013

**Energy Consumption Survey 2011**  
*Final data*

**Industrial companies energy consumption reaches 11,337 million euros in 2011, 17.8% higher than in 2009**

**Consumption of electricity represents 51.7% of the total energy consumption**

Industrial energy consumption reached 11,337 million euros in 2011. This item of data represented a 17.1% increase as compared with that registered in 2009, the last year that this survey was conducted.

The main energy products used by industrial companies were electricity (54.2% of the total), gas (27%) and petroleum products (13.7%).

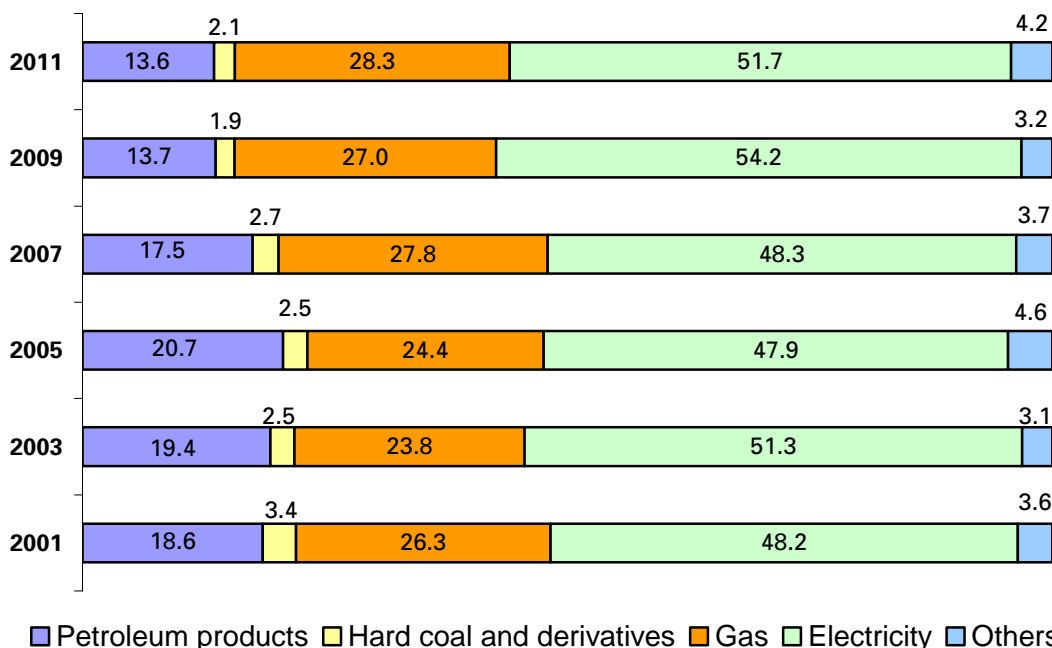
**Distribution of industry energy consumption. Year 2011**

Type of product	Consume (thousands)	% over the total	% Variation 11/ 09
Hard coal and derivatives	243,395	2.1	29.6
Diesel	930,618	8.2	7.1
Heavy fuel oil	430,242	3.8	34.1
Other petroleum products	178,538	1.6	26.9
Gas	3,213,726	28.3	23.1
Electricity	5,860,467	51.7	11.7
Other energy consumption	480,432	4.2	56.2
<b>Total</b>	<b>11,337,418</b>	<b>100.0</b>	<b>17.1</b>

The main energy products used by the industrial companies were electricity (51.7% of the total), gas (28.3%) and petroleum products (13.6%).

Since 2001, when this survey was first conducted, electricity has always been the main energy product considering consumption, with percentages standing between 48% and 54% of the total.

Percentage distribution of energy consumption by type of energy, years 2001-2011



Results by activity group

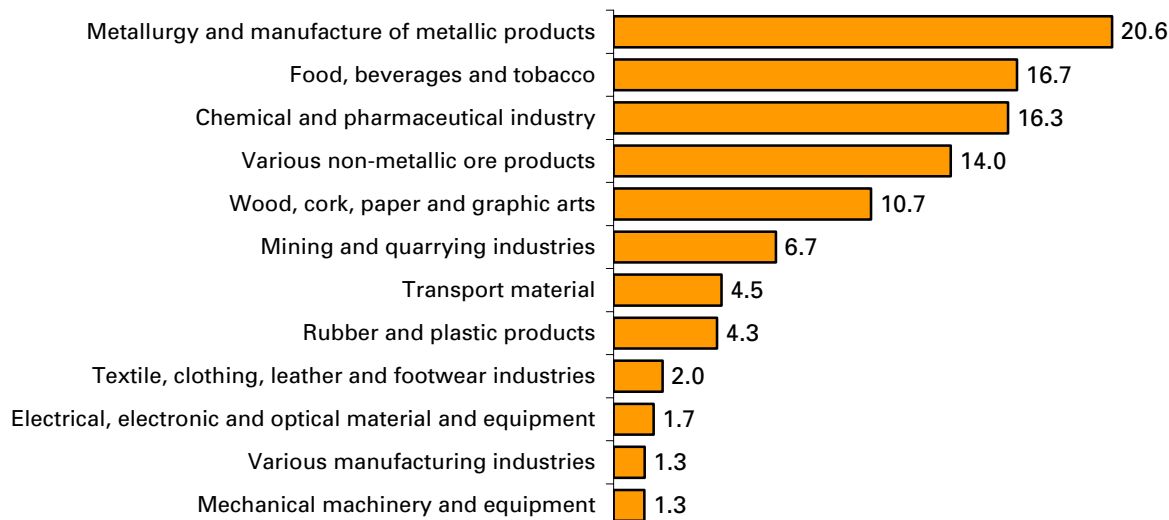
The branches of activity with the greatest energy consumption between 2009 and 2011 were *Mining and quarrying industries* (57.7%) and *Chemical and pharmaceutical industry* (28.5%)

Performance of the energy consumption by groups of activity. Year 2011

Groups by activity	Consumption	% Variation 11/09
Mining and quarrying industries	762,101	57.7
Chemical and pharmaceutical industry	1,851,265	28.5
Wood, cork, paper and graphic arts	1,207,752	17.6
Metallurgy and manufacture of metallic products, except machinery and equipment	2,340,455	14.6
Food, beverages and tobacco	1,893,803	13.9
Transport material	506,823	13.8
Mechanical machinery and equipment	145,021	12.0
Various non-metallic ore products	1,581,803	8.7
Rubber and plastic products	485,667	6.6
Textile, clothing, leather and footwear industries	229,994	5.8
Electrical, electronic and optical material and equipment	187,337	2.9
Various manufacturing industries, repair and installation of machinery and equipment	145,398	2.9
Total	11,337,418	17.1

The activity groups with the greatest energy consumption in 2011 were *Metallurgy and manufacture of metallic products, except machinery and equipment* (with 20.6% of the total), *Food, beverages and tobacco* (16.7%) and *Chemical and pharmaceutical industry*(16.3%)

### Percentage distribution of energy consumption by activity group



By use of the different types of fuels, worth noting was the large share of electricity registered by the groups *Rubber and plastic products* (78.9% of the group total), *Electrical, electronic and optical material and equipment* (76.0%) and *Transport material* (70.8%).

Use of gas represented 39.8% in the *Extractive industry* and 39.1% in *Various non-metallic ore products*, whereas consumption of petroleum products represented 33.1% in *Various manufacturing industries*.

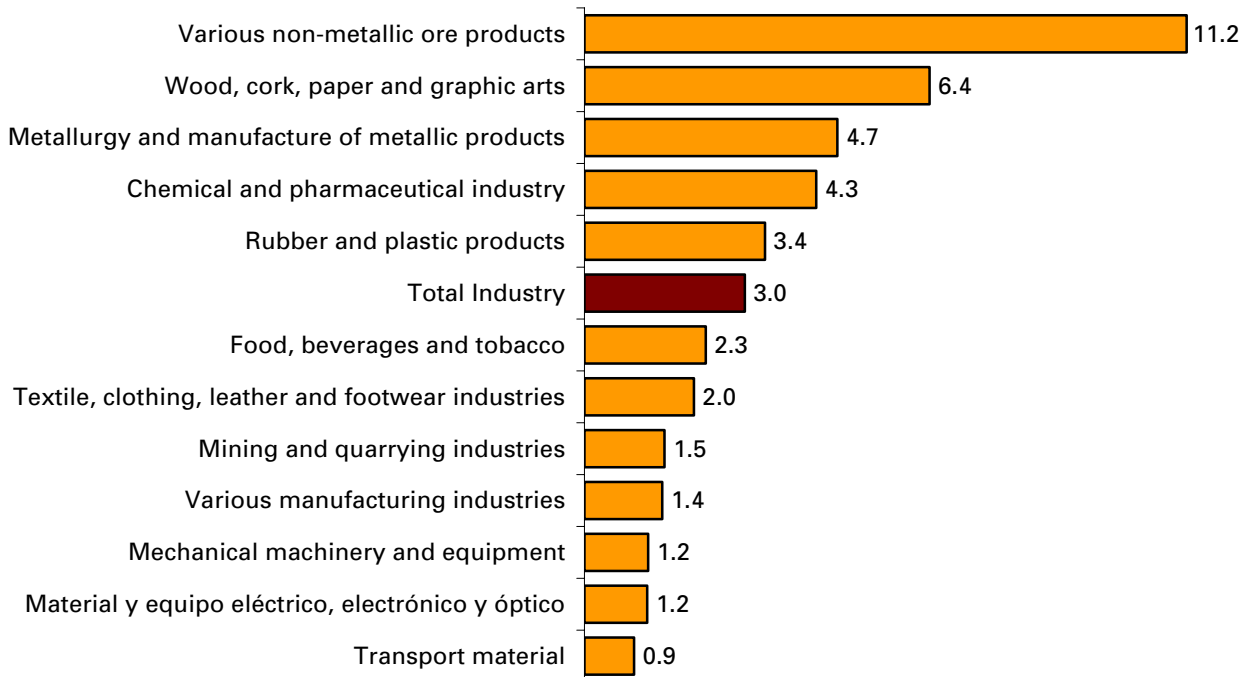
### Percentage distribution by types of energy and groups of activity. Year 2011

Groups of activity	Hard coal and derivatives	Petroleum products	Gas	Electricity	Other
Mining and quarrying industries	0.2	20.1	39.8	33.7	6.2
Food, beverages and tobacco	0.1	20.1	25.3	51.1	3.3
Textile, clothing, leather and footwear industries	0.0	10.5	28.5	59.5	1.4
Wood, cork, paper and graphic arts	0.1	9.4	34.2	49.6	6.7
Chemical and pharmaceutical industry	1.4	5.9	36.6	44.3	11.7
Rubber and plastic products	0.0	5.3	15.4	78.9	0.5
Various non-metallic ore products	10.0	16.0	39.1	34.0	0.9
Metallurgy and manufacture of metallic products	2.3	14.6	18.2	63.4	1.6
Electrical, electronic and optical material and equipment	0.2	11.0	11.3	76.0	1.6
Mechanical machinery and equipment	0.0	23.8	14.5	61.0	0.7
Transport material	0.0	6.6	20.9	70.8	1.6
Various manufacturing industries	0.0	33.1	6.5	59.8	0.6
<b>Total</b>	<b>2.1</b>	<b>13.6</b>	<b>28.3</b>	<b>51.7</b>	<b>4.2</b>

The percentage represented by the energetic consumption over the total acquisitions of goods and services (acquisitions, work by other companies and external services) for the

total was 3.0%. The group with more importance was *Various non-metallic ore products*, with 11.2%.

**Importance of the energy consumption over the total acquisition of goods and services by groups of activity (in percentage)**



**Energy consumption by activity sector**

The Energy Consumption Survey provides a break-down of data for 96 activity sectors, thereby enabling an in-depth study of the industrial reality, providing information regarding which are the most significant sectors in consumption of the different types of fuel.

In the following chart are represented the 10 sectors with the highest energy consumption that represent 50% of the total. Thus, consumption of *Manufacture of basic chemical products* with 12.1% of the total for the sector.

**The 10 sectors with the highest energy consumption**

Activity sector	Consumption	% over the total
Manufacture of basic chemical products	1,367,846	12.1
Manufacture of basic products in iron, steel and ferro-alloys	959,836	8.5
Manufacture of jewellery, costume jewellery and the like	689,801	6.1
Manufacture of paper and cardboard articles	650,602	5.7
Petroleum and gas products	446,001	3.9
Manufacture of ceramic products used for construction	440,661	3.9
Manufacture of concrete, cement and plaster	401,383	3.5
Manufacture of plastic products	368,610	3.3
Meat industry	361,908	3.2
Manufacture of glass and glass products	317,584	2.8

**Hard coal and derivative** consumption were specially important in the *Manufacture of elements made of concrete, cement and plaster* that registered 36.4% of the total for the sector in 2011.

#### **The 10 sectors with the highest percentage of use of hard coal**

Activity sector	Hard coal and derivatives
Manufacture of cement, lime and plaster	36.4
Casting of metals	8.7
Manufacture of ceramic products except those used for construction	4.2
Manufacture of precious metals and other non ferrous metals	3.3
Manufacture of other transport material n.e.c.	3.3
Manufacture of basic chemical products	1.9
Manufacture of glass and glass products	1.7
Manufacture of domestic apparel	1.5
Manufacture of basic products in iron, steel and ferro-alloys	1.5
Sugar, coffee, tea and infusions and confectionery	1.4

**Electricity** consumption represented a very significant part of the total for a great number of industrial sectors, mainly in the *Manufacture of consumer electronics and assembled printed circuits* (with 93.6% of the total for the sector) and *Manufacture of computers and peripherals* (89.6%).

#### **The 10 sectors with the highest percentage of other energy consumption**

Activity sector	Electricidad
Manufacture of electronic components and assembled printed circuits	93.6
Manufacture of computers and peripherals	89.6
Manufacture of medical and dental instruments and supplies	88.2
Manufacture of consumer electronics	86.6
Manufacture of jewellery, costume jewellery and the like	84.9
Preparation and spinning of textile fibres	84.9
Manufacture of cables and cable devices	81.5
Aircraft and spacecraft construction and combat militar vehicles	80.9
Manufacture of lamps and other illuminating electronic devices	80.8
Manufacture of musical instruments Various other manufacturing industries	80.5

The sectors with the highest percentage of use of **petroleum products** were *Installation of other electrical material and equipment* (with 65.3% of the total) and *Manufacture of elements made of concrete, cement and plaster* (61.2%).

#### **The 10 sectors with the highest percentage of use of petroleum products**

Activity sector	Petroleum products
Installation of other electrical material and equipment	65.3
Manufacture of elements made of concrete, cement and plaster	61.2
Sawmilling and planing of wood	56.3
Repair of metallic products, machinery and equipment	55.7
Stone cutting, working and finishing	52.5
Manufacture of wooden containers and packaging	50.3
Extraction of rocks and metallic ores	47.4
Manufacture of agricultural and forestry machinery	44.7
Manufacture of tanks, reservoirs and containers of metal	42.8
Manufacture of builders' metal carpentry and joinery	40.1

Use of **gas** (natural and manufactured) was of great significance in the sectors *Manufacture of ceramic products for construction* (with 70.2% of the total) and *Petroleum and natural gas industries* (61.9%).

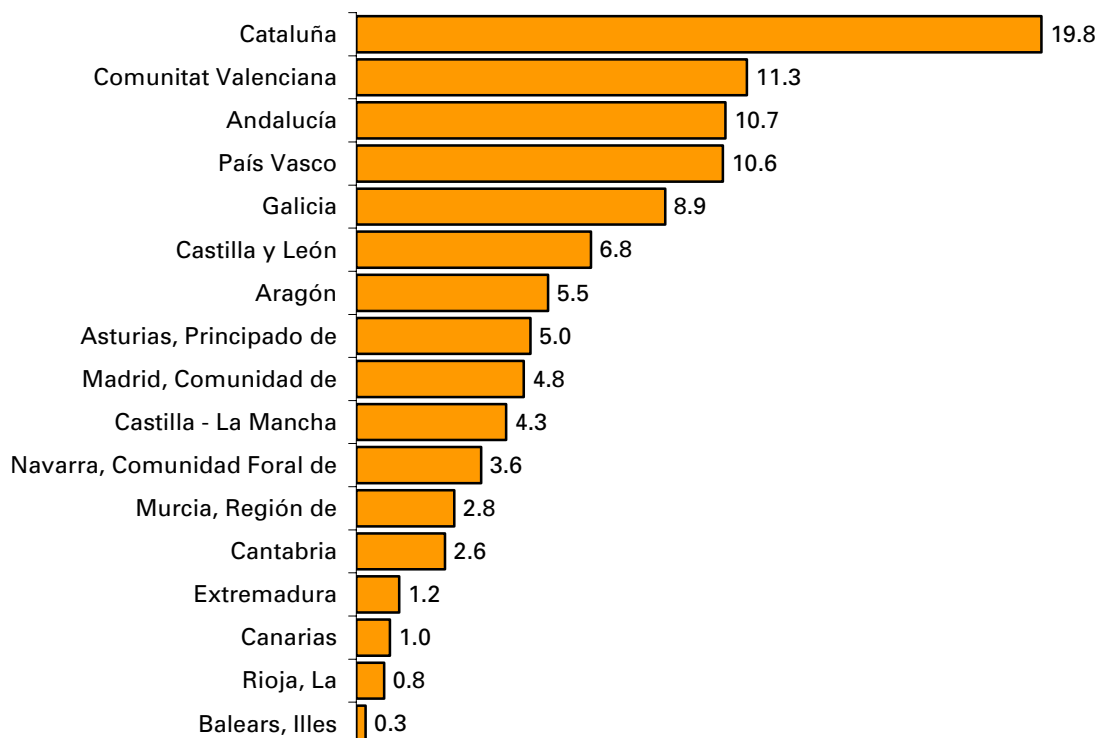
### The 10 sectors with the highest percentage of use of gas

Activity sector	Gas
Manufacture of ceramic products for construction	70.2
Petroleum and natural gas industries	61.9
Textile finishings	59.4
Sugar, coffee, tea and infusions and confectionery	56.4
Manufacture of ceramic products except those destined to construction	56.4
Manufacture of glass and glass products	52.1
Paints, varnishes, printing ink and mastics	51.9
Manufacture of other chemical products	44.6
Manufacture of pulp, paper and cardboard	44.4
Manufacture of abrasive products and non-metallic mineral products n.e.c.	44.2

### Energy consumption by Autonomous Community

The Autonomous Communities with the greatest share in overall energy consumption were Cataluña (19.8% of the total) and Comunitat Valenciana (11.3%). In turn, Illes Balears (with 0.3%) and La Rioja (0.8%) were the ones with the least weight in overall energy consumption.

### Percentage distribution of energy consumption by Autonomous Community



**Distribución porcentual por tipos de energía y comunidad autónoma. Año 2011**

Comunidad autónoma	Carbón y derivados	Productos petrolíferos	Gas	Electricidad	Otros	Total consumos
Andalucía	2.2	17.5	25.5	46.0	8.9	1,208,677
Aragón	1.7	9.7	40.8	46.3	1.4	627,703
Asturias, Principado de	2.8	21.6	16.5	55.4	3.8	570,057
Balears, Illes	6.7	24.3	19.1	48.8	1.2	30,206
Canarias	0.6	36.0	17.1	42.6	3.7	109,732
Cantabria	4.5	8.3	19.8	58.3	9.1	290,250
Castilla y León	2.2	14.7	32.6	47.0	3.5	767,928
Castilla - La Mancha	2.0	17.0	26.8	50.3	3.9	490,468
Cataluña	2.5	8.9	28.4	55.8	4.4	2,242,979
Comunitat Valenciana	1.2	10.5	41.9	42.6	3.8	1,279,076
Extremadura	3.6	16.7	26.3	52.4	1.1	140,078
Galicia	2.2	29.4	10.0	55.8	2.6	1,011,035
Madrid, Comunidad de	2.2	12.4	20.7	62.6	2.1	548,117
Murcia, Región de	0.4	11.5	24.0	48.3	15.7	320,662
Navarra, Comunidad Foral de	4.7	8.3	32.6	50.4	4.0	409,170
País Vasco	1.5	5.4	36.1	56.1	1.0	1,200,472
Rioja, La	0.3	21.1	24.5	52.0	2.1	90,807
Total nacional	2.1	13.6	28.3	51.7	4.2	11,337,418

Regarding different fuels used, it is worth highlighting that electricity use represented more than half of overall energy consumption in 12 Autonomous Communities. In two of them, Principado de Asturias and Galicia, it actually represented over 60%. In the previous survey, corresponding to the year 2009, electricity represented more than half of energy consumption in 12 Autonomous Communities.

The Autonomous Communities with the highest percentage of consumption were hard coal and its derivatives were Illes Balears (6.7%), Comunidad Foral de Navarra (4.7%) and Cantabria (4.5%).

In turn, those with the greatest use of petroleum products were Canarias (36.0%) and Galicia (29.4%).

Finally, the Autonomous Communities with the highest percentages of use of gas during the year 2011 were Comunitat Valenciana (41.9%) and Aragón (40.8%).