

CONSOLIDATED MANAGEMENT REPORT  
2011  
REPSOL YPF GROUP

*Translation of a report originally issued in Spanish. In the event of a discrepancy, the Spanish language version prevails.*

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# GENERAL AND ECONOMIC-FINANCIAL INFORMATION

## *MACROECONOMIC ENVIRONMENT*

### **Risks dragging down growth**

2011 witnessed a slow-down in the pace of economic recovery as the world attempts to drag itself out of the harshest economic crisis seen in the last seventy years. During the year, the deterioration in certain previously very clearly identified risks, coupled with the fall-out of other unforeseeable events, such as the tsunami in Japan and the confrontations in Libya, tested the resolve of the worldwide economic recovery.

World gross domestic product (GDP) climbed by roughly 3.8%, well below the growth forecast by the International Monetary Fund (IMF) at the start of the year. The most disappointing performances came from the developed economies, which faced a particularly difficult year. Following the upturn of 2010, which saw 3.2% growth in developed economies, the same nations slowed to an anemic rate of 1.6% in 2011, while projected global growth for 2012 was also slashed.

The slump in growth over the first half of 2011 can be put down to the effects that the following factors had on a still-fragile economy: the spike in inflation due to the higher prices of raw materials; the gradual phasing out of fiscal stimulus policies; the austerity measures ushered in from the end of 2010 onward throughout various European countries, and the widespread concerns over the global supply chain in the wake of the Japanese earthquake of 11 March.

As a result, employment and public income fared worse than expected, further undermining the sustainability of the weaker euro zone economies. In April, Portugal was effectively forced to seek financial aid from the IMF and the European Union (EU) to avoid bankruptcy, following in the footsteps of Greece and Ireland. To compound matters, Greece acknowledged its inability to meet the objectives laid down in its bailout package. Negotiations for a second aid package before summer ended up including a mechanism for exchanging Greek debt, forcing private creditors to accept significant debt relief measures. This precedent triggered systemic risk within the Euro Zone, while increasing pressure on other member states and the European Bank due to their heavy exposure to sovereign debt.

Confirmation that the break-up of the single European currency was actually on the cards, following the announcement of a referendum in Greece -subsequently cancelled-, caused massive turmoil within the markets, widespread adjustments in counterparty risk and further difficulties in securing financing. In response to these tensions, the main central banks from across the world joined forces to ensure the ongoing liquidity of the system.

It's worth noting that 2011 also saw somewhat improved international political coordination, thus eliminating the likelihood of a chain reaction similar to the one that followed the bankruptcy of Lehman Brothers in 2008. Having said that, measures and reforms implemented to date have been unable to predict or stem the underlying problems. This not only holds true in the case of the euro zone, for similar problems in the United States and Japan have led to downgrades in their credit rating, adding further uncertainty to the financial markets.

The Spanish economy experienced a mild slow-down in its pace of recovery from the second quarter of 2011 onward, closing the year with accumulated growth of 0.7% vs.

2010. Foreign trade once again proved decisive and while private domestic demand improved in 2011, it failed to offset the committed adjustments in government spending in an attempt to reduce the public deficit to 3% of GDP by 2013.

### **Another year of high volatility**

Oil prices in 2011 were heavily influenced by both economic and geopolitical factors, with events materializing in two stages. Over the first half of the year, existing market inertia brought on by rallying demand from the end of 2010 was exacerbated by the added uncertainty of what it has since coined the "Arab Spring", fuel price pressures due to the risk of a supply shortage in any key exporting nation. Thus, with the market withdrawal of Libyan oil exports, and the increase in Japanese imports to address the fall-out of its natural disasters, the price of Brent crude climbed to prices not seen in over two and a half years, at 126 dollars per barrel at the start of April. Over the second half of the year, the prevailing economic and financial uncertainty in developed countries, mainly European, coupled with the gradual return of Libyan oil, caused oil prices to fall back by 13%, to stand at around 110 dollars. And they have remained at this level, albeit with considerable volatility.

Fundamentals have remained at the heart of all these economic, financial and geopolitical factors, especially in relation to the growth of emerging economies and the downward corrections for non-OPEC production. China, India, the Middle East and Brazil, among other regions, have maintained heavy demand for commodities on the path to economic growth and, as in 2010, these same regions were solely responsible for the increase in worldwide oil consumption for the year. Non-OPEC countries, on the other hand, seem incapable of stepping up production. This, combined with the steady decline in oil fields and the departure of Libyan crude due to the crisis, has meant that supply within the market remains poor, despite only limited demand.

These prevailing fundamentals produced a floor for Brent oil prices of at least 100 dollars for the year, even against a backdrop similar to the one it is seen now, characterized by serious concerns over global economic performance, with various developed economies at high risk of recession and with considerably less potential for conflict in North Africa and the Middle East.

At the close of 2011, the average price for Brent crude stood at 111 dollars per barrel. This level marks an all-time high in annual terms, exceeding prices for 2008 by 12.7 dollars. Another important point to note is that when translated to euros, the current average for Brent oil stands at 80 euros per barrel, more precisely 12.5 euros above the figure for 2008. The scenarios are different. Now, with the euro weakened by the public debt problems plaguing various countries, inflationary pressure can do more damage in Europe. In turn, the average price for West Texas Intermediate (WTI) stood at 95 dollars per barrel, 5 dollars below the same figure for 2008. The differing showings from Brent and WTI can largely be put down to the latter's decoupling from the international markets. The spread between the two benchmarks has widened, with WTI trailing Brent by 29 dollars according to daily trading figures. Lying behind this widening is the continuing excess supply of crude at Cushing, Oklahoma -WTI distribution hub- and the crisis in Libya, which has had a greater impact on Europe. By year-end, the spread had returned to 11 dollars in Brent's favor, although the average yearly difference still exceeded 16 dollars.

## ***THE GROUP'S ACTIVITIES***

The Group's activities are divided into five business areas, which correspond to the main divisions in its organizational structure:

- Three strategic integrated activities, including the operations undertaken by the Group's companies (except YPF and Gas Natural Fenosa) in the following areas:
  - Upstream, relating to the exploration and production of oil and natural gas;
  - LNG, relating to midstream operations (liquefaction, transport and regasification) of natural gas and marketing operations for natural gas and liquefied natural gas; and
  - Downstream, corresponding to refining and marketing involving oil products, chemicals, and liquefied petroleum gas.
- Two holdings in strategic companies:
  - YPF, which includes the operations of YPF S.A. and its Group companies in all of the aforementioned activities; as of 31 December 2011, the Group owned 57.43% of YPF, S.A., which is included in the Group's financial statements through full consolidation; and
  - Gas Natural Fenosa, which mainly engages in natural gas marketing and the generation, distribution, and marketing of electricity; as of 31 December 2011, the Group owned 30.01% of Gas Natural Fenosa, which is included in the Group's financial statements through proportional consolidation.

## ***HORIZON 2014 PLAN***

In February 2011, the company presented updated key economic figures under the Horizon 2014 Plan to the markets, confirming the ongoing validity and effect of its main strategic lines:

- Upstream: driving company growth
  - Repsol's presence in geographical areas with a high exploration potential and its recognized ability for deepwater exploration has transformed the company into one of the energy companies with the best growth prospects.
  - The investment strategy will be based on a solid portfolio of strategic projects: the exploitation of those already in operation and making progress on those projects in the delineation or development phase. The company will continue to pursue its commitment to organic growth and for exploration activities in new areas of interest for the Group, occasionally harnessing opportunities for inorganic growth that offer value and help strengthen the portfolio.
  - The development of these projects will increase annual oil production in the Upstream area by between 3 and 4% until 2014, and even further up

to 2019, with an estimated reserves replacement ratio in excess of 110%.

- Downstream: optimizing and improving profitability
  - In the fourth quarter of 2011, the extensions and upgrades to the Bilbao and Cartagena refineries were completed within the envisaged term and on budget. The upgraded facilities will enable the company to improve operating margins and consolidate its position of leadership in the business within Spain.
  - The excellent position developed by Repsol's Downstream business will allow the company to capitalize on the economic recovery, thereby obtaining solid cash flow generation for the Group.
- YPF: capturing the company's hidden value
  - YPF is a leading company in Argentina, a growing market that offers plenty of business opportunities. The energy transition that is taking place in the country towards international prices and the strict management of investments and costs will allow the company to reach its growth goal in results and dividends.
- Gas Natural Fenosa: a leader in the gas and electricity convergence industries
  - Creation of a leading integrated gas and electricity company, which will ensure steady cash flow generation for the Group.

The keys for generating value in the various businesses and strict financial discipline will enable the Group to reach the Plan's ultimate goal: maximizing the value created for the stockholder.

During 2011, the Horizon 2014 Plan benefitted from operating investments of €6,472 million to help it achieve this goal. The main initiatives during the financial year involved delineating the large exploratory discoveries (in Brazil, Peru, Venezuela and the United States); completion and start-up of the refining projects in Spain (Cartagena and Bilbao); Upstream exploration (Bolivia, Brazil, Sierra Leone, Liberia, Guyana, Norway and Peru); and the efficient operation of Repsol's production assets.

The discoveries made over recent years and the acquisition of new mining rights have laid the foundations for generating future growth.

Moreover, the Group has tapped into a number of opportunities for inorganic growth to provide added value, particularly in the short term, by increasing its weighting of assets in producing countries that pose lower levels of risk:

- In Russia, the company signed a memorandum of understanding with Alliance Oil Company for oil and gas production and exploration and also acquired the company Eurotek, with exploratory assets in an advanced state of development and delineation.
- In the United States, exploratory blocks were acquired in the oil-rich North Slope basin in Alaska, while a joint venture agreement was signed with the North American company SandRidge Energy for the exploration and production of blocks rich in unconventional oil and gas in the Mississippian Lime oil play.

The Group's investee companies made progress in their respective strategic lines over the course of 2011:

- YPF, bolstered by the recovery of prices in Argentina, is focusing on the exploitation of mature fields (mainly through improvement of the recovery

factor), while making advances in commercial management, streamlining operations and exploring the potential of unconventional resources.

- Gas Natural Fenosa is materializing the synergies flowing from the acquisition and integration of Unión Fenosa, while effectively managing the debt levels resulting from the transaction.

## RESULTS

The Group's results for 2011 and 2010 are as follows:

Millions of euros	2011	2010
<b>OPERATING INCOME</b>	<b>4,805</b>	<b>7,621</b>
Upstream	1,413	4,113
LNG	386	105
Downstream	1,207	1,304
YPF	1,231	1,453
Gas Natural Fenosa	887	881
Corporate and adjustments	(319)	(235)
<b>FINANCIAL RESULT</b>	<b>(822)</b>	<b>(1,008)</b>
Net income of companies accounted for using the equity method	75	76
<b>NET INCOME BEFORE TAX</b>	<b>4,058</b>	<b>6,689</b>
Income tax	(1,514)	(1,742)
<b>CONSOLIDATED NET INCOME FOR THE YEAR</b>	<b>2,544</b>	<b>4,947</b>
Net income attributable to minority interests	(351)	(254)
<b>NET INCOME ATTRIBUTABLE TO THE PARENT</b>	<b>2,193</b>	<b>4,693</b>

Repsol YPF's net income for 2011 stood at €2,193 million. Operating income was €4,805 million, while EBITDA amounted to €8,440 million. Earnings per share were 1.80 euros.

In 2010, net income amounted to €4,693 million, while operating income and EBITDA stood at €7,621 million and €9,196 million, respectively. The agreement reached with China Petroleum & Chemical Corporation (Sinopec) for the joint development of exploration and production projects in Brazil had a marked effect on results for the year. Following the deal, Repsol holds a 60% stake in Repsol Sinopec Brasil, while Sinopec holding the remaining 40%. The agreement ensures financing for the development and subsequent exploitation of the discoveries in Brazil, in particular Guar, Carioca and Panoramix, with the estimated market value of these assets exceeding \$10.6 billion.

Operating income for the Upstream area (Exploration and Production) moved from €4,113 million in 2010 to €1,413 million at 31 December 2011. The result for 2010 includes €2,847 million in capital gains stemming from the agreement signed between Repsol and Sinopec. Leaving aside these capital gains and the asset impairment variation reported for both years (see note 9 to the Consolidated Financial Statements), income for the Upstream area in 2011 shrunk, largely on account of the drop in production due suspended operations in Libya for sizeable part of the year, coupled with the impact on income of the depreciation of the dollar against the euro, all this mitigated by the higher international crude oil and gas prices over the year and the lower exploration costs.

The Liquefied Natural Gas (LNG) business posted profits of €386 million in 2011, up €281 million on figures for 2010, largely on the back of larger LNG volumes (the LNG Peru plant having been operational since June 2010) and LNG marketing margins in 2011.

Operating income in the Downstream division was €1,207 million, compared to the €1,304 million in the previous year. This drop in profit can largely be explained by the reduced margins reported by the Refining business, as well as by the lower volumes in Commercial business, as a result of the economic crisis, despite a better showing from Chemicals in the first half of the year and the better results from the Trading division.

YPF ended 2011 with operating profit of €1,231 million, down 15.3% on the €1,453 million posted in 2010. The difference is mainly due to the effect that the strikes have had on crude oil production, cost inflation, and the temporary suspension of the Petróleo Plus program (see note 2 in the 2011 Consolidated Financial Statements). The rise in income resulting from fuel sales at service stations and domestic products with prices linked to international prices were unable to offset these negative effects.

Repsol's 30% stake in Gas Natural Fenosa generated operating income of €887 million, in line with the same figure for 2010.

The consolidated Group reported a net financial result of minus €822 million in 2011, in comparison with the minus €1,008 million a year earlier. The difference is primarily due to lower net interest expense on borrowings, mainly on account of the larger average balances of financial investments associated with higher rates of return.

Corporate income tax totaled €1,514 million, with an effective tax rate of 38.0% (vs. 26.3% in 2010, with this unusually low rate resulting from the unusual transactions carried out during the year, such as the agreement with Sinopec, sale of Refap and CLH, etc.).

## **FINANCIAL OVERVIEW**

At year-end 2011, Repsol YPF holds a solid financial position.

The Group's net financial debt excluding Gas Natural Fenosa, meaning without taking into account the proportional integration of the figures corresponding to this company, was €6,775 million as of 31 December 2011, compared to the €1,697 million reported in the previous period, reflecting the impact of the purchase of treasury shares for 10% of Repsol YPF, S.A. share capital on 20 December 2011 for the sum of €2,572 million, and for the amortization on 8 February 2011 of the preference shares issued by Repsol International Capital for a nominal value of 725 million dollars. As subsequent events,



half of the treasury shares purchased on 20 December were sold on 11 January 2012. Taking preference shares into account, net financial debt ex Gas Natural Fenosa amounted to €9,775 million at 31 December 2011, in comparison to the €5,265 million at 31 December 2010.

The Group's liquidity position ex Gas Natural Fenosa amounted to €5,989 million at year-end (including undrawn credit lines), despite the transactions described above. Furthermore, this liquidity was further increased in January 2012 due to sale of the aforementioned treasury stock, combined with a €750 million bond issue.

The Group's consolidated net financial debt at year-end 2011 stood at €11,663 million, compared to the €7,224 million for 31 December 2010. Taking preference shares into account, net financial debt at year-end 2011 amounted to €14,842 million, vs. €10,972 million at 31 December 2010.

During 2011, payments on investments reached €6,255 million. For more detailed information on operating investments by business area, please head to the relevant section of this Consolidated Management Report covering the business area in question.

In relation to the section on divestments, it is worth mentioning the major divestments carried out by Gas Natural Fenosa.

It is worth mentioning the sale of 88,011,085 shares in YPF (representing a 22.38% stake in the company) and the decision of the Petersen Group to exercise its 10% call option. This sale was partly implemented by means of a loan of \$626 million by Repsol to the Petersen Group.

The shares of Repsol YPF, S.A. are listed on the continuous market of the Spanish stock markets (Madrid, Barcelona, Bilbao and Valencia) and of Buenos Aires (*Bolsa de Comercio de Buenos Aires*). Up until 4 March 2011, the shares were quoted on the New York Stock Exchange as American Depositary Shares (ADS), and have been listed on the OTCQX market since 9 March 2011.

Dividends paid by Repsol YPF to its shareholders over 2011 amounted to €1,282 million, corresponding to an interim dividend on earnings for fiscal year 2010 of 0.525 euros per share, as paid in January 2011, and a final dividend for 2010, also of 0.525 euros per share, paid in July 2011. Furthermore, the Board of Directors adopted a resolution on 30 November 2011 to allocate an interim dividend on earnings for 2011 of 0.5775 euros per share, marking a 10% increase on the interim dividend for 2010, paid on 10 January 2012.

As previously stated, on 20 December 2011, Repsol acquired a total of 122,086,346 treasury shares, representing 10% of its share capital and at a nominal value of one euro per share, in furtherance of the resolution adopted unanimously at the Board of Directors meeting held on 18 December. The decision to acquire the stock was reached after receiving news that the creditor banks of Sacyr Vallehermoso had decided not to renew the credit facility previously awarded to the company in order to acquire 20% of the capital of Repsol, or to condition partial refinancing on the sale of 10% in Repsol. This package was acquired at a price of 21.066 euros per share.

In 2011, Repsol YPF acquired an additional 6,685,499 treasury shares, representing 0.55% of the share capital and at a nominal value of one euro per share, for a value of €125 million. The aforementioned shares were sold for a gross cash amount of €140 million, entailing capital gains of €15 million, allocated to "Other reserves".

Moreover, and within the framework of the Share Acquisition Plan approved at the ordinary Annual General Meeting of 15 April 2011, the company purchased a total of 298,117 shares in Repsol YPF, S.A., representing 0.024% of its share capital, the cost of which amounted to €6.6 million, delivered to Group employees in accordance with the aforementioned Plan.

The aforementioned acquisitions were carried out by virtue of the powers that the Annual General Meeting of 30 April 2010 vested in the Board of Directors, authorizing "the derivative acquisition of shares in Repsol YPF, S.A., on one or more occasions, by purchase, swap or any other transaction for valuable consideration, directly or through subsidiaries, up to a maximum number of shares which, added to those already held by Repsol YPF, S.A. and its subsidiaries, does not exceed 10% of share capital of the company and for a price or equivalent value that may not be lower than the nominal value of the shares, nor exceed their quoted price on the stock market".

The authorization remains valid for five years running from the date of the Annual General Meeting, rendering null and void, the authorization conferred by the previous Annual General Meeting held on 14 May 2009, in relation to any part thereof that had not been used.

At 31 December 2011, the treasury shares held by Repsol YPF and Group companies represented 10% of its total share capital.

### **Financial prudence**

Repsol YPF keeps, in line with its prudence financial policy, sufficient available cash resources and other net financial instruments, including undrawn credit lines, to cover the debt maturities for at least the next two years, and covering 49% of its entire gross debt and 41% of same including preference shares. In the case of Repsol YPF ex Gas Natural Fenosa, these same resources cover 55% of gross debt and over 43% including preference shares.

Financial investments included under the headings of Note 12 to the Consolidated Financial Statements as "Other financial assets at fair value through profit and loss", "Loans and receivables" and "Held-to-maturity investments" (which include cash and cash equivalents) amount to €5,137 million, €4,129 million of which correspond to Repsol YPF, without including Gas Natural Fenosa. The Group has also committed, unused lines of credit at its disposal for an amount of €4,225 million (excluding Gas Natural Fenosa), down from the €4,666 million at the end of 2010 (excluding Gas Natural Fenosa). For the consolidated Group as a whole, the amount in committed, unused credit lines was €5,482 and €5,690 million as of 31 December 2011 and 2010, respectively, 80% of which falls due after 31 December 2012.

Accordingly, net debt and the net debt to capital employed ratio, in which capital employed refers to net debt plus net equity, provide a true and fair view of the volume of necessary borrowings and their relative weighting in the funding of capital employed in transactions.

Millions of euros, except ratios	31 December			
	Consolidated Group		Consolidated Group ex Gas Natural Fenosa	
	2011	2010	2011	2010
I Net debt	11,663	7,224	6,775	1,697
II Preference shares	3,179	3,748	3,000	3,568
III Net debt, including preference shares	14,842	10,972	9,775	5,265
IV Capital employed	41,885	36,958	36,329	30,777
Net debt to capital employed (I/IV)	27.8%	19.5%	18.6%	5.5%
Net debt, including preference shares, / capital employed (III/IV)	35.4%	29.7%	26.9%	17.1%

At year-end 2011, the Group's net debt to capital employed ratio (excluding Gas Natural Fenosa) stood at 18.6% versus 5.5% reported at the end of the previous year. Taking preference shares into account, the same ratio stood at 26.9%, versus the 17.1% reported at year-end 2010. These ratios have increased by 7% due to the impact of the one-off transaction to acquire 10% of treasury stock.

The net debt to capital employed ratio for the consolidated Group at year-end 2011 stood at 27.8%, in comparison to 19.5% at 31 December 2010. Taking preference shares into account, this same ratio stood at 35.4% vs. 29.7% for 2010.

The following table provides a breakdown of changes in net financial debt during the 2011 and 2010 financial years:

Millions of euros	Consolidated Group		Consolidated Group ex Gas Natural Fenosa	
	2011	2010	2011	2010
<b>Net debt at the beginning of the period</b>	<b>7,224</b>	<b>10,928</b>	<b>1,697</b>	<b>4,905</b>
EBITDA	(8,440)	(9,196)	(7,014)	(7,688)
Variation in trade working capital	2,239	1,693	1,708	1,316
Investments (1)	6,207	5,091	5,547	4,468
Divestments (2)	(1,004)	(4,483)	(91)	(3,804)
Dividends paid (including affiliates)	1,686	806	1,649	759
Treasury stock transactions	2,557	-	2,557	-
Currency translation differences	13	617	11	535
Disposals of holdings in companies without loss of control	(2,327)	(489)	(2,327)	(489)
Taxes paid	1,784	1,627	1,690	1,490
Changes in consolidation perimeter (3)	71	(372)	(9)	(395)
Redemption of US preference shares	535	-	535	--
Interest and other movements	1,118	1,002	822	600
<b>Net debt at year-end</b>	<b>11,663</b>	<b>7,224</b>	<b>6,775</b>	<b>1,697</b>

- (1) There were financial investments of €48 and €15 million for the consolidated Group in 2011 and 2010, respectively, that do not appear in the above table.
- (2) Similarly, there were financial divestments of €39 and €88 million for the consolidated Group in 2011 and 2010, respectively, that do not appear in the above table. In addition, it should be pointed out that divestment by Gas Natura Fenosa in Arrúbal combined cycle in 2011 included financing terms for the buyer.
- (3) Relates in 2010 to the deconsolidation of Refap's debt.

Below is a breakdown of Repsol YPF's current credit rating:

	<b>Standard &amp; Poor's</b>	<b>Moody's</b>	<b>Fitch</b>
Short-term debt	A-2	P-2	F-2
Long-term debt	BBB	Baa1	BBB+

## **RISK FACTORS**

Repsol YPF's operations and results are subject to risks resulting from changes in competitive, economic, political, legal, regulatory, social, industrial, business, and financial conditions, which investors should take into account.

Future risk factors, either unknown or not currently flagged as relevant by Repsol YPF, could also affect the company's business, results and financials.

### **OPERATIONAL RISKS**

**The uncertainty of the economic context.** The worsening of the debt crisis within the Euro Zone has forced the global economy along a tight path requiring reforms to prevent the worldwide economy from deteriorating further. The slowing pace of growth of the global economy could stir up social tension and tempt states to resort to protectionism. Likewise, nagging pressure on the sustainability of public accounts in advanced economies is continuing to exert much pressure on the credit markets, and could lead to tax reforms or changes in the regulatory framework governing the oil and gas industry. Lastly, the economic and financial situation could have negative effects on the current or future third-party business partners of Repsol YPF. Any of the factors described above, whether occurring together or alone, could have an adverse impact on the financial situation, business or operating results of Repsol YPF.

**International benchmark crude oil prices and demand for crude oil may fluctuate due to factors beyond Repsol YPF's control.** World oil prices have fluctuated widely over the last ten years and are driven by international supply and demand factors over which Repsol YPF has no control. The world oil market and oil prices are swayed heavily by political developments throughout the world (especially in the Middle East); the evolution of stocks of oil and derivatives; the circumstantial effects of climate changes and meteorological phenomena, such as storms and hurricanes (particularly prevalent over the Gulf of Mexico); spiking demand in countries with strong economic growth, such as China and India; major world conflicts, as well as the political instability and threat of terrorism that periodically affect certain producing areas, and also the risk

that the supply of crude oil may become a political weapon. In 2011, Brent crude oil prices averaged 111.26 dollars per barrel, as opposed to an average of 63.69 dollars per barrel reported over the 2002-2011 period. Over this ten-year period, the maximum average annual price was the 111.26 dollars per barrel reported in 2011, while the minimum average annual price was 25.02 dollars in 2002. In 2011, the price range for crude oil (Brent) floated between roughly 94 and 126 dollars per barrel.

International crude oil prices and demand for crude oil may also fluctuate significantly during economic cycles.

Reductions in oil prices negatively affect Repsol YPF's profitability, the value of its assets and its plans for capital investment, including projected capital expenditures related to exploration and development activities. Similarly, a significant drop in capital investment could negatively affect Repsol YPF's ability to replace its crude oil reserves.

**Repsol YPF's operations are subject to regulation.** The oil industry is subject to extensive regulation and intervention by governments throughout the world in such matters as the award of exploration and production interests, the imposition of specific drilling and exploration obligations, restrictions on production, price controls, required divestments of assets, foreign currency controls and nationalization, expropriation or cancellation of contractual rights. Such legislation and regulations apply to virtually all aspects of Repsol YPF's operations both inside and outside Spain. In addition, the legislation of certain countries envisages the imposition of sanctions on non-domestic companies that make certain investments in other countries. In addition, the terms and conditions of the agreements governing Repsol YPF's oil and gas interests generally reflect the regulatory framework of the country in question and/or negotiations held with governmental authorities, and therefore vary significantly by country and even from one area to another within the same country. These agreements generally take the form of licenses or production sharing agreements. Under license agreements, the license holder finances and bears the risk of the exploration and production activities in exchange for the resulting production, if any. Moreover, part of the production may have to be sold to the state or the state-owned oil company. License holders are generally required to make certain tax or royalty payments and pay income tax on their production, which can be high when compared with the taxes paid by other businesses. Production sharing agreements, on the other hand, generally require the contractor to finance the exploration and production activities in exchange for recovering its costs from part of production (cost oil), while the remainder of production (profit oil) is shared with the state-owned oil company.

Repsol YPF cannot predict changes in the aforementioned laws or how they will be interpreted, nor can it foresee the implementation of specific policies.

**Repsol YPF is subject to extensive environmental regulations and risks.** Repsol YPF is subject to extensive environmental laws and regulations in practically all the countries in which it operates, which regulate, among other matters affecting Repsol YPF's operations, environmental quality standards for products, air emissions and climate change, energy efficiency, water discharges, remediation of soil and groundwater and the generation, storage, transportation, treatment and final disposal of waste materials.

In particular, and due to concerns over the risk of climate change, a number of countries have adopted, or are looking into adopting, new regulatory requirements to reduce greenhouse gas emissions, such as carbon taxes, increasing efficiency standards, or adopting emissions trading schemes. These requirements could make Repsol YPF's products more expensive as well as shift hydrocarbon demand toward relatively lower-carbon sources, such as renewable energies. In addition, compliance

with greenhouse gas regulations may also require the company to upgrade its facilities, monitor or sequester emissions or take other actions that may increase the cost of compliance.

These laws and regulations have had and will continue to have an impact on Repsol YPF's business, financial situation and results of operations.

**Operating risks related to exploration and exploitation of oil and gas, and reliance on the cost-effective acquisition or discovery of, and, thereafter, development of new oil and gas reserves.** Oil and gas exploration and production activities are subject to particular risks, some of which are beyond the control of Repsol YPF. These activities are exposed to production, equipment and transportation risks, natural hazards and other uncertainties relating to the physical characteristics of oil and natural gas fields. The operations of Repsol YPF may be curtailed, delayed or cancelled as a result of weather conditions, technical difficulties, delays in the delivery of equipment or compliance with administrative requirements. In addition to this, some of our development projects are located in deep waters and other difficult environments, such as the Gulf of Mexico, Brazil and the Amazon rainforest, or in complex oilfields, which could aggravate these risks further. Offshore operations, in particular, are subject to maritime risks, among them storms and other adverse meteorological conditions, or shipping collisions. Also, the transportation of oil products, by any means, always has inherent risks: during road, rail or sea transport, or by pipeline, oil or another hazardous substances could leak; this is a significant risk due to the potential impact a spill could have on the environment and on people, especially considering the high volume of products that can be carried at any one time. Should these risks materialize, Repsol YPF may suffer major losses, interruptions to its operations and harm to its reputation.

Moreover, Repsol YPF must replace depleted oil and gas reserves with new proven reserves in a cost-effective manner that enables subsequent production to be economically viable. Repsol YPF's ability to acquire or discover new reserves is, however, subject to a number of risks. For example, drilling may involve negative results, not only with respect to dry wells, but also with respect to wells that are productive but do not produce sufficient net revenues to return a profit after drilling, operating and other costs are taken into account. In addition, crude oil and natural gas production blocks are typically auctioned by governmental authorities and Repsol YPF faces intense competition in bidding for such production blocks, in particular those blocks offering the most attractive potential reserves. Such competition may result in Repsol YPF's failing to obtain desirable production blocks, or otherwise acquiring them at a higher price, which could render subsequent production economically unviable.

If Repsol YPF fails to acquire or discover, and, thereafter, develop new oil and gas reserves in a cost-effective manner, or if any of the aforementioned risks materializes, its business, results of operations and financial condition could be materially and adversely affected.

**Location of reserves.** Part of the oil and gas reserves are located in countries that are or could be economically or politically unstable.

Reserves in these areas as well as related production operations may be exposed to risks, including increases in taxes and royalties, the establishment of limits on production and export volumes, the compulsory renegotiation or cancellation of contracts, the nationalization or denationalization of assets, changes in local government regimes and policies, changes in business customs and practices, payment delays, currency exchange restrictions and losses and impairment of operations due to the actions of insurgent groups. In addition, political changes may

lead to changes in the business environment. Economic downturns, political instability or civil disturbances may disrupt the supply chain or limit sales in the markets affected by such events.

In 2011, Libya became embroiled in a belic conflict. As a result, Group production in the country was suspended on 5 March 2011 and gradually resumed towards the end of the year. At 31 December 2011, 0.9% of the total consolidated assets of Repsol YPF were located in Libya, relating primarily to oil and gas exploration and production activities. Likewise, Libya accounted for 1.2% of the Group's total annual oil and gas production for 2011 (4.5% in 2010).

**Oil and gas reserves estimation.** In calculating proven oil and gas reserves, Repsol YPF relies on the guidelines and the conceptual framework of the Securities and Exchange Commission's (SEC) definition of proven reserves and on the criteria established by the Petroleum Reserves Management System of the Society of Petroleum Engineers (PRMS-SPE). Under these rules, proven oil and gas reserves are those reserves of crude oil, natural gas or natural gas liquids for which, after analyzing geological, geophysical and engineering data, have a reasonable certainty of being produced -from a given date, from known reservoirs and under existing economic conditions, existing technology and existing government regulation- prior to the termination of the contracts whereby the corresponding operational rights were awarded, and regardless of whether probabilistic or deterministic approaches were used to arrive at the estimate. The project to extract the gas or oil must have started, or otherwise the operator must be reasonably certain that the project will commence within a reasonable timeframe.

The accuracy of these estimates depends on a number of different factors, assumptions and variables, some of which are beyond the company's control. Factors that fall within the company's control include: drilling, testing and production after the date of the estimate, which may entail substantial upward or downward corrections in the estimate; the quality of available geological, technical and economic data used and the interpretation and valuation thereof; the production performance of reservoirs and recovery rates, both of which depend in significant part on available technologies as well as the company's ability to implement such technologies and the relevant know-how; the selection of third parties with which Repsol YPF conducts business; and the accuracy of initial estimates of existing hydrocarbons in place at a given reservoir, which may prove to be incorrect or require substantial revisions. On the other hand, factors mainly beyond Repsol YPF's control include changes in prevailing oil and natural gas prices, which could impact on the quantities of proven reserves (since estimates of reserves are calculated under existing economic conditions when such estimates are made); changes in prevailing tax rules, other government regulations and contractual conditions after the date estimates are made (which could render reserves economically unviable to exploit); and certain actions of third parties, including the operators of fields in which the Group has an interest.

As a result of the foregoing, measures of reserves are not precise and are subject to revision. Any downward revision in estimated quantities of proven reserves could adversely impact company results, leading to increased depreciation, depletion and amortization charges and/or impairment charges, which would reduce earnings and shareholders' equity.

**Repsol YPF's natural gas operations are subject to particular operational and market risks.** Natural gas prices tend to vary between the different regions in which Repsol YPF operates as a result of significantly different supply, demand and regulatory circumstances, and such prices may be lower than prevailing prices in other regions of the world. In addition, excess supply conditions that exist in some regions

cannot be utilized in other regions due to a lack of infrastructure and difficulties in transporting natural gas.

In addition, Repsol YPF has entered into long-term contracts to purchase and supply natural gas in various parts of the world. These contracts have different price formulas, which could result in higher purchase prices than the price at which such gas could be sold in increasingly liberalized markets. Furthermore, gas availability could be subject to the risk of counterparties breaching their contractual obligations. Thus, it might be necessary to look for other sources of natural gas in the event of non-delivery from any of these sources, which could require payment of higher prices than those envisaged under the breached contracts.

Repsol YPF also has long-term contracts to sell and deliver gas to clients, mainly in Argentina, Bolivia, Brazil, Chile, Venezuela, Spain and Mexico. These contracts present additional types of risks to the company as they are pegged to existing proven reserves in Argentina, Bolivia, Venezuela, Trinidad and Tobago and Peru. Should available reserves in those countries prove insufficient, Repsol YPF might not be able to satisfy its obligations under these contracts, some of which include penalty clauses for breach of contract.

**Conditions in the petrochemicals industry are cyclical.** The petrochemicals industry is subject to wide fluctuations in supply and demand, reflecting the cyclical nature of the chemicals market on a regional and global scale. These fluctuations affect the prices and profitability of petrochemicals companies, including Repsol YPF. Repsol YPF's petrochemicals business is also subject to extensive governmental regulation and intervention in such matters as safety and environmental controls.

**Significant presence in Argentina.** Nearly 20% and 19% of Repsol YPF's assets were located in Argentina as of 31 December 2011 and 2010 respectively, corresponding for the most part to exploration and production activities. These assets relate primarily to YPF, S.A. and subsidiary companies. At year-end 2011, the Group's holding in YPF, S.A. stood at 57.43%. In addition, business in Argentina accounted for approximately 28% and 20% of operating income as of 31 December 2011 and 2010 respectively.

After the economic crisis of 2001 and 2002, Argentina's GDP has grown at an average rate of approximately 8.5% from 2003 to 2008, slowing down in 2009 due to the international financial crisis. After a recovery process initiated in 2010, effective growth stood at roughly 9% for 2010 and, according to preliminary figures, a higher figure for 2011. The Argentinean economy is still sensitive to volatile commodities prices, limited credit and international investment in infrastructure, the development of energy resources supporting economic growth and rising inflation rates, among other factors.

The main economic risks facing Repsol YPF due to its operations in Argentina include the following:

- limitations on its ability to reflect in local prices increases in international oil prices and other fuels, exchange rate fluctuations and/or other costs affecting operations;
- restrictions on hydrocarbon export volumes, driven mainly by the requirement to satisfy domestic demand, thereby affecting the company's prior arrangements with its clients;
- the need to extend concessions, some of which are due to expire in 2017;
- work disruptions and union-agreed strikes;



- eventual modifications to the current regulatory framework through the adoption of government measures and/or legal changes that could affect Group operations and their projected profitability (rise in hydrocarbon export taxes; establishment of tariffs on the purchase of services or goods that are necessary to develop the activities; renegotiation or cancellation of contracts; changes in policies affecting trade or investment; etc.)
- changes in the Argentinean peso exchange rate and restrictions on accessing the exchange market, both for discharging obligations and paying dividends abroad;

Duties on hydrocarbon exports have been increased over recent years (see note 2, "Argentina - Regulatory Framework", in the Consolidated Financial Statements for 2011). As a result of these export tax increases, YPF could be, and on certain occasions has been, forced to renegotiate its export contracts despite having been approved by the Argentinean government. The imposition of these export withholdings has had an adverse impact on the operating income of YPF.

In addition, YPF has been obliged to sell a part of its natural gas production previously destined for the export market in the local Argentine market and has therefore been unable to meet its contractual gas export commitments in whole or, in some cases, in part, leading to disputes with its export clients and forcing YPF to claim force majeure under its export sales agreements. Repsol YPF believes that these actions from the government constitute force majeure events that relieve YPF from any contingent liability for the failure to comply with its contractual obligations.

**Repsol YPF's current insurance coverage for all the operational risks may not be sufficient.** As discussed in several of the risk factors mentioned in this document, Repsol YPF's operations are subject to extensive economic, operational, regulatory and legal risks. The company holds insurance covering against certain risks inherent in the oil and gas industry in line with industry practice, including loss or damage to property and equipment, control-of-well incidents, loss of production or income incidents, removal of debris, sudden and accidental seepage, pollution, contamination, clean-up costs, and claims for damages brought by third parties, including personal injury and loss of life, among other business risks. Moreover, insurance coverage is subject to deductibles and limits that in certain cases may be materially exceeded by its liabilities. In addition, Repsol YPF's insurance policies contain exclusions that could leave the Group with limited coverage in certain events. On the other hand, the company may not be able to maintain adequate insurance at rates or on terms considered reasonable or acceptable, or be able to obtain insurance against certain risks that could materialize in the future. If the company experiences an incident against which it is not insured, or the costs of which materially exceed its coverage, it could have a material adverse effect on its business, financial condition and results of operations.

## FINANCIAL RISKS

Group business is exposed to different kinds of financial risk, including:

**Liquidity risk.** Liquidity risk is associated with the Group's ability to finance its obligations at reasonable market prices, as well as being able to carry out its business plans with stable financing sources.

See chapter on liquidity under the "Financial Prudence" section of this report.

**Credit risk.** The exposure of the Group to credit risk is mainly attributable to commercial debts from trading transactions, which are measured and controlled in relation to the customer or individual third party. The Group has its own systems for the permanent credit evaluation of all its debtors and the determination of risk limits with respect to third parties, in line with best practices.

As a general rule, the Group establishes a bank guarantee issued by financial entities as the most suitable instrument of protection from credit risk. In some cases, the Group has taken out credit insurance policies to transfer partially the credit risk related to the commercial activity of some of its businesses to third parties.

## **Market risk**

• **Exchange rate fluctuation risk.** Repsol YPF is exposed to fluctuations in currency exchange rates since revenues and cash flows generated by oil, natural gas, and refined product sales are generally denominated in dollars or otherwise affected by dollar exchange rates. Operating income is also exposed to fluctuations in currency exchange rates in countries where Repsol YPF conducts its activities. Repsol YPF is also exposed to exchange risk in relation to the value of its financial assets and investments, predominantly those denominated in US dollars. In order to mitigate the exchange rate risk on results, and when it deems appropriate, Repsol YPF may hedge with derivatives in relation to those currencies for which there is a liquid market and where transaction costs are reasonable.

In addition, Repsol YPF's financial statements are expressed in euros and, consequently, the assets and liabilities of investee companies with a different functional currency are translated into euros at the exchange rate prevailing on the balance sheet date. The revenues and expenses of each of these items in the profit and loss accounts are translated into euros by applying the exchange rate in force on the date of each transaction; for practical reasons, the exchange rate used is, in general, the average of the period in which the transactions were made. Fluctuations in the exchange rates applied in the process for converting the currencies into euros generate variations (gains or losses), which are recognized in the Repsol YPF Group consolidated financial statements and expressed in euros.

• **Commodity price risk.** In the normal course of operations and trading activities, Repsol YPF Group earnings are exposed to volatility in the price of oil, natural gas, and related derivative products (see the previous section "Possible fluctuations in international benchmark oil prices and oil demand due to factors beyond the control of Repsol YPF" and "Operational and market risks affecting Repsol YPF's activities in the natural gas industry").

• **Interest rate risk.** The market value of the Group's net financing and net interest expenses could be affected by interest rate fluctuations.

Note 20 "Financial risk and capital management" and Note 21 "Derivative transactions" in the Consolidated Financial Statements for financial year 2011 include additional details on the financial risks described in this section.

## BUSINESS AREAS

The Group's main operating highlights are shown below:

	<b>2011</b>	<b>2010</b>
<b>Upstream:</b>		
Oil and gas net production (1)	<b>109,059</b>	<b>125,653</b>
<b>LNG:</b>		
Production of liquefaction trains (2) (3)	<b>5.4</b>	<b>5.1</b>
LNG sold (3)	<b>11.0</b>	<b>6.7</b>
<b>Downstream:</b>		
<b>Refining capacity (4)</b>	<b>998</b>	<b>878</b>
Europe (5)	896	776
Rest of the World	102	102
<b>Crude oil processed (6) (7)</b>	<b>31.5</b>	<b>34.4</b>
Europe	27.9	28.7
Rest of the World	3.6	5.7
<b>Number of service stations</b>	<b>4,506</b>	<b>4,447</b>
Europe	4,211	4,182
Rest of the World	295	265
<b>Oil product sales (6) (8)</b>	<b>37,805</b>	<b>38,613</b>
Europe	33,548	32,429
Rest of the World	4,257	6,184
<b>Petrochemical product sales (8)</b>	<b>2,659</b>	<b>2,618</b>
By region:		
Europe	2,312	2,263
Rest of the World	348	355
By product:		
Base products	889	874
Derivative petrochemicals	1,770	1,744
<b>LPG sales (8)</b>	<b>3,033</b>	<b>3,108</b>
Europe	1,486	1,680
Rest of the World	1,547	1,428
<b>YPF:</b>		
Oil and gas net production (1) (9)	180,700	197,442
Refining capacity (4) (10)	333	333
Processed crude oil (7) (10)	14.7	15.4
Number of service stations (11)	1,557	1,653
Oil product sales (8) (10)	14,144	14,146
Petrochemical product sales (9)	1,639	1,563
LPG sales (8) (10)	456	422
Natural gas sales (3)	12.3	14.0
<b>Gas Natural Fenosa:</b>		
Natural gas distribution sales (12) (13)	395,840	411,556
Electricity distribution sales (12) (13)	54,067	54,833

(1) Thousands of barrels of oil equivalent (kboe).

(2) Including liquefaction train production according to their shareholding. Trinidad [Train 1 (20%), Trains 2 and 3 (25%), Train 4 (22.22%)]; Peru LNG (20%). Of this production, 3.2 bcm in 2011 and 2.8 bcm in 2010 belong to companies consolidated in the Repsol Group through the equity method.

- (3) Billions of cubic meters (bcm).
- (4) Thousand barrels per day (kbbl/d).
- (5) The reported capacity includes the shareholding in ASES.A.
- (6) The 2010 information includes Refap's 30% (Brazil) until it was sold in December 2010.
- (7) Millions of tons.
- (8) Thousands of tons.
- (9) The data shown is for Argentina, except the net hydrocarbon production of 718 and 777 thousand of barrels of oil equivalent (kboe) in 2011 and 2010, respectively, which is reflected in United States data.
- (10) Including 50% shareholding in Refinerías del Norte, S.A. ("Refinor").
- (11) Including 50% of "Refinor" service stations.
- (12) Including 100% of reported Gas Natural Fenosa sales, even though Repsol YPF had a 30.01% share in Gas Natural at 31 December 2011 and 30.13% at 31 December 2010, accounted for through proportional consolidation.
- (13) Gigawatts per hour (GWh).

## **Abbreviations used for units of measurement**

"bbl".....	Barrels
"bcf".....	Billion cubic feet
"bcm".....	Billion cubic meters
"boe".....	Barrels of oil equivalent
"Btu".....	British thermal unit
"GWh".....	Gigawatts per hour
"kbbl".....	Thousand barrels
"kbbl/d".....	Thousand barrels per day
"kboe".....	Thousand barrels of oil equivalent
"km <sup>2</sup> ".....	Square kilometers
"Mbbbl".....	Million barrels
"Mboe".....	Million barrels of oil equivalent
"Mm <sup>3</sup> /d".....	Million cubic meters per day
"Mscfd".....	Million standard cubic feet per day
"MW".....	Megawatts
"MWe".....	Megawatts electrical
"MWh".....	Megawatts per hour
"TCF".....	Trillion cubic feet

## **UPSTREAM**

### **ACTIVITIES**

The Repsol Upstream division embraces oil and natural gas exploration and production activities excluding those performed by YPF. For information on the exploration and production activities conducted by YPF, see the corresponding chapter on this company and its affiliates contained in this Consolidated Management Report.

The Repsol Upstream division manages its project portfolio with the objective of achieving profitable, diversified and sustainable growth, with a commitment to safety and the environment. Its strategy is underpinned by the following objectives: increasing production and reserves, diversifying its business geographically by increasing its presence in Organisation for Economic Co-operation and Development (OECD) countries, achieving operating excellence and maximizing the profitability of its assets. To such end, a number of measures have been taken during the last few years: there was a successful investment in human capital to promote growth; the organizational structure was redefined to reflect the strategic objectives and oriented towards

improving the quality of operations; technical and commercial processes have been redesigned and standardized, and technological capacities have been developed to operate successfully in deep waters.

Geographically, the Upstream division's strategy is based on key traditional regions, located in Latin America (mainly Trinidad and Tobago, Peru, Venezuela, Bolivia, Colombia and Ecuador) and in North Africa (Algeria and Libya), as well as in strategic areas for short and medium-term growth that have been consolidated in recent years. Among the latter areas, particularly important are the US Gulf of Mexico (with the important Shenzi field, in operation since 2009, and one of the company's key strategic projects) and offshore fields in Brazil.

In addition, strategic growth in the medium-term will also be bolstered by major gas projects currently being developed in Venezuela, Peru, Bolivia and Brazil, and in the longer-term, by the increasingly important asset portfolio in Norway, Canada, West Africa, Indonesia, Alaska and Russia.

Mirroring its move towards geographic diversification, 2011 saw the Group successfully incorporate areas offering huge potential in Alaska, Russia, Ireland, Iraq, Tunisia and Portugal.

In 2011, Repsol acquired a 70% stake in the North Slope project, one of Alaska's most prolific regions, offering major discovered reservoirs and with moderate exploration risk. The site contains more than 150 exploratory blocks in the area surrounding the large fields already in production.

The first quarter of 2012 will mark the start of exploratory drilling activities on the North Slope. The acquisition has increased the company's presence in OECD countries and reflects its strategy of balancing the portfolio of exploratory acreage with assets offering lower risk within a stable environment.

In December 2011, the company signed an important agreement with Alliance Oil Company to create a joint venture (AROG), which will provide a platform for growth for both companies within Russia, the world's largest producer of gas and oil. The new joint company will be valued at approximately \$840 million after both shareholders have contributed assets and capital. Alliance Oil will hold a 51% stake in the company, while Repsol will own the remaining 49%.

Under the agreement, Alliance will transfer its Upstream Saneco and Tatnefteodatcha affiliates, with assets currently generating in the region 20,500 barrels of oil per day, along with exploration and production licenses for 2P reserves (proven plus probable) of roughly 171.5 million barrels at 31 December 2010. These assets are valued at approximately 570 million dollars. Repsol, in turn, will contribute capital and acquire the rest from Alliance to reach a shareholding of 49% in the joint company. As well as exploiting the assets to be contributed by Alliance Oil, the agreement envisages the parties seeking out further exploration opportunities and achieving growth through production assets in Russia.

Repsol currently owns a 3.7% stake in the equity of Alliance Oil due to the merger of West Siberian Resources and the Russian energy giant in 2008.

The aim of this new agreement is to combine Alliance Oil's knowledge and privileged access to exploration and production opportunities in Russia with the know-how and technical capacity of Repsol, thus forging a long-term alliance for ongoing exploration and production activities.

In February of 2011, the Group completed the purchase of a 74.9% shareholding in the Russian company Eurotek-Yugra, which owns the exploration and production licenses for the Karabashsky 1 and 2 blocks in the hydrocarbon-rich West Siberia basin. Through this company, it then went on to secure five new exploratory licenses at the 2011 round, also located within the West Siberia basin.

In December, the company announced an agreement to acquire the Russian company Open Joint Stock Company Eurotek (Eurotek), which holds exploratory and production licenses in West Siberia. The transaction already has the approval of the Federal Antimonopoly Service of Russia. The acquired assets include the licenses for the Syskonsyninskoye (SK) gas field, which is currently in an advanced state of development and will enter into production in 2012, and also the Yuzhno-Khadyryakhinskoye (YK) gas field, which is currently in the final stage of delineation and could start producing in 2016. In 2012, Repsol will incorporate these assets into the joint venture with Alliance Oil, as part of its commitment to contribute assets and capital to the new joint venture. The YK and SK fields will provide AROG with roughly 115 Mboe of additional 2P reserves (proven plus probable), combined with the 171.5 million barrels of oil that Alliance has contributed to the joint venture through its Upstream Saneco and Tatnefteodatcha affiliates.

In 2011, Repsol acquired 25% of ExxonMobil and ENI's interest in the Dunquin project, located in deep waters off the coast of Ireland. The project is essentially an exploratory area in the Porcupine basin off the coast of south-east Ireland. ExxonMobil is the local operator. The project is currently in the second exploratory stage with prospects already identified for drilling, which may get under way in 2013. The arrangement has provided Repsol with new opportunities within a proven oil system in an OECD country, with favorable contractual terms and market conditions.

Also in Ireland, Repsol took part in the "2011 Irish Atlantic Margin" exploratory licensing round, obtaining 40% of the "Newgrange" exploratory project in the South Porcupine/Goban Spur basin in southern Ireland.

In Iraq, and after negotiations with local authorities, during which different exploratory blocks and investment opportunities were evaluated, the Iraqi Ministry of Natural Resources agreed in 2011 to award Repsol the PIRAMAGRUN and QALA DZE exploratory blocks under production sharing contracts (PSC), which were signed in July. In the second half of the year, Repsol opened offices in Erbil (Kurdistan).

In 2011, the company secured three exploratory blocks located offshore of Tunisia, in an area offering huge potential and in which no exploratory wells have been drilled to date. The blocks have a water table of 400 meters. If current estimates are confirmed in the next few years, the block could well become a new oil area.

In October 2011, the exploratory contracts were signed for the Lagosta and Lagostím blocks in Portuguese national waters. The two blocks have a water table of between 500 and 1,500 meters, and are located between 15 and 100 kilometers from the coastline.

The company is meeting its commitments and the next stage of growth is now materializing, based largely on the company's success in exploring and on the efficient development and start-up of explored areas. This emerging future growth is reflected in a number of strategic projects currently under different stages of development and which have gained real momentum between 2009-2011, such as the U.S. Gulf of Mexico (Shenzi, already in production in 2009), Brazil (Guará, Carioca and Piracucá/Panoramix), Venezuela (Cardón IV and Carabobo), Bolivia (Margarita-Huacaya), Peru (Kinteroni), Algeria (Reggane) and Libya (I/R).

Many of these projects are being undertaken in offshore areas, a key priority for Repsol where the company is cementing its position as one of the most competitive companies with an unrivalled track record in exploration and production. Over recent years, Repsol has stepped up exploration activity considerably and is harnessing its technical know-how on the path to becoming a major player in offshore exploration.

When operating, particularly in deep waters, Repsol applies best practices and recommendations taken from the industry's most stringent standards, and ensures

strict compliance with all applicable regulations with the aim of becoming one of the best companies once the moratorium in the Gulf of Mexico has been lifted.

In September, the Repsol-BSC Research Center was unveiled in Barcelona as a leading research center to be used to improve upon and channel cooperation between Repsol and the Barcelona Supercomputing Center (BSC). This collaboration will allow the parties to tackle a range of different research projects in areas of interest to Repsol operations. The center reflects the company's commitment to technological research and the advantages that the BSC can offer to Spanish industry. Initial priorities are to continue with the Caleidoscopio project and to focus on improving underground imaging through seismic and electromagnetic technologies, these being of huge importance to deep water operations, among others.

At year-end, Repsol's Upstream division was involved in oil and gas exploration and production blocks in 31 different countries, either directly or through investee companies. The company was the operator in 23 of these countries.

Over the last five years, Repsol has stepped up its onshore and at sea exploratory activity considerably, making major gas and oil discoveries worldwide. In addition, Repsol's Upstream unit posted a record replacement rate of proven reserves in 2011, hitting 162%, outstripping the already admirable ratio of 131% for 2010. The unit has already deployed further resources and assets to provide a considerable boost to its future results.

#### Finished exploratory wells

	2011 (1)							
	Positive		Negative		Under evaluation		Total	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
<b>Europe</b>	-	-	1	*	-	-	1	*
<b>South America</b>	2	*	1	*	-	-	3	*
Trinidad and Tobago	-	-	-	-	-	-	-	-
Other countries in South America	2	*	1	*	-	-	3	*
<b>Central America</b>	-	-	-	-	-	-	-	-
<b>North America</b>	-	-	1	*	-	-	1	*
<b>Africa</b>	1	*	4	2	-	-	5	2
<b>Asia</b>	-	-	1	*	-	-	1	*
<b>Total</b>	3	*	8	3	-	-	11	4

	2010 (1)							
	Positive		Negative		Under evaluation		Total	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
<b>Europe</b>	-	-	-	-	-	-	-	-
<b>South America</b>	3	1	8	3	-	-	11	4
Trinidad and Tobago	-	-	-	-	-	-	-	-
Other countries in South America	3	1	8	3	-	-	11	4
<b>Central America</b>	-	-	-	-	-	-	-	-
<b>North America</b>	-	-	-	-	-	-	-	-
<b>Africa</b>	1	*	-	-	-	-	1	*
<b>Asia</b>	-	-	-	-	-	-	-	-
<b>Total</b>	4	1	8	3	-	-	12	4

(1) A gross well is a well in which Repsol owns a working interest. The number of net wells is the sum of the fractions of interest held in gross wells.

\* Fewer than one exploratory well.

## Finished development wells

	2011 (1)							
	Positive		Negative		Under evaluation		Total	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
<b>Europe</b>	-	-	-	-	-	-	-	-
<b>South America</b>	75	22	6	2	-	-	81	24
Trinidad and Tobago	2	*	-	-	-	-	2	*
Other countries in South America	73	21	6	2	-	-	79	23
<b>Central America</b>	-	-	-	-	-	-	-	-
<b>North America</b>	2	*	1	*	-	-	3	*
<b>Africa</b>	3	*	-	-	-	-	3	*
<b>Asia</b>	-	-	-	-	-	-	-	-
<b>Total</b>	<b>80</b>	<b>23</b>	<b>7</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>87</b>	<b>25</b>
	2010 (1)							
	Positive		Negative		Under evaluation		Total	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
<b>Europe</b>	-	-	-	-	-	-	-	-
<b>South America</b>	47	13	4	2	7	3	58	18
Trinidad and Tobago	2	1	1	*	-	-	3	1
Other countries in South America	45	12	3	2	7	3	55	17
<b>Central America</b>	-	-	-	-	-	-	-	-
<b>North America</b>	-	-	-	-	-	-	-	-
<b>Africa</b>	28	5	2	*	16	3	46	8
<b>Asia</b>	-	-	-	-	-	-	-	-
<b>Total</b>	<b>75</b>	<b>18</b>	<b>6</b>	<b>2</b>	<b>23</b>	<b>6</b>	<b>104</b>	<b>26</b>

(1) A gross well is a well in which Repsol owns a working interest. The number of net wells is the sum of the fractions of interest held in gross wells.

\* Fewer than one development well.

Repsol's current activity by geographical area						
	As of 31 December 2011					
	Acreage				No. of exploratory wells being drilled (1)	
	No. of blocks		Net acreage (km <sup>2</sup> ) (2)			
	Development	Exploration	Development	Exploration	Gross	Net
<b>Europe</b>	11	38	348	17,920	-	-
<b>South America</b>	51	31	6,020	43,718	8	2
Trinidad and Tobago	7	-	2,363	-	-	-
Other countries in South America	44	31	3,658	43,718	8	2
<b>Central America</b>	-	1	-	2,108	-	-
<b>North America</b>	7	444	479	7,698	-	-
<b>Africa</b>	5	34	2,692	119,371	2	*
<b>Asia</b>	-	9	-	24,979	-	-
<b>Total</b>	<b>74</b>	<b>557</b>	<b>9,539</b>	<b>215,792</b>	<b>10</b>	<b>2</b>

(1) A gross well is a well in which Repsol owns a working interest. The number of net wells is the sum of the fractions of interest held in gross wells.

(2) Gross acreage is the area where Repsol owns a working interest. Net acreage is the sum of the gross area in each acreage according to their respective working interests.



## Acreage

The table below displays information on Repsol's developed and undeveloped acreage, by geographical area, as of 31 December 2011:

	2011			
	Developed (1)		Undeveloped (2)	
	Gross (3)	Net (4)	Gross (3)	Net (4)
	(km <sup>2</sup> )			
<b>Europe</b>	<b>21</b>	<b>16</b>	<b>31,586</b>	<b>18,252</b>
<b>South America</b>	<b>1,465</b>	<b>401</b>	<b>116,681</b>	<b>49,337</b>
Trinidad and Tobago	170	63	5,409	2,300
Other countries in South America	1,295	338	111,272	47,037
<b>Central America</b>	<b>0</b>	<b>0</b>	<b>5,269</b>	<b>2,108</b>
<b>North America</b>	<b>18</b>	<b>5</b>	<b>16,385</b>	<b>8,172</b>
<b>Africa</b>	<b>613</b>	<b>170</b>	<b>185,750</b>	<b>121,893</b>
<b>Asia</b>	<b>0</b>	<b>0</b>	<b>58,909</b>	<b>24,979</b>
<b>Total</b>	<b>2,116</b>	<b>591</b>	<b>414,580</b>	<b>224,740</b>

- (1) Developed acreage is the area assignable to productive wells. The amounts shown belong to the acreage, both in terms of exploration and development.
- (2) Undeveloped acreage covers the surface area in which no wells have been drilled, or where any wells have not been completed to the point of permitting oil and gas production in economically viable quantities, regardless of whether said area has proven reserves.
- (3) Gross acreage is the area where Repsol owns a working interest.
- (4) Net acreage is the sum of the fractions of interest held in gross acreage.

## Main production concessions by country

The following table provides figures on the main production concessions for Repsol's Upstream division by country at 31 December 2011, likewise stating the percentage that Repsol holds in each of them.

	Main blocks	% Repsol	Operated (O) / Not operated (NO)	Liquid (L) / Gas (G)
<b>Europe</b>				
Spain	Poseidón Norte	100.00%	O	G
Spain	Boquerón Unit	61.95%	O	L
<b>South America</b>				
Trinidad and Tobago	West Block	30.00%	NO	L - G
Trinidad and Tobago	TSP (POUI)	70.00%	O	L - G
<b>Other countries in South America</b>				
Brazil	Albacora Leste	6.00%	NO	L - G
Brazil	BM-S-9 (Carioca-Guará)	15.00%	NO	L
Bolivia	Sábalo	24.50%	NO	L - G
Bolivia	San Alberto	24.50%	NO	L - G
Bolivia	Margarita (Caipipendi)	37.50%	O	L - G
Colombia	Cravo Norte	5.63%	NO	L
Ecuador	Block 16	55.00%	O	L
Ecuador	Tivacuno	55.00%	O	L
Peru	Bloque 56	10.00%	NO	L - G
Peru	Bloque 88	10.00%	NO	L - G
Venezuela	Quiriquire (Gas)	60.00%	O	G
Venezuela	Barua Motatan	40.00%	NO	L
Venezuela	Quiriquire	40.00%	NO	L - G
Venezuela	Mene Grande	40.00%	NO	L
<b>Central America</b>	---	---	---	---
<b>North America</b>				
United States	Shenzi	28.00%	NO	L - G
<b>Africa</b>				
Algeria	TFR, TIM and BEQ (Issaouane)	59.50%	O	L
Algeria	Tin Fouyé Tabenkor (TFT)	30.00%	NO	L - G
Libya	NC-115	20.00%	NO	L
Libya	NC-186	16.00%	NO	L
<b>Asia</b>		---	---	---

## Average realization price for crude oil and gas by geographical region

	At 31 December 2011		At 31 December 2010	
	Average crude oil realization price (€/Bbl)	Average gas realization price (€/Boe)	Average crude oil realization price (€/Bbl)	Average gas realization price (€/Boe)
<b>Europe</b>	80.06	54.49	59.36	42.87
<b>South America</b>	53.25	13.79	53.51	11.27
Trinidad and Tobago	77.25	13.31	60.00	10.72
Other countries in South America	47.19	14.78	51.34	12.73
<b>Central America</b>	-	-	-	-
<b>North America</b>	76.04	47.09	57.22	38.98
<b>Africa</b>	74.81	-	59.99	-
<b>Asia</b>	-	-	-	-
<b>TOTAL</b>	60.51	14.23	55.51	11.65

Note: Source data in dollars converted at the average accumulated dollar/euro exchange rate for every year.

## RESULTS

<b>Operating income</b>	<b>2011</b>	<b>2010</b>	<b>2011/2010 Variation</b>
Millions of euros			
North America and Brazil	419	2,911	(86%)
North Africa	99	642	(85%)
Rest of the world	895	560	60%
<b>Total</b>	<b>1,413</b>	<b>4,113</b>	<b>(66%)</b>

Operating income for the Upstream division in 2011 totaled €1,413 million, in comparison to the €4,113 million posted a year earlier. EBITDA amounted to €2,072 million, versus the €2,478 million in 2010. The 2010 result includes capital gains of €2,847 million, a consequence of the agreement reached between Repsol and Sinopec to develop joint exploration and production projects in Brazil.

Without taking into account this capital gain and the variation between both years in terms of the effect of the result of the asset impairment test, operating income dropped in 2011 due to the interruption of operations in Libya, slumping production mainly due to the aforementioned suspension, and the depreciation of the dollar against the euro, all of which was partially offset by rising crude oil and gas prices and lower exploration costs.

The average realization price of the Repsol's basket liquids hydrocarbons stood at 83.3 dollars per barrel (59.8 euros per barrel), versus 72.6 dollars per barrel (54.7 euros per barrel) in 2010. The average price of gas was 3.5 dollars per thousand cubic feet, 28.3% up on the same figure for 2010. These variations are in line with those experienced by benchmark prices on international markets.

The lifting cost hit 3.6 dollars per barrel. This figure is higher than the 2010 cost (3.0 dollars per barrel), largely due to the drop in production, chiefly in Libya and Trinidad and Tobago, and to a lesser extent because of increased costs. The finding cost of

proven reserves averaged 15.2 dollars per equivalent barrel over the 2009-2011 period.

## **DISCOVERIES**

Repsol's exploration results over recent years have been at all-time highs. The company has achieved numerous and important discoveries in priority areas for Repsol, including Brazil, the United States, Venezuela, Peru, Bolivia and Algeria. These discoveries have paved the way for strategic development projects to ensure future organic growth for the company. These projects are currently under development with the aim of bringing them online as soon as possible. Some of these discoveries, such as those in Brazil, Venezuela and Peru, were among the largest in the world for their respective years.

In 2011, three new discoveries were made, two in Brazil (Gávea and Malombe) and one in Libya (A1 130/4).

In June 2011, Repsol Sinopec Brasil (in which Repsol owns a 60% stake) and its partners Statoil and Petrobras announced a major exploratory discovery in ultradeep waters off Brazil at the Gávea well. The well, located at block BM-C-33, 190 kilometers off the coast of Río de Janeiro, was drilled under 2,708 meters of water, reaching a final depth of 6,851 meters. The consortium is currently analyzing the results obtained from the well before pressing on with the area exploration and evaluation process. Repsol Sinopec Brasil is the operator of the consortium, with an interest of 35%. Statoil holds another 35%, with Petrobras owning the remaining 30%. According to Information Handling Services (IHS), Gávea is one of the ten largest discoveries made in 2011.

On 4 November, Repsol announced that the Malombe well had discovered a gas discovery at the Espírito Santo basin, block BM-ES-21, at the post-salt layers off the Brazilian coastline. Repsol Sinopec Brasil owns an 11.1% interest in the consortium, while Petrobras, being the operating company, holds the remaining 88.9%.

The discovery is located 135 kilometers from the city of Vitoria in the state of Espírito Santo. The well was drilled in the south-east of the Peroá field, under 980 meters of water. The discovery was confirmed after conducting a battery of tests that detected gas at a depth of 2,600 meters. The consortium, which will continue to carry out work within the block, will present an assessment plan to the Brazilian National Oil Agency (ANP) to delimit the discovered reservoir and provide estimated volume and productivity.

In Brazil, difficulty in accessing certain deposits (including the Guara and Carioca areas) due to their deep-water status has made exploration and development a real technological challenge, but one that Repsol is successfully tackling, as show by the numerous discoveries already made to date.

In January an exploratory discovery was made at well A1 130/4 in block NC-115 located in the Murzuq basin.

In addition, the positive findings obtained at the Abare and Tingua wells in Brazil are currently being finalized and assessed. On 14 November, Repsol Sinopec Brasil and its partners Petrobras and BG Group announced a discovery of high-quality oil at the Abare well, in the area of Carioca, located in block BM-S-9, thus increasing the potential of this area in the hydrocarbon-rich Santos basin in the Brazilian pre-salt layer. The discovery can be found 35 kilometers to the south of the discovery well in Carioca and 293 kilometers off the east coast of the state of So Paulo. The analyses have revealed the existence of high-quality oil, with an API of 28°, in carbonate

reservoirs at depths of 4,830 meters. Formation testing is envisaged to gauge the productivity of these stores.

In August of 2011, the Tingua well finished drilling at the BM-S-44 (S-M-172) block in the Santos basin. The partners in the venture are Repsol Sinopec Brasil (25%) and Petrobras (75%), the latter being the operating company. The companies found a column of nearly 40 meters of crude oil in the pre-salt carbonate reservoir. Oil and gas samples and the overall potential of the block are currently under assessment.

## PRODUCTION

Repsol's hydrocarbons production in 2011 (excluding YPF) was 298,791 barrels of oil equivalent/day, down 13.2% on figures for 2010.

The conflict in Libya caused production within the country to plummet to a quarter of the annual production reported in 2010, and also accounts for nearly two thirds of the drop in production worldwide.

Furthermore, gas production in Trinidad and Tobago fell away over the second half of the year due to maintenance work on both the Atlantic liquefaction trains of Atlantic LNG and the production platforms. Contributing factors also included the natural decline of Albacora Leste (Brazil), coupled with Repsol's reduced interest in this asset following the corresponding agreement with Sinopec, and likewise the effects of the 2010 moratorium on drilling in the Gulf of Mexico, which continued to be felt over the first half of 2011.

On a more positive note, production in Peru climbed by 35% (primarily the supply of gas over all of 2011 to the Peru LNG liquefaction plant, which was brought online in 2010) and contracts were revised in Ecuador, although these plus points fail to offset the aforementioned drops.

### Net production of liquids and natural gas by geographical area:

	2011			2010		
	Liquids (Mbbbl)	Natural gas (bcf)	Total (Mboe)	Liquids (Mbbbl)	Natural gas (bcf)	Total (Mboe)
<b>Europe</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>
Spain	1	2	1	1	2	1
<b>South America</b>	<b>26</b>	<b>370</b>	<b>92</b>	<b>26</b>	<b>390</b>	<b>96</b>
Bolivia	2	35	8	2	33	8
Brazil	2	-	2	3	1	3
Colombia	1	-	1	2	-	2
Ecuador	9	-	9	6	-	6
Peru	3	37	10	3	23	7
Trinidad and Tobago	5	250	49	6	282	56
Venezuela	5	47	13	4	51	14
<b>Central America</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>North America</b>	<b>10</b>	<b>3</b>	<b>10</b>	<b>10</b>	<b>3</b>	<b>11</b>
United States	10	3	10	10	3	11
<b>Africa</b>	<b>4</b>	<b>12</b>	<b>7</b>	<b>16</b>	<b>12</b>	<b>18</b>
Algeria	1	12	3	1	12	3
Libya	3	-	3	15	-	15
<b>Asia</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total net production</b>	<b>40</b>	<b>387</b>	<b>109</b>	<b>53</b>	<b>407</b>	<b>126</b>

## Productive wells by geographical area

	As of 31 December 2011 (1)			
	Oil		Gas	
	Gross	Net	Gross	Net
<b>Europe</b>	8	6		
<b>South America</b>	<b>1,056</b>	<b>357</b>	<b>163</b>	<b>64</b>
Trinidad and Tobago	99	69	48	16
Other countries in South America	957	288	115	48
<b>Central America</b>				
<b>North America</b>	14	4		
<b>Africa</b>	113	27	79	24
<b>Asia</b>	-	-	-	-
<b>Total</b>	<b>1,191</b>	<b>394</b>	<b>242</b>	<b>88</b>

	As of 31 December 2010 (1)			
	Oil		Gas	
	Gross	Net	Gross	Net
<b>Europe</b>	8	6	5	4
<b>South America</b>	1,059	329	168	70
Trinidad and Tobago	99	69	47	16
Other countries in South America	960	260	121	54
<b>Central America</b>	-	-	-	-
<b>North America</b>	12	3	-	-
<b>Africa</b>	230	46	77	23
<b>Asia</b>	-	-	-	-
<b>Total</b>	<b>1,309</b>	<b>384</b>	<b>250</b>	<b>97</b>

(1) A gross well is a well in which Repsol owns a working interest. The number of net wells is the sum of the fractions of interest held in gross wells.

## RESERVES

At 31 December 2011, Repsol's proven reserves (excluding YPF), estimated in accordance with the U.S. Securities and Exchange Commission (SEC)'s guidelines and the criteria envisaged under the Petroleum Reserves Management System of the Society of Petroleum Engineers (PRMS-SPE), totaled 1,167 Mboe, of which 393 Mboe (34%) relate to crude oil, condensate and liquefied gases and the remaining 774 Mboe (66%) to natural gas.

These reserves are mainly located in Trinidad and Tobago (31%). 52% is located in the other South American countries (Venezuela, Peru, Brazil, Ecuador, etc.), 12% is in North Africa (Algeria and Libya), 4% is in the Gulf of Mexico (United States) and about 1% in Spain.

In 2011, the aforementioned reserves fared well, with a total addition of 177 Mboe, most notably due to the Perla field in Venezuela, the Reggane project in Algeria, the initial declaration of recoverable hydrocarbons at Sapinhoa in Brazil and the revision of the Kinteroni development plan in Peru.

In 2011, Repsol reported a reserves replacement ratio (measuring total additions of proven reserves over the period relative to production for the period) of 162% for crude oil, condensate, LPG and natural gas (141% for crude oil, condensate and LPG, and 174% for natural gas).

## **INVESTMENTS**

Operating investments in the Upstream business totaled €1,813 million in 2011, 62% up on the same figure for fiscal year 2010 (€1,119 million). Investment in development accounted for 43% of the total and was carried out mainly in the United States (19%), Bolivia (17%), Trinidad and Tobago (15%), Venezuela (13%), Peru (12%) and Brazil (12%). Exploration investments represented 40% of total investment and materialized chiefly in the United States (38%), Brazil (20%) and Angola (14%). Remaining investment relates largely to the acquisition of Eurotek in Russia.

## **ACTIVITIES IN THE MAIN COUNTRIES**

### **North America**

#### **United States**

Repsol's continued drive to consolidate its project pipeline in the United States reflects its strategy of increasing its presence in OECD countries. Thus, on 7 March, the Group's subsidiary Repsol E&P USA Inc. announced that it had closed a deal with the companies 70 & 148, LLC and GMT Exploration, LLC for the joint exploration of the blocks that these two companies have on the North Slope, one of the most hydrocarbon-rich areas in Alaska. Following the deal, Repsol holds a 70% interest in these blocks. Overall, the deal encompasses over 150 blocks lying close to major production fields, spanning approximately 2,000 km<sup>2</sup>. For the first evaluation stage, Repsol has undertaken to provide the necessary investment to explore the area and confirm that the project is economically viable.

Exploratory drilling is scheduled to get under way in February 2012. The area can be broken down into two parts: a project under delineation and a host of exploratory prospects. The blocks lie directly south of the 71 blocks located in the Beaufort Sea, where the company controls 20%.

The Alaskan North Slope is a particularly promising area, offering a number of major discovered reservoirs and relatively low exploratory risk. Thanks to the new project, Repsol has increased its presence in OECD countries while consolidating its strategy of balancing its exploration portfolio with low-risk assets through onshore opportunities within a stable environment. 70 & 148, LLC and GMT Exploration, LLC are private companies based in Denver (Colorado), both engaged in oil exploration activities. Both have worked jointly on exploratory ventures in Alaska for over a decade and are one of the largest consortiums operating in the state. Repsol is confident that its international

track record and experience, combined with the local know-how of its new partners, will generate short- and mid-term value.

Also worthy of note is Repsol's presence in deep waters in the U.S. Gulf of Mexico, where the company holds a 28% interest in the hugely important Shenzi oil production project, along with an impressive number of exploratory blocks, which proved their potential in 2009 following the discovery made at the Buckskin well. This region is considered to be one of the most profitable and with the best deepwater exploration potential in the world.

The Shenzi field, which came on-stream in March of 2009 through its own platform, is one of the largest discoveries made to date in deep waters in the Gulf of Mexico. At year-end, twelve wells were producing at the Shenzi platform, plus two further wells at the Marco Polo platform. Two production wells were drilled over the course of 2011. In relation to the first of these, SB-201, Repsol received authorization on 15 March from the U.S. government to continue drilling (suspended in 2010 due to the moratorium, which was eventually lifted in October of 2010). The drilling was completed in May and the well came on-stream in June, with an initial ratio of 17,000 bopd. Drilling on the second authorized production well (SB-101) was finished in September and the well was made operational in October. To date, the reservoirs have been matching previously modeled performance levels.

In 2011, Repsol pressed on construction of the installations and drilling of the water injection wells at Shenzi in order to maintain the pressure and boost production.

Authorization was also granted to drill the appraisal well at the Buckskin discovery. Work was completed in October with positive results, confirming the reservoir's excellent potential and offering key information in defining the field development plan, with start of production now envisaged for 2017-2018. Repsol made this hugely important discovery back in 2009 as project operator during the exploratory phase. At a depth of roughly 9,000 meters, this is the deepest well operated by Repsol to date and one of the deepest wells in this region.

In December of 2011, Repsol announced an agreement, eventually ratified at the very start of January 2012, with the U.S. oil company SandRidge Energy, whereby Repsol is set to acquire a 16% and 25% interest in two areas of unconventional resources within the larger Mississippian Lime oil play, bridging the states of Oklahoma and Kansas.

The investment will lead to added production and reserves from 2012 onward and it is estimated that Repsol's net production at these areas will peak at 90,000 boe/day in 2019. The company expects to drill more than 200 horizontal production wells during 2012, a figure that will climb past 1,000 in 2014, over an area spanning 6,900 km<sup>2</sup>. Mississippian Lime is an oil play offering high historical production levels and proven resources, rich in light oil and gas produced from fractured carbonates. There is already a heavy presence of infrastructure within the area, which has been operating there for over 30 years and will allow for a rapid start-up of production and marketing of the resulting oil and gas.

Repsol's project pipeline in the United States, which is in different phases of development and comprises over 440 blocks, makes the country one of the company's strategic growth areas.

## Canada

Towards the end of the year, Repsol secured two new exploratory blocks at the 2011 offshore licensing round for eastern Canada. The company is taking part with a 10% interest in a consortium with two partners offering considerable experience in the region (Chevron and Statoil). These blocks were incorporated to the official company acreage in 2012.



The two blocks are NL11-02-01 and NL11-02-02, located in the Flemish Pass basin in the region off the coast of Newfoundland and Labrador, in the west of the discovery made by Statoil at the Mizzen well.

These blocks can be added to those the company secured during 2008-2010 in the offshore areas of Newfoundland-Labrador, Central Ridge and Jeanne d'Arc, meaning exploratory ventures in Canada have been increasing steadily. Seismic work was conducted in 2011 (1,789 km<sup>2</sup> of 3D seismics) to prepare the inventory of drilling prospects.

## **Latin America**

### **Brazil**

With a further two discoveries in 2011 (Gávea and Malombe wells), Brazil has once again become a prime example of Repsol's success at exploring over recent years. Two major development projects were generated in the Guar and Carioca areas of the hydrocarbon-rich BM-S-9 block within the larger Santos basin, with Repsol making important progress in 2011 towards starting production, a milestone that will provide a major boost to the company's existing production levels. Repsol has also made the Abar Oeste and Iguaz (2009) and Abar (undergoing final evaluation in 2011) discoveries within this same block, thus increasing the potential of developable resources in the region.

Moreover, and as part of the Guar and Carioca assessment plan, four appraisal wells turned in positive results in 2011 (Guar Norte, Guar Sul, Guar ADR1 and Carioca NE), thus reconfirming the considerable oil and gas potential of both areas.

In December 2011, Repsol presented the ANP with its declaration of commerciality for Guar (which will hereafter be called Sapinho), together with the final report of the evaluation plan for the area. Work continued over the year to bring the project on-stream in 2013. Three appraisal wells were drilled (Guar Norte, Guar Sul and Guar ADR1) with positive results. Extended well tests (EWT), started towards the end of 2010, were also completed in 2011, with extremely positive results, not only in relation to the productivity but also the connectivity and permeability of the reservoir. Daily production of over 30,000 barrels of oil is expected.

In 2011, the "Cidade de Sao Paulo" floating production, storage and offloading unit (FPSO) arrived at the Brasfels shipyard in Angra dos Reis (Brazil) to undergo final construction (integration of the topsides). The work is expected to be completed during the second half of 2012, enabling production in the south Guar area to get under way in 2013.

Also in 2011, Repsol signed a lease agreement for a second-generation production platform ("FPSO Charter 4") to cover the northern Guar area, while high-resolution 3D seismic work was got under way and the decision was reached to acquire the submarine equipment required for production.

In the Carioca area, drilling of the Carioca NE appraisal well was completed at the start of 2011, with the positive results once again confirming the area's huge potential and providing final data for the field development plan and future production start-up, initially earmarked for 2017. EWT for Carioca NE started mid-October 2011, and is expected to be completed at the start of the second quarter of 2012. The preliminary results obtained at the end of 2011 are better than initially expected.

Depending on the new results obtained, the consortium expects to carry out more appraisal work so as to gauge the total potential of the Carioca area. For such purpose,

the Brazilian authorities (ANP) have approved an additional program of activities, pushing the deadline for the declaration of commerciality back to 31 December 2013. Meanwhile, the work flow for the development project and production start-up for the Carioca area is continuing as planned.

In 2011, work continued on the evaluation and development plan for the Piracucá field (block BM-S-7). Drilling work was carried out in order to obtain information on the best option for full development of the block.

The evaluation plan for the Panoramix discovery, located within the BM-S-48 (674) block, was presented to the Brazilian authorities (ANP) in August of 2011. The plan envisages the drilling over the coming three years of an appraisal well with contingent drill stem tests (DST) and the possibility of a second well.

In February 2012, Repsol announced a significant oil discovery in the deep water of the Campos basin in Brazil. The discovery took place during the Pão de Açúcar drilling in block BM-C-33, where Repsol Sinopec Brasil is the operating company with a 35% share. The well has found two hydrocarbon accumulations with a total height of 500 meters, which is a good indicator of the great importance of the find. Pão de Açúcar joins the Seat and Gávea discoveries, all of them in the BM-C-33 block. These three wells consolidate the high potential of the Campos basin, which might confirm the existence of a large hydrocarbons nucleus similar to the one in the Santos basin. Repsol and its partners in the discovering consortium expect to carry out additional work in 2012 to confirm the large extent of the discovery.

All the promising results in Brazil since 2011 were obtained by virtue of the alliance signed in 2010 between Repsol (60%) and the Chinese company Sinopec (40%), which led to the creation of Repsol Sinopec Brasil, one of the leading private energy companies operating in Latin America. The alliance became fully-fledged from an operational standpoint in 2011.

Repsol Sinopec Brasil is one of the leading independent energy companies spearheading exploration and production in Brazil. It occupies a strategic position in the areas offering the greatest potential along the Brazilian pre-salt layer, and is leading exploratory efforts in the hydrocarbon-rich Santos basin alongside Petrobras and BG. The company boasts a significant and well-diversified portfolio of assets within the country, which includes a field already in production (Albacora Leste) and major discoveries over recent years, along with the Piracucá field, located within the BM-S-7 block and currently under development, and Panoramix, in the BM-S-48 (674) block.

The important exploration discoveries made in recent years, coupled with the development projects that are currently materializing and the agreement reached with Sinopec, all bolster the company's strategy in offshore Brazil, one of the areas offering the greatest growth in oil and gas reserves worldwide, and represent one of the key growth projects for the Upstream division.

## Bolivia

Repsol's main project under way in Bolivia involves the entire development of the Margarita-Huacaya area. This key project is located in the northern reaches of Tarija state and is operated by a consortium comprising Repsol (operator, with a 37.5% stake), BG (37.5%) and PAE (25%). The objective of the joint development project for the Margarita and Huacaya fields (the latter, discovered in 2008, was one of the five largest discoveries made in the world that year) is to step up gas production in two phases, entailing a further increase of 6 Mm<sup>3</sup>/d for each phase.

Remodeling work on existing installations was completed in May of 2011, thus improving processing capacity and, therefore, increasing the field's total daily natural

gas output of 2.3 million cubic meters to 3 million cubic meters. The work included upgrading the facilities and changing valves, discharge lines, filters and compressors.

In tandem with this, final development work on phase 1 of the project continued in 2011 with the ultimate aim of increasing the field's natural gas processing capacity to 9 million cubic meters per day. Thus, construction work continued during the year on the new gas processing plant, the gas transport system (GTS) and the evacuation system (EXS). A major milestone in phase 1 was reached in November 2011 following successful completion of the recompletion work on the Margarita 4st (MGR 4st) well, with the aim of finishing it completely. Production testing revealed that it was the well with the greatest flow rate in the Subandina basin, with production under testing of 5.4 million cubic meters per day. The testing prompted the construction of a specially designed flare pit over 50x60 meters in size, 25 meters in height and with eight eight-inch lines as burners, the largest to be constructed in Bolivia to date. Reservoir output is expected to reach 9 million cubic meters per day over the second quarter of 2012.

The results exceeded initial expectations and effectively corroborated the technical viability of production at the committed flow rate for phase 1 of the project.

At present, more than 1,500 people are working on site and on the construction of the gas extraction and evacuation pipelines.

In June of 2011, Repsol reached the final investment decision (FID) for phase II of Margarita-Huacaya development, the aim of which is to attain production of between 14 and 15 million cubic meters a day in 2013 and 2014, respectively.

## Peru

The drilling and completion phase was finished in 2011, along with testing of the development wells as part of the development program for the Kinteroni Sur field. This phase got under way in August of 2010. The wells are already ready for production start-up as soon as surface installations and pipelines to the Malvinas plant have been completed. The drilled development wells turned in better-than-expected results. In terms of the above-ground installations, 2011 witnessed the start of preliminary on-site work on the production installations at Kinteroni and Nuevo Mundo, while extraction pipelines were also constructed. Long-term delivery equipment was purchased so as to ensure that it is available at the relevant phase of construction. The equipment is being delivered on schedule and the south Kinteroni area is expected to enter production over the second half of 2012.

In 2011, the Peruvian authorities awarded Repsol the environmental permits required to start the exploration phase for the north Kinteroni area, with the drilling campaign now expected to commence in 2012.

The Kinteroni field is located in block 57, in mid-east Peru. Geographically, it lies to the east of the Andes mountain range in the Ucayali-Madre de Dios basin. The exploration licensing and exploitation agreement for the block was signed in January 2004 and envisages five exploratory periods (the fourth period is currently in progress). The partners of the block are Repsol, with 53.84% (operator) and Petrobrás, holding 46.16%. Kinteroni was discovered in January of 2008 and was one of the world's largest at the time. The final investment decision (FID) to develop the southern area of the Kinteroni field was taken in July of 2009 and was declared a commercial discovery before the Peruvian authorities in November of the same year. The initial development plan was then sent to the local authorities in May 2010.

In 2011, the Camisea field, where Repsol owns a 10% interest, continued to send natural gas to the Peru LNG liquefaction plant, in which the company owns a 20%

interest. The Camisea field comprises blocks 56 and 88, where production is intended for the local market and to supply the Peru LNG liquefaction plant.

Repsol took part in the 2011 exploratory licensing round in the country and walked away with three exploratory blocks (180, 182 and 184) in the Huallaga basin, pending final official confirmation.

## Venezuela

In December of 2011, a natural gas supply agreement was signed as part of the major gas project at the Perla megafield within the Cardón IV block, thus enabling the project development phase to get started. The supply contract, which runs until 2036, envisages a mutual undertaking to deliver and purchase over 8.7 TCF of natural gas, and the facility will help meet domestic gas demand in Venezuela, which is expected to grow over the coming years on the back of consumption in domestic, industrial, petrochemical and electrical power processes. Given the scale of the venture, the Perla field also offers the possibility of exporting natural gas, an option that Repsol and Eni will analyze together with PDVSA and the Venezuelan authorities.

The Perla megafield was discovered by Repsol and Eni in 2009 within the larger Cardón IV block, which is located in shallow waters of the Gulf of Venezuela, roughly 50 kilometers from the coast. A total of five wells have now been drilled. These will be brought on-stream through platforms and underwater connections, which will take the gas to the coast for processing and evacuation to the Venezuelan distribution network.

In 2011, two appraisal wells (Perla 4 and Perla 5) were drilled and turned in positive findings. Work on the first of these wells was started in December of 2010 and completed in January of 2011. Production tests were successfully completed at the end of February, with the findings reconfirming the size of the reservoir.

Drilling of the Perla 5 well concluded at the start of May 2011, while production testing was conducted between May and June. Of the five wells drilled to date, this has the most production potential and is the first to be slanted at a considerable angle (82 degrees) in offshore Venezuela. Following final completion, it is estimated that the well will be able to produce between 100 and 130 Mscfd. These two wells had a dual objective: to assess the lateral continuity of the discovery and to form part of an early production program.

In 2011, the field development plan was fully defined, envisaging production start-up under phase I to take place in 2013. Also in 2011, it was decided to push forward the bidding process for construction of the offshore facilities. The project has been structured into three phases so as to bring development of the field in line with changing demand. Expected production levels for each phase are 300 Mscfd for the first, 800 Mscfd for the second and 1,200 Mscfd for the third.

During the evaluation period, Repsol and Eni are participating equally with 50% a piece. Following the evaluation stage, however, PDVSA will be entitled to acquire up to 35% of the venture, meaning that Repsol and Eni would each control 32.5%.

Moving on to the Carabobo heavy crude oil project, conceptual engineering work for the early accelerated production project was completed and the initial development plan was agreed upon. Similarly, procurement processes were initiated to acquire drilling equipment and machinery for the stratigraphic and development wells and 3D seismic equipment for the area. In March of 2011, conceptual engineering work got under way in order to construct a heavy crude oil upgrader capable of processing 200,000 barrels of oil/day. The installation will enable the consortium to increase the quality of the crude to 32° API once operational, with start-up tentatively scheduled for 2017.

These different phases envisage, in principle, the possibility of starting early accelerated production during the second half of 2012, reaching a production *plateau* of 400,000 barrels of oil in 2017 with the start-up of the upgrader.

In February 2010, the Venezuelan government awarded the Carabobo project to a consortium of international companies headed by Repsol, which holds an 11% stake. The project involves the development, along with PDVSA, of the heavy crude oil reserves in the Carabobo 1 Norte and Carabobo 1 Centro blocks located in the Orinoco Oil Belt, one of the areas with the largest undeveloped oil reserves in the world. Production will reach 400,000 barrels of oil per day over 40 years. Part of the heavy crude oil obtained from the project will be sent to Repsol's Spanish refineries, which will allow the company to profit from its investment in advanced deep conversion techniques at the refineries.

#### Trinidad and Tobago

Repsol holds a 30% stake in the company BPTT, which operates a large productive oil and gas area in the country's offshore zone. Production at these various fields will be sent to the liquefaction trains at the Atlantic LNG plant, in which Repsol also owns an interest. In 2011, BPTT carried out stoppages for maintenance work on the Cannonball, Kapok and Inmortelle fields and on trains 1 and 4 at the Atlantic LNG facility, dragging down production figures at BPTT in comparison to 2010.

On 25 August, the BPTT consortium announced the start-up of gas production at the Serrette field. This dry gas field features an unmanned platform, connected by 26-inch pipeline running 50 kilometers to BPTT's "Cassia B" platform.

Repsol is the operator of the TSP blocks, holding a 70% interest. 3D seismic work on this marine area was completed in February of 2011. The purpose of this work was to obtain full information on the area and assess the remaining exploratory potential of the asset. The task of processing the available seismic information was also completed in 2011, with the aim of unearthing possible exploratory opportunities for 2012.

#### Other countries

In Colombia, Repsol announced the signing in January of 2011 of an agreement with the Colombian company Ecopetrol (ECP) and the Brazilian giant Petrobras to acquire a 30% interest in the Tayrona offshore exploratory block, located in waters of the Colombian Caribbean, close to the Guajira peninsula. The other partners are Ecopetrol, which holds 30%, and Petrobras, which will remain the operating company, with the remaining 40%. In 2011, 1,500 km<sup>2</sup> of 3D seismic work was carried out to pinpoint the location of drilling prospects.

In April 2011, Repsol entered into an agreement with Ecopetrol (ECP) to acquire a 50% stake in the offshore RC-11 and RC-12 blocks (ECP remains the operator with the other 50% interest). The asset offers medium-high potential and is found in shallow waters off the Colombian coast.

In July of 2011, drilling was completed on the Chipirón T well within the Chipirón block. The well discovered oil at three levels and the positive results obtained from the well are currently undergoing appraisal work.

In October 2011, drilling was completed on the Caño Rondón Este well within the Rondón block. The findings will be assessed after production tests have been conducted.

In Guyana, Repsol owns an interest in the Georgetown block, which it operates with a 15% stake. The partners in this particular project are YPF (30%), Tullow Oil (30%) and CGX Energy (25%). Preliminary work was carried out over the year before drilling gets started on the Jaguar-1X well, employing the Jack-Up Atwood Beacon platform. The platform, which is currently being used in Surinam by its current operators, must arrive before the well drilling work can get under way. The well is expected to reach its final depth midway through 2012. Despite being installed in shallow waters, the well will operate at high pressure and temperature due to its depth and the geological features of the surrounding area.

In Cuba, Repsol signed a lease contract in January 2010 with Saipem to use the Scarabeo-9 drilling rig, which complies with all the technical requirements and all limitations established by the U.S. authorities for drilling operations in Cuba. The drilling rig reached Cuban waters in January of 2012 and started drilling the Jagüey exploration well on 31 January.

In Ecuador, the company continued to operate normally in 2011 within blocks 16 and Tivacuno, following the signing of the new service contracts with the Ecuadorian government. The contract for block 16 was signed on 23 November 2010, within the deadline imposed by new domestic legislation. The agreement took effect from 1 January 2011 onward. In the case of the Tivacuno block, the corresponding contract was signed on 22 January 2011, with an effective date of 21 February 2011. The contracts will bridge the 2011-2018 horizon and Repsol's interest under both of them amounts to 55%. The partners, holding equal interests in both blocks, are OPIC (31%) and Sinochem (14%).

## **Africa**

Repsol's significant presence in North Africa is mainly concentrated in Libya and Algeria, countries where it holds interests in major projects that will ensure sustained and profitable growth over the coming years. The company is also consolidating its presence in West Africa, in particular Angola, Sierra Leone and Liberia.

### **Libya**

Owing to the armed conflict that ravaged the country for most of 2011, production came to a grinding halt at the start of March. For the most part of February, production wavered at around 50%, and during the second and third quarters, Repsol had zero production at the fields.

Production at blocks NC-115 and NC-186 was resumed in October following the end of the fighting. The company is confident that production levels in 2012 will return to levels reported before the onset of the conflict.

### **Algeria**

The major Reganne gas project was ready in 2011 for the start of the development stage in 2012, after the Algerian authorities granted final approval of the development plan towards the end of the year. Well drilling, deepening and completion work is expected to get under way during the first half of 2012 with the aim of starting gas production in 2016. Repsol is the project operator, with a stake of 29.25%, while RWE holds 19.5%; Edison, 11.25%; and the state-owned company Sonatrach, 40%.

Acquisition, reprocessing and seismic interpretation was conducted on the Sud-Est Illizi exploration block over the course of 2011, thus generating the necessary information for the exploratory drilling campaign, which is expected to start in 2012. In January 2010, Repsol signed an agreement with Sonatrach and the National Agency for the

Assessment of Oil Resources (ALNAFT) of Algeria for the exploration and exploitation of the Sud-Est Illizi block, located in south-east Algeria. The consortium developing the exploration activities is formed by Repsol (52.5%) as the operator, the Italian company Enel (27.5%) and the French-Belgian concern GdF-Suez (20%).

## Angola

In January 2011, Repsol was awarded three exploration blocks (22, 35 and 37) during the licensing round held in the country. Repsol is the operator of block 22, with a 30% interest. The blocks are located in Kwanza, in deep waters off Angola, in a basin that Repsol geologists view as a continuation of the oil-rich Santos basin, located in Brazilian offshore waters. In December, Repsol signed contracts with Sonangol to acquire interests in the blocks, which were added to the company's official acreage at the start of 2012.

## Sierra Leone

Following the two exploration discoveries made in deep waters off Sierra Leone (with the Mercury-1 well in 2010 and with the Venus B-1 well in 2009), drilling work got started on the Júpiter-1 well in November 2011, and is expected to be completed in the first quarter of 2012. The water table at the well site is 2,200 meters. In February 2012 it was announced that a 30 meter hydrocarbon column in the Júpiter-1 drilling. Drilling work also commenced on the Mercury-2 well in 2011, and will finish in 2012 following completion of the Jupiter-1 well.

Repsol is a pioneering company in the exploration of this African region. The company's operations, started in 2003, have discovered an area with a high potential, where further exploration will be carried out in collaboration with its partners Anadarko and Tullow.

## Liberia

An agreement was reached in the second quarter of 2011 to increase Repsol's interest in the LB-15, LB-16 and LB-17 blocks by a further 10%, thus climbing from the previous 17.5% to the current 27.5%. A deal was also manufactured for Repsol to acquire a 10% interest in the LB-10 exploration block.

## Europe

### Norway

In 2011, three new exploration blocks were added to the project pipeline that the company is currently cementing in the country. At year-end, Repsol owned interests in eight exploration blocks in Norwegian waters, acting as operating company for two of them (PL-541 and PL-531).

At 1 January 2011, Repsol acquired a stake in the PL-529 block, located in deep waters in the south-west of the Barents Sea, following the acquisition of a 10% interest from Eni, the company operating the block. A 3D seismic reading has already been obtained for the block, delineating its main prospect, Bønna. The work program envisages the drilling of an exploration well at the prospect during the spring of 2012.

Also on 1 January 2011, Repsol effectively obtained 10% of the PL-530 license by acquiring a 10% stake in the operating company GdF, which retains 30% of the

license. Drilling work on the Heilo exploration well was completed in October, with the well turning in negative findings.

Repsol secured an interest in the PL-531 block by acquiring a 20% stake in the company Marathon, with the effective date being 1 January 2011. Marathon holds a 10% interest in the license, but transferred the operation to Repsol. The work program envisages the drilling of an exploration well, foreseeably in 2013. This will be the first well operated by Repsol in Norwegian waters of the Barents Sea.

In 2012, Repsol secured six new exploration licenses at the APA2011 (Award in Predefined Areas). The results of the bids previously presented in September of 2011 were publicly announced on 17 January 2012. Of the six new licenses awarded, Repsol will act as operating company on one of them. The licenses are located in the Norwegian Sea (four), the Barents Sea (one) and the North Sea (one).

## Spain

In June 2011, the Spanish Secretary of State for Climate Change awarded a favorable Environmental Impact Statement (DIA) green-lighting the drilling of the Siroco A-1 exploration well in the Alboran Sea. For environmental reasons, the work has been scheduled for the February-April period of 2013. In 2011, Repsol obtained a fresh extension to the second exploration period for the area, which was published in the Official Gazette of the Spanish State (BOE) in October and will run until August of 2013.

Repsol secured these licenses (Siroco A-D) back in 2004. Since then, 3D seismics have been obtained and a study conducted of the seabed and other geophysical and geological factors so as to determine the presence of gas and the location of the Siroco A-1 exploration well.

As part of the work to bring the Lubina and Montanazo discoveries on-stream, the actuation and control units for the underwater equipment were installed at the Casablanca platform in 2011. All that remains is to install the underwater equipment and connect it to the control equipment at the platform, following approval of the corresponding part of the DIA. The delay in obtaining the official licenses has meant that the scheduled production start-up for these fields has been pushed back to the fourth quarter of 2012.

Repsol made these two oil discoveries in the Spanish Mediterranean in the first half of 2009, through the Montanazo D-5 and Lubina-1 wells, located 45 kilometers off the coast of Tarragona. Repsol is the operating company in both cases.

In June, the company acquired a 40% interest in the Bezana and Bigüenzo blocks, situated on the Cantabrian coast. The company Petroleum O&G España is the operator of these blocks with a 60% stake.

## ***LIQUEFIED NATURAL GAS (LNG)***

### **ACTIVITY AND CONTEXT**

LNG activities include the liquefaction, transportation, marketing, and regasification of liquefied natural gas, in addition to electricity generation activities in Spain at the BBE



plant (Bahía de Bizkaia Electricidad) and natural gas marketing in North America. Since 1 January 2008, the information in this section refers solely to the Repsol Group's LNG commercial segment. For information on YPF's LNG business, please refer to the chapter on this company and its affiliates contained in this Consolidated Management Report.

The LNG market in 2011 was marked by an increase in demand from Japan, caused in turn by the earthquake that rocked the country on 11 March and the ensuing nuclear crisis.

This brought about a steady increase in prices in the Far East, which over the fourth quarter of the year reached figures upwards of 17 and 18 dollars per million Btu, and caused a significant de-coupling with European pricing points [NBP (National Balancing Point) at around 9 dollars per million Btu], and even more so with the Henry hub, which remained unchanged at around 4 dollars per million Btu.

The market was also characterized by low fleet availability, coupled with high spot fleet prices stemming from the longer travel times caused by the rerouting of large amounts of LNG from the Atlantic basin to the Pacific on account of the price de-coupling and the slumping demand throughout Europe.

In Spain, the most noteworthy event was the fall in demand for LNG, together with an increase in gas supplied by pipelines following the arrival of the Medgaz pipeline.

With regard to the power generation market, the average Spanish electricity pool price was €49.9 per MWh in 2011, up 35% on figures for 2010. Gross demand for electrical power across the Iberian peninsula in 2011 stood at 255,179 GWh, 1.8% down on the same figure for 2010. Most technologies reported lower production than in 2010, such as hydraulic power, which saw a 28% drop, and combined cycle plants, which shed 22%, whereas coal power plants doubled production in comparison to 2010. Solar power generation grew by 43% over the year, with an increase of 26% in photovoltaics and 193% in concentrating solar power.

## **RESULTS**

Operating income from LNG operations totaled €386 million in 2011, in comparison to the €105 million posted a year earlier. EBITDA stood at €556 million in 2011 (vs. 277 million in 2010).

The improvement in these results is chiefly due to larger LNG volumes (the LNG Peru plant having been operational since June 2010) and LNG marketing margins in 2011.

## **ASSETS AND PROJECTS**

The main milestone for 2011 was that it marked the first full year of operation of the Peru LNG liquefaction plant in Pampa Melchorita, which was brought on-stream in June 2010, and in which Repsol holds a 20% interest. The other partners in Peru LNG are Hunt Oil (50%), SK Energy (20%) and Marubeni (10%). The Camisea consortium, in which Repsol also has a 10% stake, supplies natural gas to the plant.

The facility, with a nominal capacity of 4.4 million tons per year, processes 17 million cubic meters of gas per day. It boasts the two largest storage tanks in Peru (each with a capacity of 130,000 cubic meters) and a sea terminal over one kilometer long to receive ships with capacities ranging from 90,000 to 173,000 cubic meters.

Additionally, the project envisages that Repsol will be the exclusive marketer of the liquefaction plant's entire production. The gas purchase agreement entered into with Peru LNG will run for 18 years from the start of commercial operations and is, in terms of volume, the largest LNG acquisition ever made by Repsol.

In September 2007, Repsol was awarded a contract under an international tender organized by the Federal Electricity Commission (CFE) for the supply of LNG to the natural gas terminal in the port of Manzanillo on Mexico's Pacific coast. The contract envisages the supply of over 67 bcm of LNG to the Mexican plant over a fifteen-year period. The Manzanillo plant, which will supply gas to the CFE power plants in mid-west Mexico, will receive gas from the Peru LNG plant. Although start-up was scheduled for the second half of 2011, it is now expected to enter into service in 2012.

Production at the Peru LNG facility was 5.2 bcm (3.8 million tons/year), more than twice the figure for 2010, due to 2011 being the first full year of operation and thanks also to improvements in a number of operational indicators for the plant.

June 2009 witnessed start-up of production at the Canaport LNG regasification plant, a Repsol (75%) and Irving Oil (25%) partnership, and the first LNG regasification plant on Canada's eastern coastline. Located in Saint John (New Brunswick) and with an initial send-out capacity of 10 bcm/year (1 billion cubic feet per day), the Canaport terminal is one of the largest in North America and supplies markets on the eastern coast of Canada and the north-eastern United States. Repsol, the plant operator, supplies the LNG that fuels the terminal and is entitled to the entire regasification capacity. The third tank, which started operations in April 2010, is able to receive loads from the largest LNG carriers up to now.

A multi-year LNG supply agreement was signed in 2010 with Qatargas for the Canaport LNG plant. The LNG will be supplied using Q-Flex and Q-Max carriers, the largest in the world with capacities of 210,000 and 260,000 cubic meters, respectively, making Canaport LNG one of the handful of plants worldwide capable of receiving these ships at its terminal. This agreement bolsters Repsol's status as a reliable, diversified and flexible natural gas provider for the Canadian and north-eastern American markets.

Highlights for 2011 included the delivery of 14 loads under the agreement with Qatargas, concentrated in months of higher market prices, as well as a sharp rise in plant use in comparison to 2010, with January 2011 hitting an all-time high in terms of daily production. Growth in natural gas marketing activities in North America is also expected to continue.

Repsol is involved in the Trinidad and Tobago integrated LNG project, in which it holds an interest alongside BP, BG and others in the Atlantic LNG liquefaction plant. The strategic geographical location of the facility allows it to supply markets in the Atlantic Basin (Europe, the United States, and the Caribbean) under advantageous economic conditions.

This plant has four liquefaction trains with a combined capacity of 15 million tons per year. Repsol holds a 20% stake in train 1, a 25% stake in trains 2 and 3, and 22.22% in train 4 (the latter being one of the largest in the world, with an output capacity of 5 million tons/year). In addition to its interests in the liquefaction trains, Repsol plays a leading role in the supply of gas and is one of the main purchasers of LNG.

In Spain, Repsol holds a 25% interest in the company Bahía de Bizkaia Electricidad, S.L. (BBE). This company owns a combined cycle power plant with 800 MWe of installed capacity. Power generated at the plant is fed to the grid for residential, commercial, and industrial consumption. The facility, which is located in the port of Bilbao, had low availability over 2011 due to the repair and subsequent replacement of a turbine casing, although the excess gas was sold without economic loss for the company.

In December 2007, Repsol and Gas Natural SDG signed a shareholders' agreement with Sonangol Gas Natural (Sonagas) with the aim of starting work on developing an integrated gas project in Angola. This initiative involves the appraisal of gas reserves to determine the investments that would be required for their development and export in the form of liquefied natural gas. In accordance with the timetable, Repsol and Gas Natural SDG, acting through the company Gas Natural West Africa (GNWA), have taken part in the exploration activities currently being undertaken by Sonagas, the operator of the consortium, in which GNWA holds a 20% interest, followed by Sonagas (40%), Eni (20%), Galp (10%), and Exem (10%).

As part of the significant structural and legal progress achieved to date, an office was set up in Luanda and gas and mining rights were awarded by the Government of Angola. The Concession Decree was approved by the Council of Ministers, ratified by the National Assembly and published in the Official Gazette. The Risk Service Agreement was also signed in July 2010.

Moreover, drilling on the Garoupa-2 and Garoupa North wells was completed in 2011. The wells are currently under appraisal and the ongoing work will eventually verify the consortium's projected gas resources for the field. For the time being, the seismic and drilling work is set to continue into 2012.

In Brazil, Repsol signed a contract in December 2009 to join the consortium formed by Petrobras (51.1%), BG (16.3%), Galp (16.3%) and Repsol (16.3%) and which is to conduct technical engineering studies –Front End Engineering Design (FEED)– prior to the installation of a floating LNG plant at the BSM-9 and BSM-11 fields. These studies serve to assess the floating liquefaction plant's technical and economic viability. In 2011, three studies were carried out in tandem with different consortiums with a view to reducing technical uncertainty in relation to what is a groundbreaking development within the LNG industry, while also stimulating competition between different contractors to therefore streamline development and construction costs. The results of these studies will also be compared with other logistical solutions for extracting gas in the Brazilian pre-salt area in order to select the best option for capitalizing these resources. In the event that the project is finally declared feasible, Repsol will be guaranteed the option of participating in the construction of the plant. The final investment decision is due to be made in 2012.

## **LNG TRANSPORT AND MARKETING**

The Repsol-Gas Natural LNG (Stream) 50-50% joint venture is one of the leading LNG marketing and transport companies in the world and one of the most important operators in the Atlantic basin. One of this company's objectives is to optimize the management, in the short- and medium-term, of both partners' fleets, which include 15 gas tankers and a variety of other vessels.

In 2011, Repsol, with management support from Stream, marketed 11.0 bcm of LNG, up 64% on the same figure for 2010. Most of the gas emanated from Peru LNG, which was started up in June 2010, and from Trinidad and Tobago. The main destinations for the cargo were Spain, Canaport LNG and the Asian market, with sales materializing in both the Atlantic basin (Europe and America) and the Pacific basin. In January 2011, the company reached an agreement with Kogas to supply 1.9 Bcm of LNG, thus boosting gas supplies to the Asian market.

In terms of ships, at year-end 2011 Repsol owned seven LNG carriers and a further two jointly owned (50-50) with Gas Natural Fenosa, all of them under time charter agreements and with a total capacity of 1,248,630 cubic meters. Four of these LNG

vessels were added during 2010, linked to the start-up of the Peru LNG project, one from Naviera Elcano and three more from Knutsen OAS.

In addition to this, Repsol leased a further four LNG carriers in 2011 under medium-term agreements and other shorter *ad hoc* leases.

## INVESTMENTS

Operating investments from the LNG business totaled €18 million in 2011, down on the €82 million invested in 2010. The funds were largely earmarked for the gas project in Angola and the Atlantic LNG plant, while investment for 2010 related primarily to the construction of a third tank at the Canaport LNG regasification terminal.

## DOWNSTREAM

The Repsol Group Downstream business embraces the supply and trading of crude and other products, oil refining, marketing of oil products and LPG, and the production and marketing of chemicals. The information in this section does not include YPF's activities. For information on YPF's Downstream activities, please see the section on this company and its affiliates contained in this Consolidated Management Report.

## RESULTS

<b>Operating income</b>	<b>2011</b>	<b>2010</b>	<b>2011/2010 Variation</b>
Millions of euros			
Europe	1,012	1,182	(14%)
Rest of the world	195	122	60%
<b>Total</b>	<b>1,207</b>	<b>1,304</b>	<b>(7%)</b>

Operating income in the Downstream business amounted to €1,207 million in 2011, down 7.4% on the €1,304 million posted in 2010.

This year-on-year drop in income can largely be explained by the smaller margins in the Refining business and the lesser volumes in commercial business, as a result of the economic crisis, despite the upturn in the chemical business in the first half of the year and the improved results in the Trading division.

## REFINING

The Repsol Group owns and operates five refineries in Spain (Cartagena, A Coruña, Petronor, Puertollano and Tarragona), with a combined distillation capacity of 896,000

barrels of oil per day (including, in the case of the Tarragona refinery, the share in Asfaltos Españoles S.A.). Installed capacity at La Pampilla refinery (Peru), in which Repsol holds a 51.03% stake and is the operator, is 102,000 barrels of oil per day.

## Refining activity and context

Events in 2011 were shaped by the prevailing international economic crisis. Demand for oil products dropped off in OECD countries, impacting the refining business, particularly in Europe, where refining margins fell to the lowest levels seen in several years. The year witnessed the closure of yet more refineries and this restructuring within the sector is expected to continue over the coming years across both Europe and the United States, with the closure of less complex refineries that are unable to compete as effectively. These closures, coupled with a foreseeable recovery in mid-term demand, will allow margins to rally, especially at refineries geared towards producing medium distillates and with capacity to process heavy crude products. According to the findings of the International Energy Agency, this increase in demand will largely materialize in emerging countries, headed by China and India.

The refining margin in Spain stood at 1.6 dollars per barrel in 2011, slightly down on the same figure for 2010 (2.5 dollars per barrel). In Peru, the annual refining margin came in at 3.3 dollars per barrel, in comparison to the 4.2 dollars per barrel seen in 2010.

The table below shows the refining capacity of the refineries in which Repsol held a stake at 31 December 2011:

<b>Refining capacity (1)</b>	<b>Primary distillation</b> (thousand barrels per day)	<b>Conversion index (2)</b> (%)	<b>Lubricants</b> (thousand tons per year)
<b>Spain</b>			
Cartagena	220	76	155
A Coruña	120	66	-
Puertollano	150	66	110
Tarragona	186	44	-
Bilbao	220	63	-
<b>Total Repsol (Spain)</b>	<b>896</b>	<b>63</b>	<b>265</b>
<b>Peru</b>			
La Pampilla	102	24	-
<b>Total Repsol</b>	<b>998</b>	<b>59</b>	<b>265</b>

(1) Information disclosed in accordance with the Repsol Group consolidation criteria: all the refineries mentioned are included in the Group's financial statements through full consolidation. The reported capacity in Tarragona includes the shareholding in ASES.A.

(2) Defined as the ratio between the equivalent capacity coefficient of Fluid Catalytic Cracking (FCC) and primary distillation capacity.

In this context, Repsol refineries managed by the Downstream division processed 31.5 million tons of crude oil, marking a year-on-year drop of 2.8%, following the loss of REFAP due to its sale in December of 2010. Average use of refining capacity in Spain

stood at 71%, versus the 74% for 2010. In Peru, refinery use was also down on the same figure for 2010, dropping from 71% to 69% in 2011.

The table below provides a breakdown of refinery production, by main products:

## PRODUCTION

Thousands of tons	2011	2010 (3)
<b>Refinery intake (1)</b>		
Crude	31,483	34,410
Other refinery intake	9,053	7,321
<b>Total</b>	<b>40,536</b>	<b>41,731</b>
<b>Refining production</b>		
Intermediate distillates	17,835	18,668
Gasoline	8,145	9,084
Fuel oil	6,287	6,081
LPG	1,056	1,166
Asphalts (2)	1,272	1,478
Lubricants	242	275
Other (except petrochemicals)	2,858	2,250
<b>Total</b>	<b>37,695</b>	<b>39,002</b>

(1) Information disclosed in accordance with the Repsol Group consolidation criteria: all the refineries mentioned are included in the Group's financial statements through full consolidation, with the exception of Refap, which is presented in relation to the Group's 30% interest in 2009 and 2010. This stake was sold on 14 December 2010.

(2) Includes 50% of the Asfaltos Españoles S.A. (ASESA) asphalt production, in which Repsol and Cepsa own 50% shares. Repsol markets 50% of ASESA's products.

(3) Figures for 2010 include the contribution made by 30% interest in the Refap refinery, such interest as sold in December 2010.

The following table shows the origin of the crude oil processed at the Group's refineries, as well as sales of oil products.

ORIGIN OF CRUDE OIL PROCESSED	2011	2010
Middle East	28%	22%
North Africa	6%	19%
West Africa	9%	11%
Latin America	26%	25%
Europe	31%	23%
<b>Total</b>	<b>100%</b>	<b>100%</b>

## OIL PRODUCT SALES

Thousands of tons (1)

	2011	2010
<b>Sales by geographic area</b>		
<b>Sales in Europe</b>	<b>33,548</b>	<b>32,429</b>
<b>Own marketing</b>	<b>20,558</b>	<b>20,963</b>
Light products	17,580	17,850
Other products	2,978	3,113
<b>Other sales (2)</b>	<b>6,400</b>	<b>5,591</b>
Light products	4,814	3,889
Other products	1,586	1,702
<b>Exports (3)</b>	<b>6,590</b>	<b>5,875</b>
Light products	1,754	1,688
Other products	4,836	4,187
<b>Sales - rest of the world</b>	<b>4,257</b>	<b>6,184</b>
<b>Own marketing</b>	<b>1,862</b>	<b>1,822</b>
Light products	1,579	1,469
Other products	283	353
<b>Other sales (2)</b>	<b>1,548</b>	<b>3,383</b>
Light products	1,231	2,517
Other products	317	866
<b>Exports (3)</b>	<b>847</b>	<b>979</b>
Light products	264	357
Other products	583	622
<b>Total sales</b>	<b>37,805</b>	<b>38,613</b>

### Sales by distribution channel

<b>Own marketing</b>	<b>22,420</b>	<b>22,785</b>
Light products	19,159	19,319
Other products	3,261	3,466
<b>Other sales (2)</b>	<b>7,948</b>	<b>8,974</b>
Light products	6,045	6,406
Other products	1,903	2,568
<b>Exports (3)</b>	<b>7,437</b>	<b>6,854</b>
Light products	2,018	2,045
Other products	5,419	4,809
<b>Total sales</b>	<b>37,805</b>	<b>38,613</b>

(1) 2010 includes the part corresponding to the 30% interest in Refap, which was sold in December of 2010.

(2) Includes sales to operators and bunker sales.

(3) Expressed from country of origin.

In the final quarter of the year, the upgrades and improvements to the Cartagena (C10) and Bilbao (URF) refineries were brought online, both key projects within Repsol's Strategic Plan that were approved in 2007 by the company's Board of Directors.

Following successful completion of the projects, Repsol has met the objectives initially set out in its investment strategy:

- increasing the distillation and conversion capacity of the refining system so as to maximize production of medium distillates given the prevailing shortage, cutting down on fuel oil production processing heavier crude oils.
- Improving energy efficiency, along with safety and the environment.
- Positioning Repsol's refining model as one of the best and most efficient.

The C10 project has enabled the company to boost production capacity at the Cartagena complex to 11 million tons (220,000 barrels per day). Now geared towards the production of medium distillates -over 50%- and with capacity to process heavy crudes with greater value added, the upgraded refinery will help improve the balance of trade in Spain by reducing the country's reliance on imports of automotive fuels. It is in fact the most ambitious industrial project in Spain's history, one that has generated wealth during the construction stage (€3,152 million in investment, involvement of over 20,000 people, average employment of 3,000 workers over three years) and will continue generating it once operational (1,600 direct jobs and more than 8,000 indirect jobs). With the project now completed, the Cartagena refinery has become a modern facility and one of the most efficient in Europe in terms of energy and the environment.

Thanks to the URF project, conversion capacity at the Bilbao refinery has increased significantly, with the facility now processing heavy crude oils and maximizing the production of medium distillates.

The construction of both plants was completed with excellent safety ratios, on schedule and within the approved budget.

Furthermore, both projects form part of Repsol's drive to adapt its facilities to the production of clean transport fuels, encouraging the use of biofuels (biodiesel) while improving energy efficiency, security and the associated environmental impact.

In 2011, Repsol signed an agreement with the Korean company SKL to construct and operate a new production plant for new-generation lubricant base oils.

The plant, which will be annexed to the Cartagena refinery, will require an estimated investment of 250 million euros and is set to begin operating in 2014. The Cartagena and Tarragona refineries will provide the raw materials needed to fuel the facility.

The base oils produced are needed in the manufacture of lubricants for Euro IV/V engines, and involve a major reduction in emissions and consumption.

As part of the Repsol Group's plan to integrate people with disabilities, 81 disabled people formed part of the group's workforce at its industrial complexes in Spain at year-end 2011.

## **MARKETING**

Repsol markets its range of products through an extensive network of service stations. In addition, marketing activity includes other sales channels and the marketing of a wide range of products, such as lube oils, bitumen, coke, and derivatives.

Total sales from own marketing activities fell year-on-year by 1.6% across the board in 2011 to reach 22,420 thousand tons. This drop was due to shrinking demand, which was particularly evident in Spain.

In similar fashion, own sales of gasoline and diesel oil fell by 4% in Spain. Despite this drop, sales fared better than the market as a whole, leading to an increased market share of 0.4%. In other countries, sales climbed by 4%.



Despite these lower sales volumes, Repsol's Marketing division was able to manage the sales margin efficiently, both in the case of service stations and direct sales to end consumers, contributing considerable income growth on track with the trend for 2010. In 2011, the company continued to apply its strict policy of controlling credit risk.

At 31 December 2011, Repsol had a network of 4,506 services stations in countries where the Downstream division operates. In Spain, the network comprised 3,620 points of sale, 70% of which had a strong concessionary link to the network while 26% were company operated. Service stations in other countries were spread throughout Portugal (425), Italy (166) and Peru (295).

The Downstream business had the following points of sale (service stations and supply units) as of 31 December 2011:

<b>Points of sale</b>	Controlled by Repsol (1)	Branded outlets (2)	Total
Spain	2,540	1,080	3,620
Portugal	264	161	425
Peru	116	179	295
Italy	52	114	166
<b>Total</b>	<b>2,972</b>	<b>1,534</b>	<b>4,506</b>

(1) Owned or controlled by Repsol under long-term commercial agreements or other types of contractual relations that ensure direct long-term control by Repsol over these points of sale.

(2) "Branded outlets" refers to service stations owned by third-party dealers with whom Repsol has entered into a new branding agreement entitling Repsol to (i) be the sole supplier of these service stations and (ii) to use its brand at the service station. In the EU, the maximum term of these agreement is five years.

In Spain, Repsol markets its fuels under the Repsol, Campsa, and Petronor brands, with the following distribution as of 31 December 2011:

<b>Brand</b>	Point of sale
Campsa	200
Repsol	3,086
Petronor	308
Other	26
<b>Total</b>	<b>3,620</b>

In 2011, Repsol continued to implement the commitments acquired with the EU in 2006, which include the right of dealers operating the service stations to be released from their long-term supply agreements with Repsol. These commitments expired on 31 December 2011.

In 2011, Repsol opened the world's first service station to be certified by Breeam, the leading international design and assessment method for sustainable buildings. The service station was constructed under eco-architecture parameters, employing a wide range of recycled materials, and is highly energy-efficient. The building also boasts the AENOR universal accessibility certificate.

Reflecting the growth experienced in non-oil business -18% in 2011- Repsol has been chosen as the brand of choice for Spanish drivers when purchasing non-oil products, according to the findings of a recent study conducted by an important independent company from the commercial research sector. Repsol service stations are considered the best in terms of the quality of the range of in-store products and services and the quality of the service offered to customers.

In similar fashion, Repsol, alongside El Corte Inglés department store, staged a successful promotional campaign in which discount checks were offered on purchases exceeding a certain amount, both at Repsol service stations and at the department stores of the Spanish chain.

Moreover, Repsol signed a strategic agreement with Burger King to develop a project whereby Auto King diners are to be set up at Repsol service stations in Spain.

In keeping with its commitment to society, Repsol rolled out an initiative in 2011 to improve the accessibility of more than 500 of its service stations in Spain. Thanks to the project, Repsol will have the largest number of accessible retail outlets in Spain and one of the largest in Europe.

In addition, the company opened the first accessible service station in Portugal, both for employees and customers.

As a prime example of the company's unflinching commitment to sustainable energy supply, Iberia and Repsol staged the first Spanish flight to be powered by biofuels. This groundbreaking project within the airline industry used biofuels certified by the Repsol Technology Center.

Once again confirming the company's strategy of growth and consolidation in Asia, Repsol has started to produce lube oils in China and Malaysia, with sales expected to approach 20,000 tons in 2015, equivalent to more than 25% of Repsol's annual sales of these products in Spain. At present, Repsol markets its lube oils directly or through distributors in over 60 American, European and Asian countries.

Repsol has been actively working since 2005 to integrate disabled people into its workforce and provide them with the required training, while also raising the awareness of other employees in this regard. The sterling work conducted in this field has been recognized on numerous occasions. In 2011, the company was handed the Discapnet award from the Spanish Once Foundation and also received the Ability Award for "Best private company", in recognition of its significant overall contribution to developing and providing employment to disabled people.

Reflecting Repsol's commitment to environmental protection and personal safety, the Autonomous Region of Madrid awarded Repsol's Bio Telex 46 oil with the European eco-label. The oil was developed fully at the Repsol Technology Center. The official standard is the first to be granted in Spain to a lubricant oil.

## **LIQUEFIED PETROLEUM GAS (LPG)**

Repsol is one of the leading retail distributors of LPG in the world and ranks first in Spain and Latin America. In 2011, the company operates in nine different European and Latin American countries.

LPG sales in 2011 totaled 3,033 thousand tons, on track with figures for 2010. Total sales in Spain slumped by 12% year-on-year, dragged down by particularly dry and warm weather conditions. Repsol distributes bottled, bulk, and piped LPG in Spain through collective distribution networks and has more than 10 million bottled LPG customers supplied through a network of 232 endorsed distribution agencies. Bottled LPG sales accounted for 62% of total retail LPG sales in Spain in 2011.

<b>Sales volume of LPG</b>	<b>2011</b>	<b>2010</b>
Thousands of tons		
Europe	1,486	1,680
Spain	1,325	1,503
Rest of Europe <sup>(1)</sup>	161	177
Latin America	1,547	1,428
Peru	625	497
Ecuador	375	368
Argentina	336	332
Chile	194	199
Rest of Latin America <sup>(2)</sup>	17	32
<b>Total</b>	<b>3,033</b>	<b>3,108</b>
Bottled	1,689	1,761
Bulk, piped and others <sup>(3)</sup>	1,344	1,347
<b>Total</b>	<b>3,033</b>	<b>3,108</b>

(1) Portugal and France

(2) Brazil and Bolivia in 2010, and only Brazil in 2011.

(3) Includes sales to the automotive market, LPG operators and others.

LPG trade margins for 2011 in Spain were up year on year across all channels, including bottled LPG, despite the change to the pricing system ushered in by the Spanish Ministry of Industry, Tourism and Trade in September 2009. According to the new model, 25% of the price to be applied in a forthcoming quarter would be pegged to international prices in effect during the immediately preceding quarter and the remaining 75% would depend on the maximum price prevailing at the end of the quarter just ending. The variation in this formula had an adverse impact on fourth quarter 2009 results and on results for 2010 and 2011; if this trend remains in place or if international LPG prices continue to climb, 2012 results will also feel the brunt.

In Portugal, Repsol distributes bottled and bulk LPG to end customers while also supplying other operators. Sales in 2011 reached 150,000 tons, making the company the third largest operator with a 21% market share.

In Latin America, Repsol is the leading LPG distributor in Argentina, Ecuador, Peru and Chile. It markets bottled and bulk LPG in Argentina to the residential, commercial and industrial sectors, with sales totaling 336,000 tons.

AutoGas (GLP for vehicles) is one of the most popular alternative fuels in the world. Although it has yet to make any meaningful impact on the Spanish market, sales grew by 18% in 2011, indicating increased demand for this economic fuel that also helps to improve air quality within cities. The industry expects that roughly 40,000 vehicles will be running on AutoGas in five years' time.

Repsol, fully aware of the growing interest in this alternative fuel, had 80 points of sale equipped with AutoGas pumps at year-end 2011; and intends to open further points of sale at a pace of 100 per year over the coming years.

In Peru, Repsol continued to develop and expand the vehicular LPG market in 2011 with the signing of a commercial agreement with the company Relsa, one of the market leaders in vehicle renting to companies.

Repsol continues to drive forward research, development and innovation programs centering on LPG. Highlights here include the SolarGas application, a groundbreaking, integral energy supply system combining solar energy with LPG to provide hot water to homes and businesses in a sustainable and economic manner and with very low CO<sub>2</sub> emissions; or new uses in agriculture, fishing and the development of products and services, such as Portugal's Easy Gas.

## **CHEMICALS**

The chemical business, part of the Downstream division, produces and markets a wide range of products, ranging from base to derivative petrochemicals. Its products are marketed in over 90 countries, leading the market on the Iberian peninsula.

Production is concentrated at three petrochemical complexes located in Puertollano and Tarragona (Spain) and Sines (Portugal), where there is a high level of integration between basic and derivative chemicals, as well as with refining activities, in the case of the Spanish facilities. Repsol also has a number of subsidiary and affiliate companies, through which the company produces styrene derivatives, chemical specialties and synthetic rubber at special plants. The latter is produced through Dynasol, a 50% partnership with the Mexican KUO group, with plants in Mexico and Spain.

Operating income in the chemical business, part of the Downstream division, experienced year-on-year growth of 113%. The improvement in both margins and demand over the first half of the year, coupled with the ongoing consolidation of austere cost-cutting measures and streamlining and production adjustments at plants, have all helped to push up income, despite the weakening of the sector seen in the second half of the year.

Sales to third parties in 2011 amounted to 2.66 million tons, marking a 1.6% increase on the 2.62 million tons sold in 2010.

In addition, investments continued in 2011, mainly to upgrade and optimize existing assets, enhance efficiency, reduce costs and improve quality, safety and environmental standards.

<b>OPERATING HIGHLIGHTS CHEMICALS</b>	<b>2011</b>	<b>2010</b>	<b>2011/2010 Variation</b>
Thousands of tons			
<b>Capacity</b>			
Basic petrochemicals	2,808	2,808	0%
Derivative petrochemicals	2,933	2,933	0%
<b>TOTAL</b>	<b>5,741</b>	<b>5,741</b>	<b>0%</b>
<b>Sales by type of product</b>			
Basic petrochemicals	889	874	1.7%
Derivative petrochemicals	1,770	1,744	1.5%
<b>TOTAL</b>	<b>2,659</b>	<b>2,618</b>	<b>1.6%</b>
<b>Sales by region</b>			
Europe	2,312	2,263	2.1%
Rest of the world	348	355	(1.9%)
<b>TOTAL</b>	<b>2,660</b>	<b>2,618</b>	<b>1.6%</b>

The following table details production capacity for the main petrochemical products in the Downstream business, mainly in Europe, as of 31 December 2011:

#### **PRODUCTION CAPACITY**

Thousands of tons

##### **Basic petrochemicals**

Ethylene	1,362
Propylene	904
Butadiene	202
Benzene	290
Ethyl tert-butyl ether	50

#### **PRODUCTION CAPACITY**

Thousands of tons

##### **Petrochemical derivatives**

<b>Polyolefins</b>	
Polyethylene (1)	875
Polypropylene	520
<b>Intermediate products</b>	
Propylene oxide, polyols, glycols, and styrene monomer	1,189
Acrylonitrile / Methyl methacrylate	166
Rubber (2)	115
Other (3)	69

(1) Includes ethylene vinyl acetate (EVA) and ethylene butyl acrylate (EBA) copolymers.

(2) Includes 55,000 tons of production capacity in Mexico.

(3) Includes styrene derivatives and specialties.

## **NEW ENERGIES**

The New Energies Business Unit was created in 2010, assigned to the Downstream Division, to promote and provide business sense to the new initiatives contributing to a vision of the future where energies are more diversified and produce fewer carbon dioxide emissions.

The aim of Repsol's New Energies Business Unit is to identify new opportunities, promote projects and carry out business initiatives in fields such as bioenergy and renewable energies applied to transport and other areas that could share synergies with Repsol's current businesses and the geographic regions in which it operates.

In this context, Repsol continued in 2011 to develop a number of projects started in 2010, including the acquisition of a shareholding and management control over the KUOSOL joint venture, engaged in the development of bioenergy through the farming *jatropha curcas*; AlgaEnergy, in microalgae research; Orisol, which develops wind farms; and IBIL, a company that manages the recharging of electric vehicles.

In terms of IBIL's envisaged expansion, Repsol signed commercial collaboration agreements in 2011 with Renault-Nissan, Peugeot and Opel to promote the sale of electric vehicles by vehicle manufacturers and for IBIL to install further recharging stations.

### **Acquisition of Sea Energy Renewables**

In 2011, Repsol acquired 100% of Sea Energy Renewables, later renamed Repsol Nuevas Energías U.K., a British company based in Scotland and engaged in the promotion and development of offshore wind farms. With the deal, Repsol acquired development rights at three offshore wind farms off the Scottish coast.

Within the context of this same deal, Repsol reached an agreement with EDP Renováveis for the joint development of two of the wind farms, namely the 1,500 MW Moray Firth wind farm and the 905 MW Inch Cape facility, in which Repsol will own 33% and 51% interests, respectively, following the agreement. The company also holds a 25% stake in the Beatrice wind farm with Scottish and Southern Renewables owning the remaining 75%. Thanks to the new deal, Repsol now holds rights to develop, construct and operate 1,190 MW of installed capacity in the United Kingdom.

During the plant development stage, which is due to be completed sometime between 2014 and 2015, the necessary studies will be conducted and steps taken to acquire the construction and operating permits for the facilities, with plant start-up expected to take place between 2015 and 2020. The project will allow Repsol to apply its considerable technological expertise in offshore operations, coupled with its experience in large-scale engineering projects.

## **INVESTMENTS**

Operating investments in Downstream totaled €1,712 million, up 6.2% on the €1,612 million reported in 2010. Most of this investment was spent on ongoing refining projects, particularly in Spain, on upgrading operations, facilities and fuel quality, and on safety and the environment, as described in the previous sections of this report.

## **DIVESTMENTS**

In November 2011, Repsol sold its liquefied petroleum gas (LPG) subsidiary Repsol Gas Brasil to the company Ultragas for the sum of €20 million. The sale marked the end of its divestment process of non-strategic Downstream assets in Brazil so as to concentrate on developing exploration and production projects through its investee company Repsol Sinopec Brasil.

In addition, Repsol reached an agreement to sell its subsidiary Repsol France S.A., engaged in LPG distribution in France, to Totalgaz, a subsidiary of the Total Group.

Repsol will continue to focus its attention on the LPG sector in markets where it already operates, with the aim of maintaining and enhancing its market leadership.

## **YPF**

All value chain activities (exploration, production, refining, logistics, marketing, and chemicals) conducted by YPF and its affiliates have been reported separately since 1 January 2008, the date on which the new organizational structure of the Repsol Group was unveiled. At 31 December 2011, the Group held a stake of 57.43% in YPF, S.A., which is included in the Group's financial statements through full consolidation. Most YPF operations, assets, and clients are located in Argentina.

The 2010-2014 Exploration and Production Development Program was launched in December of 2009 and officially got under way at the start of 2010, with its objectives including implementation of the unconventional oil and gas exploration and production plan. In May 2011, the company announced the discovery of unconventional oil resources (shale oil) at the Vaca Muerta field in the Loma La Lata Norte area in Neuquén province. The initially projected volume of resources and reserves at the discovery was subsequently raised in November 2011 and in February 2012.

In January 2012, Repsol announced the discovery of a conventional oil reservoir in the Chachahuén block, located in the southern region of Mendoza province, within the Neuquina basin. This is the largest discovery in the province for several years.

In the gas sector, work to develop, construct and start up the Escobar LNG terminal (Buenos Aires province) was completed in May 2011.

The facility, constructed in a record time of just 206 days, is operated by YPF and regasifies LNG through a ship boasting a capacity of 17 million cubic meters a day and 151,000 cubic meters of LNG storage capacity.

In line with the company's objective of unifying and strengthening the overall image of the YPF service station network under the concepts of modernity and rationality, 80 stations were remodeled over the course of 2011. In October, a groundbreaking service station in Latin America was unveiled in Tigre-Nordelta. Marking the first flagship station within the YPF network, the sustainable facility features advanced architecture and is energy efficient to help protect the natural environment. Existing soil and land conditions were ideally suited for a non-typical project, one capable of balancing the needs of customers with environmental protection. Fuel is delivered through five lines of state-of-the-art smart pumps, the first to be installed publicly in Argentina, thus improving customer care and service. On-site services include the Full

store, able to accommodate 180 people, two vehicle oil and diagnostics stations and an interactive Serviclub point, at which club members can find useful information, along with cash points and car washes.

In December of 2011, the La Plata industrial complex beat its production record for naphtha intended for the internal market, with a volume of 207,000 cubic meters, reaching a new annual all-time high of 2,174,000 cubic meters. Full integration of the industrial complex was also completed by uniting the operations and services of the refinery with those of the chemical complex. On the same way, full integration of the Plaza Huincul refinery and the Methanol complex was also achieved.

## RESULTS

YPF posted €1,231 million in operating income for 2011, marking a 15.3% drop on the €1,453 million reported in 2010.

This reduction is largely the result of the strikes affecting crude oil production, coupled with rising costs and the temporary suspension of the Petróleo Plus program. The increased income reported from sales of fuel at service stations and products with prices pegged to international prices was unable to offset the overall drop in operating income.

Average annual production stood at 495 kboe/day, down 8.5% on the 541 reported in 2010. Broken down, the decrease was 10.5% in gas, and 6.7% in production of liquids. The 7.6% drop in crude can largely be put down to lower production levels stemming from trade union stoppages, particularly the strike in Santa Cruz, which ran from April to July, and to a lesser extent, the Chubut strike.

## UPSTREAM

This area is tasked with the exploration, development and production of hydrocarbons, mainly in Argentinean territory, as the source for the rest of the company's value chain. In Argentina the company has 48 onshore and offshore exploration blocks with a surface area of over 140,000 km<sup>2</sup>, and is the direct or associate operator in 93 production areas located in the Neuquina, Golfo de San Jorge, Cuyana, Noroeste and Austral basins. The company also operates in the United States and Guyana through YPF International.

### Finished exploration wells

	As of 31 December 2011 (1)									
	Positive		Negative		Under evaluation		Total			
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Argentina	18	16	6	3	2	2	26	21		
United States	-	-	1	*	-	-	1	*		
<b>Total</b>	<b>18</b>	<b>16</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>27</b>	<b>21</b>		



	As of 31 December 2010 (1)							
	Positive		Negative		Under evaluation		Total	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Argentina	6	6	8	6	-	-	14	12
United States	-	-	-	-	-	-	-	-
<b>Total</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>6</b>	<b>-</b>	<b>-</b>	<b>14</b>	<b>12</b>

(1) A gross well is a well in which YPF owns a working interest. The number of net wells is the sum of the fractions of interest held in gross wells.

\* Fewer than one exploratory well.

### Finished development wells

	As of 31 December 2011 (1)							
	Positive		Negative		Total			
	Gross	Net	Gross	Net	Gross (2)		Net	
Argentina	553	493	8	8	561		501	
United States	-	-	-	-	-		-	
<b>Total</b>	<b>553</b>	<b>493</b>	<b>8</b>	<b>8</b>	<b>561</b>		<b>501</b>	

	As of 31 December 2010 (1)							
	Positive		Negative		Total			
	Gross	Net	Gross	Net	Gross		Net	
Argentina	709	616	8	7	717		623	
United States	-	-	-	-	-		-	
<b>Total</b>	<b>709</b>	<b>616</b>	<b>8</b>	<b>7</b>	<b>717</b>		<b>623</b>	

(1) A gross well is a well in which YPF owns a working interest. The number of net wells is the sum of the fractions of interest held in gross wells.

(2) Excluding 98 injection wells. When added, these make up the 659 reported as development wells.

\* Fewer than one exploratory well.

### Acreage

The table below displays information on YPF's developed and undeveloped acreage, by geographical area, as of 31 December 2011:

(km <sup>2</sup> )	31 December 2011							
	Developed (1)				Undeveloped (2)			
	Gross (3)		Net (4)		Gross (3)		Net (4)	
Argentina	6,046		4,484		172,069		95,343	
Guyana	-		-		8,400		2,520	
United States	117		16		1,161		672	
Uruguay	-		-		8,500		3,400	
<b>Total</b>	<b>6,163</b>		<b>4,500</b>		<b>190,131</b>		<b>101,935</b>	

- (1) Developed acreage is the area assignable to production wells.
- (2) Undeveloped acreage covers the surface area in which no wells have been drilled, or where wells have not been completed to the point of permitting oil and gas production in economically viable quantities, regardless of whether said area contains proven reserves. The amounts displayed pertain to acreage in terms of both exploration and operation.
- (3) Gross acreage figures do not take into account YPF's percentage stake in it.
- (4) Net acreage is the sum of the fractions of interest held in gross acreage.

### Main production concessions by country

The following table provides figures on the main YPF production concessions by country at 31 December 2011, likewise stating the percentage that YPF holds in each concession.

	Main blocks	% Repsol	Operated (O) / Not operated (NO)	Liquid (L) / Gas (G)
<b>Argentina</b>				
	Loma La Lata	100%	O	L - G
	Los Perales	100%	O	L - G
	San Roque	34%	NO	L - G
	Chihuido La Salina	100%	O	L - G
	Acambuco	23%	NO	L - G
	Chihuido Sierra Negra	100%	O	L - G
	Manantiales Behr	100%	O	L - G
	El Portón	100%	O	L - G
	Barranca Baya	100%	O	L - G
	Puesto Hernández	84%	NO	L
	Seco León	100%	O	L - G
	Aguada Toledo - Sierra Barrosa	100%	O	L - G
	Magallanes	63%	NO	L - G
	Aguada Pichana	27%	NO	L - G
	Desfiladero Bayo	100%	O	L - G
	CNQ 7A	50%	NO	L
	Señal Picada	100%	O	L - G
	Tierra del Fuego	30%	NO	L - G
	Vizcacheras	100%	O	L - G
	Lomas del Cuy	100%	O	L - G
	Chihuido La Salina Sur	100%	O	L - G
<b>United States</b>				
	Neptune	15%	NO	L
	Neptune North	15%	NO	L

### Average realization price for crude oil and gas by geographical region

	At 31 December 2011		At 31 December 2010	
	Average crude oil realization price (€/Bbl)	Average gas realization price (€/Boe)	Average crude oil realization price (€/Bbl)	Average gas realization price (€/Boe)
<b>Argentina</b>	42.76	9.66	37.49	9.78
<b>United States</b>	72.46	17.50	56.10	22.93

Note: source data in dollars converted at the accumulated average dollar/euro exchange rate for the period in question.

## **DISCOVERIES**

### **Conventional**

In 2011, YPF completed the drilling of ten exploration wells at the Neuquina basin (five of them in non-operated areas). Of the total wells drilled, four discovered resources (Triquileu sur x-1, Jagüel Casa de Piedra este x-1 and x2, and Chachahuen Sur x-2), while three are pending final results.

In January 2012, the company announced the discovery of a conventional oil reservoir in the Chachahuén block, located in the southern reaches of Mendoza province, within the Neuquina basin.

The exploration campaign rolled out over the year involved the drilling of three wells at depths of between 1,000 and 1,500 meters. The wells confirmed the existence of mineralized layers at the Rayoso formation with an average thickness of 10 meters. Two of the wells underwent testing and contributed a combined 500 barrels per day of average density oil (24° API). The third, only recently drilled, is still undergoing trials.

### **Unconventional**

The first stage of development of the 2010-2014 Exploration and Production Development Program has now been completed, the result being 15 vertical wells in the northern area of Loma La Lata and Loma Campana (Neuquén province), with target shale oil found at the Vaca Muerta formation, and with all wells having initial production levels of between 200 and 600 boe per day.

Continuing with explorations at the Vaca Muerta formation, drilling was completed on two vertical wells at the Bajada de Añelo and La Amarga Chica blocks, both located to the north of the formation. The BAñ.x-2 well posted high quality (48° API) crude oil production levels, while positive results were also reported during testing at the LCh.x-3 well, which produced crude oil of 35° API. Output for both wells is keeping pace with previous levels of performance. Existing resources at the area are currently under evaluation and activities are to be stepped up.

It is estimated that the Vaca Muerta formation spans a total area of 30,000 km<sup>2</sup>, of which YPF holds rights over approximately 12,000 km<sup>2</sup>. Initial findings would suggest that 77% of its total area contains oil, with the rest offering a mixture of wet and dry gases.

## **PRODUCTION**

YPF's oil and gas production during 2011 stood at 180.7 Mboe, down 8.5% on figures for 2010. Liquid production was 100.4 Mbbl, while crude oil was 81.4 Mbbl and gas 80.3 Mboe. Union strikes, which took place mainly in the south between April and July, dragged down production by 9.5 Mboe. Without taking into account these strikes and other losses caused by third-parties, crude oil production would have fallen by 2.5% year-on-year.

Within the framework of the Gas Plus program, which focuses on gas production, YPF secured authorization for the "Lajas Tight Gas", "Piedras Negras-Señal Lomita", "Rincón del Mangrullo" and "Precuyano - Cupen Mahuida" projects. For those areas held in association with partners, the company also secured approval for the Gas Plus projects in Aguada Pichana and in Lindero Atravesado.

## Net production of liquids and natural gas by geographical area:

	2011			2010		
	Liquids	Natural gas	Total	Liquids	Natural gas	Total
	(Mbbbl)	(bcf)	(Mboe)	(Mbbbl)	(bcf)	(Mboe)
Argentina	99	451	180	107	505	197
United States	1	1	1	1	1	1
<b>Total net production</b>	<b>100</b>	<b>453</b>	<b>181</b>	<b>107</b>	<b>506</b>	<b>197</b>

## Production wells by geographical area

	As of 31 December 2011 (1)			
	Crude		Gas	
	Gross	Net	Gross	Net
Argentina	11,559	9,918	841	529
United States	7	1	-	-
<b>Total</b>	<b>11,566</b>	<b>9,919</b>	<b>841</b>	<b>529</b>

	As of 31 December 2010 (1)			
	Crude		Gas	
	Gross	Net	Gross	Net
Argentina	11,036	9,378	831	542
United States	7	1	-	-
<b>Total</b>	<b>11,043</b>	<b>9,379</b>	<b>831</b>	<b>542</b>

(1) A gross well is a well in which YPF owns a stake. A net well is when the sum of the stakes in several wells equals 100%. The number of net wells is the sum of the stakes held in gross wells, expressed in whole numbers and fractions.

## RESERVES

At 31 December 2011, YPF's proven reserves, estimated in accordance with the U.S. Securities and Exchange Commission (SEC)'s guidelines and the criteria envisaged under the Petroleum Reserves Management System of the Society of Petroleum Engineers (PRMS-SPE), totaled 1,013 Mboe, of which 585 Mboe (58%) relate to crude oil, condensate and liquefied gases, and the remaining 427 Mboe (42%) to natural gas.

Company reserves fared well over 2011 with the addition of 202 Mboe, 137 of which correspond to oil. Highlights for the year included the addition of a major oil development project in unconventional reservoirs (Vaca Muerta) at the Neuquén Gas business unit, and the extension of concessions for all areas containing reserves of the Mendoza business unit.

In 2011, YPF reported a reserves replacement ratio of 112% for crude oil, condensates, LPG and natural gas combined (153% for crude, condensates and LPG, and 60% for natural gas).

## ACTIVITY

YPF's current activity by geographic area						
As of 31 December 2011						
	Acreage (1)				No. of exploration wells being drilled (3)	
	No. of blocks		Net acreage (km <sup>2</sup> )(2)			
	Development	Exploration	Development	Exploration	Gross	Net
Argentina	93	48	26,752	73,075	9	6
Guyana	-	1	-	2,520	1	*
United States	5	49	16	672	-	-
Uruguay	-	2	-	3,400	-	-
<b>Total</b>	<b>98</b>	<b>100</b>	<b>26,768</b>	<b>79,667</b>	<b>10</b>	<b>6</b>

(1) Operated and non-operated by YPF.

(2) Gross acreage is the size of an area in which YPF owns a stake. The net acreage is the sum of the stakes in gross acreage.

(3) A gross well is a well in which YPF owns a stake. A net well is when the sum of the stakes in several wells equals 100%. The number of net wells is the sum of the stakes held in gross wells, expressed in whole numbers and fractions.

\* Fewer than one exploratory well.

## Argentina

YPF's exploration activity in Argentina focused on the following areas in 2011:

Offshore. YPF is currently the operator of three blocks:

- CAA40 and CAA46, in the Malvinas basin (Argentina), where the Malvinas x.1 well was drilled 490 meters underwater and with a final depth of 2,000 meters to tap oil reserves with negative results. YPF held a 33.5% interest. In December, 100% of the CAA-40 and 50% of the CAA46 blocks were returned to the Argentinean Secretary for Energy due to expiry of the first exploratory period, and YPF's interest was increased to 100%.
- Block E1, in the Colorado basin (Argentina), at a depth of 1,600 meters, which is at an early well planning stage. YPF holds a 35% interest.

YPF also owns a 30% interest in block E3 of the Colorado basin, with the operator being one of its partners. Geological and geophysical studies were conducted during 2011 to define and design the seismics to be taken.

Onshore

Unconventional

- Shale oil: against the backdrop of the 2010-2014 Exploration and Production Development Program, fifteen vertical exploration wells were drilled in 2011 at the Vaca Muerta formation, in Loma La Lata (Neuquén province). The positive findings, along with the seismic and geological studies conducted, point to the existence of technically recoverable resources within the area. The first exploratory step-out well was the BAñ.x-2 at the Bajada de Añelo block, which proved to be productive. The second step-out well was the LACH.x-3 within the La Amarga Chica block. Both turned in healthy results on par with levels seen in the northern sector of Loma La Lata and Loma Campana.

In relation to activity outside the northern area of Loma La Lata and adjacent blocks, work was completed on the ChSN.xp-623 well within the Chihuido de la

Sierra Negra block. The lower 150 meters were stimulated, resulting in high quality (37° API) oil. The well is currently awaiting final results.

In addition, the company drilled the LCav.x-2 well in the Bandurria block, the MMo.x-1 well in the Mata Mora block, and the LAm.x-2 well in the Loma Amarilla block, while drilling was started on the Corr.x-1 well in the Corralera block.

- Shale gas: The LLLK.x-2h well was brought on-stream midway through December, marking the first horizontal well at the Vaca Muerta formation to target shale gas. As a part of the 2010-2014 Exploration and Production Development Program, work was started in December on the CA.x-5 well in the Cerro Arena block, and on the LDMo.x-1 well in the Loma del Molle block, both intended for shale gas production at the Vaca Muerta formation.

#### Conventional

- San Juan province: the Ansilta es-1 appraisal well (Tamerías area) was drilled at a depth of 2,507 meters below surface, without evidence of oil or gas. Due to the negative findings, the block will be returned at the end of the second exploratory period in March 2012.
- Chubut province: the Las Coloradas es-1 appraisal well (Gan Gan block) was drilled in the south-western sector of the Cañadón Asfalto basin (Área Gan Gan). At 1,600 meters below surface, the well discovered economic basement before reaching a final depth of 2,065 below surface. This new information will enable the company to adjust its prospecting model in an area where the only available information to date has come from potential methods on account of the extensive basalt coverage, with only scant 2D seismic data available. Soil samples were also collected between Gorro Frigio and Sierra de la Manea for geochemical analysis, covering 500 km<sup>2</sup> of the CGSJ V/A area.
- Mendoza province: after interpreting the 3D seismics taken in the fourth quarter of 2010, the company defined the final position of two exploration wells within the Los Tordillos Oeste block, Mendoza province, in collaboration with Sinopec Argentina (formerly Occidental Exploration and Production), which holds a 50% interest. For both projects, the respective environmental authorizations have been sought from the local authorities and are expected to be obtained midway through 2012, whereupon the drilling phase will start. This particular venture will enable the company to meet its investment commitments for the first period, which has been extended by virtue of article 1 of Provincial Resolution 546/09.
- La Rioja province: the company recorded 300 kilometers of regional 2D seismics in the area of Bolsones Bermejo and Pagancillos (Bolsón del Oeste block). The main objective here is to obtain a better picture of the geometry of the formations and make out potential structures in order to drill a well in 2012. A geochemical soil sample was also taken over 150 km<sup>2</sup> of the area west of Guandacol.
- Frontier areas: drilling of the Puesto Chacaico x-1 well was completed in the Río Barrancas block, reaching a final depth of 836 meters. The well presented impregnations of fresh oil and gas at various units of the lower cretaceous layer, thus confirming the existence of an active oil system for this frontier sector of the Neuquina basin.
- Borde de Cuenca play: exploration got under way in search of heavy crude oils on the border of the Neuquina basin, in southern Mendoza province. The working plan envisages the drilling of at least 15 appraisal wells at various

depths, the aim being to define the extension of the play and the thickness of its mineral layers.

Regarding field development activities, a total of 659 development wells had been drilled by year-end 2011, including 98 injection wells. Together with secondary, repair and infrastructure activities, these entailed a total investment in development of \$1,510 million.

During 2011, YPF continued to work on improving its facilities and streamlining oil and gas production. New simulations of reservoirs and facilities were conducted so as to continue optimizing compression capacity and above-ground installations.

YPF's key initiatives for the improvement of productive assets include:

- Neuquén Gas: during 2011, the company continued to implement its integral low-pressure operational plan for the Lomo la Lata field, upgrading a further primary separator and compression station, while also completing optimization work on the compression station interconnection system, thereby helping to minimize losses and rendering the internal piping system more flexible. Similarly, the pilot production facility was started up at ultra low pressure by installing mobile motor compressors at the wellhead. Moreover, a program was rolled out in the area of Aguada Toledo-Sierra Borrosa to drill 10 new wells and repair 14 existing production and injection wells within the framework of the integral secondary recovery plan, which also envisages upgrading above-ground installations. In the same area, development of non-conventional gas (tight gas) at the Lajas formation got started in the fourth quarter of 2011 through fracturing activity at existing wells and the drilling of new wells. The work is being carried out via the Lajas temporary joint venture, in association with Vale do Río Dolce.
- Mendoza: models were updated to incorporate the information obtained in 2010 from the Llanquanelo field, while delineation work and cold production testing continued through the drilling of two new wells in other areas of the field and in deeper reservoirs. The planned drilling work for the Loma de la Mina reservoir was completed with eight new wells located at various positions within the block. Drilling also continued on eight directional wells at Cerro Fortunoso and two new wells were drilled at Valle del Río Grande, with one of them obtaining the information needed to initiate unconventional oil investigations in 2012. In order to continue developing the Desfiladero Bayo field, five production wells were drilled and three conversions made in the northern sector. In addition, four replacement injection wells were drilled and four conversions carried out within the Desfiladero Bayo Infill area, the aim being to start bringing the field towards the injectivity levels required to meet development targets. In 2011, seven new wells were drilled, three of which were directional wells for the Chihuido de la Salina reserve (two at the Chihuido la Salina Centro-Norte field and one at Chihuido la Salina Norte) and four being horizontal wells, two located in the El Portón reserve. With regards to workover activity, a total of 12 repairs were carried out, five at the El Portón Sur field (Área de Reserva El Portón), one at the Chihuido La Salina Norte reservoir and five at the Chihuido La Salina Centro-Norte reservoir (Área de Reserva Chihuido La Salina). At Mendoza Norte, work continued on the Vizcacheras Pinch Out project with the drilling of 10 wells, associated workover and installation work. Wells were also repaired and reactivated in the La Ventana block.
- Neuquén and Río Negro: at the El Medanito field (fully owned by YPF), the aggressive drilling campaign in 2010 (across the mid-west region) was followed in 2011 by another intensive drilling campaign, including a new pilot water injection facility (in the south-west of the field). The drilling program scheduled for 2012 includes ongoing mass development throughout the area, and

completion of the construction work started two years previously on various installations.

- Chubut: the Manantiales Behr Full Development project includes the El Alba, La Carolina, Grimbeek and Sur Manantiales projects. The Chabut region currently has 840 oil-producing wells and 15 free gas-producing wells. A total of 196 wells were drilled in 2011, including 87 infill wells at the Grimbeek block and 109 development wells divided among the four aforementioned projects, with total investment climbing to \$283 million for the period. The overriding objective of this new project is to ensure full development and exploitation of new areas, with the possibility of gradually constructing new wells, implementing new assisted recovery projects and enhancing development with the corresponding above-ground installations with a view to improving the recovery factor within the area. Within the Chabut reserve, the project offering the greatest primary development potential is La Carolina, which now includes a pilot polymer injection facility at Grimbeek II, surfactant injection equipment at Sur Manantiales Behr and infill well drilling potential throughout certain sectors.
- Santa Cruz: in 2011, 13 integral development projects were rolled out at four areas under development (Las Heras, El Guadal, Los Perales and Cañadón Seco), comprising a total pipeline of 79 projects. The main development projects include Cerro Grande, Maurek, Seco and León Los Perales. As a result of these projects, a total of 65 wells have been drilled, which, including the costs of associated resources, entailed a total estimated investment of \$154 million.

Turning our attention to the development of new exploration and production businesses, it is worth highlighting the following work:

2010-2014 Exploration and Production Development Program: in 2010, collaboration agreements were signed with 12 provinces, whereby YPF undertook to assess the exploration potential of their sedimentary basins. The signatory provinces were Entre Rios, Formosa, Chaco, Santa Cruz, Buenos Aires, Córdoba, Santa Fe, San Juan, La Rioja, Salta, Misiones and Tucuman. In 2011, technical meetings were held with representatives of the provinces and three of the four phases envisaged for the 2010-2012 period have now been concluded. It is expected that the report detailing opportunities will be delivered within the first four months of 2012.

Acreage under concession: 10-year extensions were officially awarded for 16 operational blocks in Mendoza province, effective from 2011 onward, with investment in exploration activity to hit the \$54 million mark.

New acreage: YPF was heavily involved in the 2011 license bidding rounds for Chubut and Mendoza provinces. The company is now finalizing negotiations for the awarded areas.

## **International expansion**

International business focused primarily in 2011 on assessing exploration opportunities in South America. At present, YPF is staging talks in the following countries:

- Colombia: negotiations have been held for the following five blocks: Catguas, Carboneras, COR12, COR14 and COR33. The first two blocks are located in the Catatumbo basin, while the others can be found in the Cordillera Oriental basin. The company is currently awaiting official approval from the relevant government bodies. YPF's interest in the blocks ranges from 10% to 60%, and



the company is set to be the operator in four blocks. The total area of the new acreage is 3,398 km<sup>2</sup>. The exploration activity to be carried out over the next two years requires the company to obtain 180 kilometers of 2D seismics and 50 km<sup>2</sup> of 3D seismics, plus the drilling of two wells to tap unconventional resources.

- Peru: YPF is awaiting the award from the Peruvian government of blocks 180, 182 and 184 within the Huallaga basin, and block 176 in the Ucayali basin. Whatever the outcome, YPF holds a 25% stake in the consortium created with Repsol (operator, 25%) and Ecopetrol (50%).
- Paraguay: in September 2011, YPF was awarded a prospecting permit for Manduvira, located within the Chacoparaná basin.
- Uruguay: on 30 May 2011, YPF's Management Committee green-lighted the signing of a prospecting agreement with the state-owned ANCAP and the creation of a YPF subsidiary in Uruguay. The area is located onshore, within the Chacoparaná basin. YPF also holds offshore interests in areas 3 and 4 of the Punta del Este basin, and is the operator of one of them.
- Chile: during 2011, YPF successfully secured the San Sebastián (40%) and Mazarri/Lago Mercedes (50%) onshore blocks.

### **Non-operated areas**

In September 2010, there was an incident on the offshore AM-2 platform of the Magallanes field, operated by Sipetrol (in which YPF holds a 50% interest) and located in the Strait of Magellan. In the wake of the accident, the field was out of production until December 2010, whereupon it began to operate at 30% capacity. This situation remained unchanged over 2011. The AM-2, AM-3 and AM-6 platforms were successfully started up on 22 December 2011, with connections yet to be completed from AM-1 to the TurboCompressor 200 (TC200) located at AM-2. Production climbed to an average of 800 cubic meters per day of crude oil and 1.8 Mm<sup>3</sup>/d of gas. When brought into service, the machine will operate at the AM-1 platform and will contribute an additional 600,000 cubic meters of gas per day and approximately 60 cubic meters a day of crude oil.

In Aguada Pichana, operated by Total Austral and in which YPF holds a 27.27% interest, the Las Cárceres project was delineated and implemented. 3D seismics were taken at Cárceres Oeste towards the end of December 2011 and work is in progress to interpret the findings. The AP.xp-1001 exploration well targeting shale gas was drilled at Vaca Muerta (first shale gas well to be deployed by the temporary joint venture) and is currently awaiting termination.

Moving to the CNQ 7A block, operated by Pluspetrol and in which YPF holds a 50% interest, delineation work was successfully completed on the El Corcobo Norte, Jagüel Casa de Piedra, Cerro Huanul Sur and Puesto Pinto reservoirs, and development work is already in progress. In December 2011, injection processes were started under the pilot polymer injection project taking place at the El Corcobo Norte field.

The JCPE-x1 / JCPE-x2 exploration wells were drilled in 2011 and have proved to be economically successful.

## **United States**

The Neptune field maintained stable production levels of 10,000 bbl/day for over six months in a row.

Despite the absence of any new drilling work, satisfactory reservoir responses effectively meant that up to 3.5 Mbbbl (gross) of proven reserves could be added, with the replacement ratio topping 80%.

The consortium running the Neptune field approved the development of the SA01ST1 well at the W2 site, following the proposal put forward by the technical team of Maxus E&P.

As no new wells were drilled in 2011, production came in significantly lower than originally expected, at over 1.5 Mbbbl. Despite this, rising crude oil prices will help to offset part of the deficit.

Maxus' committee approved the extension of 35 exploration blocks, paving the way for new business opportunities in the future.

## **Natural gas**

YPF's natural gas sales totaled 12,280 million cubic meters in 2011, down by approximately 5.5% on the volume sold in 2010, and with the most significant drop in sales witnessed in the industry segment. In Argentina, YPF enjoys a market share of roughly 30%. The average price of natural gas sold by the company climbed 4.4% year-on-year, chiefly due to withering volume within the less profitable segments.

As a part of a program launched by the Argentinean government, an LNG regasification ship, located in Bahia Blanca, was kept in operation over the year to introduce 2,222 million cubic meters of gas (up 23% on the same figure for 2010) into the country's gas network. Of this total, 1,218 million cubic meters were injected over the five winter months to meet increased demand, equivalent to approximately 8 Mm<sup>3</sup>/d.

In both April and December 2011, YPF carried out work to modify and upgrade Bahía Blanca installations, managing to push up natural gas injection capacity from 10 to 12.5 million cubic meters a day in April, and subsequently up to 14.5 million cubic meters a day. Further improvement work is expected to increase natural gas injection capacity to 17 million cubic meters a day in April of 2012.

In addition, the Escobar temporary joint venture (jointly owned by Enarsa and YPF in equal shares), with YPF acting as operator, closed the year having successfully developed, constructed and started up the Escobar LNG terminal.

The terminal, which is currently being operated by YPF, regasifies LNG through a ship capable of regasifying 17 million cubic meters a day and with 151,000 cubic meters of LNG storage capacity. Since its start-up in May 2011, the terminal has regasified 1,375 billion cubic meters.

ENARSA and YPF have also created a temporary joint venture with the aim of executing and operating the Cuatrosos LNG project. Each company will have an equal 50% stake, with YPF operating the venture.

This project will be located in Bahía Blanca and is currently undergoing development.

## REFINING, LOGISTICS AND MARKETING

YPF has three refineries: La Plata (in the province of Buenos Aires), Lujan de Cuyo (in Mendoza) and Plaza Huincol (in Neuquén). La Plata has a distillation capacity of 189,000 barrels per day and a daily conversion capacity of 119,000 barrels; Luján de Cuyo has a distillation capacity of 105,500 barrels per day and the same conversion capacity; and Plaza Huincol has a distillation capacity of 25,000 barrels per day. Furthermore, the La Plata refinery has a lubricant manufacturing plant with a capacity of 860 cubic meters/day of finished base oils.

Logistics for crude oil is articulated through three companies in which YPF holds a stake (Oldelval, Termap and Oiltanking Ebytem), along with chartered tankers and two company-owned pipelines (Puesto Hernández - Lujan de Cuyo and Puerto Rosales - La Plata). Product logistics is mostly carried out through two company-owned multi-purpose pipelines (Lujan de Cuyo-San Lorenzo-La Matanza and La Plata-La Matanza), three loading ports, 12 tankers, eight barges, four tow boats, 16 terminals (nine with associated ports), six LPG plants, 54 airport filling stations and 1,600 trucks.

It also owns a 50% holding in Refinor, a company engaged in the refining, transportation and marketing of fuel (70 service stations in total, effectively meaning 35 given YPF's 50% stake) and derivative products in north-west Argentina.

YPF refineries processed 45.2 thousand cubic meters/day in 2011, 4.2% less than in 2010. This reduction was largely due to trade union conflicts that affected operations of crude oil coming from the Gulf of San Jorge over the first half of the year, coupled with limited availability of crude oil from Neuquén and the scheduled stoppages and strikes at various units.

Despite these hurdles, refining performance over 2011 in terms of LPG, gasoline and medium distillates remained high.

According to the latest benchmarking studies, maintenance and mechanical availability standards for the YPF refinery units are among the best of their kind worldwide.

The load and, therefore, use of conversion units was optimized, thus allowing production of gasolines for the domestic market to reach 3.7 million cubic meters, representing an 8.8% increase year-on-year and the highest level seen in recent years.

In 2011, YPF continued to position itself in the marketing of IFO (naval bunker fuel). The improvements made in logistics have helped position the company as one of the main suppliers in the region and increased its market share from 14% in 2007 to 41.4% in 2011.

The following table shows the capacity of YPF refineries at 31 December 2011:

<b>Refining capacity (1)</b>	<b>Primary distillation</b> (kbb/d)	<b>Conversion ratio (2)</b> (%)	<b>Lubricants</b> (thousand tons per year)
<b>Argentina</b>			
La Plata	189	69	256
Luján de Cuyo	106	110	—
Plaza Huincul	25	—	—
Refinor(3)	13	—	—
<b>Total (4)</b>	<b>333</b>	<b>74</b>	<b>256</b>

(1) Information reported in accordance with Repsol Group criteria for integration in the financial statements: all the refineries report at 100%, except Refinor (50%).

(2) Expressed as the ratio between equivalent FCC capacity and primary distillation capacity.

(3) Total primary distillation capacity: 26,100 barrels/day.

(4) This refers to YPF's total distillation capacity in Argentina (three YPF refineries, plus the stake in the Refinor refinery).

The table below provides a breakdown of YPF refinery production, by main product type:

Millions of tons	<b>As of 31 December</b>	
	<b>2011</b>	<b>2010</b>
<b>Refinery intake</b>		
Crude	14.3	15.4
Other refinery intake	0.4	0.4
<b>Total</b>	<b>14.7</b>	<b>15.8</b>

Thousands of tons	<b>As of 31 December</b>	
	<b>2011</b>	<b>2010</b>
<b>Refining production</b>		
Intermediate distillates	7,013	7,067
Gasoline	3,711	3,762
Fuel oil	914	1,440
LPG	620	674
Asphalts	221	205
Lubricants	165	181
Other (except petrochemicals)	1,008	936
<b>Total</b>	<b>13,652</b>	<b>14,264</b>

Utilization of refining capacity in 2011 stood at roughly 89%, versus the 93.2% reported in 2010.

Logistics activity climbed 3% year-on-year. High occupation levels were also achieved for road, sea and river transport, as well as in the use of pipelines, terminals and ports.

Investments in refining and logistics totaled €396 million in 2011, marking a 42% increase in relation to the previous year (€148 million).

With effect from 1 January 2010, Law 26,093 on Biofuels imposed the obligation to market gasoline with bioethanol and diesel oil with biodiesel (fatty acid methyl ester, or FAME). For this purpose, YPF completed the necessary upgrades to the San Lorenzo and Dock Sud terminals and the refineries so that they could take delivery of FAME. The process culminated with the construction of facilities for the reception and

processing of bioethanol at the Lujan de Cuyo, Montecristo, San Lorenzo, La Matanza and La Plata terminals, with work still in progress at the Barranqueras, Villa Mercedes and Junín terminals.

There is ongoing investment to build bioethanol and FAME delivery installations for gasoline and diesel oil mixing, respectively, at the remaining loading terminals, and also to increase the transport capacity of the Puesto Hernandez oil pipeline as it travels to the Lujan de Cuyo industrial complex.

Likewise, the Monte Cristo, Luján de Cuyo, San Lorenzo, La Matanza, La Plata and Barranqueras terminals now have automated operations, continuing with the schedule for the remaining plants. The investment needed to construct storage tanks to enhance logistics and meet market demand has also been approved.

Due to changes in the available crude oil basket within the domestic market (very acidic crudes with higher solid contents), YPF has continued to implement its refinery investment plan by incorporating new process machinery and equipment and improving metallurgy at the facilities.

In line with the objective of reducing sulfur content in gasolines and diesel oils to improve fuel quality, the company continued with its investment projects for the hydro-treatment of diesel oil and gasolines.

In this regard, a new diesel oil hydro-treatment plant is currently being built and assembled at the La Plata refinery, with the new arrival to have a processing capacity of 5,000 cubic meters per day. The new facility will produce a diesel oil containing 10 parts per million (ppm) of sulfur. Construction also started on the new Coke Unit "A", which will increase existing processing capacity by roughly 70%.

Work is also in progress at the Luján de Cuyo refinery to install a diesel oil hydro-treatment plant with a capacity of 2,640 cubic meters/day and to construct a new gasoline hydro-treatment unit.

A compression system has been brought online at the La Plata and Luján de Cuyo refineries, whereby part of the gases typically sent to the flare pit for burning can now be recovered for use as fuel gas in furnaces and boilers. In the case of Luján de Cuyo, daily recovery is equivalent to 76,800 normal cubic meters of fuel gas per day, while at La Plata, daily recovery equates to 130,000 normal cubic meters of fuel gas. The upgrades also herald a significant environmental improvement by curbing CO<sub>2</sub> emissions. La Plata has become the company's first industrial project to be classified as a Clean Development Mechanism (CDM), while the Lujan de Cuyo project is currently being assessed by the United Nations.

In 2011, YPF rolled out an investment plan to increase existing storage, segregation and fuel shipment capacity across the country and to increase crude oil storage capacity at its refineries. The plan will effectively increase storage capacity by 160 thousand cubic meters of diesel oil, 50 thousand cubic meters of gasoline and 180 thousand cubic meters of crude.

In terms of sales, YPF targets various market segments (retail, agro, industry) through a nationwide network of 1,557 points of sale, allowing the company a market share of over 57% for all gasolines and diesels combined.

YPF manages 181 service stations directly through the company Opessa (fully owned), with fuel sales accounting for 16.6% of total sales made by the Retail segment.

In the area of convenience stores, Full and Full Express models (the latter being a more simplified version) are now accounting for an increasing proportion of stores, with 359 and 29 retail outlets nationwide, respectively, including the company's own network and franchises.

In line with the company's objective of unifying and enhancing the overall image of the service station network under the concepts of modernity and rationality, an image

improvement plan was implemented at 80 stations. In October, YPF unveiled its first flagship service station called Nordelta, which features a host of new technologies (digital labeling, corporate television, etc.).

In the Agricultural segment, YPF has nine bases for the distribution of diesel across Argentina, known as “YPF Directos” and forming a one-stop sales system that has helped consolidate the company’s position in a sector experiencing unbridled growth and of vital importance for the ongoing economic development of the country.

These bases are used to market products such as diesel fuels, fertilizers and agrochemicals, and accept various forms of payment, including cereal grains (mainly soya), which can be processed to produce flours and oil for sale chiefly abroad. In terms of grain exchanges, total business in 2011 topped 850,000 tons.

In the case of oil, part was earmarked for the production of FAME, a key component of the diesel oil the company produces commercially (at December 2011, the percentage of FAME mixed in diesel oil stood at 7%).

In terms of synergies with Chemicals, YPF began selling a new product known as FS Glyphosate II, which is formulated and produced internally.

In the Mining segment, 20 commercial agreements have now been signed to supply diesel oil and/or lubricants to various mining companies throughout the country. With the objective to improving the service provided to this segment, two company-owned bases were opened, namely YPF Minero Valles (Salta province) and YPF Montecristo (Córdoba province), and the company is currently weighing up the merits of constructing two new bases in Quilla (Santa Cruz province) and Albardón (San Juan province).

In 2011, the company spearheaded nationwide sales of the *N-Premium* high-octane gasoline (grade 3), securing a market share of 63.9% and improving its mix to naphtha to 29.2%, in comparison to the 22.6% reported in 2010.

Focusing on diesel oil, the company has been following an aggressive sales policy for the low-sulfur (D-Euro) *Premium* product, recommended for all high-performance engines, reaching a market share of 62.9% within the retail segment and a fuel mix of 18.5% vs. the 9.7% seen in 2010.

This strategy allowed the company to deliver a larger portion of Ultradiesel to the industry, transportation and agro segments, catering to existing demand while minimizing imports of the product.

In relation to lubricants, the Elaión light lube range (high performance product for light vehicles) turned in a positive performance, posting a year-on-year increase of 12.5% in product sales.

Towards the end of 2011, and to meet the needs of an increasingly demanding market, the company developed a new line of products specially designed to protect engines regardless of what fuel type is used. The formulation features Flexlub technology with groundbreaking compounds capable of neutralizing the effects of contaminants and guaranteeing a clean engine.

In 2011, sales were up 13% year-on-year for high-end heavy lubes, premium lubricants for heavy diesel engines represented by the Extravida range, meeting the most stringent quality standards.

During the year, YPF launched its first line of car care products, identified as *Obsesión*, which brings together a family of products under a single concept, with modern and appealing packaging and an image more typically associated with the cosmetics sector. The range includes antifreezes, coolants, anti-corrosion protection, brake fluids, windscreen wiper liquid, car wash products, polish, silicone restorers, upholstery cleaners, engine cleaners, air fresheners and multi-purpose oils.

In the Commercial area, strategy is focused chiefly on bringing management in line with the highly competitive environment, positioning and consolidating high value-added products and services while exploring new business alternatives.

International growth will be magnified by creating a company-owned enterprise to supply a full range of lubricants throughout Chile and fuels for the aeronautics market, thus complementing the existing sale of lubricants in Brazil.

## **CHEMICALS**

Chemicals business production takes place at the Ensenada industrial complex, integrated with the La Plata refinery, and also at the Plaza Huincul methanol complex, which houses the Plaza Huincul refinery. Likewise, YPF carries out chemical activity at the Bahia Blanca complex through its investee company Profertil.

These industrial complexes have an aggregate production capacity in excess of 2 million tons per year, intended for market segments such as modified naphthas, resins, detergents, automotives, solvents, biodiesel, agrochemicals and fertilizers.

International prices for the main chemical products continued to rally over 2011, building on the improvement first noted towards the end of 2009. Methanol prices increased as construction of new facilities remains in limbo and supply struggles to keep up with demand.

The aromatics margin was up slightly on the previous year on the back of a 34% increase in the aromatics mix, which outpaced the 31% reported for virgin gasoline. The improvement in aromatics was driven by an excellent showing from the xylene value chain (which jumped almost 40%).

YPF improved its aromatics and methanol sales mix, with sales in Argentina increasing by 12.8% in comparison to 2010. The main driver of this growth were sales of methanol to the biodiesel production segment, which accounted for 46% of methanol sales.

Construction and assembly of the new Continuous Catalytic Regenerator (CCR) reforming unit continued during 2011. Once completed, the unit will increase the production of aromatics by 50% to meet growing internal demand for octane components used in high quality gasoline and hydrogen production, which is needed for gasoline and diesel oil hydro-treatment processes at the La Plata refinery. Estimated investment for this project is approximately €250 million, making it the largest petrochemical investment in Argentina over the last decade.

In April, Profertil began to construct a new storage facility in Puerto General San Martín (Santa Fé province), with a fertilizer storage capacity of 200,000 tons. Estimated total investment amounts to €45 million.

The following table shows the production capacity of the main petrochemical products:

Tons per year	<b>Capacity</b>
<b>Ensenada:</b>	
Aromatics	
BTX (benzene, toluene, xylene)	244,000
Paraxylene	38,000
Orthoxylene	25,000
Cyclohexane	95,000
Solvents	66,100
Olefins and derivatives	
MTBE	60,000
Butene I	25,000
Oxo-alcohols	35,000
TAME	105,000
LAB/LAS	
LAB	52,000
LAS	25,000
Polybutenes	
PIB	26,000
Maleic	
Maleic anhydride	17,500
<b>Plaza Huincul:</b>	
Methanol	411,000
<b>Bahía Blanca</b>	
Ammonia/urea	933,000

## INVESTMENTS

Operating investments totaled €2,182 million, in comparison to the €1,537 million reported in 2010. Close to 69% of these funds were earmarked for hydrocarbon exploration and production development projects, while nearly 27% were used to finance the modernization of refineries and chemical production equipment.

## GAS NATURAL FENOSA

### RESULTS

As of 31 December 2011, Repsol owns 30% of the Gas Natural Fenosa Group, which is proportionally consolidated in the accounts. The operating income contributed by the Gas Natural Fenosa Group climbed 0.7% in 2011 to reach €887 million, in comparison to the €881 million reported in 2010.

Despite capital gains from sales of assets failing to match figures for 2010, operating income has remained steady during the two years. This can be explained by the improvements seen in electricity distribution activity in Spain and the rise in wholesale gas sales margins, offsetting the weaker earnings from electricity sales in Spain and electricity distribution in Latin America and the inevitable absence of any income from the assets divested in 2010 and 2011.

The results highlight the fundamentals underpinning the Gas Natural Fenosa business model, which aims to strike an appropriate balance between regulated and deregulated



business in the gas and electricity markets, with a growing, diversified contribution made by its international presence.

The main operating highlights for the business are described below. In the interests of clarity, the figures shown below are those generated by Gas Natural Fenosa, even though the Group's holding in the company is 30%.

## **Gas distribution**

### **Spain**

Business in Spain includes the compensated gas distribution activity, the ATR (third-party network access services) and secondary transport, as well as non-compensated distribution activities (rental of gas meters, connections to customers, etc.).

Within the framework of the Action Plan approved by the Spanish National Antitrust Commission (CNC) in relation to the Unión Fenosa acquisition process, Gas Natural Fenosa undertook to disinvest in certain gas distribution assets.

Accordingly, 30 April 2010 saw the sale of low-pressure gas distribution assets comprising 507,726 supply points and 3,491 kilometers of distribution network, and on 30 June 2011 the company once again honored its commitments with the CNC stemming from the purchase of Unión Fenosa by selling a further 304,456 natural gas supply points, with consumption totaling 1,439 GWh in the autonomous community of Madrid, to the Madrileña Red de Gas Group.

Sales from regulated gas business in Spain amounted to 201,231 GWh in 2011, down 2.9% on the same figure for 2010.

Gas Natural Fenosa has continued to expand its distribution network and number of supply points, although it should be noted that the figures provided have been offset by the divestments made to date.

At year-end, the distribution network spanned 43,871 kilometers, down 2.4% year-on-year, while the number of supply points came in at 5,050,000, 4.2% less than in 2010, reflecting the divestments carried out in furtherance of the Action Plan approved by the CNC in relation to the acquisition of Unión Fenosa.

### **Latin America**

This concerns the gas distribution activity in Argentina, Brazil, Colombia and Mexico. In 2011, the number of gas supply points reached 5,882,000. Year-on-year growth rates remain high, showing an increase of 217,000 supply points, with Colombia turning in a particularly solid performance, where new supply points amounted to 108,000.

Sales from gas activity in Latin America, which include gas sales and third-party network access services, amounted to 191,031 GWh, 5% down on the same figure for 2010. This minor reduction is largely due to the drop in sales to the Brazilian electricity generation sector, given that water reserves in 2011 remained much higher than in 2010, resulting in lower demand for natural gas.

The gas distribution network has been extended by a further 1,339 kilometers over the last 12 months, reaching 65,831 kilometers at year-end 2011, representing growth of 2.1%.

## Italy

Business in Italy includes third-party network access services and rate-regulated gas sales.

Gas Natural Fenosa reached a total of 440,297 supply points in the gas distribution business in Italy, up 4.3% on the same figure for year-end 2010.

Gas distribution activity stood at 3,578 GWh, marking an increase of 5.6% in comparison to 2010. The distribution network was extended by 887 kilometers to reach 6,736 kilometers at the close of the year.

## Power distribution

### Spain

This business includes regulated power distribution activity and customer network services, mainly connection and link-up rights, metering, and other services associated with third-party access to the company's distribution network. Electricity supply points experienced mild growth of 0.8% in 2011 to reach 3,748,000.

In 2011, power effectively supplied fell by 1.6% to 33,916 GWh, reflecting the drop in nationwide consumption stemming from the prevailing economic gloom and the relatively mild weather conditions experienced towards the end of the year.

### Latin America

Business here encompasses regulated power distribution in Colombia, Guatemala, Nicaragua and Panama.

In May 2011, Gas Natural Fenosa reached an agreement with the British private equity fund Actis to sell its interests in the distribution companies DEORSA and DEOCSA, both engaged in power distribution in Guatemala, along with its interests in a number of other energy companies within the country. As a result of the divestment, the results for electricity distribution business in Guatemala relate solely to the first five months of the year.

Sales from electricity distribution activity in Latin America represented 17,706 GWh, marking a moderate drop of just 1.6% despite the divestment in Guatemala, while the client portfolio slid 27.3%.

### Moldavia

Business in Moldavia involves regulated power distribution and marketing at a tariff in the capital and metropolitan area and in the country's central and southern regions. Gas Natural Fenosa distribution in Moldavia accounts for 70% of the country's total.

Demand for electrical power within the context of Gas Natural Fenosa's distribution business in Moldavia climbed by 3.3%, while supply points, which totaled 819,506 at year-end, also experienced year-on-year growth. Sales from the electricity distribution business stood at 2,445 GWh.

## **Electricity**

### **Spain**

The electricity business in Spain includes power generation activities, the wholesale and retail marketing of electricity in the deregulated Spanish market, the supply of electricity at the tariff of last resort and electricity trading in wholesale markets.

In 2011, electricity demand across the peninsula fell by 2.1% in comparison to the previous year. After correcting this percentage to factor in the effects of employment and temperature, the actual drop in demand was 1.2%.

Gas Natural Fenosa power generation throughout the Iberian Peninsula amounted to 38,081 GWh in 2011. Of this amount, 35,701 GWh came from ordinary system generation, and 2,380 GWh from special system generation. This represents a year-on-year slump of 0.7% as a whole, broken down as 0.3% under the ordinary system and 5.9% under the special system. Gas Natural Fenosa's accumulated share in ordinary system generation at 31 December 2011 was 20.8%, slightly higher than the previous year.

Hydroelectric production in 2011 totaled 2,892 GWh, marking a year-on-year drop of 39.1% due to a very dry year from a hydrological view. Power generation at combined cycle plants in 2011 amounted to 23,967 GWh, down on figures for 2010. Nuclear power production showed a slight improvement on figures for 2010. The upshot for Gas Natural Fenosa of the enactment of the Royal Decree on the Guarantee of Supply is that the national coal-fired plants affected by the new law are operating non-stop with production levels of 4,464 GWh, in comparison to the 772 GWh reported in 2010.

Sales from the electricity marketing business came in at 35,905 GWh.

### **Latin America**

This section relates to power generation assets in Mexico, Puerto Rico, Panama and the Dominican Republic.

Power generated in Latin America stood at 17,506 GWh in 2011, down on the same figure for 2010 largely on account of the drop reported in Mexico, where production was impacted by the sale of the combined cycle plants in 2010.

### **Kenya**

This section includes power generation in the African country. In 2011, fuel-based power generation reached 767 GWh, comfortably outstripping 2010 production on the back of heavy demand for thermal power production in Kenya, in turn due to a very dry year in terms of water availability and, therefore, a drop in dam water levels.

## **Infrastructure**

This business includes the development of integrated liquefied natural gas projects; oil and gas exploration, development and production; sea transport management and operation of the Maghreb-Europe gas pipeline.

Gas transportation activity carried out in Morocco through the companies EMPL and Metragaz represented a total volume of 111,855 GWh, up 1.9% on the previous year. Of this figure, 80,569 GWh were transported to Gas Natural Fenosa through the company Sagane, while 31,286 GWh were earmarked for Portugal and Morocco, representing growth of 7.7%.

Regarding gas exploration and production at the Tanger-Larache project (Morocco), in which the company holds a 24% stake, a number of different development options for the first well are currently being explored.

## **Supply and marketing**

This business area is engaged in the supply and marketing of gas (wholesale and retail) both in Spain and abroad, and of other products and services related to retail marketing and also marketing of the gas tariff of last resort in Spain.

Gas Natural Fenosa's marketing in the Spanish gas market reached 169,204 GWh, representing a year-on-year drop of 8.4%, chiefly due to lower sales to households on account of the divestments carried out to date. Supplies to third parties in the Spanish market came in at 67,698 GWh, revealing a 2.4% increase.

Supplies to the international market climbed noticeably to reach 71,733 GWh, marking an increase of 30.9%.

## **Unión Fenosa Gas**

This business embraces the gas supply and marketing activities carried out by Unión Fenosa Gas, including the liquefaction infrastructure in Damietta (Egypt), regasification infrastructure in Sagunto (Spain) and management of the shipping fleet.

Gas supplied to the Spanish market reached 56,937 GWh, representing a year-on-year drop of 4.3%. In addition, 26,503 GWh of energy was handled through international sales.

## **Investments**

Repsol operating investments over the year in relation to its stake in Gas Natural Fenosa amounted to €582 million, in comparison to the €463 million reported in 2010.

Gas Natural Fenosa channeled most of its investments into regulated gas and electricity distribution activities.

Spain remains the main recipient of Repsol investment, while Mexico and Colombia are the main beneficiaries of investment in Latin America.

# **CORPORATE AREAS**

## ***PEOPLE MANAGEMENT***

At year-end 2011, Repsol had a consolidated workforce of 46,575 people representing over 70 different nationalities. Of this figure, a total of 39,622 employees were working at companies under the direct control of Repsol. All the information presented in this section refers to these employees. The company's employees work in more than 30 countries, chiefly in Spain (43%) and Argentina (37%), but also in countries such as Peru (9%), Portugal (3.1%), Ecuador (2.3%) and Uruguay (2%). Of the total number of employees, 48% work in the Downstream division, 39% in YPF, 7% in Upstream and LNG, and 6% in corporate departments.

The breakdown of the workforce is 1% executive personnel, 6% technical managers, 44% technicians, 3% administrative staff and 46% operators. Permanent work contracts account for 88% of the total, while women represent 27% of the total workforce.

### **Change in the organizational structure**

With the aim of reorganizing the company to reflect the current level of implementation of the Strategic Plan and also rendering the company's management more efficient, the senior management of Repsol was restructured in 2011 through the creation of a new General Department for Economics, Finance and Investee Companies (which has assumed control of YPF and Gas Natural Fenosa investee companies, along with the duties of the Corporate Media Department and of the former General Department for Economics and Finance), and by making the General Upstream and Downstream departments directly accountable to the Executive Chairman's Office.

To ensure that Repsol continues to consolidate its position and grow in the countries where it operates, the decision was reached to adapt the organizational model by enlarging the role of country heads and, through this, magnifying the company's global vision at country-level.

In relation to the business units, the main changes were the restructuring of Repsol Sinopec Brasil to reflect the new corporate scheme and the creation of Repsol Nuevas Energías UK.

### **Diversity and balance**

Repsol's Diversity and Balance Committee remained continued in 2011 to rolling out specific measures to encourage and foster diversity and work-life balance, articulated through multi-disciplinary teams tasked with proposing and promoting groundbreaking initiatives geared towards ensuring diversity and work-life balance, such as telecommuting, recruiting people with disabilities, making working hours more flexible, adapting installations and managing time efficiently.

According to the findings of a survey polling the opinions of 2,538 employees, telecommuting is considered an internally valued tool for guaranteeing a proper work-life balance. Telecommuters, bosses, work colleagues and managers alike were all quick to point out that the trust bosses place in their telecommuters has a positive

bearing on their involvement, motivation and productivity. The program was extended in 2011 to cover industrial facilities and commercial offices in Spain. At year-end, a total of 818 people worldwide were making use of the scheme, illustrating that this approach to work is becoming increasingly widespread and key to retaining and attracting talent.

Another company initiative is for Repsol workers to carry out their work under flexible conditions, effectively meaning they can adapt their working hours to suit their needs, provided their work allows for this and always respecting the practices, customs and restrictions in place in the country or region in question.

The concept of flexible working hours encompasses the different ways in which hours can be redistributed, whether calculated daily, weekly/monthly or on a seasonal basis.

The company also operates the following paid leave system, always in strict accordance with the practices and customs of each country or region:

- Maternity leave: workers can claim minimum paid maternity leave of 12 weeks owing to the birth of a child.
- Breastfeeding leave: provided the preceding maternity leave lasts less than six months, mothers are entitled to claim paid breastfeeding leave equivalent to one hour per day, which will last for three months following her return to work from maternity leave. This leave can be taken as two separate half hours of absence, or pooled and taken together as one period of eight full working days.
- Paternity leave: fathers can claim minimum paid paternity leave of three working days owing to the birth of a child.
- Leave following the death of a family member up to the second degree of relationship: workers are entitled to paid leave of three business days upon the death of a family member, or five business days if they need to travel.
- Marriage leave: workers can take minimum paid leave of five business days if they wish to marry or register officially as de facto partners.

These measures improve upon the minimum legal requirements in most of the countries where Repsol is present. In the case of Spain, all employees enjoy the following benefits beyond those provided for at law:

- The age of minors is increased to 12 years for the purpose of claiming working hour reductions on family-related grounds.
- De facto couples receive the same treatment as married couples, including the 15-day leave if they register as a de facto couple.

The VI Spanish Framework Agreement envisages more flexible starting times for work and the option of reducing the lunch break in order to leave work earlier. It also allows workers to reduce working hours by making use of telecommuting.

Likewise, time management is to be rendered more efficient through a number of different initiatives, such as publishing an interactive guide on good e-mail use and the efficient management of meetings. The interactive guide has now been consulted by 9,362 employees.

In terms of equal opportunities, Repsol treats diversity as a concept that enriches the company and stimulates innovation and creativity. With this in mind, the program to integrate people with different disabilities is perhaps the most widely known and recognized externally.

The program started life in 2005 in Spain, and its gradual implementation has shaped a new reality within Repsol, which currently has a total of 578 workers with different disabilities; 400 under direct contracts of employment and a further 178 employed through alternative channels in Spain (3.2% of the workforce, compliant with legal

requirements). In addition, 65 people with differing disabilities work in Argentina, 24 in Ecuador, 24 in Peru and 14 in Portugal. Of these, 20% are engaged in technical work.

In 2011, the company paid particular attention to hiring workers with disabilities within the industrial area and there were ongoing campaigns and initiatives to raise awareness. A total of 6,502 people have now taken part in the events organized at various of the company's work centers.

Repsol has agreements in place with different organizations, associations and foundations, which advise the company on issues relating to disabilities and with which the company has maintained close ties since the start of the program. In Spain, these include the Framework Cooperation Agreement between Repsol, ONCE and their respective foundations, with action geared towards developing and enhancing the social integration and acceptance of people with disabilities.

In 2011, Repsol Perú was awarded the "Socially Responsible Company" accolade in recognition of its responsible management as part of its business culture and strategy.

The Provincial Government of Pichincha handed Repsol Ecuador the "General Rumiñahui" award for socially responsible work committed to the community under the "large multinationals" category, with honorable mention for the good practices of "Community support and corporate volunteering" and "Labor inclusion of disabled people".

Moreover, and for the second year running, the Proyecto Padres Foundation in Argentina gave YPF honorable mention in the "Towards a family-responsible company" award.

In January 2011, Repsol received the Ability Award for the Best Large Private Company. The accolade, which is awarded in the presence of Queen Sofía of Spain, provides public recognition for Spanish companies and institutions that develop sustainable business models and make people with disabilities part of their value chain, whether with employees, suppliers or customers.

Repsol YPF, S.A. was one of only 36 companies to receive the *Igualdad en la Empresa* (Equality in Business) badge. This badge is promoted by the Spanish government and is awarded to companies whose equal treatment and opportunities policies for workers deserve special recognition.

In October 2011, a new Welfare Services Program was launched for all permanent and part-time employees working in Spain, along with their family members (spouse or de facto partner, children, parents-in-law, parents and grandparents), with the aim of supporting them with any health-related problems they may be experiencing. The services on offer include home care for the elderly, specialist treatments, and telephone alarm systems for dependent senior citizens or minors, among others.

The program provides all beneficiaries with a bank of free sessions/services that can be taken at home if the employee or a family member falls ill (psychologist, nurse, physiotherapist), along with telepharmacy services and private tutors for ill children or those in recovery, among others services.

## **2011 climate survey**

In 2011, the company conducted its third climate survey to poll the opinions of all permanent employees (excluding YPF). Final participation in the study was 82%. The aspects to receive the highest score were: company vision, issues related to Repsol's appeal as an employee, and diversity and balance.

Close to 500 reports containing results have been generated to meet the information needs of the different departments and confidentiality has been observed for all the reports.

The results were disclosed to all employees in 2011. Workshops were also initiated during the year to identify underlying causes, with the process culminating in the first quarter of 2012. The resulting analyses are helping the company to shape more efficient improvement actions.

These actions now feature in the annual people management plans and in the action plans of the different businesses. Repsol has also defined certain lines of action running across the entire company, which will be developed further in 2012.

### **Start of the cultural change process**

In 2011, the company initiated a process of cultural change, leading to changes in approaches to work and in people management.

Now, for example, bosses are essential as the forerunners of this new culture and as disseminators of the values that Repsol is committed to: responsibility, transparency, innovation, collaboration or team work and equal opportunities.

One of the most significant projects helping the change to take root is the construction of the new corporate headquarters. The proposed new campus is helping to make new approaches to work a reality. The building has been designed with space very much in mind as a means of championing these new approaches, such as working in open, unrestricted areas, bringing people from different areas and businesses together within a single space, utilizing the best technologies to improve productivity and communication, and making working hours more flexible.

### **Attracting the finest talent**

Within a complex labor market, Repsol remains unflinchingly committed to implementing programs aimed at capturing, motivating and incentivizing top talent, offering them an appealing place to work and guaranteeing and promoting equal opportunities in their professional development.

In this regard, it is worth highlighting the work carried out to attract and develop young talent through technical master's courses held at Repsol's advanced training centre (*Centro Superior de Formación Repsol*, or CSFR), which in 2011 had 85 students from different countries, and to recruit executive personnel through the New Professionals Plan, through which 35 people joined the company's ranks during the year. Repsol's commitment to young professionals is to be stepped up in 2012, which marks the start of the new Repsol Master's in Energy Management.

In 2011, the company established a specific job marketing strategy for capturing and retaining talent in industrial divisions. Not only was Repsol involved in job fairs, forums and seminars in communities lying close to its industrial facilities, thus increasing university attendance levels within these same communities, but it also carried out various job selection processes within these areas of influence. It is worth noting in this regard that in keeping with the commitment of the company's industrial divisions to recruiting people with different disabilities, nine disabled people were selected in 2011 to take part in chemical plant operator courses at the company's various facilities.

Over the course of the year, 16 new educational cooperation agreements were signed with new universities and educational centers, with the company welcoming 365 new scholarship holders. The *Impulsa* scholarship scheme has been optimized to provide certain scholarship holders with advanced online training in languages and general



skills, including the option to attend conferences on the areas of the company where they work.

Major improvements have been made to the Employment Channel on [repsol.com](http://repsol.com). These include a new home page, which now features added videos to make the web page more dynamic. Page content has also been redefined, with information now being clearer and more accessible, and also job offers. The Employment Channel obtained the best score in the job category from the KWD Webranking study, in which [repsol.com](http://repsol.com) once again cemented its website leadership, having now held on to its title for six years running in the Spanish edition of the study.

Repsol remains abreast of social trends. For this reason, and reflecting its commitment to technological development across all company processes, Repsol investigates and tracks its image and position throughout the social networks so as to seize any opportunity to improve upon its image as employer and use new sources of recruitment.

## **Talent management**

One of Repsol's goals is to have sufficient internal talent to guarantee that its strategic objectives are duly met. It therefore has suitable mechanisms in place to profile and develop all company employees. The company has a raft of corporate diagnostic tools to measure people's capacities, performance, knowledge and management style. Based on the findings, it plans out the most suitable paths for development (mobility, training, hands-on development and best practices), which can therefore shape the development and career plan for both management and technical staff.

One of the key factors in 2011 was working on the management style of bosses. Apart from the information reporting and implementation plans discussed above, the company launched a number of training workshops for bosses, covering conduct and behavior and techniques for assessing and providing feedback. A total of 224 bosses completed the workshops in 2011, which will continue to be staged over 2012. In order to help develop and hone the management style of bosses, the first convention for bosses from the industrial division was held in Tarragona. This pilot project will now be exported to other facilities and businesses.

Bosses were provided with leadership training, with attendance totaling 254 bosses under the "Communicate to lead" program delivered in five different countries. Management style and corporate development tools were also provided to bosses in Peru, Portugal and Brazil.

Since the launch in March 2011 of a new range of executive training initiatives based on the *Repsol Style*, 161 executives completed a total of 10 training schemes over the course of the year.

Another course of action was to strengthen leadership skills in multicultural working environments for those executives who have an international team under them. With this in mind, a specific training program was given to 38 people (17 managers and 21 bosses), while various open-door conferences have also been held on multiculturalism.

In 2011, the company consolidated the systems it uses to assess and develop the talent of its employees, such as People Review, which provides a detailed assessment of people, generating a shared vision of each of them: their strengths, areas of improvement and professional profile. These assessments pave the way for development plans and other specific actions, and envisage mobility throughout the company. In 2011, 1,907 people were assessed, including 27 in Portugal, 40 in Peru and 93 in Venezuela and Trinidad y Tobago.

The Development Center evaluates the level of development of certain acts or conduct of the person by conducting individual and group tests. It is worth highlighting the four Developments Centers held in Brazil and Peru to assess a total of 29 people. The tool has evolved to take on a new combined format, embracing online and in-person dimensions. Boss involvement has been further bolstered following completion of the process to design an Individual Development Plan, which is agreed upon between boss and collaborator.

With a view to improving knowledge and developing people by country, a program of development interviews has been rolled out, with participation in 2011 amounting to 58 people in Brazil and 17 in the United States.

The Assessment-Feedback scheme was also introduced in 2011 to see what perception superiors, team members, peers and internal clients have of the subject's conduct and actions. This scheme started life as a pilot initiative for the heads of the service station network in Spain. Overall, the pilot program has evaluated 122 bosses, with the involvement of 969 people. The program integrates the initial assessment with subsequent follow-up and support actions for bosses and will be gradually extended to other company bosses over time.

In 2011, a diagnostic was conducted on the quality and distribution of technical knowledge within the LNG and YPF Upstream areas and within the Corporate Department for Organization, Processes and Systems, through an assessment of technical skills or critical knowledge. A total of 1,043 people were evaluated as part of the process.

Since January 2011, 7,081 work migrations and 3,373 changes of job classification have been carried out. Within the management team, there have been 60 appointments and 60 migrations.

## **Training**

Repsol is a company committed to people, valuing, promoting and facilitating employee training as the key driver behind their personal and professional development. Training must be focused on developing people's knowledge, skills and attitudes in order to reach the objectives of the different businesses and units, while being aligned with the company's strategy and geared towards developing Repsol's culture and leadership style.

With the aim of improving the management of existing and future training within the company, new functionalities were designed and launched in 2011 to facilitate and streamline training management for employees and bosses alike, thus meeting the need to standardize corporate people management tools within a single, more accessible and user-friendly online environment.

In 2011, more than 1,541,161 hours of training were given to over 37,201 employees across the globe.

A particular milestone was the training provided to new Repsol employees through entry-level master's courses, encouraging them to take Repsol up on the wealth of opportunities it has to offer.

Continuing with the work started in 2010, the company is continuing to develop the specific programs of each business, based on a common working structure and focusing on the process of thinking out employee training and learning needs, encompassing not only strategic needs for each area/unit, but also the job suitability and professional and personal development of our employees.

In line with this tactic of developing training as a strategic lever for attaining the objectives and challenges of each area and of the company as a whole, the concept of e-learning was also strengthened considerably during 2011 through Repsol's Virtual Learning Environment, launched in 2010. This drive forward has led to the launch of online activities and mixed training courses, whereby online training is supplemented with on-site modular training provided over a relatively long period of time (between three months and two years). The new environment also gave rise to the launch in 2011 of new programs aimed at specific groups from the sales divisions, executive staff, and other people who work within the company or who are to change from one area or business to another.

### **International careers**

Repsol currently has 661 expatriates working within the company.

A particular highlight in 2011 was the company's ability to respond quickly to the needs arising from new projects that the company had started in various countries. Proof of this was the recruitment of 166 employees with international profiles and the 39 migrations of existing employees between different countries, thus providing the company with specific experience in key areas to be able to tackle the new challenges facing it. Repsol action within the Libya business unit, which focused on the welfare of employees and their family members given the complex situation affecting the country since the evacuation, illustrates the management style for those posted or assigned abroad, characterized by an integral process that responds not only to the different needs of the company, but also the needs of employees and their family members.

### **Employee remuneration**

A single, standardized calendar was implemented worldwide in 2011, coordinated with the company's Annual Performance Assessment calendar. Thanks to the calendar, the company is now better positioned to match up individual performance assessment with recognition-related decisions, such as pay rises, promotions or mid-term incentives. The upshot of this integration process is added coherency, equality and simplicity in reaching pay-related decisions, which now operate on the same clock worldwide. The aim of this move is to relate and explain the impact of performance on the pay package, offering the employee an overall view of the result of his or her yearly performance and the lines to be followed on the path to future development.

It is also worth noting that in 2011 the Annual General Meeting approved two pay systems articulated through the delivery of shares:

- the 2011-2012 Share Acquisition Plan intended for Repsol YPF Group executives and employees in Spain, whereby interested employees can receive up to 12,000 euros of their yearly remuneration for 2011 and 2012 as company shares, with the share price being equivalent to the closing price for Repsol YPF shares on the interconnection system (continuous market) for the Spanish stock markets on the date the shares are delivered to the beneficiary, scheduled to take place during October, November and December. Over the 2011 period, shares totaling €6.6 million were delivered to the 1,553 Group employees who opted for the plan.
- Plan to Deliver Shares to the Beneficiaries of Multiyear Pay Schemes, divided into five cycles and intended for the Chief Executive Officers, the rest of the management team and other Group employees that are already beneficiaries of certain multiyear cash pay-out schemes. The new program will allow these

employees to invest in Repsol YPF, S.A. shares by up to 50% of the gross multiyear incentive they receive during the start year of each cycle. Participants in each of the cycles will be entitled to receive one Repsol YPF, S.A. share for every three shares acquired in the initial investment pertaining to each cycle provided the beneficiary does not dispose of his or her shares within the term of three years. A total of 350 employees signed up for the first cycle of the plan, leading to the delivery of 227,498 shares.

### **Performance assessment**

2011 marked a full year of operation of the Repsol performance system, known as *Gestión por Compromisos* (Management by Commitments), which affects employees who fall outside the scope of the company's collective bargaining agreement, except for YPF, which in 2011 implemented a new performance assessment model called GPS.

For those employees covered by the collective agreement, assessment campaigns were staged in 2011 throughout certain areas of the Refining and Chemicals businesses and throughout central services, at Repsol YPF S.A.

### **Model of contribution**

Owing to the challenges posed by the new economic and social climate, which has pushed companies into adapting to market conditions, the Repsol Group has conducted a review of its people management model. Thus, at year-end 2010, and based on the findings of the working environment diagnostic involving all group employees, interviews were held with all members of the company's senior management in order to compile information on how the model can be improved.

The management concluded by suggesting two courses of action associated with the aim of recognizing the contribution made by the human team that makes up Repsol:

- Adapting the performance assessment system for managers and staff with special duties within the company, known as GxC (*Gestión por Compromisos* - Management by Commitments), to bring it in line with currently existing needs, three years after its initial implementation.
- Exploring the possibility of implementing models to improve levels of commitment among everyone making up the company -attempting to recognize all contributions of value, regardless of the organizational or professional level from which they emanate- and to peg suitable recognition to the contribution.

Since the nineteen nineties, the Repsol Group has been introducing elements to make people management more dynamic, thus ensuring that all Group companies remain competitive in the different markets in which they operate. First of all, the Negotiation Committee of the most recent VI Framework Agreement (collective bargaining agreement governing the main aspects of the negotiations between the different Group companies in Spain) was fully aware of the need make changes in the direction of the economic system, which, while maintaining the purchasing power of salaries, now pegs additional pay increases to the achievements of the company.

Secondly, the improvement in business results can be put down to the contribution made by all people that make up the company. Aligning the objectives of all these people will lead to a quantifiable improvement in earnings, which will undoubtedly help offset the negative effects of the prevailing crisis in business throughout Spain.

The agreement, which remains in effect until 31 December 2013, envisages the following pay items:

- Salary increase reflecting the consumer price index (IPC) and additional increase of 0.5% in 2011, 0.3% in 2012 and 0.2% in 2013, payable only if the Group accomplishes a specific net income in each year.
- Implementation of a variable pay system for people covered by the collective bargaining agreement. This pay item is intended to ensure that the commitment of everyone working for the Repsol Group in Spain is geared towards attaining the key objectives of each organizational unit. A culture of measuring efficiency will also be introduced throughout the organization.
- Agreement to create a joint company/trade union committee to develop an assessment system that can be applied to all activities relating to people management.

These initial achievements and agreements have paved the way for a new company model demanding increased commitment from everyone, reflecting and adapting to the diversity of the people that make up Repsol, and bringing about growing levels of personal and professional development.

### **Innovation and Improvement**

The Innovation and Improvement initiative originated, in 2011, as senior management's commitment to generate an effective lever to enable Repsol to respond rapidly to a changing environment and to enable it to "invent the future". Similarly, it represents a response to the needs and expectations collected through interviews and focus groups of managers at the highest levels and with the greatest knowledge in the whole Group, carried out during 2010 as part of an extensive process reflecting on the strategic management of Quality and Knowledge Management Functions.

So, the main milestone in this area in 2011 was the development of different Innovation and Improvement units in the businesses and the corporate area in order to promote innovation in the company, where this is seen to be a fundamental competence with which Repsol needs to equip itself to survive and evolve in a changing environment with growing uncertainty. Activity in 2011 was aimed at responding to the main challenges across the board this project involves:

#### **Culture of innovation**

The initiative was defined, clarifying its purposes and objectives, validating it with all interested parties and defining a set of initiatives aimed at achieving a culture of innovation in Repsol. The basic concepts and fundamental values this project represents for the company are collected in what has been called the Innovation Address, endorsed by Executive Management, which places each Repsol professional at the centre of the innovation process.

To drive this initiative, from a system perspective, the main levers were identified and adaptation was made to the 2011 survey, so as to include specific aspects of innovation and improvement, enabling them to be assessed and considered within this analysis. All of this enabled a reference point to be determined as regards the culture of innovation already existing in Repsol.

A key milestone in facilitating this is the organizational arrangement chosen to carry it out. An Innovation Network has been set up, providing this with a common language and aims through specific awareness raising and training activities, needed to enable leadership of this cultural change project.

The Network is intended to encourage and watch over the promotion of the culture of innovation, involving exchanges of experiences and good practices through initiatives in the Master Plan (including knowledge management), which have a horizontal and multidisciplinary nature with respect to all the company's areas.

As an aim, innovation is one of the cardinal points on which the Repsol Master Plan for Energy Management is structured, in which nearly 100 new Repsol professionals will participate in 2012. Following the principle of "learning while doing", while they carry out their project they will make use of various innovation techniques, with the assistance of the same experts who are working in our business units.

Furthermore, self-assessment processes have been continued as per Repsol's own model, which has formal recognition from EFQM and Fundibeq as "good management practice", ensuring alignment of the diagnostic process with the business strategy, the incorporation of improvement initiatives and monitoring of action plans.

In this regard, specific actions took place in 2011 for the Chemicals, Refining Spain, Upstream Spain and Ecuador and Refining and Marketing Peru business units, and progress was made in developing the Repsol diagnostics model by including for the first time an analysis of effectiveness in deploying functions considered mature in innovation, knowledge and process management based on integral management reflection in the Personnel and Organization Department.

This reflection has been an excellent "field trial" for Repsol's diagnostics model, enabling it to be adjusted for optimized applications in future processes in other areas of the company.

#### Agility and flexibility

In order to make the company more agile and flexible, initiatives have been promoted aimed at improving project management in the company, accelerating the planning and budgeting process and experimenting with different forms of working and organization.

Likewise, to facilitate rapid access to the information required to respond to the businesses' needs, and continuing along the line begun in 2010, a new search engine was implemented during the year (Autonomy, recognized as the market leader due to its capability to offer results of greatest relevance by capturing the logic underlying documents), to give access to the company's main information sources. Two pilot programs for advanced features based on this are reaching their conclusion. The commissioning is also beginning of platforms for mobile devices which will enable more, better and quicker access to knowledge for employees who are physically moving around, without this being a limitation.

#### Collaboration and network working

In this field, the dynamics of creating collaborative settings focusing on networked working and exchanging experiences relating to relevant business aspects or knowledge common to its members is maintained. There are now 21 practice communities and 240 interest groups.

The concept of personal work space began to be developed in 2011. The objectives of this are to facilitate employee access to collaborative environments and boost the dynamics of knowledge and experience sharing.

The launch of the first pilot program for a new collaborative environment in the company is worth highlighting, based on the new forms of relationship offered by new technologies, seeking to make it easier to make best use of the talent and knowledge of all Repsol's professionals, regardless of their position and responsibilities.

Similarly, the initiatives to guarantee retaining the knowledge of employees retiring, rotating or changing jobs for transfer to others were continued in 2011. This is supported by the collection of personal experiences recorded and transmitted using audiovisual means. There are other actions in the same line, such as the implementation of specific tools to conserve the “technical memory” of certain businesses, such as the Exploration and Production business with its “Know Howse” environment.

### Open organization

The implementation continued in 2011 of an open and collaborative innovation process in which employees can take part, by means of the development of systems for managing ideas in the businesses. This promotes the creation of an environment which channels creativity and encourages participation, involvement and the development of the people who work in the company.

The idea management process has been defined and a new computer tool was assessed, selected and implemented to support it. This represents a development on the path initiated in 2010 and permitted the launching of six campaigns aimed at over 10,000 employees, through which over 3,000 ideas have been contributed.

The open organization dimension also extends outside of Repsol. External innovation programs were launched in all fields in 2011. Examples such as the Inspire Program with the Technical University of Madrid, collaboration with Pasion>IE alongside the IE Business School and Accenture and several projects with the ESADE Creapolis innovation centre and Co-Society complement the Entrepreneur’s Fund managed by Fundación Repsol in the collaborative search for new ideas and innovative projects.

### Labor Relations

Repsol signed the VI Framework Agreement with Spain’s largest unions – the CCOO and the UGT – in 2011. This regulates working conditions for all the Group’s workers in Spain. Its contents are being translated to the collective agreements.

As mentioned in the section on compensation, this agreement, valid during the 2011-2013 period, includes a new variable item linked to the business unit’s objectives, guaranteeing the workers’ purchasing power and including the possibility of obtaining additional increases linked to the company’s achievements. Additionally, the commitment to employment stability and to inclusion of disabled people is renewed and it contains advances as regards training, conciliation, health and safety.

A full meeting of the Repsol Union Network was held in Santa Cruz de la Sierra (Bolivia) from 26 to 28 September. Sector and Repsol union organizations from the following countries were present at the meeting: Bolivia, Colombia, Argentina, Brazil, Peru, Ecuador, Mexico and Spain, as well as the International Federation of Chemical, Energy, Mine and General Workers’ Unions (ICEM).

In the meeting session with Group Management representatives, the Group’s industrial and commercial reality, Corporate Social Responsibility policy and specific activity in Bolivia were covered. A presentation was given on the project underway in the Margarita field, highlighting the agreement concluded in application and development of the International Labor Organization’s Convention 169 with the region’s indigenous communities, organized and represented by the Itaka Guasu Guarani People’s Assembly.

## **Health and Safety**

In the health area, the following initiatives were developed in 2011:

- A general framework for action and a model were defined for effective deployment of the health and safety function throughout the Group. This management model includes responsibilities, the governance and supervisory elements and the coordinating bodies necessary to ensure compliance with policy, strategic lines and objectives.
- The Standard for Assessment of Environmental, Social and Health Impacts was approved, responding to the latest trends as regards the assessment of health impacts. This makes it possible to include action with local communities and the consideration of health aspects at an early phase in the projects.
- The projects for expanding the Cartagena and Petronor refineries were completed without serious accidents.
- Continuing with the audit plan in compliance with the internal health regulations, auditing was carried out on the Dynasol centre at Santander.
- Support visits were made to the operations in Algeria and Cuba to assess the emergency plans and evacuation systems established (including availability of appropriate external suppliers).
- A variety of humanitarian aid actions took place as a consequence of the conflict in Libya.
- Training of employees in various health areas (first aid, cardiopulmonary resuscitation, back school, stress management, manual handling of loads, etc) was again a priority area of activity.

The carrying out of a variety of campaigns promoting health and healthy habits in different countries continued (campaigns for early detection of colon and prostate cancer, detection and control of high blood pressure, prevention of malaria and hepatitis A, for prevention of contagious diseases, etc).

The presentation of the Healthy Company 2011 to Repsol Bolivia is to be highlighted, thanks to the actions carried out within the Know How to Live program in the areas of health care, prevention and promotion.

## ***INNOVATION AND TECHNOLOGY***

Repsol considers that investment in R&D&i, performed with the calling to be leader, is one of the key factors in making possible a more efficient and sustainable energy system, capable of responding concurrently to the two great challenges in the sector – supply security and reduction of CO<sub>2</sub> emissions – while maintaining the competitiveness of the energy system. For this reason, Repsol invests in R&D to help find solutions to such important challenges, thereby providing value both to the company and to society as a whole.

Uncertainty about what will be the dominant technologies of the future, time to maturity of R&D efforts, economic cycles and pressures to reduce costs at low points in the cycle have led Repsol to develop a Strategic Technology Plan as part of its business strategy. The lines of work set out in the plan cover all the company's businesses: hydrocarbons exploration and production, the natural gas value chain, oil refining and



its products and petrochemicals, and new energies for diversifying energy production and its use.

In 2011, Repsol invested €75 million in R&D activities carried out directly at its technology centers in Spain (Móstoles) and Argentina (La Plata) and a further €7 million in projects undertaken in the company's different business units. Repsol maintains an active policy of collaboration with technology centers, public and private universities and companies in Spain and internationally. The investment earmarked for these types of agreements was €13.7 million. Repsol participates in R&D financing projects run by different government authorities. In 2011 it took part in 12 projects promoted by the Spanish government and four European Union projects.

Repsol has over 500 specialists in its different research centers.

## **R&D Programs**

**Upstream.** In this area, Repsol develops and applies the most advanced exploration technologies to find new oil and gas fields. The significant discoveries reported in 2008, 2009 and 2010 are a good example of the efficient development and use of these technologies. The Caleidoscopio project, as well as other technologies of its own development, place Repsol at the forefront of the exploration in complex areas. Furthermore, it has signed collaboration agreements with technology companies and has a strategic alliance with the Barcelona Supercomputer Center. The aim is to raise the level of confidence in subsoil images and reduce the uncertainty in the search for oil and gas accumulations. These technologies can be applied in difficult areas, with forecast of reserves thousands of meters down, such as in the Gulf of Mexico and Brazil, where thick layers of salt conceal very high quality reserves.

A significant change in the company's Upstream Technology occurred in 2011, with the definition of a new Strategic Plan for Upstream Technology for the period 2011-2015. After an exercise in internal reflection, the 2011-2015 strategic plan was built on the technological successes of recent years and focuses activity on key strategic lines for the company, such as simulation of wells, illumination of sub-soils, characterization of wells and non-conventional hydrocarbons. The challenge for the new plan is to develop and apply a new generation of technologies to make it possible to successfully tackle and deal with the technological challenges demanded in the company's large investment projects in coming years.

**LNG.** Advances in the development of liquefaction technologies continued in this area, to be used in floating systems. This will enable the exploitation of gas reserves which cannot currently be used in an economically competitive manner. Repsol also systematically monitors alternative technologies for exploiting gas reserves, such as the conversion of natural gas into liquid fuels, compressed natural gas and hydrate technology as a means of transporting and storing natural gas.

**Downstream.** In the area of oil refining and its derived products (petrol and diesel, LPG, asphalt, lubricants, specialized products, etc), technological knowledge is applied to optimize the operation of refineries and to enhance product quality, with particular attention paid to advances in energy efficiency and environmental issues.

As an example of the developments in this area, it is possible to mention technologies aimed at achieving the objectives of the multi-year plan for refinery energy efficiency, together with the support for the commissioning and development of tools for optimizing the C-10 project for expanding the Cartagena refinery, works aimed at differentiating fuels using new approaches ranging from petrol and diesel to heavy fuel

oils, the use of more environmentally-friendly lubricants, formulated using regenerated raw materials and biodegradable oils (highlighting the launch of the first product with Ecolabel labeling granted in Spain), the development of processes facilitating the obtaining of new products for formulating tires in more demanding and competitive markets, the innovative development of asphalts of improved environmental quality and support for LPG applications for transport and integrated systems of improved energy efficiency.

In petrochemicals, company programs continued aimed at improving energy efficiency and cost saving and lines of technological development aimed as a priority at obtaining new differentiated and specialty products. Outstanding in 2011 were the industrial production of new grades of hydrogenated rubbers of higher added value developed in Repsol's Technology Centre, the development of new grades of polypropylene for fabrics aimed at markets with high margins, the industrial manufacture of polyethylene with improved properties for production of large-diameter pipes and the development of technologies for producing next generation polyols for polyurethane foams.

**New energies.** In 2011, the alignment of the technological strategy in new energies continued to drive R&D associated with the challenges the company sets in its business strategy. Outstanding in this sense was the activity related to bioenergy, through the development of new energy crops, the development of technology in microalgae cultivation and in biology for production of biofuels. CO<sub>2</sub> technology was oriented to its transformation into added-value products, electric transport technologies to energy recharging and storage systems and renewable electricity generation was focused on future technologies with synergies with existing capabilities and Repsol's potential for development.

### **Technology prospecting studies**

In order to achieve a future with energy sustainability, Repsol must overcome ambitious technological barriers to arrive at new and better solutions, as well as analyze the potential impacts of social events, scientific findings and the evolution of natural resources. Repsol carries out systematic prospecting studies to visualize future scenarios and, in relation to these, identify opportunities arising from the long-term evolution of technologies in the energy and petrochemical sectors.

These include studies on the use of oils for the production of biofuels, new technologies for engines and fuels, battery technologies for electric vehicles and refining scenarios for 2030. These studies allow Repsol to gain a clearer vision of the future to guide its portfolio of technological investments.

### **Patent policy**

Fully aware of the huge importance and value of research and development work, Repsol is committed to the protection of the results of this work. In 2011, it applied for patents to cover numerous inventions in a range of different fields, such as catalysis to streamline processes, the development of new polyol processes or applications, new products, new Upstream technologies for evaluating underground formations, and new devices and equipment intended for LPG uses.

## **CORPORATE RESPONSIBILITY**

Energy companies assume great challenges and considerable responsibility when facing the challenges of a sustainable energy model that guarantees a safe supply, contributes toward mitigating climate change effects and respects human rights in all applicable areas.

In 2011, the corporate responsibility function that formalizes Repsol YPF's current Corporate Responsibility (CR) model was approved. This model is the way that the company as a whole contributes toward sustainable development. This model comprises:

- The company's values and principles behind its actions arising from the commitments it has acquired through the internal regulations that have developed CR issues, assumed positions and adherence to the principles of various international initiatives.
- The Corporate Responsibility Coordination System, which consists of four components:
  - To ascertain what is expected by the stakeholders (authorities, shareholders, investors, employees, customers, suppliers, communities, partners, etc.) with respect to the company's CR performance.
  - To review CR performance and compare it with the stakeholders' expectations at the corporate, country and main operating center levels.
  - Bring performance closer to expectations through actions involving revising the company's operating processes, training programs, awareness and training or strategic social investment. Each of those actions incorporates specific performance indicators. These actions as a whole make up sustainability plans that are publically acquired commitments that are informed publically.
  - To measure progress by using reputation metrics.
- Government and Corporate Responsibility bodies: the Strategy Committee, Investments and Corporate Social Responsibility of the Board of Directors, the CR Committee at the corporate level and the CR Committees for Spain, Bolivia, Ecuador and Peru. All of the committees are made up of representatives of the areas concerned with fundamental Corporate Responsibility issues such as: Employees and Organization, Communication and External Relations, Community Relations, Legal Services, Safety and Environment, Purchasing and Hiring and Corporate Safety.

Each committee is in charge of applying the company's CR Coordination System at the company and operation levels; track sustainability plans; determine the strategic social investment needs in the country; learn and orient the information appearing in the country's CR Report, if any; learn and orient the information appearing in the country's Global Compact Progress Report, when the company, at the country level, adheres to this initiative and any other national information arising from CR commitments acquired publically by Repsol YPF and coordinate the company's participation in international countrywide initiatives such as the EITI.

Repsol has maintained an active commitment with the ten principles of the United Nations Global Compact since 2003 when it joined this high value initiative to achieve a fairer and more united world.

Furthermore, Repsol is aware that extraction produces a major source of income for governments of countries with natural resources. If they are properly managed, they can and should contribute to their economy's growth very positively. Therefore, from the moment it was launched, the company joined the Extractive Industries Transparency Initiative (EITI), the global initiative that Repsol considers to be best positioned to achieve the goal of increasing the transparency of financial information.

To give a detailed report on the progress and performance of ethical, social and environmental issues, Repsol publishes its Corporate Responsibility Report and the United Nations Global Compact Progress Report annually. Aware of the importance of the impacts generated by the company's activities and operations, and therefore of the relevance of providing a detailed report to interested parties on a local level, Repsol has published the Repsol YPF Ecuador Corporate Responsibility Report for the third consecutive year. Furthermore, in 2011, a Corporate Responsibility Report for the La Pampilla refinery in Peru was published for the first time.

Repsol's presence in international sustainability indexes is proof of how the company has been able to win the trust of those analysts and institutional investors who understand that corporate responsibility is a good indicator of the quality of management and governance of a company.

Yet another year, the company's performance in corporate responsibility matters has been recognized and it continues to be a part of the following prestigious sustainability indexes: FTSE4Good, Ethibel Sustainability and Dow Jones Sustainability. For the first time this year, Repsol obtained the maximum score in this last index. Thus, it became the world's most sustainable oil and gas company.

Once again, Repsol received the Gold Class company rating according to the 2011 Sustainability Yearbook as recognition of the companies with the best sustainability and corporate responsibility behavior in the world.

The leadership obtained in 2011 corresponds to the effort made in all company areas. It was driven by its management team because it improved its performance. This recognition demonstrates Repsol's firm commitment to transparency and corporate responsibility and ethical, environmental and social values that are part of its corporate culture.

## **Repsol Foundation**

During 2011, Repsol Foundation has maintained and reinforced its commitment to improve society. To do so, it has held programs with objectives based on social integration, community development, sustainability and imparting art, science and culture.

In order to be present in those areas where it can make the greatest contribution such as energy, the environment and sustainability, it created the Repsol Foundation Entrepreneur Fund. It is a pioneering initiative in Spain to promote and support corporate energy efficiency projects that provide solutions toward improving efficiency and savings and responsible energy use. This initiative, integrated into the commitment to improve current energy models' sustainability, arose with the objectives of attracting talent, promoting innovation and corporate development, generating economic activity and creating jobs. To do so, the Foundation foresees selecting up to five projects out of the ones presented in each tender process. These will receive technical, business, legal and financial advice and financial support for as long as necessary to develop and place them on the market. The selected projects will also be granted access to the necessary investors and business contacts to boost

their commercial development. The Foundation will endow €1.5 million to the Entrepreneur Fund per year.

The Energy Observatory has continued to progress in its energy savings and efficiency studies and publications. The Energy Efficiency and Greenhouse Gas Emission Intensity (GEI) indexes were updated. The former expresses the evolution of global energy efficiency broken down by economic sector in Spain and the latter shows the evolution of greenhouse gas intensities associated with the economic activity.

The aim of Citizen R is to promote responsible citizens. It is a project that specially targets young people and children and encourages a culture of participation, respect and solidarity as well as the importance of responsible energy use, taking care of the environment and energy sustainability. In 2011, the Citizen R caravan, a space equipped with interactive resources for different areas of educational workshops and games traveled to Barcelona, Valladolid and Madrid (Spain) and Lisbon, Sines and Porto (Portugal). In total, it has received more than 22,000 visits of which more than 10,500 were schoolchildren.

Within the framework of the European Year of Volunteering, the Foundation implemented the Volunteer Plan to address social concerns put forth by the group's employees and their environment. At the same time, it contributed toward building a better future in society. The plan, encouraged by the senior management, is conceived by and for volunteers, and it encompasses a wide range of actions, especially in social matters. It has initiatives aimed at training youth and programs that cover activities to help the most underprivileged groups: promoting values, intergenerational cooperation, actions to promote sports, rehabilitation of the environment and others such as online volunteering. The plan already has six fully developed programs that encompass the work of 800 volunteers R nationwide and a wide network of collaborators who help to effectively deploy these activities.

In the area of Education and Training, with the commitment to meet the new training demands, a scholarship program is being developed in cooperation with the Petronor, A Coruña and Tarragona refineries to encourage local youth to get job training. The last time it was offered, more than 65 young people benefitted from the aid. Furthermore, through Repsol Chairs, in order to complete postgraduate education and contribute toward promoting research, Repsol collaborates with Professional Technical Schools for Mining Engineers and Industrial Engineers at the Universidad Politécnica de Madrid and with Universidad Rovira i Virgili de Tarragona.

Likewise, in order to research, acquire knowledge and promote competitiveness and regional development, the Repsol Chair of Competitiveness and Regional Development at Universidad de Lleida was implemented.

Within the field of education, another of the Foundation's objectives is to generate, impart and promote scientific knowledge. With this purpose in mind, a partnership agreement with the Parenting University's Educational Foundation was implemented. It is represented by philosopher and writer José Antonio Marina and its purpose is to develop a project that contributes toward waking young people's interest in science and technology. Furthermore, within the framework of the agreement that Repsol holds with the National Library of Spain, a series of educational and cultural activities to bring science closer to the public and stimulate interest in scientific knowledge were sponsored. Training of South American specialists in preserving their cultural and bibliographic heritage has been encouraged.

The Foundation is becoming increasingly involved in integrating the disabled. Through cultural, sports and educational initiatives, the Foundation has worked toward achieving a social model that enables equal opportunities and facilitates this group's job and social insertion. Thus, in cooperation with Fundación ONCE (ONCE Foundation), they continued with the "Tu Formación no tiene límites. Desarrolla tu

Futuro" (Training is unlimited. Develop your future) program, and the program titled "Campus inclusivos de verano Campus sin límites" (Campuses that include summer. Limitless campuses) in which a total of fifty students with different types of disabilities have participated.

In the scope of the Foundation's commitment with this group, Recapacita (Think it over) was registered. It is an awareness program for society about the difficulties and barriers that disabled persons encounter in their daily lives. The Recapacita tent has traveled to eight Spanish cities (Puertollano, Tarragona, Santander, A Coruña, Arteixo, Bilbao, Murcia and Madrid) with a final balance of 17,000 visitors.

The Repsol Foundation was awarded in 2011 with the Prodis and Discapnet awards as recognition for its efforts integrating the disabled.

In the field of research and social studies, the Foundation conducted the study titled *Social Aspects of Sustainable Mobility*. It shows a cross-section of Spanish society's habits and behaviors in connection with mobility and the impacts caused by the current behavioral models. At the Social Energy Observatory, the *Repsol Energy Efficiency Social Indicator was updated*. This indicator analyzes the habits, beliefs, knowledge and aptitudes of Spanish society in light of energy consumption and it identifies social mechanisms and tools to boost energy efficiency.

In the countries where the company is present, the Foundation conducts programs that promote community development and improvement of the quality of life. It does so by acting with specific projects that are suitable for the needs of each area. Thus, in Peru, a program is being developed that is aimed at low-income youths from Pachacútec and Arequipa in order to make it possible for them to access the educational system and favor subsequent insertion in the workforce.

Also in Peru, construction of Luisa Astrain School was concluded. During the first year of academic activities, 375 students enrolled. With this initiative, the town of Pachacútec will be able to generate opportunities for 1,000 schoolchildren from their infancy. This will enable children in extreme poverty to access a quality education.

In Colombia, the Foundation has contributed toward the building and furnishing of the Integrated Child Development Center (CIDI) in Cartagena de Indias. This was done to solve the health problems identified in the area and reduce infant mortality by offering care to babies.

In Bolivia, the health project that stands out is the consolidation and expansion of the infrastructure of Hospital San José Obrero de Portachuelo in Santa Cruz de la Sierra. This is a township with a very fragile health situation. It has critical maternal and infant mortality indicators in children under five. With that, all of the health needs of the population that exceeds the hospital's current capacity will be covered.

Spreading culture is another factor that helps society's development and progress. Through different initiatives, and in cooperation with other institutions, the Foundation brings literature, music, theater and art to citizens.

These programs and other initiatives are a sample of Repsol Foundation's responsibility and its contribution toward sustained improvement of society and welfare.

## **YPF Foundation**

The YPF Foundation's mission is to consolidate and accompany YPF's commitment to the country through educational, social and cultural initiatives that generate opportunities for development and contributed toward Argentina's growth. Its objectives include:

- To promote the development of education, culture and social and job insertion of the communities where YPF works.
- To be a model of the actions that should be taken for companies and nonprofit organizations.
- To coordinate between the private and public sectors and encourage the implementation of policies that contribute toward the country's sustainable development.
- To strengthen the ties between YPF, its employees and society.
- To generate job opportunities by training youths who have been excluded from the knowledge society.
- To foster the development of society through the transforming and integrating power of art, promoting values and preserving historic heritage.
- To contribute toward preserving and caring for the environment.

The YPF Foundation's actions are reflected through numerous educational, social and cultural initiatives performed with dedication and motivation by the Foundation's staff.

In education, the Gregorio Álvarez Cultural Center was inaugurated so that the inhabitants of Plaza Huincul and Cutral Có (Neuquén) can enjoy the variety of art and cultural activities offered by this new space. The Foundation continued working on reinforcing technical education and several different programs that make it possible to socially include youths through vocational training oriented toward creating job opportunities.

Culture and art make a positive impact on the community and stimulate its development. They also affirm our identity. The space titled *Arte en la Torre* (Art in the Tower), the itinerant samples of Argentinean artists, the program titled *Argentina Pinta Bien* (Argentina Paints Well) and the cultural cycle have enabled the Foundation to show and promote the talent of Argentinean artists. At the same time, it has stirred the interest of young people nationwide.

### **Repsol YPF Ecuador Foundation**

To root itself in its firm social commitment, Repsol voluntarily decided to create a foundation in Ecuador with the main objective of working toward developing the native and mestizo communities located in territories of block 16's indirect influence. The Repsol YPF Foundation was founded on 11 May 2001.

Three priority lines of intervention to improve the populations living conditions were identified from a study of the area's socioeconomic and cultural conditions. The first one concerns education and job insertion; the second is oriented toward health and sanitation and the third refers to reinforcing productive and business capacities at the micro and local levels. Furthermore, since 2010, the Inclusive Business Model has been implemented. Besides creating corporate benefits, it creates social and financial value when integrating low-income persons in many companies' productive activities.

In 2011, the Repsol YPF Ecuador Foundation participated in twenty social development projects. Out of these projects, eight were executed during the fiscal year, and they entailed expenditures. The remaining twelve, on the other hand, were projects being tracked in which accompaniment and technical assistance prevailed. Within the foundation, there is the conviction that the supported initiatives' sustainability requires an injection of funds. However, once this process has concluded, it will be necessary to continue accompanying the projects through ongoing tracking until they are completely autonomous.

A total of 11,095 people benefitted from the programming carried out by the Repsol YPF Ecuador Foundation using its own funds, with resources contributed by institutions, counterparties, strategic allies and the community itself.

The effort to generate proposals to seek additional funding is held in place to engage multilateral cooperation institutions and other companies to join the initiatives to support social and environmental development projects.

## ***SAFETY AND ENVIRONMENT***

For Repsol YPF, attention to safety and the environment plays a central role in managing its activities. Repsol YPF's principles for safety and the environment are defined in its Health, Safety and Environment Policy. It is applicable in all company activities. In the policy, the company pledges to conduct its activities while considering the following to be essential values: safety, people's health and protecting the environment.

Additionally, safety is one of the company's fundamental and unwavering ethics that should guide all actions and commitments.

The basis for safety and environmental management is the management system. This system is comprised of an extensive body of regulations, procedures, technical guidelines and management tools that are applicable in all company activities. They are being continuously updated to be adapted to the sector's best practices.

The Management Committee establishes the safety and environmental objectives and strategic guidelines. These are the basis for drawing up objectives and plans of action for all of the company businesses. These plans consider the necessary actions for the PCDA of management, investments and associated expenses and the adaptations to new legislative requirements.

Additionally, the duties of the Board of Directors' Audit and Control Committee include learning and orienting the company's safety and environmental policy, directives and objectives.

Repsol YPF's 2011 Corporate Responsibility Report lists the most notable actions carried out during the year to improve safety and to protect and conserve the environment. It also includes the development of the most relevant indicators.

### **Safety**

The frequency of accidents with doctor's note included (company personnel plus contractor) decreased by 21% with respect to the previous year, thus meeting the annual objective set. This objective is part of the annual objectives of the Repsol YPF employees who have variable pay linked to goals attained.

The goal is to achieve zero accidents in Repsol's activities. In the last five years, the frequency with doctor's note included has decreased by more than 60%. Nevertheless, during 2011, Repsol has had to lament a total of four fatal accidents involving contractor personnel during the activities (two of those deaths occurred in traffic accidents).

The safety management system is aligned with international standard OHSAS 18001 (Occupational Health and Safety Management System). Repsol encourages



progressive certification of company centers according to that standard as a way to promote PCDA and obtain external validation of management systems. Currently, all the refineries and chemical plants, practically all lubricant and specialty facilities, several exploration and production facilities and a growing number of facilities for other activities are certified. (See detail of certified facilities at [www.repsol.com](http://www.repsol.com)).

Among the noteworthy safety milestones in new projects is the company's significant challenge that has brought about the expansion projects for the Cartagena refinery and fuel oil reduction projects at the Petronor refinery. Both of them are in Spain and are remarkable due to their magnitude. To guarantee safety in developing these projects, several activities have been carried out. These include: incorporating better international construction management practices, management of the necessary general services to meet construction workers' needs, compliance with regulations and standards due the high degree of coordination between Repsol's specialists and outsourcing company professionals, preventive observations made by specialized technicians and monitoring and tracking of materials and welding quality. Close to 22,200 people belonging to more than 700 contracting companies have participated in the projects. During the more than 37 million total hours worked, a frequency index of 1.05 was achieved. This figure is far inferior to the construction sector's average in Spain.

## **Environment**

The environmental management system is aligned with international standard ISO 14001. Repsol encourages progressive certification of company centers according to that standard as a way to promote PCDA and obtain external validation of management systems. Currently, all the refineries and chemical plants, all lubricant and specialty facilities, practically all exploration and production facilities and a growing number of facilities for other activities are certified. (See detail of certified facilities at [www.repsol.com](http://www.repsol.com)).

In 2011, significant environmental investments were made that were aimed at improving the environmental quality of petroleum products, minimizing air emissions, increasing energy efficiency, optimizing water consumption, reducing the contaminating load of dumps and improving spill prevention systems. All of this was done by applying the available best practices and technological innovation. Also of note is the effort undertaken to identify, evaluate and correct the possible past contamination situations. In note 35 of the Consolidated Financial Statements, information on assets, provisions, expenses and future actions of an environmental nature is listed.

In addition, Repsol YPF was recognized by *Newsweek* magazine as the company with the best environmental performance in the energy sector in Green Ranking 2011. This ranking assesses the environmental practices of the 500 major companies traded worldwide. It considers three categories: environmental impacts, the environmental management system and transparency on the environmental report. This year, the company's transparency was quite positively evaluated in the report on environmental issues. Moreover, it was highly evaluated in the environmental management system category. That was because of the programs, initiatives and certifications implemented in the entire organization to meet the commitments set forth in the Safety, Health and Environment Policy.

This recognition is the result of the company's joint effort to improve its environmental performance, and it shows Repsol YPF's commitment as a beacon in its sector.

## **Spill prevention**

Repsol YPF has adopted cutting-edge techniques in preventing and remedying pollution, managing accidental spills and maintaining the facilities. In this regard, the company has a marine and river spill management regulation that lays down the common basic directives for managing, preventing and responding to incidents caused by marine and river spills of oil and gas and toxic and potentially hazardous substances in all company activities.

In response to two spills on the Tarragona (Spain) seacoast in early 2011, Repsol YPF, as an extension of the actions carried out to date, drew up an Integrated Plan of Action along the Tarragona seacoast. Its purpose is to contribute to improving environmental protection, reinforcing the quality and safety of company operations on the seacoast and it has an associated investment of €131 million in the next four years. This investment is mainly assigned toward guaranteeing the integrity and reliability of the Upstream facilities (Casablanca platform) and downstream facilities (dock and outdoor rack), that Repsol YPF has along the Tarragona seacoast.

The plan's scope on the Casablanca platform amounts to an estimated investment of €50 million focused on performing actions aimed at extending the platform's life and implementing the best available technologies. Furthermore, at the dock and outdoor rack facilities, an estimated investment of €81 million should be made. It is focused on extending the facilities' reliability over time and implementing technological improvements that will make it possible to have facilities with the best safety standards on the market.

The 2011 Corporate Responsibility Report lists the actions taken during the year.

## **Safety during offshore operations**

Repsol YPF has a great deal of experience in offshore operations and it has performed deepwater operations both in the Gulf of Mexico and elsewhere. As part of the PCDA cycle, the company's standards and procedures are periodically reviewed and the lessons learned, recommendations and international best practices are incorporated.

In this regard, Repsol YPF has emergency response plans for those scenarios that may have an environmental impact. They include responses to oil and gas spills.

These contingency plans are drawn up according to the scenarios with the most risk based on local regulations, internal rules and the industry's best practices. They are reviewed and updated beforehand, both at the beginning of the drilling operations and after changes have been produced that may affect the operations' normal operation. These plans are subject to approval processes that are both internal and by the appropriate government authorities in the country of operation.

Before implementing the well construction operations, all of the most significant risks are identified and actions aimed at avoiding damage to people, the environment and the facilities are implemented. Measures are taken through documentation to ensure that all technical aspects have been properly implemented and verified. Additionally, the services commissioned are subject to periodic supervision and inspection during the operations in order to ensure that the local regulations, internal rules and the industry's best practices are applied.

In addition, Repsol YPF is a member of the OSR (Oil Spill Response), Clean Gulf Associates (CGA) and other mutual benefit societies or consortiums that intervene in large spills. These consortiums provide technical support and equipment for environmental emergencies.

## **SUSTAINABLE ENERGY AND CLIMATE CHANGE**

During 2011, the 2012-2020 Carbon Strategy was reviewed and updated. Its objective is to boost the company's vision of a more diversified and less carbon intensive energy supply. The Carbon Strategy's end goal is to have a common method of acting that harmonizing the existing initiatives and detects synergies with an integrated focus.

After the creation of the New Energies business unit in 2010, currently deploying its plans of action, Repsol considers it necessary to prioritize carbon intensity reduction activities in company operations. It focuses on the following areas:

- Energy efficiency to reduce CO<sub>2</sub> emissions and energy consumption through carrying out systematic plans that enable reduction opportunities to be developed.
- Carbon Markets that focus on mitigating the deficit foreseen in the European Union Emissions Trading Scheme (EU ETS), development of MDL projects and procurement of Certified Emission Reductions (CER).
- Prospecting and development of technologies that enable CO<sub>2</sub> to be transformed into added value products.
- Biofuel strategy for research, development, production, mixing and distribution.
- Development of new technologies for transport that contribute toward guaranteeing the supply with cleaner fuels with a lesser impact on the environment.
- Integration of carbon management throughout the company's value chain.

Repsol YPF's Management Committee is in charge of approving the company's carbon strategy as well as evaluating its implementation. Additionally, since 2005, the duties of the Board of Directors' Audit and Control Committee include learning and orienting the company's safety and environmental policy, directives and objectives including climate change aspects.

Repsol YPF has set a strategic objective of reducing 2.5 million tons of equivalent CO<sub>2</sub> during the 2005-2013 period. This is displayed in annual reduction objectives with respect to a business as usual scenario. They are approved by the company's Management Committee. They are part of the annual objectives for most of the Repsol YPF employees who receive goal-oriented variable pay. A reduction of roughly half a million tons of equivalent CO<sub>2</sub> was brought about in 2011 through specific energy savings actions. The accumulated decrease as a consequence of all actions taken between 2006-2011 amounts to 2.1 million tons of equivalent CO<sub>2</sub> more than 80% of the strategic objective).

Within the scope of energy efficiency, of note is the certification by an external entity of the Energy Management System of the A Coruña refinery in conformity with the new ISO 50001 standard. This is the first certified facility with these characteristics in the world. Implementing this system enables:

- Consolidating energy management criteria and good practices, applying them homogeneously among areas, systematizing work methods, prioritizing opportunities for improvement and ensuring that those efficiency criteria are present in all activities performed.

- Decreasing energy consumption due to the incorporation of all energy management-related activities in one PCDA cycle. To do so, it is fundamental to have tools to identify, analyze and implement opportunities to save as well as to efficiently monitor both energy consumption and the related processes or activities.

This system lies within Repsol YPF's commitment to efficiently use energy at its facilities in order to preserve natural resources, reduce atmospheric emissions and contribute toward mitigating climate change effects.

After this experience's success, this certification was extended to the Puertollano refinery with the implementation of an Energy Management System to obtain ISO 50.001 certification.

## **COMMUNICATIONS**

Repsol believes that communications is a key element in its relationship with society, and, in order to adequately manage it, makes available to its main stakeholders various online and offline tools with which to effectively and transparently report on its activities and businesses. The company is betting on a communications strategy that is based on proximity, truthfulness and speed as the main principles of its General Communications Management strategy.

### **Shareholders and investors**

Many ways to learn about the company's everyday activity are made available to these groups. Since it became a listed company in 1989, Repsol has maintained an Investor Information Bureau (OIA) and an Investor Relations Management, through which it serves its investors and securities analysts. In recent years, analyst coverage of the company has greatly increased, reaching a total of 41 analysts that effectively follow the company's evolution.

In order to serve shareholders' information needs, Repsol makes the OIA available to them. Shareholders can personally visit the bureau, call the free line 900 100 100 or write via regular post or email, in order to obtain any information required. The OIA answered some 50,000 calls in 2011 (and average of 190 per day). The most frequent questions concerned share values, the Annual General Meeting, dividend payment dates, and relevant company facts.

Moreover, all the relevant company information can be found on the corporate website ([www.repsol.com](http://www.repsol.com)), as well as specific contents in the "Shareholders and investors" section, which had more than 250,000 visits in 2011. The website also includes a number of email addresses (the generic address being [infoaccionistas@repsol.com](mailto:infoaccionistas@repsol.com)), to which inquiries can be addressed and at which publications can be requested. In 2011, more than 5,000 emails were received in 2011, mainly requesting information about Repsol.

The Investor Relations Management constantly communicates with institutional investors and securities analysts. In 2011 roadshows (meetings with institutional

investors outside the Repsol offices) were held in Europe, the United States and Asia, in which senior management took part, as well as 11 other meetings in which the investor relations team took part. Moreover, Repsol attended 12 sector conferences, both in Europe and in the United States, during which meetings with institutional investors were also set up. If the visits to the company offices are added, an approximate total of 600 institutional investors were contacted in 2011. Finally, the Investor Relations Management held a field trip (a visit in which analysts and institutional investors can learn about a representative asset of the company, in which the senior and the local management take part) in Argentina and Bolivia, with the attendance of 38 analysts following the company's evolution.

## Media

The aim of the General Communications Management is to serve the media under the principles of transparency, proximity, rigor and truthfulness. To this end, Repsol has various channels through which it manages information requests from the media.

The main activities of the Repsol Group in 2011 were made known to the media through more than 60 press releases, all of which are available in the corporate website ([www.repsol.com](http://www.repsol.com)) Press Room. The press releases issued by industrial facilities in Spain, those issued in countries where the company operated, those pertaining to sports sponsorship project, and those relative to specific businesses, such as liquated petroleum gas (LPG) or the Repsol Foundation, should also be taken into account.

In order to maintain a close relationship with media professionals, in 2011 a number of press conferences and information sessions were held. These include the presentation by the Repsol chairman, Antonio Brufau, of the 2010 results in the press conference which took place on 24 February, as well as the media session following the Annual General Meeting of 15 April 2011.

Furthermore, media professionals took part in the visit that the Prince of Asturias and the Prince of Wales made to the Repsol Technology Center on the occasion of a Spanish-British seminar on seaweed biofuels (31 March), in the opening of the first sustainable fuel station in the world (13 April) and in the first Spanish biofuel-based flight (3 October), among other events.

On the occasion of the launch of the extension to the Cartagena refining plant, which constitutes the largest industrial investment in the history of Spain, of more than 3,000 million euro, the General Communications Management scheduled a number of visits to the new facilities for international, national, regional and local media.

The corporate website includes a Press Room where information about the Repsol Group and its activities is available to media professionals. In addition to press releases, it includes graphic and multimedia files, publications, specific dossiers and newsletters intended for journalists from all over the world.

In 2011 *News* was presented: a new tool for media relations, created to provide Repsol stories and projects from a point of view less concerned with current events, but rather of a didactic nature. *News* is sent to more than 2,000 journalists and has been warmly received. Social network activity also started, more specifically on Twitter, where press releases are announced, as well as the most relevant company and energy sector data.

Another of the 2011 novelties was the Spanish translation and distribution of the well-known book *How the Energy Industry Works* among journalists, institutions, universities and associations, as well as in Repsol offices all over the world. It is a highly didactic work, and thus a tool for everyday use by non-experts in the energy industry.

In order to respond to journalists' requests for information, the General Communications Management makes available to them an email address ([prensa@repsol.com](mailto:prensa@repsol.com)), through which more than 4,000 inquiries and requests for information were received in 2011. This figure proves that high media interest in Repsol activities. By means of this channel, the company answers, on a daily basis, quickly and effectively, to the many requests from the media.

As a result of the constant work of the General Communications Management, in March 2011 the Barcelona Chamber of Commerce, Industry and Shipping awarded Repsol the Llotja Award in recognition of its commitment to providing truthful, full and accessible information to journalists, investors, and the general public, mainly through its Annual Reports and its website.

## **Repsol on the Internet**

With 10 years' experience in the digital world, the [www.repsol.com](http://www.repsol.com) website is reputed for its multi-content strategy. By means of this strategy, Repsol seeks to approach various public segments with interesting contents which make it possible to acquire information about and follow the company in real time, as well as to generate close relationships and conversations through its four blogs and its ever-growing social network presence.

This recognition comes from prestigious organizations, with expertise in the medium and in the generation of relationships of trust, which have counted Repsol among the best for another year. The international consultancy KWD, which evaluates almost 1,000 European companies in its annual KWD ranking, points out that Repsol has headed the Spanish ranking for eight consecutive years, and that, moreover, in 2011 it has entered the top 5 of the best European companies. The Spanish Association for Business Accountancy and Administration, among others, has also awarded Repsol – for the sixth time – the AECA Award as the Ibex 35 company with the best financial information on the Internet.

In 2011, [repsol.com](http://repsol.com) developed three lines of action to be so successful. Firstly, creating new digitalized contents, audiovisual, interactive, and web-locatable, which makes it easier to learn about Repsol, its brands and products, and the way in which it works. The new Innovation and Technology channel, the Products and Services redesign and the renovated sections, About Us and Corporate Responsibility, are examples of this.

Secondly, being accessible to users through its presence in mobile devices, such as smartphones and tablets through Repsol Guide applications and the generation of contents visible in these environments.

And thirdly, promoting dialogue and interaction through a greater emphasis on the web 2.0, where the new Technological Innovation blog joins the dialogue already started by the blogs of Dani Pedrosa, Marc Márquez and Cuchara de Palo, as well as through the consolidation of the Box Repsol and Repsol Guide profiles, which in 2011 have reached the three-year mark in the main social networks: Facebook and Twitter.

The result has been a monthly average of over 70 million viewed pages and five million visits to the [repsol.com](http://repsol.com) website, as well as massive social network activity, reaching 100,000 Facebook followers and 22,000 Twitter followers, which amount to a 67% and 400% increase with respect to 2010, respectively.

## **INTANGIBLE ASSETS MANGEMENT**

A significant part of the value of a company lies in its intangible assets. A company's brand and reputation are two key strategic values for differentiation and the generation of trust among the various stakeholders.

For this reason, Repsol promotes the management of these intangible assets from the Communications, Corporate Reputation and Brand Strategy Management.

### **Brand strategy**

The brand constitutes a key asset in Repsol's strategy: an intangible asset which can concentrate all the company's value, making them pervasive throughout the organization, and conveying them in each of its relations with the various stakeholders.

For this reason, in 2011 the Strategic Brand Plan was launched, with the aim of giving the brand a strong, consistent and differentiating personality in its verbal and visual expression, managing its implementation in all its points of contact and in its communication with all its audiences, and creating an internal culture which is fully aligned with the brand.

Repsol has been recognized as one of the best Spanish brands in the 2011 Superbrands Awards. This organization recognizes excellence in branding as synonymous with market consolidation, a guarantee of quality and trust for the public in more than 80 countries all over the world.

In 2011 Repsol also ranked among the top-ten Spanish companies in the biannual ranking published by Interbrand, a world-renowned company in brand valuation. In 2011, the Repsol brand came eighth, improving its position with respect to 2009, when it was ninth. Their bet on internationalization, innovation, new technologies, and adaptation to new consumption patterns are the main features of the brands heading the ranking.

### **Reputation**

Repsol understands corporate reputation as the capacity to generate trust, respect and admiration among all our stakeholders. This trust is a differentiating element, as proved by the fact that companies with the best reputations are also those which are most highly valued. A good reputation makes them more competitive because it has direct impact on financial results, talent attraction and loyalty, product recommendation and crisis management.

This is particularly relevant in such sensitive sectors as the energy sector, always in the spotlight due to its direct work with natural resources and its main role in people's welfare. This places very high standards on Repsol's work.

As a pioneering company as regards reputation, Repsol was one of the four founding companies of the Corporate Reputation Forum and in 2011 became one of the sponsors of the *Corporate Excellence Centre for Reputation Leadership*, an idea laboratory in which the main Spanish companies come together to professionalize brand and corporate reputation management on a global level.

In Repsol reputation is managed with the aim of promoting constant improvement of the organization and its external recognition. To this end, its reputation is continually

measured, and a Strategic Corporate Reputation Plan has started to be deployed. Special emphasis has also been placed on online reputation management.

In 2011 has maintained and improved its position among the top ten in the main national and international reputation rankings, such as the Spanish Business Reputation Monitor (MERCOS) and the *Fortune's World Most Admired Companies* index, both by sector and by country.

## **SPORTS SPONSORSHIP**

In 2011, Repsol took part in the top racing competitions in the world, such as the World Motorcycling Championship, which is the best testing ground for its fuels and lubricants. It is precisely the experience acquired in the development of specific products for top competitions that enables Repsol to remain a leader in the research and development of products that can fulfill its customers' high expectations.

The 2011 season was exceptional as regards the world titles won by the Repsol pilots taking part in international competitions. In MotoGP, Repsol won the World Championship with Casey Stoner. Moreover, Repsol Honda Team was the team World Champion. Repsol's Australian pilot won ten of the seventeen great championships. Dani Pedrosa won three times, and only bad luck prevented him from reaching the end of the season with options to winning the championship. Andrea Dovizioso came third at the end of the season. As an example of the supremacy of the Repsol team, two of our pilots have stepped onto the podium in fifteen of the seventeen main competitions.

Marc Márquez, the latest 125cc World Champion, debuted in the Moto2 category. The Cervera pilot did not disappoint his fans and, after a difficult start to the season, he won seven races and reached the end of the season as the leader in his category. An unfortunate accident in the penultimate race brought his options to winning the championship to an end. Even though he failed to win the prize, the Repsol pilot has been confirmed as a sports and media phenomenon, which makes him a wonderful ambassador for the brand, both on and off the race track.

Repsol won the Trial Indoor and Outdoor World Championship in the men's category and the Outdoor World Championship in the women's category for another year. Toni Bou has won ten world championships. The 26-year old is on the verge of becoming the pilot who has won the most awards ever in the history of this specialty. As for Laia Sanz, she has established herself, with eleven world championships, as the best in her category.

Repsol remained the personal sponsor for Marc Coma, who in January won the 2011 Dakar rally in the motorcycle category.

In the Spain Speed Championship, which has become the best testing ground for the World Championship, the Repsol team took the first three positions in the 125cc category.

### **Other sponsorships**

Repsol is a company committed to Olympic sports through its collaboration with the ADO plan, which helps many young sportspeople to live the dream of taking part in the Olympic Games. In this way, Repsol is betting on consolidating the excellent status of Spanish sports with a view to the 2012 London Olympics.



As a novelty, this year the Group started sponsoring an acrobatic flight team which has won the World Sub-championship, the Spanish Championship, and has taken part in a number of aerial exhibitions.

## ***NEW REPSOL HEADQUARTERS***

Construction on the new Repsol headquarters commenced in November 2008, and works were practically complete in 2011.

In 2011, the above-ground structure was completed and 100% of the façade was executed; installation work came to an end, and the commissioning phase is currently underway. The garden trees were also planted in October. Moreover, the interior landscaping work has started.

The internal refurbishment was also completed in terms of the design of the various areas, and work continued on the design and functioning of the main services, with the collaboration of the members of the Campus Team (which consists of 54 representatives of the various Group units, channeling area participation and opinion in the change project) and trade union representatives. The degree of completion of the internal refurbishment project is 52%.

The 2011 frequency index of accidents involving absence has remained under five, which constitutes a landmark in the building sector.

Finally, work has been performed with all units to study in detail its actual move to the company's campus. Work has been completed with an implementation simulation, checking the functioning of each area, and detecting special needs.

In November and early December, almost 1,000 employees have visited the trial office, which was expressly refurbished for the occasion, as well as the most striking areas in the building.

Campus occupancy is scheduled to start between April and June 2012.

The future Repsol headquarters will have a ground floor plus four office and service floors. It will also have two underground facility floors, as well as parking for 1,800 vehicles. The project comprises more than 5,000 square meters, which will provide various services for employees. The buildings will constitute a ring making it possible to enjoy an almost 10,000 square meter garden with trees. In addition, a new green area will be created in the business campus perimeter. Repsol has banked on sustainability since the project design phase.