In search of more and better energy

SUSTAINABILITY REPORT 2011
**Galp Energia** is an integrated energy operator with diversified activities across the globe in the oil and gas industry. The Company has a strong presence in the resource-rich South Atlantic exploration and production area that covers the pre-salt of Brazil’s Santos basin and the Angolan offshore. Galp Energia is present in 13 countries: Portugal, Spain, Brazil, Angola, Venezuela, Mozambique, Cape Verde, Guinea-Bissau, Swaziland, Gambia, East Timor, Uruguay and Equatorial Guinea.
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Galp Energia publishes this year its sixth sustainability report, which covers the Company’s activities in this field in 2011.

Except for Exploration and Production (E&P) offshore projects, the activities of companies where Galp Energia owns at least half of the equity are within the boundary of this report.

This report targets all Company stakeholders, whose expectations have been addressed in the definition of the report’s content, subject matter and indicators.

In addition to the chapters that will, like in previous years, cover activities such as the E&P of oil and gas, environmental performance, health and safety, human capital, stakeholders and social responsibility – as well as related indicators –, this year’s report will also cover the new and important commitments and goals which are relevant to execution of the Company’s sustainability strategy. The new policy for corporate social responsibility will be highlighted and progress will be reported on the Company’s strategy for climate change.

Because it has been condensed, the information contained in this report should be considered in combination with the information available on the sustainability section of www.galpenergia.com, Galp Energia’s website. Additional information can be sourced from the Company’s annual and governance reports, which are also available on the same website.

This report has been prepared in accordance with the third version of the Global Reporting Initiative (GRI3)’s guidelines and related indicator protocols. Whenever performance indicators are not calculated using the methodology proposed by the GRI, this will be explicitly reported and the methodology used will be acknowledged.

This report is rated A according to the table in Appendix 2.

The 2011 sustainability report has been checked by PricewaterhouseCoopers, an accredited third party.

To request the clarification of doubts or to send suggestions about the content of this report, the following contacts can be used:

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Tel.: +351 217 240 866
Fax: +351 217 242 965
e-mail: investor.relations@galpenergia.com
www.galpenergia.com
Seven exploration and production projects in Portugal. Refining system comprising two integrated refineries. Marketing of oil products across a broad network, including 1,394 service stations. Second natural gas player.

Main destination of the oil products exported, with 0.6 Mt.

Participation in two exploration and production projects.

Marketing of oil products through a network of 66 service stations, in Cape Verde, Gambia, Guinea Bissau and Swaziland.

Present across 20 exploration and production projects. Represents over 80% of the total reserves and contingent resources of Galp Energia. Working interest production of 4 kboepd in 2011.

Supply contracts for 6 bcm of natural gas per year.

Presence in one natural gas liquefaction project.
Growing energy

With more than 40 exploration and production projects, spanning four continents, Galp Energia aims to produce more than 300 kboepd in 2020, a 15-fold increase from the Company’s production in 2011.

The Company has two refineries, with a combined capacity to process 330 thousand crude barrels per day.

Galp Energia will continue to strengthen its oil product marketing activities in Iberia and in Africa.

In the Gas & Power business, Galp Energia will proceed with its natural gas distribution and supply activities in Iberia, where it is already the second largest supplier.

One exploration and production project. Marketing of oil products through a network of 31 service stations.

Five exploration and production projects. Annual oil product sales of 245 kt.
Main events and awards

2011

January

R&D AND ADVANCED TRAINING IN RESERVOIR GEO-ENGINEERING

Launch of programme “GeoER – Geo-engineering of carbonate reservoirs in partnership with Petrobras”, Brazilian universities UNESP and UNICAMP, and Portuguese universities FCUL, UA and IST.

June

FIRST PILOT TESTS OF THE “ENERGY-EFFICIENT FLEET” SOLUTION

Installation of the first devices for smart metering of driving behaviour

August

DISCOVERY OF WORLD-CLASS NATURAL GAS RESERVES IN MOZAMBIQUE’S ROVUMA BASIN

September

FIRST STAGE OF SMART GALP IMPLEMENTATION

Installation of devices for smart metering in pilot-test homes

October

SIGNING OF THE 1ST PERFORMANCE CONTRACT ON ENERGY EFFICIENCY BETWEEN CORINTHIA HOTEL AND GALP SOLUÇÕES DE ENERGIA

November

CONSTRUCTION START FOR THE SINES REFINERY’S R&D CENTRE

Announcement of Sinopec as a new shareholder in Petrogal Brasil
Awards

Sustainability in the Oil & Gas industry

Galp Energia was awarded Sector Mover status (an award that goes to the company with the fastest growth in sustainability performance), among 118 companies and is now top 15% in the Oil & Gas industry.

In SAM’s Sustainability Yearbook (Sustainability Asset Management), Galp Energia was awarded Sector Mover status in Oil & Gas. The award recognised that Galp Energia was the company in the Oil & Gas industry globally whose sustainability performance grew fastest in 2011, a year when it positioned itself in the top 15% of the sector.

Published by SAM, the Sustainability Yearbook reviews the outlook for 58 sectors according to the organisation’s Corporate Sustainability Assessment.

Since 1999, SAM has annually reviewed the sustainability performance of over 2,000 companies and compiled over the years one of the largest global databases on corporate sustainability. The 2,500 largest companies selected on the basis of the Dow Jones Global Total Stock Market index are invited each year to participate in SAM’s Corporate Sustainability Assessment. Only the top 15% in each of the 58 sectors qualify for inclusion in SAM’s Sustainability Yearbook.

SAM is the organisation that assesses and rates companies that wish to be included in the Dow Jones Sustainability Index (DJSI).

European investor relations perception study

In March, Galp Energia was awarded the second place in the European Oil & Gas industry/E&P in Institutional Investor’s 2011 European Investor Relations Perception Study, which rated companies’ relationship with capital markets and recognised both best practice and the best professionals. Galp Energia’s chief executive officer Manuel Ferreira De Oliveira was rated the best CEO in Continental Europe’s Oil & Gas/E&P and Tiago Villas-Boas was considered the best investor relations officer in European Oil & Gas/E&P.

Performance in environment, health and safety

Galp Energia’s performance in environment, health and safety (EHS) became internationally recognised when the Company was awarded a mention of honour in the 10th Dupont Safety Awards, category Performance Improvement. This honour was worth a third place among 71 contesting companies from 20 countries.
An integrated energy operator

**Exploration & Production**

**Production goal:**
- 300,000 barrels of oil per day.

**Production goal for 2020:**
- To produce half of the national consumption;
- Increase ten times the current production.

**Discoveries:**
- 709 million barrels of 3P reserves, up 24% on 2010.

**Brazilian pre-salt:**
- 3rd company with the largest exploration area in the development of oil and natural gas in the Brazilian pre-salt (the largest industry discoveries in the past 30 years).

**Portugal:**
- Oil exploration off the Portuguese coast in extensive campaigns to obtain seismic data with special-purpose ships (11,700 km of lines);
- The water depth ranges from 200 to 3,500 meters.

**Refining**

With its refining sector, Galp Energia gives a decisive contribution to a wide variety of sectors in the domestic economy.

**Refining capacity:**
- 330,000 barrels of oil per day (equivalent to Portugal’s consumption);
- The largest industrial project currently under way in Portugal (€1,400 million investment) for upgrade of the Sines and Matosinhos refineries.

This project will significantly increase diesel production and align it with domestic demand. It will allow a significant increase in energy efficiency in Galp Energia’s refining system.

**Products directly consumed by end customers:**
- Oil;
- Diesel oil;
- Jet fuel (planes);
- LPG (household and industrial);
- Lubricants;
- Bitumens (road construction).
BACKGROUND

Power:
- total power sold: 219 GWh (45 GWh in 2010);
- market share: 1.4%.

Distribution of segments in the total portfolio

Retail chain:
- promoting a philosophy of convenience with innovative spaces and a new offer of fresh and quality products.

Latest-generation fuels, tested in the most renowned European laboratories:
- Galp G Force – premium line of high-performance fuels, which increase engine power, reduce consumption and preserve the environment;
- Galp Hi Energy – additive-enhanced fuel for greater efficiency.

Strong presence in the Iberian Peninsula:
- more than 1,400 service stations provide a large range of products and services that ease the path for consumers every day.

Natural gas

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of clients</td>
<td>1,267,338</td>
</tr>
<tr>
<td>Volume sold (Mm³)</td>
<td>5,365</td>
</tr>
<tr>
<td>Extent of the network (kms)</td>
<td>11,655</td>
</tr>
</tbody>
</table>

Note: activity concerns only the distribution (medium and low pressure).
Main economic data

Core economic indicators

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<th></th>
<th>2010</th>
<th>2011</th>
<th>Change (%)</th>
</tr>
</thead>
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<tr>
<td>Direct economic value generated (M€)</td>
<td>14,193</td>
<td>16,915</td>
<td>19.18%</td>
</tr>
<tr>
<td>Revenue (M€)</td>
<td>14,064</td>
<td>16,884</td>
<td>19.48%</td>
</tr>
<tr>
<td>Other revenue (M€)</td>
<td>129</td>
<td>111</td>
<td>(13.95%)</td>
</tr>
<tr>
<td>Direct economic value distributed (M€)</td>
<td>13,438</td>
<td>16,266</td>
<td>21.04%</td>
</tr>
<tr>
<td>Operating costs (M€)</td>
<td>12,802</td>
<td>15,515</td>
<td>21.19%</td>
</tr>
<tr>
<td>Salaries and employee compensation (M€)</td>
<td>235</td>
<td>239</td>
<td>1.70%</td>
</tr>
<tr>
<td>Payments to capital providers (M€)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest charges and similar costs (M€)</td>
<td>110</td>
<td>198</td>
<td>70.91%</td>
</tr>
<tr>
<td>Dividends (M€)</td>
<td>167</td>
<td>118</td>
<td>(29.34%)</td>
</tr>
<tr>
<td>Payments to the state (M€)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate income tax</td>
<td>108</td>
<td>187</td>
<td>73.15%</td>
</tr>
<tr>
<td>Other taxes</td>
<td>12</td>
<td>15</td>
<td>25.00%</td>
</tr>
<tr>
<td>Community investments (M€)</td>
<td>4</td>
<td>4</td>
<td>0.00%</td>
</tr>
<tr>
<td>Accumulated or retained economic value (M€)</td>
<td>755</td>
<td>649</td>
<td>(14.04%)</td>
</tr>
<tr>
<td>ISP</td>
<td>2,726</td>
<td>2,430</td>
<td>(10.86%)</td>
</tr>
<tr>
<td>Expenditure on I&amp;D&amp;T</td>
<td>15.6</td>
<td>n.d.</td>
<td></td>
</tr>
<tr>
<td>Significant financial grants from the state</td>
<td>1.2</td>
<td>2.0</td>
<td>(66.67%)</td>
</tr>
<tr>
<td>Supplier cost (M€)</td>
<td>781</td>
<td>914</td>
<td>17.03%</td>
</tr>
<tr>
<td>Average supplier payment period (days)</td>
<td>35</td>
<td>30</td>
<td>(14.29%)</td>
</tr>
<tr>
<td>Net profit (M€)</td>
<td>452</td>
<td>433</td>
<td>(4.20%)</td>
</tr>
<tr>
<td>Replacement cost adjusted net profit (M€)</td>
<td>316</td>
<td>251</td>
<td>(20.57%)</td>
</tr>
<tr>
<td>Capital expenditure (M€)</td>
<td>1,233</td>
<td>1,000</td>
<td>(18.90%)</td>
</tr>
<tr>
<td>Net assets (M€)</td>
<td>9,148</td>
<td>10,155</td>
<td>11.01%</td>
</tr>
<tr>
<td>Debt (M€)</td>
<td>2,837</td>
<td>3,504</td>
<td>23.51%</td>
</tr>
<tr>
<td>Ebitda (M€)</td>
<td>1,064</td>
<td>1,990</td>
<td>2.44%</td>
</tr>
<tr>
<td>Replacement cost adjusted ebitda (M€)</td>
<td>864</td>
<td>797</td>
<td>(7.75%)</td>
</tr>
<tr>
<td>EBIT (M€)</td>
<td>649</td>
<td>642</td>
<td>(1.08%)</td>
</tr>
<tr>
<td>Replacement cost adjusted EBIT (M€)</td>
<td>464</td>
<td>395</td>
<td>(14.87%)</td>
</tr>
<tr>
<td>Capital and operating expenses in environment, quality and safety (M€)</td>
<td>43.8</td>
<td>49.9</td>
<td>13.93%</td>
</tr>
<tr>
<td>Working interest production (boepd)</td>
<td>20</td>
<td>21</td>
<td>5.00%</td>
</tr>
<tr>
<td>Volumes sold, E&amp;P (Mbbl)</td>
<td>3</td>
<td>4</td>
<td>33.33%</td>
</tr>
<tr>
<td>3P reserves net entitlement (Mboe)</td>
<td>574</td>
<td>709</td>
<td>23.52%</td>
</tr>
<tr>
<td>Volume of refined products sold (Mt)</td>
<td>17</td>
<td>16</td>
<td>(5.88%)</td>
</tr>
<tr>
<td>Volume of natural gas sold (Mm³)</td>
<td>4,926</td>
<td>5,365</td>
<td>8.91%</td>
</tr>
</tbody>
</table>
01 • MESSAGES
Dear shareholders,

As it creates value for its shareholders, Galp Energia also generates the power that society and the economy need for progress and well-being.

The views of scientists and reputable international organisations on the future of energy in this century converge on one point: the energy mix will become more diversified and fossil fuels will keep their strategic role.

Therefore, Galp Energia commits a large share of its human and financial capabilities to the exploration and production of oil and natural gas, which are vital to global – and, consequently, Portuguese – energy security. The launch of GeoER, an initiative for research and advanced training in carbonate reservoir geo-engineering in partnership with Petrobras and a number of prestigious Portuguese and Brazilian universities, reflects a corporate culture that sets a premium on the development of human capital.

But this is not the only energy frontier Galp Energia is pushing back. We are active in the sustainable production of biofuels with our jatropha project in Mozambique and our palm project in Brazil. We invest in knowledge to make our own operations more energy-efficient and to offer solutions to our clients that will help them use energy more rationally.

Galp Energia has surely progressed along the path of sustainability management. Evidence of this is the SAM’s Sector Mover award in Oil & Gas E&P, which went to the company with the highest growth in the DJSI (Dow Jones Sustainability Index). SAM rates companies for inclusion in the DJSI.

We aim to improve every year. In this spirit, we disclose in this report our strategic sustainability priorities together with our commitments to our stakeholders.

On the economic front, we renewed our support to EITI, the extractive industry’s transparency initiative, by disclosing our payments to states where we operate in the production of oil and natural gas. In corporate governance and ethics, we introduced a new corruption-fighting policy and established clearly the framework for our government relations.

On the environmental front, we worked out our first calculation of the carbon footprint for Galp Energia overall and by activity. Also, we made steady progress towards fulfilling our commitments under our strategy for climate change. In safety, we performed well in the implementation of System G+.

On the social front, the excellent performance of Galp Voluntária in its first year evidenced our employees’ strong sense of social responsibility. In this report, we disclose new indicators for quantifying our social performance according to the London Benchmarking Group’s methodology. These indicators will help us orient our social investment efforts as well as effectively communicate our engagement with the community. The Galp Energia Foundation has also been increasingly recognised as a valuable institution by the people and organisations that benefit from its actions.

All these activities are the result of the dedication of all Galp Energia employees and the support of our stakeholders and members of the Company’s governing bodies, who always challenge us to venture farther afield.
Message from the chief executive officer

Dear shareholders,

Energy is critical to the welfare of nations as it generates employment, is a source of innovation and feeds into virtually every sector of the global economy. Given the responsibility implied by its activities, Galp Energia has increasingly integrated sustainability in the strategic management of its business.

In recognition of this stance, DJSI assessors SAM awarded us Sector Mover status, meaning that the Galp Energia was in 2011 the company that progressed fastest in the DJSI’s Oil & Gas sector.

This award has given us an additional incentive to integrate sustainability further into our business. After listening to its stakeholders, Galp Energia has committed to a sustainability strategy with the following priorities:

- to continuously improve performance in environment, health and safety;
- to further a culture of responsible and ethical behaviour;
- to combat climate change;
- to engage stakeholders in the Company activities and get closer to communities;
- to upgrade human capital;
- to foster innovation.

For each of these priorities an action plan has been drawn up with new sustainability commitments.

In this report, Galp Energia updates on execution of its strategy for climate change. A first calculation is reported on the Company’s carbon footprint – overall and by activity. These are important tools to effectively manage our efforts to mitigate the impact of our activities on the environment.

Important steps have been taken to boost ethics and transparency in the Company. Alongside the introduction of an anticorruption policy, a new standard was implemented for government relations. Following on the practice reported in the previous report, we renewed our support to the Extractive Industries Transparency Initiative (EITI).

Great progress was achieved in corporate responsibility in 2011. Galp Voluntária, a volunteer force set up in our Company, had a noteworthy performance in its first year.

Galp Energia’s corporate responsibility policy is presented in this report. Diverse initiatives were developed in the markets where Galp Energia operates, which gave additional thrust to the Company’s relationship with surrounding communities.

We engaged with our scientific and technological stakeholders in 2011 to hear their views, which had a favourable effect on the evaluation and improvement of Galp Energia’s strategy for research, development (R&D) and innovation.

Two initiatives were particularly important: the set-up of an R&D centre at the Sines refinery and the start-up of GeoER, an initiative for advanced training in geo-engineering of carbonate reservoirs, in partnership with Petrobras, two Portuguese and two Brazilian universities.

Progress was also made in Galp Energia’s offering of integrated sustainable energy solutions. This was evidenced by the energy efficiency contracts signed both with the hotel sector and the Portuguese universities that joined the sustainable campus network.

Our exploration and production activities reached new highs as the commercial production of oil started in the Brazilian pre-salt and a new discovery of natural gas was made in Mozambique’s Rovuma basin, which gave a significant boost to Company reserves. We are aware of the importance of these activities for Galp Energia and we will therefore raise our investment in this area, namely by raising the capabilities of our human capital so as to address our upcoming challenges successfully.
In refining, another stage was completed in the process to convert our processing base. This will lower energy use while raising the capacity to produce diesel, thereby making imports of this product redundant.

In everything we do, we are uncompromising in plant, human and environmental safety. This is a commitment that is deeply embedded in our operations.

Our expectation is that this report will reassure our stakeholders as to the resolve of Galp Energia’s sustainability efforts, even in uncertain times.

By way of conclusion, I would like to thank Galp Energia’s governing bodies for their support to the advancement of our sustainability policies. I would like to extend my recognition to our employees, suppliers of goods and services, business partners and clients for their efforts and cooperation in making a success of our sustainability programmes. I also thank the other stakeholders for their interest in the activities of our Company and the positive stimuli that resulted from any criticism or comment they made available to us.

Manuel Ferreira De Oliveira
Gnlp Energia’s chief executive officer
02 • SUSTAINABILITY AT GALP ENERGIA
Galp Energia is the sole integrated, Portuguese-based oil and gas operator, its activities range from the exploration and production of crude oil and natural gas to refining and marketing of oil products, the distribution and marketing of natural gas and the generation of power.

Galp Energia’s diversified business portfolio, namely its current positioning as an integrated multi-energy operator, reflects the multiple capabilities developed over the years by its broad range of companies.

Galp Energia’s mission is to create value for clients, employees and shareholders through its ambitious, innovative and competitive action in energy markets and its respect for ethical and sustainability principles.

In 2011, Galp Energia set out to formulate its sustainability strategy. To this end, a comprehensive exercise was carried out whose main goal was to identify priority areas. The strategy definition rested on a methodology that identified commitments, initiatives, responsible persons and short-term goals for each priority area.

Information was gathered and relevant subjects were identified by reviewing best practices in the industries where major group companies operate and by collecting stakeholder views.

Galp Energia’s sustainability strategy was formulated as the following activities were developed.

### Main information sources

- Existing goals and policies in Galp Energia
- Review of stakeholder engagement
- Benchmark analysis
- Review of results from the Dow Jones Sustainability Index
- Review of results from the Carbon Disclosure Project

The identified strategic priorities are listed below:

- **To improve performance in environment, health and safety.**
- **To further a culture of ethical behaviour.**
- **To combat climate change.**
- **To engage stakeholders and get closer to communities.**
- **To upgrade human capital.**
- **To foster innovation.**

To boost performance in each one of the strategic priorities, an action plan was laid out with new sustainability commitments as described in the following table.

<table>
<thead>
<tr>
<th>Strategic priority</th>
<th>Initiative / action</th>
<th>Goal</th>
<th>Involved stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environment, health and safety</strong></td>
<td>To set up a sustainability committee composed of representatives from several departments of Galp Energia; specification of inter alia remit, values, commitments and meetings.</td>
<td>2012</td>
<td>Shareholders, Employees, Government bodies</td>
</tr>
<tr>
<td></td>
<td>To adopt the code of conduct Companies and HIV, a national initiative against AIDS.</td>
<td>2012</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>To set and communicate demanding goals for environment, health and safety. Ongoing action</td>
<td>2012</td>
<td>Shareholders, Government bodies, Employees, Surrounding communities</td>
</tr>
<tr>
<td></td>
<td>To implement balanced scorecards as tools for monitoring and macro-managing EHS performance (see chapter 7.1).</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To further and audit the implementation of Sistema G+, Galp Energia’s EHS management system (see chapter 7.2).</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To keep track of inventories of dangerous substances used and to review internal regulations in accordance with EU regulation REACH.</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To start assessing the risks to the use of water in Galp Energia’s activities and to measure the associated impacts in order to develop a water management strategy for water crisis or water scarcity risk.</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To draw up a guide for the management of biodiversity at Galp Energia; to identify best practice, metrics, methodologies and principles, to publish the nature of impacts on biodiversity for critical operational areas.</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>Strategic priority</td>
<td>Initiative / action</td>
<td>Goal</td>
<td>Involved stakeholders</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Ethics and conduct</td>
<td>To add clauses to contracts signed by the Galp Energia group companies with suppliers, service providers and other partners whereby they commit to comply with Galp Energia’s code of ethics and conduct, to combat corruption and to safeguard human rights.</td>
<td>1st quarter 2012</td>
<td>• Shareholders</td>
</tr>
<tr>
<td></td>
<td>To schedule auditing of compliance with the code of ethics.</td>
<td>2012 and following years</td>
<td>• Partners</td>
</tr>
<tr>
<td></td>
<td>To add a specific module to the training schedule for all Galp Energia employees covering the code of ethics, corruption-fighting and the safeguard of human rights.</td>
<td>2012</td>
<td>• Employees</td>
</tr>
<tr>
<td></td>
<td>To complete the process to join the UN Global Compact.</td>
<td>2012-2013</td>
<td>• Government bodies</td>
</tr>
<tr>
<td>Climate change</td>
<td>To implement Galp Energia’s strategy for climate change as presented in chapter 6.</td>
<td>Ongoing action</td>
<td>• Government bodies</td>
</tr>
<tr>
<td></td>
<td>To communicate and specify the plan to adapt Galp Energia’s premises to climate change (see chapter 7.3).</td>
<td>2012</td>
<td>• Surrounding communities</td>
</tr>
<tr>
<td></td>
<td>To raise the weight of natural gas in Galp Energia’s exploration and production portfolio.</td>
<td>2012 and following years</td>
<td>• Shareholders</td>
</tr>
<tr>
<td></td>
<td>To calculate and disclose Galp Energia’s carbon footprint (see chapter 6.3).</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To give publicity to the Carbon Disclosure Project survey, based on data from the sustainability report.</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>Customer relations</td>
<td>To implement Voz do Cliente (Customer’s voice), a programme calling for consistent customer engagement including the set-up of focus groups and client meetings and the resolution of complaints.</td>
<td>2012</td>
<td>• All</td>
</tr>
<tr>
<td></td>
<td>To adapt the customer loyalty programme to the setting of rising energy prices and the increased weight of energy costs in customers’ budgets.</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To set quantitative goals for customer satisfaction such as key performance indicators (KPI) for customer relationship management (CRM).</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To consistently evaluate the satisfaction of Galp Energia customers in all relevant business areas in the countries where the Company operates.</td>
<td>2012-2013</td>
<td></td>
</tr>
<tr>
<td>Community involvement</td>
<td>To spread the word in social media (Facebook) about the advantages of Galp Share as a tool to cut mobility costs through car pooling.</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To benchmark social responsibility and volunteer work projects by applying the London Benchmarking Group’s methodology, among others.</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To further Galp Voluntária, the Company’s volunteer programme, and direct it to four areas: education, environment and energy efficiency, health and well-being, and road safety.</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To aim for 500 volunteers and 5,000 volunteering hours by the end of the year.</td>
<td></td>
<td>• All</td>
</tr>
<tr>
<td></td>
<td>To gradually broaden social responsibility initiatives to all regions where Galp Energia directly operates.</td>
<td>Ongoing action</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To support relevant domestic and international health-related projects that aim for the well-being of communities where Galp Energia operates.</td>
<td>Ongoing action</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To develop Aliança para a Prevenção Rodoviária (Alliance for Road Safety), a long-term programme designed to change road behaviour, thereby raising safety on the roads.</td>
<td>2012-2015</td>
<td></td>
</tr>
<tr>
<td>Stakeholder engagement</td>
<td>To further stakeholder participation in all social responsibility projects – 30</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>in Aliança para a Prevenção Rodoviária – and Galp Voluntária, 25 in special initiatives.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To support a programme to encourage listening to, and informally meeting with, communities where the Company operates.</td>
<td>Ongoing action</td>
<td></td>
</tr>
<tr>
<td>Human capital</td>
<td>To proceed with the formulation and implementation of HR policies in the African subsidiaries by stressing predictability and transparency.</td>
<td>2012-2013</td>
<td>• Employees</td>
</tr>
<tr>
<td></td>
<td>To step up the use of e-learning, namely with an Intralearn platform.</td>
<td>2012-2014</td>
<td></td>
</tr>
<tr>
<td>Strategic priority</td>
<td>Initiative / action</td>
<td>Goal</td>
<td>Involved stakeholders</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Human capital</td>
<td>To set annual goals for employee satisfaction with continued use of climate surveys.</td>
<td>2012</td>
<td>Employees</td>
</tr>
<tr>
<td></td>
<td>To extend the 360° appraisal system to all team-leading employees.</td>
<td>2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To further training programmes in environment, health and safety through face-to-face sessions, b-learning and e-learning.</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To make sure senior managers and eligible high-potential employees enrol on the Galp Energia Academy’s higher management course, whose aim is to develop future leaders (see chapter 10.1).</td>
<td>2015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To develop new, or upgrade existing, skills in technical roles that are critical to the organisation through Galp Energia Academy’s advanced courses, in partnership with leading universities for the subject at hand.</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>Innovation</td>
<td>To formulate and implement the R&amp;D strategic plan for Brazil’s E&amp;P, activities meaning an outlay of 30 million dollars over five years (see chapter 13.1).</td>
<td>2012-2016</td>
<td>Clients</td>
</tr>
<tr>
<td></td>
<td>To develop Galp Energia’s R&amp;D centre for refining in partnership with selected universities (see chapter 13.2).</td>
<td>2012-2013</td>
<td>Technical and scientific community</td>
</tr>
<tr>
<td></td>
<td>To introduce the Galp Inovação network to selected users of social media such as Facebook and LinkedIn.</td>
<td>1st quarter 2012</td>
<td>Surrounding communities</td>
</tr>
<tr>
<td></td>
<td>To set up an R&amp;R fuel group in partnership with university circles.</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To structure the internal scheme for managing relations with the Scientific and technological system (SCT).</td>
<td>2012</td>
<td></td>
</tr>
</tbody>
</table>
03 • GOVERNANCE MODEL, CODES OF CONDUCT AND TRANSPARENCY
The introduction of a corruption-fighting policy and an internal regulation to provide guidance on government relations was the most relevant milestone in 2011 on the path to enhance ethics and transparency in managing Galp Energia’s business.

Corruption-fighting policy

The board of directors of Galp Energia, SGPS, approved on 28 April 2011 the internal regulation NR-11/02, which sets out the Company’s corruption-fighting policy. This regulation states that the Company’s business is built on the principles of loyalty, straightforwardness, honesty, transparency and integrity, with full respect for the law and relevant international best practice (see http://www.galpenergia.com/PT/investidor/GovernoCorporativo/Documents/PoliticadeCombateaCorrupcao.pdf).

Execution of the regulation, whose content has been circulated to the whole Galp Energia universe, relies on a range of procedures. All corruption practices, either active or passive, are banned, including any attempt, albeit frustrated, to pursue such practices by deliberate action or omission, by creating or maintaining privileged positions, or by any other irregular situation.

Galp Energia undertakes:

- to actively and fully cooperate with authorities and government bodies, domestic and foreign, by acting with strictness, transparency and sincere cooperation through open dialogue with civil society’s institutions and organisations, renouncing to any form of untrue statement to authorities;

- to respect market rules and refrain from engaging in any activities that may breach any basic rules with respect to ethics, professional standards or competition, for the purpose of gaining advantage over competitors;

- to respect the rationale behind the principles of this policy and to further their enforcement by all domestic or international bodies aiming to sign contracts, agreements, memoranda or other instruments for the establishment of business relations or professional cooperation.

The procedures to be soon issued in respect of the policy by the executive committee of Galp Energia, SGPS, will cover the following matters:

- government relations model, approved as regulation NR-05/11 of 10 August 2011;

- expenses with third parties, approved as regulation NR-03/11 of 9 June 2011;

- funding of political parties;

- set-up of joint ventures;

- hiring and remuneration of agents;

- mergers and acquisitions;

- donations and sponsoring;

- fulfilment of domestic and international accounting standards;

- selection and hiring of senior managers.

To spread full knowledge of the provisions of the policy and associated procedures, the required employee training actions have been scheduled for 2012.

To monitor the corruption-fighting policy, according to the internal regulation 08/11 of 3 June, a committee has been set up with three members appointed by the executive committee. The committee’s mission is to ensure that the policy is implemented and well interpreted and that any doubts or omissions are resolved.

To receive any doubts or requests for additional information under an auditable procedure, an e-mail box, cacp@galpenergia.corp, has been created to which the monitoring committee has exclusive access.

Any failure to comply with the general rules of conduct contained in the corruption-fighting policy will be considered as serious wrongdoing, liable to disciplinary action.
Regulation for government relations

On approval of the corruption-fighting policy, Galp Energia published on 10 August 2011 its regulation NR-05/11 whereby it undertook to ban gifts, pay-offs or promises thereof, as well as the acceptance of gifts by any public or private body. The Company also committed to banning any authorisation for an employee to give or pay, directly or indirectly, any sum of money or benefit in kind, to obtain advantage in domestic or international trade, classing these practices as acts of corruption.

This regulation aims to harmonise the handling of government relations and thus ensure the highest respect for the basic and irrevocable principles of ethical and professional behaviour in line with the principles of transparency and cooperation, responsible development of the business, excellence in professional endeavour, customer service and respect for people.

The purpose of these rules is to lay down the model for Galp Energia’s relationship with government through its representatives, project managers and executives whenever documents are filed for authorisations or licences, and agreements, contracts or payments are signed.

As the case is for the code of ethics and the corruption-fighting policy, failure to comply with the general standards of conduct set out in the government relations regulation is considered as serious wrongdoing, liable to disciplinary action (see http://www.galpenergia.com/PT/Investidor/GovernoCorporativo/Documents/Politica_de_Responsabilidade_Corporativa.pdf).

Code of ethics: action taken

Training initiatives

- Programme CBC – Competências-Base de Chefias (Basic Leadership Skills) (see chapter 10). A 14-hour training module on the code of ethics was taught to 312 Galp Energia employees.

- Academia Galp Energia (Galp Energia Academy) (see chapter 10). A 6-hour training module on the code of ethics was taught to 80 senior managers.

Transparency

To further a sustainability strategy aimed at equitable and transparent development, Galp Energia announced in 2010 it had joined the EITI and expressed its support for the fulfilment of the initiative’s principles.

EITI, which aims to enhance governance by raising transparency and accountability in the extractive industry, is a global initiative for the transparency of revenues from the extraction and production of mineral resources such as oil and gas. EITI provides a robust and flexible framework to monitor and reconcile operator payments with revenues of the resource-owning country.

The process is supervised by representatives from governments, companies and civil society; the EITI principles, which have been agreed at the Lancaster House Conference in June 2003, are the basis for the initiative and may be accessed on http://eiti.org/eiti/principles.

In compliance with these procedures, the sums disbursed to state-owned entities in Brazil and Mozambique are stated below.

<table>
<thead>
<tr>
<th>State-owned entities payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
</tr>
<tr>
<td>Brazil</td>
</tr>
<tr>
<td>Mozambique</td>
</tr>
</tbody>
</table>

04 • RISK MANAGEMENT
Principal risks
Galp Energia is exposed to several types of risk – namely market, operations, compliance, liquidity and credit risks – that may have negative implications for the strategy, business, performance or results of the Company. These implications may, in turn, negatively affect shareholder returns via changes in dividend payments or the stock price.

Types of risk

- **Financial risks**
  - Changes in interest rates
  - Access to credit
  - Default by counterparty

- **Operational risks**
  - Project completion
  - Discovery, estimate and development of reserves and resources
  - Reliance on third parties
  - Environment, health and safety

- **Market risks**
  - Fluctuations in commodity and product prices
  - Fluctuations in exchange rates

- **Compliance risks**
  - Political and regulatory environment
  - Climate change

Internal control and risk management system
The internal control system consists of a set of policies and procedures whose purpose is to ensure, with a reasonable probability of success, that corporate goals are achieved; these include the orderly and efficient conduct of business affairs, the safeguard of company assets, the prevention and detection of fraud and errors, the enforcement of laws and regulations, and the reliability of financial reporting.

This system rests on guidance by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) on the main features of Galp Energia’s internal control: control environment, risk appraisal, monitoring, information and communication.

Control environment
The control environment is the point of departure for the other components of internal control and includes the general attitude as well as the executive committee’s ethical awareness and actions, which set an example for employees and other stakeholders.

The implementation of a code of ethics designed to guide the personal and professional conduct of all employees contributed to fulfilling the Company’s mission, vision and values. Galp Energia’s code of ethics is available on its corporate website.

Galp Energia’s control environment also includes the internal standards and procedures for delegation of powers, which ensure the accountability of management actions according to their nature and materiality.

The audit board oversees the effectiveness of the risk management, internal control and internal audit systems; this body also appraises annually the performance of systems and related internal procedures with a view to strengthening the internal control environment; the audit board’s recommendations are forwarded to the executive committee.

Risk appraisal
Aided by several internal bodies, the executive committee is responsible for the set-up at Galp Energia of a mechanism for identifying and appraising internal and external risks that may affect the Company’s performance.

Galp Energia drives the systematic appraisal of risks and internal control systems in the business units; these initiatives cover the risks identified by each business unit, which is responsible for their management.
As risks and the effectiveness of internal controls depend on endogenous and exogenous variables, the appraisal process is not static; rather, risks incurred by the Company’s main businesses are periodically reappraised to make sure that the risk profile set by the executive committee is aligned with the business units’ response to risk.

Generally, risk analysis and internal control appraisals start by identifying and classifying the principal risks that may impair both business unit goals and the control systems created to mitigate them. To appraise the effectiveness of implemented controls, residual risk is first reviewed and then the existence of unit deviations from the risk appetite is checked.

Finally, business units comment on residual risk and commit to a response plan designed to minimise, transfer, avoid or accept residual risk. This process is illustrated by the figure below, which depicts the sequencing and interdependence of activities.

**Monitoring, information and communication**

The audit board supervises the adoption by the Company of principles and policies to identify and manage principal financial and operational risks associated with its activities, and follows the steps taken to monitor, control and disclose risks.

Operational, compliance and financial audits are conducted and information systems reviewed to test the effectiveness of internal controls. Annually, an audit plan is laid out on the basis of the findings by the appraisal of residual risk for various processes and business units. This plan is submitted for approval to the chairman of the board of directors.

For more information on principal risks, the risk management policy or the internal control and risk management system, please see Galp Energia’s 2011 annual report and accounts.

More information at:

http://www.galpenergia.com/PT/investidor/GovernoCorporativo/GestaoRisco/Paginas/GestaoRisco.aspx

The appraisal of risk and internal control by the business units and the associated response plans are submitted to the chairman of the board of directors and all executive committee members. In this manner, the level of risk taken on by business unit managers is adequately communicated to the Company’s topmost bodies.
05 · EXPLORATION AND PRODUCTION OF OIL AND NATURAL GAS
Galp Energia’s E&P portfolio includes 42 projects in different development stages spread over four continents.

The Company’s activity is focused on three core areas – Brazil, Angola and Mozambique – and also includes projects in Portugal, Uruguay, East Timor, Venezuela and Equatorial Guinea. The projects currently under production are located in block 14, in the Lula field, block BM-S-11 on the pre-salt of the Santos Basin in Brazil and, on a smaller scale, in the Brazilian onshore.

In the following years, the activity in E&P will be focused on:

- the development of reserves and resources of the cluster in the pre-salt of Santos basin;
- the exploration and development of new projects in the Angolan offshore;
- the exploration of more than 112 prospects with exploratory potential already identified.

**Production**

During 2011, the production goal for 2020 rose 50% to 300 kboepd.

- The goal for 2020 was reviewed due to successful results on past campaigns; achieving this new goal will represent a production volume 15 times as large as the current one;
- In 2015 the Company estimates to reach a production of approximately 70 kboepd, multiplying by three times the current production.

In 2011 Galp Energia had an average working interest production of 20.8 kboepd.

- The continuous growth of production in Brazil was the main highlight, representing 19% of the total.

**Reserves and resources**

The oil reserves and resources have been independently analysed by DeGolyer and MacNaughton (DeMac).

- In 2011 the reserve life index hit 21.4 years and the reserve replacement ratio reached 341.9%.

**PRINCIPAL INDICATORS**

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average working interest production (kboepd)</td>
<td>15.1</td>
<td>14.7</td>
<td>19.5</td>
<td>20.8</td>
</tr>
<tr>
<td>Average net entitlement production (kboepd)</td>
<td>10.0</td>
<td>9.7</td>
<td>11.8</td>
<td>12.1</td>
</tr>
<tr>
<td>Average sales price (€/bbl)</td>
<td>96.9</td>
<td>59.8</td>
<td>75.3</td>
<td>107.1</td>
</tr>
<tr>
<td>Operating costs (€/bbl)</td>
<td>9.0</td>
<td>10.5</td>
<td>10.4</td>
<td>15.9</td>
</tr>
<tr>
<td>Amortisation (€/bbl)</td>
<td>24.0</td>
<td>17.3</td>
<td>29.5</td>
<td>144.0</td>
</tr>
<tr>
<td>EBITDA RCA (M€)</td>
<td>208.0</td>
<td>112.0</td>
<td>186.0</td>
<td>251.0</td>
</tr>
<tr>
<td>EBIT RCA (M€)</td>
<td>141.0</td>
<td>67.0</td>
<td>60.9</td>
<td>130.0</td>
</tr>
<tr>
<td>Capital expenditure (M€)</td>
<td>196.0</td>
<td>193.0</td>
<td>341.5</td>
<td>299.0</td>
</tr>
</tbody>
</table>

**Reserves and resources (Mboe)**

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proved reserves (1P)</td>
<td>20</td>
<td>25</td>
<td>128</td>
<td>145</td>
</tr>
<tr>
<td>Proved and probable reserves (2P)</td>
<td>28</td>
<td>35</td>
<td>397</td>
<td>399</td>
</tr>
<tr>
<td>Proved, probable and possible reserves (3P)</td>
<td>0</td>
<td>35</td>
<td>574</td>
<td>709</td>
</tr>
<tr>
<td>Contingent resources (3C)</td>
<td>2,113</td>
<td>3,065</td>
<td>2,356</td>
<td>2,672</td>
</tr>
<tr>
<td>Prospective resources</td>
<td>1,976</td>
<td>1,640</td>
<td>2,550</td>
<td>2,821</td>
</tr>
</tbody>
</table>
**Net entitlement reserves (Mboe)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2P Oil</th>
<th>3P Oil</th>
<th>2P Gas</th>
<th>3P Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td>397</td>
<td></td>
<td>574</td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td>399</td>
<td></td>
<td>709</td>
</tr>
</tbody>
</table>

**CO₂ emissions**
- CO₂ emissions per equivalent tonne of oil produced reached 171 kgCO₂/toe, in contrast with the 212 kgCO₂/toe in 2010, which represents a 19.3% decrease.

**Environment, health and safety in the deep and ultra-deep offshore**

During the development and execution of E&P projects and related operations, the Company consistently implements strict criteria regarding environmental protection, operational safety and health.

Drilling wells in ultra-deep waters requires extraordinary measures of safety and environmental protection. To this end, the Company resorts to the latest technology in technical and operational terms.

- It is imperative to comply with plans and exhaustive procedures to minimise the risk of accidents.

The operational performance of drilling activities achieved remarkable progress due to a steep learning curve and the adoption of new technological solutions.

- It is possible to reduce the average drilling time of wells by strictly following all the safety procedures.

**E&P activities in Brazil**

**Basins where Galp Energia holds a stake**

- Amazonas
- Potiguar
- Pernambuco
- Sergipe Alagoas
- Espírito Santo
- Campos
- Santos

**Projects in Santos basin**
- Off the Brazilian coast, Galp Energia operates in four blocks in ultra-deep water in the cluster of the pre-salt of Santos basin.
- Continuous discoveries made since 2006 have set this basin as a world-class province, since it holds the largest known concentration of oil and natural gas in ultra-deep waters.
- Galp Energia is currently the second company with most assets in this basin.

**Development of the Lula field**

- By the end of 2010, after the delivery of the declaration of commerciality of the Lula field, recoverable volumes of oil and natural gas were revised upwards to 8.3 thousand Mboe.
- The development plan for the Lula field comprises the set-up of nine floating, production, storage and offloading (FPSO) units until the end of 2017, representing a total production capacity of 1,270 kbopd.
- Three leased FPSO were in operation by the end of 2011. In addition to these three units, another six FPSO will be built in Brazil, with a production capacity of 150 kbopd.
- The construction should take place in Rio Grande’s shipyard, thereby maximising the local component present in development projects in the Lula field.
E&P activities in Angola
Galp Energia’s oil production in Angola comes from block 14, which accounted for 81% of the Company’s working interest production in 2011.

- Three fields are currently under production: Kuito’s FPSO, Benguela-Belize-Lobito-Tamboco (BBLT) platform and Tômbua-Lândana’s compliant piled tower (CPT).

E&P activities in Portugal
The exploration activities currently under development in the Portuguese offshore have raised the interest of the public, the authorities and the Portuguese scientific community itself.

Galp Energia has a 30% stake in four blocks of the Peniche basin and a 50% stake in three blocks of the Alentejo basin.

- In 2012, after interpretation of all collected data, the consortia are expected to make a decision about moving forward to the following stage of exploration, which involves the drilling of exploration wells.

The increasing importance of natural gas in Galp Energia’s E&P portfolio
Galp Energia intends to diversify its portfolio with projects of oil and natural gas.

The weight of natural gas in proved reserves nearly doubled last year, from 10.8% in 2010 to 17.8% in 2011.

- The weight of natural gas is expected to keep on increasing in the coming years, with the development of projects in Brazil and Mozambique.

Mozambique

- In 2011, drilling activities in area 4 of the Rovuma basin, in Mozambique’s offshore, in which Galp Energia has a 10% stake, revealed several natural gas discoveries of great dimension. The large amount of natural gas discovered set the Rovuma basin as a world-class province of natural gas;
  - The Mamba South-1 well was drilled in a water level of 1,585 metres at close to 40 km off the coast of Cabo Delgado, in the northern part of area 4, and reached a total depth of 5,000 metres. Combined volumes of natural gas in the reservoir amount to 22.5 Tcf;
  - The drilling activities in the Mamba-North-1 well, located 22 km north of Mamba South-1 well, were completed in early 2012;
  - Several appraisal studies were launched on multitrain development scenarios.

In a first stage, to begin between 2018 and 2020, it is predicted the beginning of supply to China, Japan, India and other Southeast Asia, given the geographic location of the basin.

(For more information see the Report and Accounts 2011).

Brazil

- Start of natural gas marketing following the start of the operations in the Lula-Mexilhão gas pipeline in the Santos basin, enabling the exportation of natural gas from the Lula field to the Brazilian shore;
  - Appraisal of different options to recover and market natural gas from the Santos Basin, namely the construction of a second gas pipeline to connect block BM-S-11 and the Cabiúnas station, the construction of a unit of liquefaction of floating natural gas (FLNG) and also the construction of additional gas pipelines connected to the Brazilian coast;
  - In 2011, the consortium set up to study the development of the FLNG project, in which Galp Energia participates, received the front end engineering and design (FEED) projects from several hired companies (SBM Offshore, SAIPEM and TECHNIP). The final investment decision, initially scheduled for 2011 was postponed. The consortium will take the final investment decision when the analysis of the remaining options is completed.

Angola

- Since the end of 2007, Galp Energia has participated in the consortium for the development of the first integrated project of natural gas in Angola, where it holds a 10% stake;
• Drilling activities on exploration wells of natural gas that started in late 2010 are scheduled to proceed in 2012.

**Equatorial Guinea**

• Galp Energia participates in an integrated project of natural gas in Equatorial Guinea. In 2011, the Company acquired part of E.ON Ruhrgas’s equity holding, expanding its 5% stake to 15%;

• The government of Equatorial Guinea has defined the general framework for the project and the feasibility study should be completed in 2012.

More information at:
06 • STRATEGY FOR CLIMATE CHANGE

6.1 REFINING
6.2 RENEWABLE ENERGY AND CLEAN FUEL
6.3 GALP ENERGIA’S CARBON FOOTPRINT
6.4 GALP ENERGY SOLUTIONS AT THE SERVICE OF ENERGY EFFICIENCY
Against a backdrop of economic instability and with some reservations regarding the main power sources that will be used in the future, such as nuclear energy, the International Energy Agency (IEA) continues to advocate the application of the so-called Scenario 450 to address climate change. In this scenario, energy efficiency policies are the largest source of pollution reduction in end-use sectors (44% of the final quota, in 2035), followed by CCS (22%) and support to renewable energy (21%).

**Galp Energia’s strategy for climate change**

In 2010, Galp Energia committed to a climate change strategy that defined actions and goals, whose execution is described in this report.

**Axis 1 – Reduce emissions related to fuels at different stages of their life cycle**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>EXECUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Exploration &amp; Production</td>
<td>Boost the harnessing and preservation of the natural gas resource and minimize CO2 emissions.</td>
</tr>
<tr>
<td>1.2 Refining</td>
<td>Invest in conversion projects of the two refineries until 2011, to suit the market demand for fuel.</td>
</tr>
<tr>
<td>1.3 Biofuels</td>
<td>Achieve, by 2020, a 10% replacement by renewable energy sources of road transport fuel, ensuring a minimum of 60% reduction of GHG emissions in the life cycle.</td>
</tr>
<tr>
<td>1.4 Fuel transportation</td>
<td>Foster change in transportation by sea and rail.</td>
</tr>
<tr>
<td>1.5 Life cycle and carbon footprint</td>
<td>Develop models to analyse fuels’ life cycle and to calculate the carbon footprint.</td>
</tr>
</tbody>
</table>

**Axis 2 – Promote energy efficiency and the integration of renewable energy sources**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Details in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Refining</td>
<td>In 2012, achieve energy efficiency gains of about 156,000 toe/year, which corresponds to 400,000 tCO2/year in comparison with the base year of 2007. Achieve reductions of 26% in the energy intensity index (EI) (Solomon Associates) in Matosinhos refinery and 14% in Sines.</td>
</tr>
<tr>
<td>2.2 Natural gas cogenations</td>
<td>Promote the installation and exploration of natural gas cogenations in industrial and services units.</td>
</tr>
<tr>
<td>2.3 Natural gas</td>
<td>Foster the use of natural gas as a cleaner fossil fuel.</td>
</tr>
<tr>
<td>2.4 Fuel distribution</td>
<td>Implement projects that foster energy efficiency.</td>
</tr>
</tbody>
</table>
### Axis 2 – Promote energy efficiency and the integration of renewable energy sources

<table>
<thead>
<tr>
<th>2.5 Biofuels</th>
<th>STRATEGY</th>
<th>Portugal – Include 6.75% by volume of biodiesel until 2014 and 10% in energy content of biofuels. Spain – Include 6.5% in energy content of biofuels until 2014 and, similar to Portugal, achieve the 10% renewable energy target for the transport sector by 2020.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTION</td>
<td>STATUS</td>
<td>In 2011: • Introduction of 290,000 m³ of biodiesel (5% diesel energy) in the Portuguese market, which corresponded to a reduction of 300,000 tCO₂. • Introduction of 250,000 m³ of bio substitutes of mineral diesel and petrol in the Spanish market, with an associated reduction of 210,000 tCO₂. For 2012: • Guarantee at least 5% of renewable energy in the transport sector in Portugal via biodiesel; • Ensure at least 6.5% of renewable energy in the Spanish transport sector via substitutes of both mineral diesel and petrol.</td>
</tr>
</tbody>
</table>

### Programmes to foster energy efficiency in Galp Energia’s clients

<table>
<thead>
<tr>
<th>2.7 Galp Soluções de Energia</th>
<th>STRATEGY</th>
<th>Help Galp Energia’s customers to optimise their energy consumption by promoting energy efficiency and sustainability in the industry, buildings and transportations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTION</td>
<td>STATUS</td>
<td>Galp Soluções de energia (GSE) has a variety of energy efficiency services and develops programmes for the promotion of energy efficiency in clients. • A first contract for energetic performance evaluation was signed with the biggest five star hotel (518 rooms) in Portugal (investment paid with energy savings). • Development and implementation of energetic efficiency concepts tailored to fit the client needs, such as energy efficient campus, energy efficient hotel, energy efficient fleet and energy efficient parking.</td>
</tr>
</tbody>
</table>

### Programme Galp 20-20-20

<table>
<thead>
<tr>
<th>2.8 Programme Galp 20-20-20</th>
<th>STRATEGY</th>
<th>Enable university grants to practice and get training in energy efficiency processes in buildings and industrial facilities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTION</td>
<td>STATUS</td>
<td>Galp 20-20-20 programme is the biggest scholarship programme in the country. • Since the programme started in 2007, 87 private and public entities have already participated in the initiative, covering all business sectors (in 2011 there were 29 entities involved).</td>
</tr>
</tbody>
</table>

### Programme Smart Galp

<table>
<thead>
<tr>
<th>2.9 Programme Smart Galp</th>
<th>STRATEGY</th>
<th>Develop a Smart Galp programme, supposed to develop an energy management system (electricity, natural gas and road fuel) in Galp Energia’s clients. The system is based on a smart metering and communication/information technologies. • It was developed an Internet website and equipment at houses and cars of pilot-clients were installed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTION</td>
<td>STATUS</td>
<td>Next pages and performance table</td>
</tr>
</tbody>
</table>

### Axis 3 – Actively participate in the development of sustainable mobile solutions

<table>
<thead>
<tr>
<th>3.1 Electrical mobility</th>
<th>STRATEGY</th>
<th>Participation in the national project for electric mobility – Mob-e – ensuring the installation of fast charging stations for electric vehicles.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTION</td>
<td>STATUS</td>
<td>Galp Energy obtained the necessary market licences and is now able to operate within the Portuguese mobile electricity market and in electric charging points. • Installation of fast electric charging points (50 kW power charging within 30 minutes) in A1 expressway, which connects the two Portuguese major cities: Lisbon and Oporto.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.2 Natural gas for vehicles</th>
<th>STRATEGY</th>
<th>Increase the use of natural gas in cars.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTION</td>
<td>STATUS</td>
<td>Natural gas is the fuel that emits less CO₂, which is particularly important to fleets of public transport of passengers and goods.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.3 Road tests of new automobile technologies</th>
<th>STRATEGY</th>
<th>Promote partnerships with the automobile industry to test vehicles with new propulsion technologies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTION</td>
<td>STATUS</td>
<td>Conclusion of the study regarding new automobile technology, in partnership with Toyota and a Portuguese university. • The three hybrid vehicles running in all-electric mode completed 50% of 37,000 km/year. • The average rate of fuel consumption was 3.0 and 3.5 l/100 km, 32% less than a diesel car.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.4 Strategic studies on mobility</th>
<th>STRATEGY</th>
<th>Participation in strategic studies on the prospects of several new propulsion technologies and respective infrastructure of supply.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTION</td>
<td>STATUS</td>
<td>Participation in a strategic study on energetic mobility in the national market, with active cooperation from a Portuguese university (IST). • This study combined the European legislation on automobile efficiency with international and national studies (IEA, CONCAWE, IST...) on development expectancy of vehicle consumption.</td>
</tr>
</tbody>
</table>
Axis 4 – Develop projects and activities that foster the combat against climate change, in association with the SCT

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Details in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Capture and carbon storage</td>
<td>Participate in COMET project – Study of CCS possibilities in southern Europe and Morocco.</td>
</tr>
<tr>
<td>Execution Status</td>
<td>Pursuit of the European project COMET.</td>
</tr>
<tr>
<td>4.2 Intelligent management of power grids</td>
<td>Participation in REIVE project – Development of a technological platform for intelligent management of power grids.</td>
</tr>
<tr>
<td>Execution Status</td>
<td>Continued participation in the REIVE (RAI) project, guided by Oporto’s INEGI.</td>
</tr>
<tr>
<td>4.3 New technological infrastructure</td>
<td>Take part in the creation and funding of Institute de Energias Offshore (institute of offshore energy), within WaveC.</td>
</tr>
<tr>
<td>Execution Status</td>
<td>Exploration of wave energy is now one of the main goals in Portugal.</td>
</tr>
<tr>
<td></td>
<td>• The guidelines of the Institute of Offshore Energy, titled MainEnergy – Sea Energy Centre have been approved.</td>
</tr>
<tr>
<td></td>
<td>• Participation in the creation of a funding unit with Enades/REN, which will invest in sea infrastructures in S. Pedro de Moel.</td>
</tr>
<tr>
<td>4.4 PhD training</td>
<td>Promote PhD training in energy and environmental energy in refining, within the AIPQR.</td>
</tr>
<tr>
<td>Execution Status</td>
<td>• Advanced training in corporate environment, mostly in refining, is fundamental to update technologies and improve the competitiveness of the Company.</td>
</tr>
<tr>
<td></td>
<td>• Besides the eight research and development projects that started last year, still under way, there is now:</td>
</tr>
<tr>
<td></td>
<td>• Improving acid gas treatment in Sines refinery.</td>
</tr>
<tr>
<td></td>
<td>• Development of inferential predictors and means of advanced control of process.</td>
</tr>
</tbody>
</table>

In 2011, Galp Energia approved the climate change action plan, after a careful analysis of the vulnerability of the buildings (see chapter 7.3)

**Performance tables**

**Cogenerations plants**

<table>
<thead>
<tr>
<th></th>
<th>Total 2010</th>
<th>Carrisó</th>
<th>Powercer</th>
<th>Sinecogeração</th>
<th>Total 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (MW)</td>
<td>121.2</td>
<td>32.0</td>
<td>7.2</td>
<td>82.0</td>
<td>121.2</td>
</tr>
<tr>
<td>Natural gas consumption (Mm³)</td>
<td>326.2</td>
<td>63.3</td>
<td>17.1</td>
<td>225.7</td>
<td>306.1</td>
</tr>
<tr>
<td>Electrical production (GWh)</td>
<td>897.0</td>
<td>248.2</td>
<td>41.2</td>
<td>608.1</td>
<td>897.5</td>
</tr>
<tr>
<td>Thermal production (GWh)</td>
<td>2,014</td>
<td>302.5</td>
<td>88.2</td>
<td>1,526.0</td>
<td>1,916.7</td>
</tr>
<tr>
<td>CO₂ emissions (ton)</td>
<td>695,488</td>
<td>135,670</td>
<td>36,810</td>
<td>498,156</td>
<td>670,836</td>
</tr>
</tbody>
</table>

**Natural gas energy efficiency**

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodic inspections to gas facilities (IRG)</td>
<td>22</td>
<td>111</td>
</tr>
<tr>
<td>Actions to spread knowledge about safety and operation of the IRG</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Energetic audits to industrial clients of natural gas</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Clients’ energy efficiency training</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Thermographic analysis to industrial clients</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>Consumption monitoring and energy management system</td>
<td>-</td>
<td>4</td>
</tr>
</tbody>
</table>

**Power generation of renewable origin**

<table>
<thead>
<tr>
<th></th>
<th>Production (MWh/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>Wind farm in Vale Grande</td>
<td>12</td>
</tr>
<tr>
<td>Parkalgar photovoltaic setup</td>
<td>0.1</td>
</tr>
<tr>
<td>Ecopostos photovoltaic setup</td>
<td>0.043</td>
</tr>
<tr>
<td>Total</td>
<td>12.143</td>
</tr>
</tbody>
</table>

(*) Since September 2011.
6.1 Refining

The upgrade project for the Matosinhos and Sines refineries, which cost 1.4 million euros, is the largest industrial investment ever in Portugal.

- This project is part of the European strategy for refining and reinforcement of the conversion capacity of the refining system.

The two refineries will function in an integrated way, with product exchanges between the two plants.

The project follows the trend in the European and global fuel market and provides for the increase of 2.5 Mt in the annual production capacity of diesel and the annual decrease of 0.8 Mt in fuel oil.

- This will raise flexibility in the acquisition of crude oil and give access to more diversified and competitive markets.

Project contribution to sustainability

- Creation of close to 4,500 jobs during the peak of construction (where local workers were the overwhelming majority).
- More than 320 million euros in local orders for equipment supply and construction.
- Support to regional development by the creation of jobs with a high technological content and the promotion of industrial and commercial activities in regions that are facing economic difficulties (northern Portugal and Alentejo).
- From 2013 onwards this project is expected to contribute, under normal market conditions, to an annual improvement of 450 million euros in the country’s trade balance.
- Self-sufficiency in diesel production and creation of exporting capacity beyond the substitution of imports from outside the European Union.
- Environmental protection and energy efficiency.

A significant part of this investment is intended for environmental improvements, such as the optimisation and reduction of polluting emissions and improved energy efficiency in both refineries.

More information at:
Matosinhos refinery

- Investment completed with all units working at full capacity, namely vacuum distillation, visco-reduction, sour waters stripper and sulphur recuperation units.
- Increased storage capacity of intermediate products and power grid remodelling.

Sines refinery

- Installation completed of one of the largest hydrocrackers of total conversion by the end of 2011, with final checks and tests under progress.
- Final construction stage of new hydrocracker support units, namely a steam reformer for producing hydrogen, a deisobutanizer and the unit for sulphur recuperation.
- Significant increase in capacity to store diesel and intermediate products, installation of a new power grid and all utilities’ sensors.
- The new units will begin production in the second quarter of 2012.
- Cogeneration with gas turbine (Sinecogeração), already in operation.
- Completion of the connection to the oil terminal.

Energy and GHG emissions in Galp Energia’s refineries

- Although the refining systems’ upgrade is yet to be completed, the targets set for the Solomon Associates’ EII will remain unchanged until 2012 (see page 65 of the 2010 sustainability report).
- In 2011, the EII had lower readings when compared to 2008, namely 5.8% in Matosinhos and 8.2% in Sines, which was reflected in energy consumption and GHG emissions.
- These were 843 ktCO₂ in Matosinhos and 1,769 ktCO₂ in Sines, or 668 ktCO₂ less than the emission licences awarded under the terms of the European Emissions Trading Scheme (EU ETS); this was a decrease in comparison with 2010, mainly due to lower consumption.
- Although an overall increase in emissions is expected, under favourable economic circumstances, a decrease of 18% is expected for specific emissions expressed in kgCO₂/CO₂ weighted tonne (CWT) – Solomon’s indicator with the European Association for Environment, Health and Safety in Refining and Distribution (CONCAWE) which compares different refineries in accordance with European Commission decision 2011/278/CE of 27 April – since its base years of 2007/2008, from 47.82 kgCO₂/CWT to 39.33 kgCO₂/CWT in 2013. In 2011 this index registered 44.8 kgCO₂/CWT, contrasting with 45.17 kgCO₂/CWT in 2010, which clearly indicates a performance evolution in both refineries.

More information at:
6.2 Renewable energy and clean fuel

Production of renewable electrical energy

Besides Parkalgar photovoltaic parks (100 kW), EMEL’s parking lot (20 kW) and 12 microgeneration ecopostos (see performance table: electricity produced by renewable sources), Galp Energia invests in wind energy through Ventrinvest consortium, where it holds a 49% stake, in a set of wind farms that will reach 400 MW.

- Photovoltaic micro-plants: construction scheduled for early 2012 of two facilities for Galp Energia industrial customers, in a total of 500 kW.

Clean fuels

Galp Energia currently adds increasing percentages of biodiesel and:

- Galp Energia’s strategy for biofuels includes, from the outset, the presence of biofuels along the value chain to ensure the social, environmental and economic sustainability of biofuel produced and marketed;

- this strategy also comprises the production of vegetable oils in Mozambique and Brazil, which plantation is already underway.

Biofuel activities

In Mozambique, culture areas of jatropha curcas linn already installed by the two companies, in Búzi (Sofala province) and Chimoio (Manica province) make an approximate total of 700 ha.

- These areas are sites for experimentation, improvement of production technologies, training of working teams and production of seeds.

In addition to the Centre of Staff Training and Seed Production in Chimoio, with 150 ha of jatropha curcas linn plantations, MoçamGalp, a local company where Galp Energia participates, initiated activities in the province of Zambézia, in the region of Mocuba in Lúgela district.

- Ongoing construction of infrastructures and ground preparation to deploy the physic nut on a new area for which a right to use and explore land (DUAT) was granted to set up an area of at least 5,000 ha.

- Preparation works of 500 ha of ground were developed along the year. The 2011/12 campaign started with the installation of a 350 ha area by fixed sowing place and plantation.

By the end of 2011, Belém Bioenergia Brasil was developing the second plantation stage in an approximate total of 10,300 ha, which sums up with 3,250 ha planted in the beginning of the year. In all 13,550 ha of palm were planted in the state of Pará.

- After completing this stage, Galp Energia hits the project’s final goal to reach 48,000 ha over the next three years. The first fruit harvest for biodiesel production is scheduled for 2013.
Activities developed in Ventinveste’s wind project
The year 2011 was an important milestone in the development of Ventinveste’s project, since its first wind farm in Vale Grande started to produce, with a total installed capacity of 12 MW.

- The construction took place between October 2010 and September 2011, when it came on stream.
- The wind farm had a total cost of 14.85 million euros and the works proceeded without any record of safety accidents.
- The annual production of Vale Grande’s wind farm represents about 86% of the annual electricity consumption of Arganil’s county, where it is located.

Conclusion of the licensing process of wind farm Picos Vale do Chão and electrical line with the emission of construction licences. Located in mountain chain Serra da Lousã, in the counties of Castanheira de Pera and Góis, this wind farm has a capacity of 22 MW.

Vale Grande’s wind farm

| Estimated annual production (GWh/year) | 36.00 |
| Sell tariff (€/MWh) | 70.95 |
| National average sell tariff (€/MWh) | 90.12 |
| Avoided emissions (tCO₂/year) | 22,000 |
| Avoided imports of natural gas and coal (M€/year) | 1.50 |
| Investment (M€) | 14.85 |

6.3 Galp Energia’s carbon footprint

By the end of 2011, Galp Energia started to prepare the methodology to determine the Group’s carbon footprint.

At a first stage, the following elements were defined i) scope of the footprint, ii) project goals, iii) methodological and calculation benchmark, iv) appearance and distribution of the footprint.

It is also worth mentioning:

- all the activities developed by Galp Energia’s Group were implemented by the companies where Galp Energia holds more than 50% or where it operates, including transportation, commodities, intermediate and final products;
- report of emissions from E&P assets, even if Galp Energia does not operate them, due to the increasing importance of this activity on the Company’s results;
- consideration of the main GHG: CO₂ and N₂O;
- separate presentation of emissions originated by the end-use of commercialized products, in order to diminish the impact of the Company’s carbon footprint;
- presentation of carbon footprint concerning all oil products, natural gas and electricity commercialized, divided by the Galp Energia’s main activities;
- calculation of the carbon footprint based on a system to monitor and report corporate performance regarding environment, quality and safety (EQS) which gathers basic information on Galp Energia’s activities (see chapter 7).

In a second stage, the carbon footprint for 2011 was calculated based on available information on this year, in a first attempt to portray reality. The results are presented below.

6.4 Galp Soluções de Energia at the service of energy efficiency

GSE (Galp Soluções de Energia) was created to help the Company’s customers optimise their energy consumption, according to technological developments and European Union regulation.

The GSE performance in the market reaches already a diversified set of clients, specifically universities, hotels, airports, industrial facilities, shopping centres and companies from the food distribution sector.

GSE develops and implements energy efficiency concepts adapted to activities in the customer segment.

• This solution comprises the development of innovative energy efficiency solutions for fleets that took part in pilot actions and which enable an effective management of the fleet, including the improvement of defensive driving and ecological indicators.

These emissions accounted for 6.1% of emissions issued by all products commercialized by Galp Energia on its end-use, which represented 61,222,577 tCO₂e.

The calculation model will be completely ready to use in 2012, based on a more complete and systematic collection of EQS indicators on all the Company’s activities.

The calculation model will be completely ready to use in 2012, based on a more complete and systematic collection of EQS indicators on all the Company’s activities.

---

**Emissions in 2011**

<table>
<thead>
<tr>
<th>Unit: tCO₂e</th>
<th>Scope 1</th>
<th>Scope 2</th>
<th>Scope 3</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>E&amp;P¹</td>
<td>170,677</td>
<td>0</td>
<td>0</td>
<td>170,677</td>
<td>4.57%</td>
</tr>
<tr>
<td>Refining²</td>
<td>2,611,916</td>
<td>171,790</td>
<td>0</td>
<td>2,783,706</td>
<td>74.61%</td>
</tr>
<tr>
<td>Cogenerations³</td>
<td>172,680</td>
<td>35</td>
<td>0</td>
<td>172,715</td>
<td>4.63%</td>
</tr>
<tr>
<td>Supply and Logistics</td>
<td>1,047</td>
<td>2,784</td>
<td>298,422</td>
<td>302,254</td>
<td>8.10%</td>
</tr>
<tr>
<td>Distribution and retail</td>
<td>228,915</td>
<td>16,450</td>
<td>37,596</td>
<td>282,961</td>
<td>7.58%</td>
</tr>
<tr>
<td>Corporate activities</td>
<td>14,258</td>
<td>1,286</td>
<td>3,211</td>
<td>18,755</td>
<td>0.50%</td>
</tr>
<tr>
<td>Others⁴</td>
<td>64</td>
<td>124</td>
<td>0</td>
<td>188</td>
<td>0.01%</td>
</tr>
<tr>
<td>Total</td>
<td>3,199,557</td>
<td>192,470</td>
<td>339,229</td>
<td>3,731,255</td>
<td>100%</td>
</tr>
</tbody>
</table>

¹ work interest Galp Energia; ² includes lubricant plant in Matosinhos, aromatics plant and Sinecogeração plant; ³ includes Carriço and Powercer cogenerations; ⁴ includes lubricant plant in Gavá (ES).

**Limits of the carbon footprint 2011**

<table>
<thead>
<tr>
<th></th>
<th>Well-to-tank</th>
<th>Tank-to-wheel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of crude</td>
<td>3,731 tCO₂e</td>
<td></td>
</tr>
<tr>
<td>Refining</td>
<td></td>
<td>61,223 tCO₂e</td>
</tr>
<tr>
<td>Marketing &amp; Retail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use - Combustion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**6.4 Galp Soluções de Energia at the service of energy efficiency**

Energy efficiency concepts developed and implemented

Energetically efficient hotel

Galp Energia signed a contract of energy efficiency with Corinthia hotel, the largest five-star hotel in Portugal (518 rooms and 17 conference rooms).

• This ground-breaking agreement allows the investment to be paid through energy savings.

• The measures of energy efficiency include the reconversion of climate systems, recovery of thermal energy for water heating, replacement of lightning systems, installation of a solar system and a cogeneration system, and a system to manage the energetic performance, among others.

Galp Energia has conducted energy audits in hotels located in Portugal’s mainland and islands, which represents nearly 1,000 bedrooms.
Sustainable campus network
Implementation of energy efficiency projects in cooperation with the University of Aveiro (UA), University of Beira Interior (UBI) and Instituto Superior Técnico (IST), in a total floor area of 300,000 m² spread by 100 buildings in the total set of universities.

Energetically efficient fleet
Pilot project of installation of a data collection device in Galp Energia’s client Brisa, concessionaire of highways in Portugal.

- Access to a portal that allows you to monitor a set of indicators related with driving, namely fuel consumption, CO₂ emissions and aggressive driving behaviour.
- The changes on behaviour while driving reduced consumption by 11%.
- The implementation of this solution will enable our clients to manage the fleet more effectively, reduce consumptions and improve defensive driving and ecological indicators.

Energetically efficient parking
Energy efficiency project at EIME’s parking lot at Largo do Chão do Loureiro, in Lisbon’s historical centre. The measures taken comprised the installation of a lighting management system, use of more efficient lighting, a system of ventilation management, creation of a manual of good practices and installation of a solar photovoltaic central on the roof, with a power capacity of 20 kW, in 230 m² of fixed panels.

Energy efficiency training for clients
Implementation of a specific training program on energy efficiency for ANA – Aeroportos de Portugal applied to several airports and which included approximately 1,000 employees.

Energy efficiency at Galp Energia
Energy audit to refinery facilities and lubricant plant in Matosinhos refinery, with full replacement of the lighting system in this facility.

More information at:
http://www.galpenergia.com/PT/ProdutosServicos/Servicos/Solucoesdeenergia/Paginas/Solucoesdeenergia.aspx
07 • MANAGEMENT OF ENVIRONMENT, HEALTH, SAFETY AND QUALITY

7.1 PROJECT FOR MONITORING AND REPORTING EQS PERFORMANCE – INDICATORS
7.2 G+ SYSTEM
7.3 GALP ENERGIA’S ACTION PLAN FOR ADAPTING TO CLIMATE CHANGE
7.4 APETRO – INDUSTRY GUIDES FOR ENVIRONMENTAL RESPONSIBILITY
Galp Energia establishes and ensures the implementation of policies, strategies, goals and methodologies of environment, health and safety (EHS), and quality, coordinating the implement of the best known practices in these fields in all areas of the Company. The main goal is to eliminate personal, material or environmental accidents and pursue the highest quality standards.

In 2011, the Company consolidated its corporate structure based on functional inter-relationships so as to align business units with the Company’s strategic priorities in EHS and quality management. With this model, Galp Energia aims to ensure that:

- all legal and other requirements applicable to the activities’ locations are followed, namely those arising from internal requirements, certifications or existing management systems.
- the EHS and quality management is shared, which means it must actively involve all employees, the community and other stakeholders.

Activities developed

EHS performance. Galp Energia’s performance in EHS become internationally recognized when the Company was awarded with a mention of honour in the 10th edition of the DuPont Safety Awards, in the category of “Performance Improvement”. This honour was worth a third place among 71 contesting companies from 20 different countries.

Development of G+ System, which is an update of Galp Energia’s EHS management system. With this development the Company aims to achieve a zero accidents target and a full implementation of G+ System in the E&P area (see following pages).

Monitoring and performance reporting in EQS. Setting of tools for monitoring and reporting the EQS performance.

Definition an analysis method to assess matters that go from vulnerabilities in Galp Energia’s facilities to climate change, following ENAAC’s (national strategy on climate change) works, coordinated by the general direction for energy and geology (DGEG) and the general direction of economic activities (DGAE) (see following pages).

Definition of action plan for climate change adaptation. In light of the vulnerabilities quoted above, a plan was developed to implement in Galp Energia’s premises (see following pages).

Publishing of sectorial guides on environmental responsibility, namely regarding storage activities, distribution and commercialization of oil products, made within a working group managed by trade association APETRO. These guides are already under implementation.

Creation of Q2C programme that guarantees the quality of white fuels through which the Company intends to define requirements and activities that will ensure the compliance of these fuels along the value chain.

Certifications. All certifications and accreditations were maintained, including the ones regarding Galp Energia’s laboratories, which remain one of the pillars in the quality assurance system. Again, two certificates were obtained:

- Galp Açores quality system – GPL;
- EQS system of Medigás, Paxgás and Dianagás.

The EHS and quality management system in the centre of the life cycle management of Galp Energia’s assets
Programme of internal audits of EQS. During 2011, 54 audits were carried out altogether, involving 80 internal auditors with 115 participations in all.

**Strengthening of EHS culture.** Galp Energia performed several preventive observations of environment and safety (OPAS), which consist in the observation of employees or service providers during activities, followed by a positive approach to commend proper behaviour or correct unsafe practices. This approach encourages employees to comply with EHS requirements by getting their commitment.

**EHS training and awareness.** The Company promoted several sessions of training and awareness, and coaching in the areas of EHS, providing employees with knowledge and techniques required to implement several areas of the EHS management system (see performance table in chapter 10).

**International Oil area**
- Workshops on communication, incident investigation and preparation of emergency response in the International Oil business unit, destined to senior managers, gas station managers and those responsible for operations and instalments of all participated companies. These workshops also included training in methodologies of root cause analysis (RCA), according to general procedures.
- Creation of a monthly newsletter in Sonangalp about accident prevention and safe use of the highway whose target audience is the company’s employees and its families, customers and suppliers.

**Companies area**
- In 2011, 145 gas stations were assessed on environmental risk. In this sense, Galp Energia implemented the new risk assessment methodology approved by the APA, which arises from APETRO’s project – sectorial guidelines on environmental responsibility (see following pages). Potential receptors and migration pathways were considered in a radius of 500 m from the gas station. The Company also identified corrective or preventive measures, therefore reducing the risk associated to more vulnerable environmental receptors. This study addresses the issues of abstraction of underground water or surface water bodies, area sensitivity, underground facilities, flora and fauna of protected areas or with high ecological value.

**Natural gas**
- Implementation of monitoring and measuring procedures of the environmental performance of service providers in the construction and maintenance of distribution networks.
- Review of risk assessment in distribution companies.
- Standardization of EHS criteria to include in project specifications for service providers.
- Elimination of the last section made of ductile iron on Lisbon’s medium pressure network. Currently, the medium pressure network (1.5 bar) is all made of steel and polyethylene.
- Participation of companies in the internal group of damage by third parties, definition and implementation of preventive actions.
- Increased number of physician visits to the premises at work, leading to the implementation of some improvements.
- Training in Ergonomics and EHS’s policy at Lusitaniagás.
- Preparation and distribution of the “List of contents featured in first aid kit” and the “Basic life support guide” at Lisboagás, as well as safety instructions for the use of products.

(See performance table on the following page)

**Galp Spain**
- Development of PREVENGO and 3S sectorial programs, covering, respectively, the implement of corporate guidelines in service stations and offices’ operations.
- Implementation of a project for the issuance of safety passports for service providers that perform their work on the Company’s premises. Galp Spain extended the project scope to transportation workers, with training sessions on safe work practices to more than 200 workers.
In all, 5,000 external workers were formed, from more than 800 companies.

**Biofuels**

By the end of 2011, Galp Energia launched a challenge to the non-governmental organization World Wildlife Fund (WWF) to define requirements for a sustainable forest management in the intervention area of Mobra/Lugela in Mozambique (see chapter 11.2).

More information at:

---

**Performance table**

<table>
<thead>
<tr>
<th>EHS culture</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performed OPAS (hours)</td>
<td>12,630</td>
<td>6,908</td>
</tr>
<tr>
<td>System audits</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>EHS alerts</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Quick wins disclosed</td>
<td>422</td>
<td>162</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EHS organization</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Commissions on EHS</td>
<td>-</td>
</tr>
<tr>
<td>Emergency response</td>
<td>-</td>
</tr>
<tr>
<td>Performed simulations</td>
<td>246</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gas facilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodic inspections</td>
<td>22</td>
</tr>
<tr>
<td>Actions of disclosure</td>
<td>14</td>
</tr>
</tbody>
</table>

---

**7.1 Project for monitoring and reporting EQS performance – indicators**

To address stakeholders’ interests and support its decision, Galp Energia started in 2010, and developed in 2011, a project aimed at monitoring and performance reporting in EQS, since these matters are seen as inseparable from the Company’s sustainability. Through this project, Galp Energia defined the principles on monitoring and reporting EQS and established a set of tools to guide the Company’s practices.

**Activities developed**

**Publishing of a corporate manual on monitoring and performance reporting in EQS.** This document contains the principles that should guide monitoring and EQS performance reporting. It also establishes good practices and guidelines to include these matters on the Company’s management activities.

**Publishing of the regulatory guide on performance indicators in EQS.** This document provides a set of logics and practices on monitoring and reporting in EQS performance, introducing a set of tools and documents. The following are noteworthy:

- list of topics per group of EQS indicators,
- list of 891 EQS indicators applicable to management units/companies/facilities,
- corporate records of indicators,
- reporting tools and balanced scorecards (BSC) of EQS reference.
7.2 G+ System

Galp Energia finds it essential to ensure the environment, health and safety of its employees, customers and community in general. Therefore, the Company identified the need to develop and implement an EHS management system, which guarantees a continuous performance improvement. This management system was named G+ System.

The **G+ System** allows to interpret the requirements of vision, mission and EHS policy of Galp Energia in daily activities, establishing through internal rules the minimum EHS requirements that should be followed in the several unities of the Company.

The following processes were identified and regulated:

- management of training, information and communication;
- management of health facilities and significant changes to its activity;
- risk management and process safety;
- management of emergency response and incident investigation.

The Company performs period audits to the system’s implementation in the several units and companies. Along with the reporting and monitoring system, these audits will enable a review of G+ System, making it increasingly strong and consequently reach the zero accidents target.

**Identification of EHS risks inherent to Galp Energia’s activities and exploration operations.**

The implementation of G+ System is possible namely in the onshore activities in Brazil, as well as other measures to control, minimize or eliminate risks, contributing to a more sustainable development of the business.

**Activities developed**

**Publishing of G+ System manual,** where the Company defined minimum requirements that all units and/or companies must ensure to meet Galp Energia’s demands for each element of G+ System.

**EHS integrated framework.** Publishing of the EHS integrated structure in the internal rules, which defines its operational management. This model is based on Galp Energia’s EHS policy, in the management elements of the G+ System and also on current laws.

**Communication campaign “O Piska”.** Piska is the friendly mascot of G+ System and it will be used on internal communication. Its application began in 2011 with a campaign that targeted internal structural and operational aspects of the G+ System.

**Evaluation process of G+ System.** During this process the guidelines to evaluate the G+ System were updated as well as its evaluation matrix to make them more consistent with the manual published this year.

- Its implement, testing and calibration will be done in 2012.

**More information at**

[http://www.galpenergia.com/PT/Sustentabilidade/responsabilidade-corporativa/seguranca-ambiente-qualidade/Paginas/sistema-g.aspx](http://www.galpenergia.com/PT/Sustentabilidade/responsabilidade-corporativa/seguranca-ambiente-qualidade/Paginas/sistema-g.aspx)
### 7.3 Galp Energia’s action plan for adapting to climate change

This adjustment plan considered Galp Energia’s infrastructures which due to location, vulnerability and value (in terms of Company’s assets) are considered as priorities.

The Company intends to establish a baseline for future actions, through the identification and characterization of possible vulnerability situations arising from potential and/or probable impacts due to the effect of climate change.

#### Methodology for the identification of risk scenarios and/or operational implications, and definition of adjustment plans resulting from climate change

1. **Identification of the problem and goals**

2. **Decision criteria**

3. **Definition of risk scenarios**

4. **Identification of adjustment options**

5. **Appraisal of adjustment options**

6. **Decision**

7. **Implementation**

8. **Monitoring**

#### Impact on the functionality of the infrastructure

<table>
<thead>
<tr>
<th>Geographical impact</th>
<th>Local</th>
<th>Regional</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>No loss of functionality</td>
<td>Reduced</td>
<td>Reduced</td>
<td>Reduced</td>
</tr>
<tr>
<td>Discontinuation of the short-term or low importance service</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Severe impact or interruption of service; physical failure of infrastructure</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

#### Matrix of vulnerabilities in the main infrastructures operated by Galp Energia

<table>
<thead>
<tr>
<th>Main infrastructures</th>
<th>2020</th>
<th>2030</th>
<th>2060</th>
<th>2080</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sines and Matosinhos refineries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil terminal of Sines and Leixões, and Mitrena’s storage plant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLC pipeline – Sines refinery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main infrastructures</th>
<th>2020</th>
<th>2030</th>
<th>2060</th>
<th>2080</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sines and Matosinhos refineries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil terminal of Sines and Leixões, and Mitrena’s storage plant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linha: CLC pipeline – Sines refinery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The resolution no. 24/2010 of the Council of Ministers of April 1, approves an instrument to identify a set of integrated adjustment measures to climate change, that should be implemented through an action plan. In this sense, the strategy outlined (ENAAC) predicts the involvement of a wide range of sectors, potential synergies, all to prepare Portugal to the adjustment challenges.

In December 2010, the meetings of Energia Indústria sector group started, coordinated by DGEG/DGAE.

Galp Energia is represented on the subgroup Energia.

The main motivations to develop these works are:

- to align the strategy with the global concern regarding the impacts of climate change, promoting the development of adjustment plans which include measures and control actions, as well as minimization of risk scenarios;

- the need to understand the consequences of climate change on infrastructures from several sectors, including the energy sector.
Activities developed

Participation and monitoring the work developed on Energia subgroup, following the national and European developments on this matter.

Internal development of a method to analyse the vulnerabilities to climate change in Galp Energia’s facilities.

Analysis and definition of plans of adjustment to climate change to implement in the organization.

In 2012, steps already established by the sectorial group will proceed, as well as the implementation of a plan of adjustment to climate change and preparation of measures to adopt in a short/medium term.


7.4 APETRO – Industry guides for environmental responsibility

Galp Energia participates actively in the working group created by APETRO after the publication of Decree-Law 147/2008 of July 29, which established new requirements on environmental sustainability.

The main goal of this project is to develop a basis method, applicable to the oil sector, necessary to fulfil the requirements of Decree-Law 147/2008, through sectorial guides, which main goals will be described below.

- Describe and establish a method to analyse and assess the potential environmental risk.
- Clarify the concepts and terms on risk assessment.
- Provide tools and techniques specific for analysing environmental risk, which enable an evaluation of economic damage.

- Establish the basis for an effective risk management.
- To ease decision-making within companies, public administrations and other organizations.

Activities developed

Legal and methodological benchmark. The main goal was to identify the most significant features of the legislation that exceeds the Directive 2004/35/CE for the internal legal system of each member state, and to assess, if possible, the development of this legislation through methodological guides or other implementation tools.

Development of sector guides on storage, distribution and marketing of oil products activities. Galp Energy highlights the following chapters as the main contents in these guides.

- Guidelines for accident analysis.
- Method of environmental risk assessment destined to each activity.

Promotion of seminars for dissemination to present and disclose the sectorial guides.
08 • ENVIRONMENTAL PERFORMANCE

8.1 RISKS RELATED TO WATER USE
The efficient use and the protection of natural resources by Galp Energia is a commitment to both the environment and future generations, and an imperative for the Company to assert its global competitiveness.

**Operational data**

### Water and effluent

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water use (10⁶ m³)</strong></td>
<td>9,695</td>
<td>11,894</td>
<td>23%</td>
</tr>
<tr>
<td>E&amp;P – Water injection</td>
<td>nd</td>
<td>2,253</td>
<td></td>
</tr>
<tr>
<td>Refining</td>
<td>7,821</td>
<td>7,585</td>
<td>(3%)</td>
</tr>
<tr>
<td>Lubricants – Matosinhos plant</td>
<td>6</td>
<td>5</td>
<td>(12%)</td>
</tr>
<tr>
<td>Lubricants – Gávã plant</td>
<td>2.09</td>
<td>1.46</td>
<td>(30%)</td>
</tr>
<tr>
<td>Cogenerations</td>
<td>nd</td>
<td>151.82</td>
<td></td>
</tr>
<tr>
<td><strong>Storage and logistics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid fuel park – Portugal</td>
<td>11.4</td>
<td>14.3</td>
<td>26%</td>
</tr>
<tr>
<td>Liquid fuel park – Spain</td>
<td>4.6</td>
<td>5.78</td>
<td>26%</td>
</tr>
<tr>
<td>GPL gas parks</td>
<td>0.72</td>
<td>0.63</td>
<td>(13%)</td>
</tr>
<tr>
<td>Terminals</td>
<td>157</td>
<td>166</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Distribution/retail</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural gas distributors</td>
<td>2.5</td>
<td>7.6</td>
<td>204%</td>
</tr>
<tr>
<td>Service stations – Portugal</td>
<td>1,275</td>
<td>1,270</td>
<td>(0%)</td>
</tr>
<tr>
<td>Service stations – Spain</td>
<td>395</td>
<td>414</td>
<td>5%</td>
</tr>
<tr>
<td>Aviation</td>
<td>2.1</td>
<td>1.8</td>
<td>(16%)</td>
</tr>
<tr>
<td>Corporate activities – Buildings</td>
<td>18.22</td>
<td>17.58</td>
<td>(4%)</td>
</tr>
<tr>
<td><strong>Water reuse (10⁶ m³)</strong></td>
<td>951</td>
<td>891</td>
<td>(6%)</td>
</tr>
<tr>
<td><strong>Effluent produced (10³ m³)</strong></td>
<td>4,490</td>
<td>4,875</td>
<td>9%</td>
</tr>
<tr>
<td>E&amp;P – Wastewater dumped to the sea</td>
<td>nd</td>
<td>826.8</td>
<td></td>
</tr>
<tr>
<td>Refining</td>
<td>4,449</td>
<td>4,010</td>
<td>(10%)</td>
</tr>
<tr>
<td><strong>Energy production and consumption</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural gas consumption (GJ)</td>
<td>13,700,170</td>
<td>15,081,284</td>
<td>10%</td>
</tr>
<tr>
<td>IDEM (10³ t)</td>
<td>304.64</td>
<td>335.35</td>
<td>10%</td>
</tr>
<tr>
<td>Corporate activities – buildings – Portugal</td>
<td>0.023</td>
<td>0.030</td>
<td>28%</td>
</tr>
<tr>
<td><strong>Consumption of residual process fuel (GJ)</strong></td>
<td>10,130,400</td>
<td>7,919,400</td>
<td>(22%)</td>
</tr>
<tr>
<td><strong>Diesel consumption (GJ)</strong></td>
<td>32,150</td>
<td>72,172</td>
<td>124%</td>
</tr>
<tr>
<td>IDEM (10³ t)</td>
<td>0.74</td>
<td>1.67</td>
<td>124%</td>
</tr>
<tr>
<td>E&amp;P</td>
<td>0.41</td>
<td>1.3</td>
<td>221%</td>
</tr>
<tr>
<td>Lubricants – Gávã plant</td>
<td>0.04</td>
<td>0.02</td>
<td>(50%)</td>
</tr>
<tr>
<td><strong>Storage and logistics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid fuel park – Portugal</td>
<td>0.24</td>
<td>0.20</td>
<td>(15%)</td>
</tr>
<tr>
<td>GPL gas parks</td>
<td>nd</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>Terminals</td>
<td>0.05</td>
<td>0.05</td>
<td>0%</td>
</tr>
</tbody>
</table>
### Energy production and consumption (cont.)

<table>
<thead>
<tr>
<th>Category</th>
<th>2010</th>
<th>2011</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electricity consumption (GJ)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDEM (GWh)</td>
<td>2,338,823</td>
<td>2,334,053</td>
<td>0%</td>
</tr>
<tr>
<td>Refining</td>
<td>649.67</td>
<td>648.35</td>
<td>0%</td>
</tr>
<tr>
<td>Lubricants – Matosinhos plant</td>
<td>2.0</td>
<td>1.7</td>
<td>(17%)</td>
</tr>
<tr>
<td>Lubricants – Gavá plant</td>
<td>0.521</td>
<td>0.514</td>
<td>(17%)</td>
</tr>
<tr>
<td>Cogenerations</td>
<td>0.398</td>
<td>0.146</td>
<td>(63%)</td>
</tr>
<tr>
<td><strong>Storage and logistics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid fuel park – Portugal</td>
<td>1.59</td>
<td>1.28</td>
<td>(19%)</td>
</tr>
<tr>
<td>Liquid fuel park – Spain</td>
<td>0.93</td>
<td>1.44</td>
<td>54%</td>
</tr>
<tr>
<td>GPL gas parks</td>
<td>1.5</td>
<td>1.8</td>
<td>18%</td>
</tr>
<tr>
<td>Terminals*</td>
<td>4.24</td>
<td>6.51</td>
<td>54%</td>
</tr>
<tr>
<td><strong>Distribution/Retail</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural gas distributors</td>
<td>0.86</td>
<td>1.16</td>
<td>35%</td>
</tr>
<tr>
<td>Service stations – Portugal</td>
<td>32</td>
<td>26</td>
<td>19%</td>
</tr>
<tr>
<td>Service stations – Spain</td>
<td>36</td>
<td>38</td>
<td>5%</td>
</tr>
<tr>
<td>Aviation</td>
<td>1.06</td>
<td>1.55</td>
<td>46%</td>
</tr>
<tr>
<td><strong>Corporate activities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buildings – Portugal</td>
<td>4.36</td>
<td>4.31</td>
<td>(1%)</td>
</tr>
<tr>
<td>Buildings – Spain</td>
<td>nd</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td><strong>Electricity production (GWh)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refining</td>
<td>1,357</td>
<td>1,332</td>
<td>(2%)</td>
</tr>
<tr>
<td>Cogeneration*</td>
<td>1,121</td>
<td>1,032</td>
<td>(8%)</td>
</tr>
<tr>
<td>Distribution/Retail – Portugal Service Areas</td>
<td>0.064</td>
<td>0.064</td>
<td>0%</td>
</tr>
<tr>
<td>Parkalgar</td>
<td>na</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td>Ventinveste</td>
<td>na</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td><strong>Thermal production (GWh)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cogenerations</td>
<td>348</td>
<td>391</td>
<td>12%</td>
</tr>
</tbody>
</table>

### Production of Hydrogen

<table>
<thead>
<tr>
<th>Category</th>
<th>2010</th>
<th>2011</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydrogen production (t)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refining</td>
<td>17,550</td>
<td>14,260</td>
<td>(19%)</td>
</tr>
<tr>
<td><strong>Natural gas consumption (10^3 t)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refining</td>
<td>49.36</td>
<td>38.49</td>
<td>(22%)</td>
</tr>
</tbody>
</table>

### Emission

<table>
<thead>
<tr>
<th>Category</th>
<th>2010</th>
<th>2011</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CO₂ e emission (t)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E&amp;P²/³</td>
<td>3,178,829</td>
<td>3,731,255</td>
<td>17%</td>
</tr>
<tr>
<td>Refining²/³</td>
<td>199,603</td>
<td>170,677</td>
<td>(14%)</td>
</tr>
<tr>
<td>Gavá plant</td>
<td>2,832,143</td>
<td>2,783,706</td>
<td>(2%)</td>
</tr>
<tr>
<td>Cogenerations²</td>
<td>127.12</td>
<td>188.00</td>
<td>48%</td>
</tr>
<tr>
<td>Terminals²</td>
<td>146,477</td>
<td>172,715</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Storage and logistics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time charter</td>
<td>nd</td>
<td>9,136</td>
<td></td>
</tr>
<tr>
<td>Spot charter</td>
<td>nd</td>
<td>289,286</td>
<td></td>
</tr>
<tr>
<td>Liquid fuel park – Portugal</td>
<td>nd</td>
<td>984</td>
<td></td>
</tr>
<tr>
<td>Liquid fuel park – Spain</td>
<td>nd</td>
<td>347</td>
<td></td>
</tr>
<tr>
<td>GPL gas parks</td>
<td>nd</td>
<td>698</td>
<td></td>
</tr>
<tr>
<td>Terminals³</td>
<td>nd</td>
<td>1,802</td>
<td></td>
</tr>
<tr>
<td>Distribution/Retail</td>
<td>nd</td>
<td>229,216</td>
<td></td>
</tr>
<tr>
<td>Natural gas distributors</td>
<td>nd</td>
<td>6,806</td>
<td></td>
</tr>
<tr>
<td>Service stations – Portugal</td>
<td>nd</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Emission (cont.)

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service stations – Spain</td>
<td>nd</td>
<td>8,941</td>
<td></td>
</tr>
<tr>
<td>Aviation</td>
<td>nd</td>
<td>402</td>
<td></td>
</tr>
<tr>
<td>Products transport – Portugal</td>
<td>nd</td>
<td>24,458</td>
<td></td>
</tr>
<tr>
<td>Products transport – Spain</td>
<td>nd</td>
<td>13,138</td>
<td></td>
</tr>
<tr>
<td>Corporate activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buildings – Portugal</td>
<td>nd</td>
<td>1,201</td>
<td></td>
</tr>
<tr>
<td>Buildings – Spain</td>
<td>nd</td>
<td>167</td>
<td></td>
</tr>
<tr>
<td>Galp Energia fleet – Portugal</td>
<td>nd</td>
<td>13,069</td>
<td></td>
</tr>
<tr>
<td>Galp Energia fleet – Spain</td>
<td>nd</td>
<td>1,107</td>
<td></td>
</tr>
<tr>
<td>Air travel</td>
<td>1,479</td>
<td>3,178</td>
<td>115%</td>
</tr>
<tr>
<td>Train travel</td>
<td>nd</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td><strong>NOx emission (t)</strong></td>
<td>5,297</td>
<td>4,643</td>
<td>(12%)</td>
</tr>
<tr>
<td>Refineries</td>
<td>5,193</td>
<td>4,591</td>
<td>(12%)</td>
</tr>
<tr>
<td>Gavá plant</td>
<td>103.92</td>
<td>51.96</td>
<td>(50%)</td>
</tr>
<tr>
<td><strong>SO2 emission (t)</strong></td>
<td>7,632</td>
<td>6,392</td>
<td>(16%)</td>
</tr>
<tr>
<td>Refineries</td>
<td>7,629</td>
<td>6,390</td>
<td>(16%)</td>
</tr>
<tr>
<td>Gavá plant</td>
<td>3.46</td>
<td>1.73</td>
<td>(50%)</td>
</tr>
<tr>
<td><strong>Particulate emission (t)</strong></td>
<td>514</td>
<td>439</td>
<td>(15%)</td>
</tr>
</tbody>
</table>

## Residue production

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous wastes (t)</td>
<td>15,983</td>
<td>6,757</td>
<td>(58%)</td>
</tr>
<tr>
<td>Refineries</td>
<td>11,617</td>
<td>6,460</td>
<td>(6%)</td>
</tr>
<tr>
<td>Lubricants – Matosinhos plant</td>
<td>120</td>
<td>153</td>
<td>28%</td>
</tr>
<tr>
<td>Cogenations</td>
<td>nd</td>
<td>9.98</td>
<td></td>
</tr>
<tr>
<td>Storage and logistics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid fuel park – Portugal</td>
<td>408</td>
<td>96</td>
<td>(77%)</td>
</tr>
<tr>
<td>GPL gas parks</td>
<td>nd</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Terminals</td>
<td>3,836</td>
<td>11</td>
<td>(100%)</td>
</tr>
<tr>
<td>Non hazardous wastes (t)</td>
<td>5,203</td>
<td>4,505</td>
<td>(13%)</td>
</tr>
<tr>
<td>Refineries</td>
<td>4,573</td>
<td>4,313</td>
<td>9%</td>
</tr>
<tr>
<td>Lubricants – Matosinhos refinery</td>
<td>105</td>
<td>55</td>
<td>(47%)</td>
</tr>
<tr>
<td>Cogenations</td>
<td>nd</td>
<td>3.09</td>
<td></td>
</tr>
<tr>
<td>Storage and logistics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aviation</td>
<td>3</td>
<td>3</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Product movement (10^3 t)</strong></td>
<td>28,026</td>
<td>29,268</td>
<td>4%</td>
</tr>
<tr>
<td>Treated in refineries</td>
<td>13,249</td>
<td>11,817</td>
<td>(11%)</td>
</tr>
<tr>
<td>Treated in Gavá plant</td>
<td>11.6</td>
<td>5.2</td>
<td>(55%)</td>
</tr>
<tr>
<td>Liquid fuel park – Portugal</td>
<td>4,925</td>
<td>4,078</td>
<td>(17%)</td>
</tr>
<tr>
<td>Liquid fuel park – Spain</td>
<td>7,267</td>
<td>4,292</td>
<td>239%</td>
</tr>
<tr>
<td>Terminals – Portugal</td>
<td>8,239</td>
<td>8,775</td>
<td>7%</td>
</tr>
<tr>
<td>GPL parks</td>
<td>334</td>
<td>301</td>
<td>(10%)</td>
</tr>
<tr>
<td><strong>Distance covered by products transport (logistics) (km)</strong></td>
<td>30,005,240</td>
<td>46,155,049</td>
<td>54%</td>
</tr>
<tr>
<td>Portugal</td>
<td>30,005,240</td>
<td>29,446,333</td>
<td>(2%)</td>
</tr>
<tr>
<td>Spain</td>
<td>-</td>
<td>16,708,716</td>
<td></td>
</tr>
</tbody>
</table>

1. These data include Carriço and Powercer cogenerations
2. 2010 value has been corrected
3. The value includes Sigias
4. Includes Aromatics and Sinecogeração plants
5. Includes Aromatics and Lubricant plant in Matosinhos and Sinecogeração
6. The 2010 value was corrected. It now refers to the period between January and December
7. The value includes offshore activities, which are not operated by Galp Energia
8. All values were calculated using Greenhouse Gas Protocol and IPIECA standards
9. The figures relate to CO2 equivalent emissions including scopes 1, 2 and 3
10. Indicators not subject to verification
Consumption of resources
Since 2011 Galp Energia has undertaken several initiatives for the effective use of natural resources – hence improving its performance – namely reducing water consumption and increasing its reuse. In addition, streamlining the use of natural resources is a concern that is present in all stages of the life cycle of the facilities, products and services. This concern is reflected on the implementation of energy efficiency measures and on the selection of fuel, technologies and materials.

The collected water for the industrial plants consumption has its origin mainly in surface extraction, considering the universe of plants which consume 65% of water, as shown below.

**Water consume by type**

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piped water</td>
<td>2%</td>
</tr>
<tr>
<td>Underground water</td>
<td>6%</td>
</tr>
<tr>
<td>Surface water</td>
<td>92%</td>
</tr>
</tbody>
</table>

Note: These consumptions regard Sines and Matosinhos refineries, Carriço and Provencer cogenerations, Real, Mitrena and Islands liquid-fuel parks and Sines and Leixões terminals.

Industrial effluents
The Sines refinery is the major production site of industrial effluents, which are, after a pre-treatment, channelled into the Ribeira de Moinhos wastewater treatment plant.

Considering the universe of facilities that represent 88% of industrial effluents, it appears that 61% of the effluent is sent to an offsite treatment plant and the remaining are discharged to the surrounding waters after treatment to ensure compliance with discharge standards.

**Industrial effluents by destiny**

<table>
<thead>
<tr>
<th>Destiny</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water environment</td>
<td>39%</td>
</tr>
<tr>
<td>Offsite treatment plant</td>
<td>61%</td>
</tr>
</tbody>
</table>

Note: These effluents concern the Sines and Matosinhos refineries, the liquid-fuel parks (Real, Perafita) and the terminals (Sines).

Direct CO₂ emissions
For the purposes of the EU ETS, refineries totaled 2,611,916 tCO₂ in 2011 (2,832,143 tCO₂ in 2010), the remainder being related to cogeneration plants (page 37).

Biodiversity
Galp Energia takes into great consideration the value of biodiversity in all its activities. Biodiversity is protected to the extent that the Company controls its activities and interactions with the environment:

- air emission control;
- dumping control;
- prevention and mitigation of spilling of hydrocarbon and other hazardous substances;
- control of noise in company facilities.

In the Iberian Peninsula, most industrial facilities are not located in protected areas but, when there are adjacent to such areas, Galp Energia implements adequate protection measures to prevent accidents likely to threaten the environment and to mitigate impacts and also to make available resources and facilities to combat environmental emergency. Activities that may damage biodiversity and ecology are previously studied and their impact is not only measured but also monitored in order to safeguard and protect environmental values, which includes the ecological ones.

Regarding biodiversity protection, two projects that started last year were continued in 2011:

- Belem project, regarding certified raw-material production of palm oil (see page 83 of Sustainability Report 2010);
- environmental safety analysis of 145 service areas in Portugal (see chapter 7).

In order to improve biodiversity protection and conservation Galp Energia intends to implement a UNEP (United Nations Environment Programme) tool, which will allow not only to identify all the facilities in protected and in rich biodiversity areas as well as the number of species in the IUCN (International Union for Conservation of Nature) red list.

More information at:
8.1 Risks related to water use

Galp Energia is present in several countries, which requires different approaches depending on the economic, social, cultural and natural scenarios, to ensure the development of the Company’s operation and activities, and the sustainability of the environment and natural resources. Being water crucial to maintain life, it is vital to the Company.

The map below shows the geographic distribution of the lack of water, according to the FAO (Food and Agriculture Organization of the United Nations) report.

Geographical dispersion of national investors

- Physical water scarcity – The development of water resources is now near or beyond the sustainable limit. Over 75% of river flows is used in agriculture, industry and the household sector. This definition, which relates water availability with search, means that dry areas are not necessarily areas with water scarcity.
- Growing physical water scarcity – Over 60% of the river flow is now used.
- Economical water scarcity – Human, institutional and financial access is limited, even if the water is locally available to satisfy human needs. Water resources are plentiful regarding the water used, since less than 25% of the river flow is used, despite the occurrence of malnutrition.
- Reduced or no water scarcity – Water resources are abundant relative to use. Water use of the river flow is less than 25%.
- Non disposal.


Galp Energia’s activities are also on the map. The onshore presence of Galp Energia in the Iberian Peninsula, Brazil, Angola, Mozambique, Guinea-Bissau, Venezuela and Equatorial Guinea does not cause water scarcity (according to FAO), since the resources used are less than the ones available. Despite this fact, in some countries there is an economical water scarcity since local populations have needs regarding nutrition and water supply services for reasons not related to the physical scarcity of water. Only in Swaziland Galp Energia develops activities in a territory where there is physical scarcity. A brief report of Galp Energia’s activities in African countries is presented below.

Gâmbia
Galp Energia sites are near Banjul city, where there is public service supply and no lack of water. Lack of water strikes especially the interior of the country, where the Company holds no infrastructures.

Guinea-Bissau
Because it is a flat country, water abstraction in Guinea-Bissau is mostly underground. As water is economically scarce, Galp Energia service stations in the country use underground water, which also serves local populations.

Mozambique
Galp Energia sites are located outside the cities where there is public supply, have underground water withdrawal that supplies local populations as well.

Cape Verde
Water access is important in this country due to the low annual average rainfall. Desalination is often used.

Swaziland
Swaziland is a more developed country than Gambia and Guinea-Bissau, since there is no economic scarcity of water although there is a physical lack of water due to a greater use of water in industry and agriculture. Galp Energia sites do not influence the country’s activities.

Water scarcity is not only felt where there is a scarce resource, but also in regions where local communities do not have economic means of access. Knowing this problem, Galp Energia commits itself to ensure water consumptions sustainability, to facilitate access to local populations and to preserve water quality through efficient effluents management and decreasing contamination risks.

09 • OCCUPATIONAL SAFETY AND HEALTH
Safety is a Galp Energia value to which the Company has committed in its policy for environment, health and safety (EHS), where it is well documented; safety at Galp Energia is enshrined in a broad set of internal regulations that are part of the EHS management system, the so-called G+ System, and are applied daily in the Company’s activities.

The goal is zero accidents, whether personal, property, environmental, operational or road-motivated.

• To achieve a sustained prevention culture, Galp Energia monitors performance on a continued basis.

Activities developed at Galp Energia in 2011 particular attention was given to practices for integrated asset management.

Process safety

• Process safety indicator (PSI) reporting in order to create a track record and to identify critical areas for prevention.

• Adoption of the American Petroleum Institute’s API 754 – Process Safety Performance Indicators for the Refining and Petrochemical Industries and reporting to the European Association for Environment, Health and Safety in Refining and Distribution (CONCAWE).

• Boost initial action for prevention of container losses, which may originate significant incidents such as the outbreak of fire and explosions with a potential to cause personal damage, environmental impact and significant property damage.

Safety of REACH products and classification, labelling and packaging (CLP) regulation

• Notice-giving of hazards to users down the chain.

• Review of all safety data for all substances that are produced and marketed including the new CLP classification, the introduction of exposure scenarios as a function of identified uses and all physical, chemical, toxicological and eco-toxicological data obtained when conducting research for the files.

• Update of safety data in preparation for compliance with the new requirements.

• Update of certain files to include new information and of notices of classification and labelling.

Performance

In recent years, Galp Energia has reduced workplace accidents. Levels recorded in 2011 were the lowest ever and were comparable with the best in the industry after falling close to 70% relative to 2008, including both Galp Energia’s own workers and external service providers.

CONCAWE benchmarking and frequency indicator of accidents with leave of absence

Number of accidents with leave of absence and related frequency indicator

In 2011, large and complex contractor jobs took place at Galp Energia where new records were set. At the height of construction over 4,000 own workers and service providers were busy simultaneously, which meant an additional 9.7 million working hours.
Internal reporting and processing of events continues to improve. The increase in the number of incidents reported stemmed both from broader application of the standard (where one of the most recent examples is the report of incidents in the International Oil business unit), higher awareness and quasi-accident reporting. The reporting model – particularly in the lower levels of the pyramid (lower-severity incidents rated as class 1) has been enlarged and improved, which shows higher sensitivity to these matters.

Accidents include those that involved the community, clients or service providers resulting in damage to property or the environment or involved services provided by Galp Energia even though the accidents may not have occurred during the Company’s normal business operations.

### Additional information

#### Galp and insourced employees

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cases of workplace illness</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Number of deaths</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Absenteeism (%)</td>
<td>3.6</td>
<td>3.3</td>
</tr>
</tbody>
</table>

More information at:

10 • HUMAN CAPITAL

10.1 THE GALP ENERGIA ACADEMY
The qualification of human capital is a pillar in Galp Energia’s strategy for success. In 2011, a range of deeper initiatives were designed to attract and keep talent, to improve the skill management system, to structure and standardise policies for the management of human resources in Africa and Brazil (two high-growth markets in recent years) and to broaden e-learning opportunities for behavioural and technical training.

The climate change survey reveals an overall positive result of this investment effort, with an improvement of 3% compared to the level reached during the previous year.

**Initiatives to attract, develop and keep talent**

**Attracting new talent – Generation Galp programme.**

14th edition of Galp Energia’s system for hiring and integrating trainees (newly graduated staff).

- The integration success rate for edition 2010-2011, when 36 young graduates participated, was 82.5%.

- Following strong growth in the E&P business, Galp Energia is investing heavily in attracting talent to this segment, which sponsored almost 30% of new hirings.

- In the Generation Galp programme, 30 high-potential young graduates on average participate each year.

**E&P.** International hiring campaigns to boost sector-specific skills and know-how; offering to all E&P-supporting areas of an introduction course on exploration and production activities; hiring of an additional 13 employees coupled with the development a new base structure for Petrogal Brasil’s role handbook.

**Project GPS – Gestão de pessoas para o sucesso (Managing people for success).**

Encouragement of employee mobility as well as personal and professional development through human resource management so as to align the Company’s human capital with its needs; role mobility led to 66 employees changing roles after internal recruitment or oriented mobility.

**Geo-engineering training at the Galp Energia Academy.**

Furthing Galp Energia Academy’s capabilities as a vehicle for the development of high-potential staff and highly skilled personnel, programme GeoER was set up to promote research and advanced training in carbonate reservoir geo-engineering (see the following pages and chapter 13).

**Human capital development**

**Skill management.** Mapped skills and career development schemes, a key tool for the Company’s human capital development, covers almost all (95%) employees across Galp Energia’s all professional categories; each role is defined according to its specific content and a given set of technical and behavioural skills in accordance with Galp Energia’s Dictionary of Skills.

**Completed integration of Spain-based employees in the skill management system.** Job descriptions were drawn up for identification of the technical and behavioural skills of former employees from Agip’s and Esso’s Spanish distribution networks, which were acquired by Galp Energia. In 2011, all Spanish-based employees were appraised according to Galp Energia’s standardised model.

**360° appraisal.** This appraisal covered close to 9% of all employees in 2011, compared with 8% a year earlier; the process was for the first time supported by mygalp, an intranet-based software; close to 15% of the Spanish-based employees were covered by the 360° methodology.

**Marketing in Africa.** Human resources policies, practices and processes were strengthened in African marketing affiliates in Swaziland, Mozambique, Gambia and Angola; policies to prevent HIV/AIDS were deployed in all these affiliates for confidential tracking procedures, condom-dispensing, and protection and non-discrimination of infected workers.

**Training**

**High-level training.** The Galp Energia Academy, the Company’s platform for advanced training that encompasses management training and programmes FormAG, EngIQ and GeoER. For the FormAG project Galp Energia organised 18,400 training hours in 2011 with 179 trainees in nine classes, which had an output of 900 essays.

**EHS.** Full execution of 349 EHS training sessions in response to refinery needs and certifications in first aid, fire-fighting and defensive driving (see performance table).

**Flexible e-training.** E-learning, b-learning and webinar training on domestic and international platforms in the following areas: welcome packages for new employees, languages, information technology, technical skills in exploration, production and refining, design and set-up of an intranet site dedicated to training.
Theme Tuesday conferences. Continued staging of this open-training initiative which has reached out to 2,500 employees in 25 sessions; these are conferences focusing on themes that are relevant to the technical and behavioural management of Galp Energia’s business.

Programme CBC. Development and implementation of a middle management training programme whose main goal is to give a broader view of the Company’s diverse activities (see the following pages).

INTEGRA programme. Continued integration, with experienced staff as tutors, of new refinery operators for the achievement of company goals; the training programme for the edition that started in 2010 has been completed to 75%.

Performance

Type of contract
Galp Energia gives priority to open-ended employment; at 31 December 2011, 86% of 7,381 employees had open-ended contracts, close to 97% of employees work full time.

Employee diversity
The geographical spread of Galp Energia employees changed as business progressed and the number of employees abroad rose almost 5%.

Geographic distribution of the employees in 2011

Gender distribution remained stable, with male employees outnumbering their female counterparts, an imbalance that is largely due to the prominence of refining and African operations.

Galp Energia and insourced employees

<table>
<thead>
<tr>
<th>Professional category</th>
<th>Total of employees</th>
<th>18-24</th>
<th>25-29</th>
<th>30-34</th>
<th>35-39</th>
<th>40-44</th>
<th>45-49</th>
<th>50-54</th>
<th>55-59</th>
<th>60-65</th>
<th>+ 65</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive/top management</td>
<td>68</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>6</td>
<td>17</td>
<td>12</td>
<td>17</td>
<td>9</td>
<td>0</td>
<td>9</td>
<td>59</td>
</tr>
<tr>
<td>Middle/general management</td>
<td>192</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>20</td>
<td>34</td>
<td>58</td>
<td>44</td>
<td>18</td>
<td>11</td>
<td>1</td>
<td>37</td>
<td>155</td>
</tr>
<tr>
<td>First line management/supervisor</td>
<td>446</td>
<td>0</td>
<td>0</td>
<td>32</td>
<td>104</td>
<td>65</td>
<td>88</td>
<td>71</td>
<td>61</td>
<td>24</td>
<td>1</td>
<td>152</td>
<td>294</td>
</tr>
<tr>
<td>Specialist groups</td>
<td>1,283</td>
<td>3</td>
<td>118</td>
<td>177</td>
<td>219</td>
<td>192</td>
<td>165</td>
<td>225</td>
<td>139</td>
<td>45</td>
<td>0</td>
<td>414</td>
<td>869</td>
</tr>
<tr>
<td>Other employees</td>
<td>5,392</td>
<td>277</td>
<td>718</td>
<td>1,008</td>
<td>969</td>
<td>738</td>
<td>594</td>
<td>555</td>
<td>370</td>
<td>154</td>
<td>9</td>
<td>2,314</td>
<td>3,078</td>
</tr>
<tr>
<td>Total</td>
<td>7,381</td>
<td>280</td>
<td>837</td>
<td>1,222</td>
<td>1,319</td>
<td>1,035</td>
<td>922</td>
<td>907</td>
<td>605</td>
<td>243</td>
<td>11</td>
<td>2,926</td>
<td>4,455</td>
</tr>
</tbody>
</table>
Turnover
In 2011, 1,369 employees left the Company, which implied a turnover of 18% – 8% for women and 10% for men – a fairly high figure due to service station turnover; excluding service stations, turnover would have been 4%.

Generic training
The number of training hours rose 8.45% to 141,235 in 2011.

EHS training
The number of training hours rose 62.6% compared with 2010 to 24,384 in 2011.

ROI of human capital
The effectiveness of human capital management is systematically measured at Galp Energia. Beyond the mapping of employee skills, the measurement of the organisational climate, the appraisal of individual performance and the application of 360° appraisal to senior managers, the first steps have been taken to measure the financial impact of the Company’s human capital policy.

PricewaterhouseCoopers’ formula for calculating the ROI of human capital as described in the European Human Capital Effectiveness Report was used for this purpose. The ROI of human capital is calculated with respect to total sales and total costs, with the latter broken down into operating costs related to human resources and operating costs that are not related to human resources.

The results show that each euro invested in employee pay returned in 2011 close to 2.96 euros to Galp Energia.
Organisational climate

Climate survey in 2011. The goal was to monitor employee perception of the seven dimensions of their professional activities, to compare findings and to implement actions designed to continuously improve the organisational climate.

<table>
<thead>
<tr>
<th>Appraised factors</th>
<th>Clarity</th>
<th>Team commitment</th>
<th>Flexibility</th>
<th>Training</th>
<th>Reward</th>
<th>Responsibility</th>
<th>Requirement levels</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2009(a)</td>
<td>4.29</td>
<td>4.17</td>
<td>4.17</td>
<td>4.07</td>
<td>4.13</td>
<td>3.92</td>
<td>4.26</td>
<td>50.20%</td>
</tr>
<tr>
<td>Year 2010(a)</td>
<td>4.43</td>
<td>4.24</td>
<td>4.29</td>
<td>4.19</td>
<td>4.26</td>
<td>4.15</td>
<td>4.36</td>
<td>55.70%</td>
</tr>
<tr>
<td>Ano 2011(a)</td>
<td>4.40</td>
<td>4.59</td>
<td>4.37</td>
<td>3.80</td>
<td>4.04</td>
<td>4.39</td>
<td>4.58</td>
<td>58.76%</td>
</tr>
<tr>
<td>Change 2010 vs 2009</td>
<td>-0.7%</td>
<td>8.3%</td>
<td>1.9%</td>
<td>-9.4%</td>
<td>-5.3%</td>
<td>5.9%</td>
<td>5.0%</td>
<td>3.06%</td>
</tr>
</tbody>
</table>

(a) Results = average of all answers

The climate survey reveals an overall improvement of 3%, with a remarkable performance in the dimensions of team commitment, responsibility and degree of strain at work. On the other hand, the results show that should implement actions to improve the training and rewards.

Focus on Programme CBC – Basic Leadership Skills

The main goals of this programme, which is targeted at middle management, are:

- to give a broader view of the Company’s diverse activities;
- to take a systematic approach to practical knowledge of standards, processes and procedures associated with leadership roles;
- to consolidate technical and behavioural skills which are critical to continuous improvement of work teams’ management.

This training initiative has been structured in the four modules described below:

- Module I – Galp Energia: corporate services, EHS and value chain;
- Module II – HR policies;
- Module III – Management analysis and control;
- Module IV – People development.

The first three modules are entirely developed and controlled by in-house staff in a five-day training course inside the Company.

The last module is organised by an external partner that for four days trains in behavioural issues groups consisting of approximately 20 people; experimental techniques are used in combination with an iterative debriefing session of group reflection, which gives the module a distinctly practical nature that adds genuine value.

Programme CBC covered approximately 320 employees and involved over 40 company staff for organisation and control of the courses.

More information at:
10.1 The Galp Energia Academy

Developing talent is a strategic tool for Galp Energia’s sustainability. Therefore, the Company developed the Galp Energia Academy together with leading Portuguese and Brazilian universities as a structural project for advanced training.

The set-up of the Galp Energia Academy followed from a commitment to additional training oriented to maximising the abilities of company staff to facilitate the emergence of new leaders with the qualifications required to take on growing responsibilities in the Company’s business and corporate services.

The Academy’s training role covered in 2011 several knowledge areas, particularly those critical to developing the employees’ skill set. Therefore, courses taught by the Academy were designed to help staff achieve Company goals.

The Academy’s activities rest on four pillars for advanced training that are described below.

**FormAG – Advanced Management training.** The main goal here is to give management and behavioural training with a focus on energy management to senior managers and high-potential staff; this course aims to prepare staff – and particularly future leaders – for their management roles at Galp Energia; it is a supporting tool for career management in so far as it helps people to progress along the professional stages offered by the Company.

**EngIQ – PhD in Refining Engineering, Petrochemicals and Chemistry.** This innovative – at the domestic and European level – PhD programme links the best chemical engineering faculties in the country and makes sure that the research projects required for a PhD degree are both carried out in a corporate environment and deal with subjects that have been previously agreed between universities and companies. Included in the scientific branch of chemical engineering, the PhD in Refining Engineering, Petrochemicals and Chemistry was conceived as a course with a higher degree of specialisation than the courses taught at Portuguese universities (see chapter 13).

**GeoER – Advanced training in Reservoir Geo-Engineering.** Integration of Geophysics, Geology and Reservoir Engineering to train staff for integrated work across the exploration and production cycle with a focus on carbonated rocks in Brazil’s pre-salt; the programme has been organised with five leading universities in Portugal (IST – Instituto Superior Técnico, FCT-UNL – Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa, and UA – Universidade de Aveiro) and Brazil (UNICAMP e UNESP) (see chapter 13).

**CompeC – Advanced training in Sales Skills.** This programme, to be launched in 2012, aims to develop Galp Energia’s sales teams.

11 • CORPORATE RESPONSIBILITY

11.1 MISSION UP | UNITED FOR THE PLANET
11.2 BIOFUELS: COMMUNITY ENGAGEMENT
11.3 THE GALP ENERGIA FOUNDATION
To coordinate all social responsibility initiatives, a new corporate policy was set up that assembles in one single unit Galp Energia’s work regarding social responsibility. Subsequently, it was developed a variety of activities in order to increase corporate intervention concerning education, environment, and culture. In 2011, a volunteer work platform was also launched to engage Galp Energia’s employees with local communities. Additionally, the Company developed several initiatives along with the Galp Energia Foundation to maximise the impact of their social investments.

Galp Energia’s corporate responsibility policy

Galp Energia and its senior management staff agree that it is necessary to not only follow the national and international legislation but also to incorporate into the Company’s culture, strategy and management actions these ethical, social, economic and environmental values. This concerns relationships with suppliers, customers, stockholders and stakeholders and everyone that is affected by Galp Energia’s activities.

Accordingly, Galp Energia is committed in including social responsibility in its activities and strategy, in every country where it operates. The goal is to continue to improve its performance and make social responsibility one of the main pillars of the Company’s organisation and create added value to suppliers, customers, stockholders and shareholders in order to better development in the area.

Galp Energia is committed in:

- adopting social responsibility as a core value in every activities and in every countries, despite their social scenarios, promoting job and training initiatives, and encouraging the occupation of highly qualified jobs for members of local communities;

- taking responsibility for the impact of its decisions and developed activities in the surrounding community, in its economy and environment while stimulating and encouraging the local regulators’ work as well as its consequences;

- being transparent through a clear and precise communication, and responsible regarding company policies and adopted procedures, delivering all requested information to stakeholders in due time, using the available and accessible tools;

- promoting ethical behaviour based on honesty, equity and integrity, showing a permanent care regarding people, economics and environment;

- acknowledging the stakeholders’ right to be heard through a common platform that ensures their expectations are taken in to account in decision-making processes and developed activities;

- respecting the rule of law and developing all efforts necessary to act as local legislation demands, following law – national and international – and good practice;

- respecting and promoting human rights, ensuring courses of action and reducing the risks of non-compliance concerning discrimination, civil, political, economic, social and cultural rights;

- respecting and exercising the fundamentals of labour rights as expressed by International Labour Organization (OLB), supporting the right to unionize and refusing all kinds of slave and child labour, and employment discrimination even in Galp Energia’s suppliers;

- maintaining good working conditions and social protection of its employees, promoting health, safety, human development and training at the work place;

- implementing operational practices aimed at combating corruption in its every forms, including extortion and bribe, and promoting political responsibility and competitiveness while respecting property rights;

- promoting an increased awareness and environmental responsibility amongst stakeholders by preventing environmental risks in the Company’s activities, such as pollution, preserving natural resources, biodiversity and natural life cycles, while developing a strong strategy regarding climate change;

- encouraging the development and dissemination of environmental friendly technologies, such as fuels and alternative energies, renewable energies, energy efficiency and sustainable mobility at the same time;

- promoting a mutually fruitful relationship with customers by adopting the best practices of fair and responsible marketing, giving factual, impartial and transparent information, which furthers a sustainable consumption, health and safety;

- create tools and supporting services to best answer clients complains, conflict resolution, data protection and client privacy, enabling access to minimum and essential services;

- promoting development in surrounding communities, through social and philanthropic activities and charity donations;
• implementing a management system of social responsibility that establishes social, environmental and economic goals, according to defined policies and will allow to evaluate the Company’s performance and further goal’s reassessment in a context of continuous improvement;

• promoting the Company’s strategic areas of action: education, safety and road safety programmes, health and welfare, environment and energy efficiency, industrial and cultural heritage, developing volunteer programmes in Galp Voluntária;

• disclosing policies in a responsible and transparent way to stakeholders, communicating the Group’s performance regarding corporate and social responsibility.

Activities developed

Galp Voluntária activities. Creation of corporate volunteer work in Galp Energia through its respective agents, in the community in general and in areas where the Company operates. To this end, Galp Energia relents annually 48 hours of employee’s working time (the equivalent of six working days). In 2011, 385 workers volunteered, in a total of 2,532 hours. Corporate volunteer actions are aligned with the sustainability and corporate responsibility strategy based on four pillars: education; environment and energy efficiency; road safety programmes; health and welfare.

Club Galp Energia activities. Promoting social, cultural and community development amongst Galp Energia’s employees. Galp Energia’s North Club rewarded chief executive officer Manuel Ferreira De Oliveira and Matosinhos refinery director Martinho Correia with merit honours. The Central Club participated in several sports activities and organized basketball, handball, futsal and athletics in partnership with Inatel Foundation. The South Club finished several synthetic grass football fields and added new combat and ballet rooms. Choir group performed in 14 concerts throughout 2011.

Education – Local communities interventions

Portugal
Partnership between Galp Voluntária and the EPIS Association (entrepreneurs for social inclusion) – in these two projects:

• Future Vocations: 26 Galp Energia volunteers participated in vocational education training and tried to prevent 15-year-old students dropout;

• Tango: leadership and management skills promotion amongst schools and Galp Energia companies, with Setgás and Lusitaniagás help.

Partnership with EPIS regarding Rumo ao Futuro (To the future initiative). Participation in a set of master classes of business leaders, titled Siga o Mestre, where corporate senior staff coached schoolteachers and deans. Galp Energia’s chief executive officer Manuel Ferreira De Oliveira was one of the speakers.

Angola
Sonangalp awarded scholarships (Galp Energia subsidiary in the angolan market) to employees’ children.

Cape Verde
Enacol assistance (Galp Energia subsidiary in the cape verdean market) to artistic initiatives. Enacol financed César Schofield to S. Tomé where he participated in the 6th Edition Biennial Fair; supported Zeropoint Art photography workshop; supported a Theatre Festival – Mindelact, Baía das Gatas Festival and Clube Castilho de S. Vicente’s fair.

Enacol supported capoeira association Liberdade de Expressão and its mission in being a free-time occupation for disadvantaged children; helping them finding their role in the community, ensuring their physical and social development.

Guinea-Bissau
Continuous training of teachers of Portuguese in
Guinea-Bissau. Renewal of the contract between Petromar (which is partly owned by Galp Energia) and the Camões Institute. The number of trainees has increased 83% in the last four years. Over 107,000 students benefited from this training program to teachers of Portuguese.

Petromar’s support to International Solidarity Foundation through books and computers. Galp Energia launched a campaign to collect 2,100 references, such as children’s books, dictionaries, grammar books, encyclopaedias and schoolbooks to that foundation’s library.
Mozambique
**Partnership with Karingana Wa Karingana association.**
200 thousand books were collected and delivered in Mozambique.

**East-Timor**
**Support to Education.** Creation of a computer centre; support to PhD in Oil Refinery and Masters MEDEA course taught in Eni Corporate University.

**Environment and energy efficiency - Local communities interventions**

**Portugal**
**Missão UP | Unidos pelo Planeta (Mission UP | United for the planet).** Educational project on energy efficiency for first and second year students. 1,720 schools joined the project and 200 lessons were taught. Over 50 Galp Energia employees participated in the project (see following pages).

**Galp Soluções de Energia.** Support to the implementation of energy sustainable solutions in schools awarded by Mission UP.

**Lisbon mobility protocol.** Partnership between Galp Energia, Galp Energia Foundation and Lisbon Municipality (CML), aiming to build bridges, sidewalks and bike lanes (see following pages).

**Mozambique**
**Biofuels.** Continued initiatives for the promotion of food safety and construction of social facilities in Mozambique, under jatropha production. Integration of family businesses in Brazil’s palm oil project (see following pages).

**Road safety programmes - Local communities interventions**

**Portugal**
**Road accident study.** Galp Energia opened an investigation into the causes of road accidents in order to raise awareness among local populations and prevent more accidents. ISCTE-IUL, National Authority for Road Safety, Road Safety Action Decade and Galp Energia Foundation participate in the initiative. According to National Authority for Road Safety, 690 deaths, 2,416 severely wounded and 39,215 superficially wounded were reported during 2011.

**Angola**
**Communicate to prevent.** A monthly newsletter was created in Sonangol regarding road safety and accidents prevention. This initiative was designed specially to Sonangol employees, their families, clients and suppliers.

**Health and Welfare - Local communities interventions**

**Help in the dissemination of prevention practices of public health events**

**Portugal**
**Support to the study Reuma Census, an epidemiologic study (population study) on a representative sample of 10,000 Portuguese, with a four-year duration.**

**Angola**
**HIV/AIDS prevention campaign.** Sonangalp distributed contents on how to prevent being infected, the importance of a diagnostic test, examples and a simple explanation about the disease. The programme also included a non-discrimination alert.

**Improvement of life conditions of disadvantaged people**

**Portugal**
**Project REPARAR.** Partnership with Santa Casa da Misericórdia de Lisboa (SCML), in which 116 volunteers repaired ten homes of elderly and needy people that benefit from SCML domestic support services. Toys and children clothes were also collected and several elderly people wishes came true while their houses were being repaired.
Partnership with Make a Wish Foundation. The Portuguese Make-A-Wish Foundation, like its international parent, grants wishes to children (from 3 to 18 years old) who have life-threatening medical conditions bringing joy and happiness to these children. Galp Energia has already granted four wishes.

Remodelling CERCIOEIRAS. Galp Voluntária and Galp Energia Foundation rebuilt CERCIOEIRAS facilities: the main building was painted – 260 m² – as well as the inner courtyard – 210 m².

Cidadão Bebé (Baby Citizen). Partnership with Legião da Boa Vontade and IPSS (private institution of social solidarity), in Porto, which consists in preparing and delivering baby products to young mothers.

GRACE partnership. Galp Energia signed a partnership with GRACE, a group of discussion and support of corporate citizenship. The first initiative was cleaning and remodelling one of the green spaces in Bairro Social da Nazaré, in Madeira Island, the second largest social housing in the country.

Christmas baskets. Galp Energia gave up its traditional Christmas dinner and spent the funds on 2,500 Christmas baskets that were delivered all over the country, including Azores and Madeira islands. This was made in partnership with local charity institutions, town council services, churches, IPSS and Cáritas.

Partnership with ENTRAJUDA. Through this partnership, Galp Energia was able to donate desktop and laptop computers to D. Pedro IV Foundation, to the Eng. Paulo Vallada Community and to Cerebral Palsy Oporto Association. In partnership with food banks from Lisbon and Setúbal districts, the Company also donated fuel discounts to 66 institutions in Lisbon’s district and 32 in Setúbal’s district.

Partnership with Banco Alimentar Contra a Fome. Through its internal communications service the Company encouraged employees to participate in the biannual collections of Banco Alimentar Contra a Fome.

Partnership with association Movimento 1 Euro. 159 employees participated in this charitable initiative. Each employee gives away one euro of his salary to this project, during the whole year and votes in the cause or projects that wishes to support.

Angola

Luanda’s Paediatric Hospital. Sonangalp granted a sponsorship and toy distributions.

Casas Lares do Bié. Donation of basic goods by Sonangalp.

Cape Verde

Partnership with Acarinhar. Enacol and Acarinhar – Cerebral Palsy Support Association – signed a partnership where it is predicted to give away fuel to a transportation van.

Partnership with Mental Diseases Recovery Centre. Galp Energia gave butane gas to be used in the institution’s kitchen.

Cape Verde Paralympic Comitee. Enacol supports paralympic athletes.

Tenis. Enacol promoted the tennis practice amongst disadvantage children and teenagers. This initiative is included in the company’s decision to increase sport
practice amongst disadvantage people, promoting equal opportunities as well as educational success, guidance of behaviours for active and healthy lifestyles.

**Guinea-Bissau**

**Partnership with National Association Aldeias SOS.** Galp Energia was awarded by this non-profit organization. The national association Aldeias SOS belongs to the International Kinderdorf SOS, member of UNESCO (United Nations Educational, Scientific and Cultural Organization) and helps children all over the world. The main goal is to prevent children and parents separation.

**Health support.** Petromar worked closely with Galp Energia to treat a child in a Portuguese hospital.

**Mozambique**

**Lar de Nossa Senhora dos Desamparados.** This institution, in Maputo, received 500 clothing pieces donated by Petrogal Mozambique.

**International Elderly Day in Mozambique.** 150 clothing pieces were donated to the elderly.

**Orphanage Casa Madre Maria Clara.** Petrogal Moçambique provides free GPL to the kitchens in this orphanage.

**Support of children sports in Escola Central of Lhanguene.** Donation of footballs and t-shirts.

**Drinking water access.** Remodelling of the water distribution system in Cabo Delgado province and in the capitals of district Macomia, Mocimboa da Praia and Palma.

**Swaziland**

**Support to five humanitarian organizations.** Galp Swaziland sponsored Swaziland Hospice at Home, NERCHA (National Emergency Response Council on HIV and AIDS), Hope House, School for the Deaf and Special Olympics.

**Mbabane Catholic Church.** Remodelling of school facilities to disadvantage children.

**East-Timor**

**Drinking water access.** Support of water distribution projectas especially in scattered locations.

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**Performance tables**

**Social impact of Galp Voluntária’s activity**

<table>
<thead>
<tr>
<th>Hours of corporate volunteering</th>
<th>2,532</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volunteers</td>
<td>385</td>
</tr>
<tr>
<td>Projects developed</td>
<td>16</td>
</tr>
<tr>
<td>Entities involved</td>
<td>15</td>
</tr>
</tbody>
</table>

**Economic impact of social investment**

<table>
<thead>
<tr>
<th>Euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total of social investments (*)</td>
</tr>
<tr>
<td>Economical value of corporate volunteer time</td>
</tr>
</tbody>
</table>

(*) Includes quota, donations and sponsorships.

11.1 Mission UP | United for the planet

Galp Energia launched Missão UP | Unidos pelo Planeta in 2010-2011. This was the first edition of the educational program for sustainability, included in Galp Energia’s social responsibility policy. It is a school program, with national coverage, on the efficiency in energy consumption and where subjects like energy sources, energy efficiency, sustainable mobility and energy footprint are approached.

This programme aims to build an enlightened opinion on our children (in the range of 6 to 12 years old that attend primary school) and make them accountable to adopt certain attitudes and change their behaviour. Through the children, the programme hopes to take these issues to both families and local communities.

This project is supported by Energetic Services Regulator (ERSE) being financed through the Electric Energy Consumption Plan (PPEC) and with institutional partnerships of Ministry of Education – DGIDC, the Geology and Energy Regulators, the Portuguese Agency of Environment and UNESCO’s National commission.

Missão UP first stage: content and creation of Brigadas Positivas.

• Besides the content available in this website, schools where invited to participated in the contest Brigadas Positivas, whereby schools, teachers and pupils are encouraged to organise brigades, i.e., groups of pupils sponsored by teachers whose duty is to create missions designed to further energy efficiency and sustainable mobility both at school and at home.

• The schools received work materials to develop their projects: billboards, advisement books, tips on efficient energy and a board game developed to allow children to learn the meaning of sustainable mobility in a fun way. The game is called Galpshare – Cabemos todos?

Missão UP second stage: award the best ideas.

The work and commitment of each school were evaluated based on originality, mobilization of the school community and involvement of other entities. The most creative and innovative projects were awarded with an efficient energy inspection and new energy efficient solutions. Individual awards were also given to pupils, teachers and parents. An event took place in June to present the projects and the winners.

Awards

• First place: Escola Básica do 1.º Ciclo/JI de Santiago dos Velhos, Arruda dos Vinhos, Lisbon;

• Second place: Colégio Catarina de Bragança, Sintra;

• Third place: Escola Básica do 1.º Ciclo n.º 2 de Estremoz, Évora.

Achievements

Missão UP first edition performance

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools</td>
<td>1,720 all over the country</td>
</tr>
<tr>
<td>Teachers</td>
<td>31,000</td>
</tr>
<tr>
<td>Students</td>
<td>386,000</td>
</tr>
<tr>
<td>Missão UP website</td>
<td>36,000 clicks, 130,000 page views, 65% of direct clicks</td>
</tr>
</tbody>
</table>

More information at:
- Missão UP, log in www.missaoup.com
- Winning schools: http://www.missaoup.com/verNoticia/vencedores-2010-2011-do-concurso-brigadas-positivas-efesta-de-entrega-de-premios

More information at:
http://www.galpenergia.com/PT/sustentabilidade/responsabilidade-corporativa/dimensao-social/educacao-eformacao/Paginas/Missao-UP.aspx
11.2 Biofuels: community engagement

Galp Energia’s strategy for biofuels (see chapter 6) is based on the guarantee of social, environmental and economic sustainability of biofuel along the value chain. Subsequently, several initiatives on social responsibility took place in Mozambique and Brazil.

Achievements: Social performance

Mozambique

In the search for sustainable management of forest surrounding the plantation of Jatropha Curcas L., Galp Energia challenged WWF (World Wildlife Fund) and his associates in order to invest in knowledge and technologies that promote a cleaner development and that can be approved and certified by accredited entities. The main actions in this project are the following:

- creation of a forest and farm monitoring system in Mocuba/Lugela, (based on a study on environmental impact and a forest inventory) to determine a deforestation reference, wood/coal consumption by the people measure as well as plans for farms/forest and biodiesel;

- socioeconomic characterization of deforestation agents, quantification of the use of forest biomass, identification of species and socio-economic analysis and characterization of the use of fire.

Goals

- Create measures to minimize wood consumption and promote a better quality of life.

- Identify ways to reduce wood consumption by installing better domestic stoves.

- Create forest management models and systems to be used by the community.

Food safety improvement. A 45 ha cornfield was sown in Búzi district, with a 18,144 kg crop, which was destined to feed the workers in Galp Buzi. A 25 ha cornfield and another 5 ha corn field will be sown in Lugela, near Zambézia province, starting a new project.

Zambézia Community programme. 6 km of road were built, connecting Soanhalo population to Mocuba-Lugela road. Galp Energia will build a new bridge over Lugela river, providing access to people, cars and goods. Fuel supply to Lugela’s families that are involved in the community’s economical activities, allowing the distribution of 20 t of corn seed. Water and rice supply to Lugela’s authorities, to celebrate the creation of an electrical power grid.

Búzi Community programme. Due to river floods, populations were not able to cross the river in January and February. Galp Energia ensured the transportation of over eight thousand primary school’s students of six schools in Búzi district.

Production and purchase of *jatropha* from small farmers. In Búzi district, 10,426 kg of JCL seeds were bought from family farms (325 small farmers and 24 villages). This initiative injected over 100 thousand meticais into local economies. Coaching and culture sessions also took place in Bandua.

Brazil

Palm oil production by local farmers. Aggregation of family businesses on a 1 ha of field to produce palm oil. Conclusion stage of baking analysis of 93 funding proposals, which corresponded to 93 ha distributed by:

- 72 family units in Tailand;
- 21 family units in Tomé-Açú.


11.3 The Galp Energia Foundation

2011 was a year of consolidation of several multi-annual projects that started in 2009 and 2010 as well as new projects and activities development. The goals set sought to identify new challenges and make projects with the purpose of strengthening its relationship with society and diversifying its performance, mostly on environment, energy and knowledge, society and culture.

Activities developed

Multiannual projects

Paralympics preparation project – London 2012. The patronage of the Paralympics aims to mobilise the society to support and recognise the Paralympic Movement, promote new sports, attract new participants and provide the necessary means and conditions to the Paralympic athletes’ preparation.

Raríssimas – Associação Nacional de Deficiências Mentais e Raras (the Portuguese association of mental and rare illness). Construction of Casa dos Marcos, a well-known centre in the social and educational fields.

Partnership with EPIS – Empresários pela Inclusão Social (Businessmen for social inclusion). Development of joint actions to combat school dropout and failure of students in the third cycle of schooling.

Conclusion of Ernesto Roma Diabetes School. The Galp Energia Foundation is one of the patrons of the 100 Supporters United for Diabetes campaign, organised by Ernesto Roma Foundation and the Portuguese Association of People with Diabetes.

Assisted care to people with reduced mobility. Galp Energia distributed electronic devices that will allow customers with reduced mobility and adapt vehicles to benefit from customised service when buying products in the convenience stores located in Galp Energia’s service stations.

Project Ecoescolas. This partnership with the Blue Flag Association for Europe (ABAE) aims to contribute to the environmental education of children and young people, mainly about energy. Currently, the project requires a school essays contest. This year winners were Escola Secundária de Seia, Escola Básica 2,3 da Mealhada and Escola EB1/PE do Galeão in Funchal.

New projects

Society

Portuguese society of Cardiology. Galp Energia participated in the 7th Heart Challenge, in May, an initiative that promoted healthy habits in order to prevent cardiovascular diseases.

CAIS Association – Street shoe shiners. Cooperation with CAIS to increase homeless’ opportunities to return to the work market as shoe shiner; a profession with a long relationship with Lisbon.

Environmental and energy efficiency

Lisbon Mobility Protocol. Galp Foundation signed a partnership with Lisbon Municipality in 2009 to implement measures of energy and environmental efficiency in Lisbon. Regarding the mobility plan called Estrutura Ecológica de Lisboa – Plano Verde, Galp Foundation is responsible for the execution of the following projects:

Jazz Galp Cycle at Casa da Música. The patronage of Galp Energia continued in 2011. The cycle of Jazz Galp continues to present well-known jazz singers as well as new national and international musicians.

Sala D. João VI at Palácio Nacional da Ajuda. Conclusion of the restoration and historical reconstruction of the Sala D. João VI at Palácio da Ajuda, under the agreement made with the Portuguese Institute of Museums and Conservation (IMC). The ceiling is still under restoration.
- **bike lanes**: street that connect Benfica (Quinta da Granja) and Telheiras, with 8,770 m; it was opened during Mobility Week, in September’s 17 and 18 of 2011;

- **public approval of pedestrian bridge with bike lanes** over Segunda Circular, connecting Segunda Circular and Torres de Lisboa;

- **repave bike lane** in Campo Grande’s park.

**World forum Lisboa 21 about water.** Galp Energia supported this initiative. There was a debate in the Society of Geography of Lisbon to reflect about water and energy as social and economical strategic benefits.

**Energy and knowledge**

**Contest Mais Energia.** Galp Energia Foundation signed a partnership with the Portuguese Association of Physics (SPF) to promote the contest Mais Energia. Specially directed for the Portuguese scientific community, the contest will award students and young researchers best essays concerning energy conversion and management. Secondly, it will award high school teachers’ essays on different energy learning approaches. The contest was launched in September.

**Culture**

**Initiatives of heritage preservation.**

The historical and artistic heritage of Group Galp Energia is under Galp Energia Foundation’s wing. Its preservation and disclosure has great importance. In this sense, the following activities took place:

- **production of the prestige book on Galp Energia’s history** *O Nosso Tempo – Uma História da Galp Energia*;

- **development of a virtual gallery, which** is available on Galp Energia Foundation’s website (www.fundacaogalpenergia.com), with a selection of Galp Energia’s artwork;

- **a new version of the Virtual Museum is under way** and should be online in 2012;

- **scanning of documents and photographs** important to know Galp Energia’s history.

12 • STAKEHOLDER ENGAGEMENT

12.1 THE SCIENCE & TECHNOLOGY SYSTEM
In 2011, attention turned to the scientific and technological community to find ways of upgrading its relationship with Galp Energia. Awareness of Galp Energia remained at a high level with an increasingly favourable perception of the company’s actions in the communities where it operates. In client relationships, several satisfaction indices remained at high levels.

**SHAREHOLDERS**
- **MEDIA**: 99% is the Galp Energia brand awareness (of fuel).
- **WORKERS**: 7,381 workers in 13 countries.
- **OFFICIAL AND GOVERNMENT ENTITIES**: 2,430 M were paid in taxes over oil products.
- **FINANCIAL ENTITIES**: 5.4% was the weight of Galp Energia exports during 2011.

**SUPPLIERS**
- **CLIENTS**: 95 M transactions/year in the service areas. Over 1.3 M clients of natural gas. Over 930,000 loyalty cards and 386,000 fleet cards. 49% of ebitda of Galp Energia is produced internationally.
- **RETAILERS AND DISTRIBUTORS**: 1,502 service areas in Portugal, Spain and Africa. Over 20,000 GLP retailers in the Iberian market.

**INTERNATIONAL PARTNERSHIP**
- More than 40 projects in E&P.
- 709 Mboe of 3P reserves net entitlement and 2,672 Mboe of 3C contingents.

**TECHNICAL AND SCIENTIFIC COMMUNITY**
- €50.4 M were invested in research, development and innovation since 2007.

**FINANCIAL ENTITIES**
- €1,000 M was the investment made during 2011 in Portugal, concerning 3.8% of the country’s gross investment.

**LOCAL COMMUNITIES**
- €26.4 M were invested in social initiatives since 2007.
- 3,500 indirect and temporary, and 450 permanent jobs were created during the upgrade project.
These relationships with stakeholders involve an ongoing dialogue and appropriate to the interests and characteristics of each one, dictating the various forms of dialogue.

### Galp Energia connection with the stakeholders

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SHAREHOLDERS</strong></td>
<td>• Website with financial and governance information to the investors.</td>
</tr>
<tr>
<td></td>
<td>• Workplace survey;</td>
</tr>
<tr>
<td></td>
<td>• performance evaluation process;</td>
</tr>
<tr>
<td></td>
<td>• corporate publishing: <em>Energia da Semana</em>;</td>
</tr>
<tr>
<td></td>
<td>• publishing <em>Radar</em>;</td>
</tr>
<tr>
<td></td>
<td>• publishing <em>Energia das Refinarias</em>;</td>
</tr>
<tr>
<td></td>
<td>• information board;</td>
</tr>
<tr>
<td></td>
<td>• intranet.</td>
</tr>
<tr>
<td><strong>WORKERS</strong></td>
<td>• Public policy definition and intervention;</td>
</tr>
<tr>
<td></td>
<td>• reporting channels.</td>
</tr>
<tr>
<td><strong>GOVERNMENT/STATE</strong></td>
<td>• Disclose information as requested;</td>
</tr>
<tr>
<td></td>
<td>• meetings with journalists;</td>
</tr>
<tr>
<td></td>
<td>• press office</td>
</tr>
<tr>
<td><strong>MEDIA</strong></td>
<td>• Scientific and technologic cooperation with universities;</td>
</tr>
<tr>
<td></td>
<td>• disclose information as requested by the students;</td>
</tr>
<tr>
<td></td>
<td>• professional and academic internships;</td>
</tr>
<tr>
<td></td>
<td>• scientific and technological cooperation with associations;</td>
</tr>
<tr>
<td></td>
<td>• universities and schools support, delivering awards to the students.</td>
</tr>
<tr>
<td><strong>SCIENTIFIC COMMUNITY</strong></td>
<td>• Market research;</td>
</tr>
<tr>
<td></td>
<td>• customers report;</td>
</tr>
<tr>
<td></td>
<td>• brand traceability;</td>
</tr>
<tr>
<td></td>
<td>• customers satisfaction;</td>
</tr>
<tr>
<td></td>
<td>• telephone support lines to each product;</td>
</tr>
<tr>
<td></td>
<td>• products information in the group website;</td>
</tr>
<tr>
<td></td>
<td>• Serviexpress;</td>
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<tr>
<td></td>
<td>• companies support service;</td>
</tr>
<tr>
<td></td>
<td>• domestic customers support service;</td>
</tr>
<tr>
<td><strong>CLIENTS</strong></td>
<td>• Periodic meeting with workers unions.</td>
</tr>
<tr>
<td><strong>WORKERS UNION</strong></td>
<td>• <em>Galp Betumes Online</em> newsletter;</td>
</tr>
<tr>
<td></td>
<td>• GalpNet website;</td>
</tr>
<tr>
<td><strong>CONTRACTORS</strong></td>
<td>• GalpNet website;</td>
</tr>
<tr>
<td></td>
<td>• retailers evaluation and selection.</td>
</tr>
<tr>
<td><strong>RETAILERS AND</strong></td>
<td>• GalpNet website;</td>
</tr>
<tr>
<td><strong>DISTRIBUTERS</strong></td>
<td>• suppliers evaluation and selection.</td>
</tr>
<tr>
<td><strong>SUPPLIERS</strong></td>
<td>• Interaction and support given to local communities.</td>
</tr>
<tr>
<td><strong>LOCAL COMMUNITIES</strong></td>
<td>• Interaction and support given to local communities.</td>
</tr>
</tbody>
</table>
Customer service satisfaction

Remote service (global) 77.3% 78.4%
Face-to-face service (natural gas)* 81.1% 82.8%

* Refers only to information tips and receiving complaints.

Customer satisfaction on service performance in natural gas

The assessment of the clients’ perception regarding technical services in the natural gas business is performed on a weekly basis. Its results contribute to an annual evaluation on the performance of each service, having an impact on the definition of the variable remuneration amounts.

In general, although there is a slight decrease, the results show a high level of satisfaction, with weighted average values near 3.5 on a scale of 0 to 5.

Satisfaction levels – technical services

<table>
<thead>
<tr>
<th>Service</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection service</td>
<td>3.57</td>
<td>3.25</td>
</tr>
<tr>
<td>Action of converting the existing domestic</td>
<td>3.51</td>
<td>3.25</td>
</tr>
<tr>
<td>Technical assistance</td>
<td>3.57</td>
<td>3.29</td>
</tr>
<tr>
<td>Responses to urgent requests</td>
<td>3.56</td>
<td>3.35</td>
</tr>
<tr>
<td>Contract terminations*</td>
<td>-</td>
<td>3.28</td>
</tr>
</tbody>
</table>

* Indicator created in 2011.

Overall satisfaction level: customer service and technical services in natural gas

<table>
<thead>
<tr>
<th>Service</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galp Comfort service</td>
<td>86.2%</td>
<td>83.3%</td>
</tr>
</tbody>
</table>

More information at:
12.1 The Science & Technology system

Between September and December of 2011, an independent consultancy company studied and evaluated Galp Energia’s cooperation partnerships not only with SCT (Scientific and Technological System) but also with universities and other technology partners. In fact, over the years, Galp Energia has been developing several cooperation agreements, in order to recognise the importance of offering its customers energy solutions, products and services that are state-of-the-art, regarding research, development and innovation.

Achievements
The diagnosis was made by characterising 40 partnerships within eight different areas.

Cooperation between Galp Energia and SCT, by areas

Each initiative was characterised relating a good practice system and a proposal of improving measures. The diagnosis benefited of an improved cooperation between Galp Energia and all of its stakeholders and partners.

These initiatives rest on eight different areas: E&P, Refining, Energy Efficiency and Renewable Energy, Mobility, Biofuels, Distribution, Galp Academy and other initiatives.

This diagnosis system combined i) information regarding SCT and its relationship with other companies, ii) Galp Energia’s information, concerning public documents already published (such as sustainability and annual reports), but also corporate documents, iii) partners hearings. This last approach intended to collect workers’ opinions and suggestions, and it was assembled after 20 interviews and an evaluation inquiry. Overall, 20 Galp Energia’s employees and 56 SCT stakeholders participated.

The study gathers in one document information on Galp Energia’s partnerships, pointing out this strategy benefits, such as:

Partnerships with several different partners. Universities and companies are both partners in R&D and innovation but also in training, consulting, business and creation of contacts. Additionally, these partnerships tend to cross different business units. Galp Energia recognises the advantage of working along with SCT, since it can provide answers to technological needs and refine Galp Energia human resources through training, attraction of talent, access to material resources and infrastructures that update the Company’s knowledge base and differentiate its activities.

Leadership role in the development of skills. Galp Energia is proactive in meeting critical mass of resources, aimed at networking more than one to one relationships.

Integrated dynamic of collaborations. The different partnerships between Galp Energia and SCT have an independent nature. Establishing a relationship creates the foundations for subsequent collaborations.

Interorganisational alignment. Present in the objectives of Galp Energia and its academic and technological partners.

Effort investment in human and relational capital. Through scholarships, the creation of training programs tailored to the Company’s needs and challenges and a bet on innovation as organizational unit structure interface with the SCT.

Formalising of collaborations. Through contractual regulation.

Following the investment made by Galp Energia and based on SCT stakeholders interviews these are three main recommendations:

- creation of a cross structure to manage and assess the collaboration with the SCT;
- creation of a central repository of information, for management, evaluation and disclosure purposes.
- execution of periodic internal forums to discuss the results and the working experience with universities and technology partners.
13 · INNOVATION AND TECHNOLOGY

13.1 R&D IN EXPLORATION & PRODUCTION
13.2 R&D IN REFINING
13.3 PRODUCT AND SERVICE DEVELOPMENT
   (SUSTAINABLE ENERGY AND MOBILITY)
13.4 LIVING LAB GALP TOYOTA
The increasing diversity in technology along with the market requirements affect the setting of business strategies and innovation activities, whose success depends increasingly on the respective technology partners.

In this context, collaborative relationships with SCT entities arise as a form of management suitable for activities of creation and use of knowledge that differentiate and create value for business strategies.

Galp Energia has been developing a strategy for R&D and innovation based on a cooperation with the SCT, which consists of a flexible network of partnerships and on-going development of shared skills. The three main pillars of the strategy for R&D and innovation are:

- closer ties with the SCT as well as with customers;
- differentiation in the markets where the Company is present by creating new services that meet the customers’ needs and expectations;
- active participation in the development of sectorial policies, which underpin the future development of the energy sector.

Activities developed

**Exploration & Production**

Creation of the programme of advance training and shared investigation of hydrocarbons in ultra-deep waters in the E&P sector by Galp Energia and Petrobras. The programme’s first result was the GeoER, an advanced course in Geo-engineering of carbonate reservoirs in partnership with Petrobras, UA, IST, FCUL and Brazilian universities UNICAMP and UNESP (see following pages and chapter 11).

**Completion of R&D projects in Exploration & Production.**

Study of depositional environments and diagenetic processes in carbonate reservoirs; integration of seismic data with soft data in the modelling and characterisation of carbonate reservoirs; seismic imaging in reservoirs below evaporite masses; modelling and characterisation of fractured reservoirs.

**Refining**

Programme EngIQ (PhD programme in Refining and Petrochemistry). Continuing works on eight R&D projects (Industrial PhD) and start of two new projects:

- refinement of the treatment system of sour gas in Sines refinery;
- development of inferential predictors and means of advanced process control.

Creation of Galp Energia’s R&D centre for refining, with the setup of pilot unit of hydrocracking (see following pages).

**Improvement of refining processes.** Continuing work on R&D project (Industrial PhD) – Modelling risk in industrial equipment including reliability distributions and the implementation of Reliability Centered Maintenance (RCM) – in Sines refinery.

**Last stage of project Ginseng (networks of wireless sensors for industrial environments with considerable hazard),** with a positive assessment by the European Commission, under 7.º Programa-Quadro (FP7).

**Development of new products and services (energy and sustainable mobility)**

**Project Smart Galp.** Beginning of the pilot project with the installation of the intelligent tri-fuel measuring system in 120 homes in Lisbon’s region and launch of web interface for users (see following pages).

**Energetically Efficient Fleet project.** Energy efficiency solution to reduce fuel consumption in fleets that promote changes in driving behaviours.

**Sustainable campus network.** Works under progress on sustainable campus of UA; beginning of the works in UBI’s and IST’s sustainable campus.

**PT Galp Innovation Challenge.** Competition organized in partnership with Portugal Telecom to develop services (mobile apps – Android and IOS operating systems) to increase the energy efficiency and sustainable mobility of its customers. The contest was widely publicized in social networks and ended with the Sapo Codebits event. In a first stage the contest had 84 proposals in a total of 243 participants, in a second stage 20 applications were distinguished and the first five awarded (see following pages).

**Electric car.** Galp Energia installed another four recharging points on service stations, which are located in both directions of A1 highway (Aveiras and Pombal) and it currently has a network of five points for fast recharging.

**Energy efficiency Programme Galp 20-20-20.** Continuance of the largest national scholarship programme for applied research in energy efficiency; 30 new scholarships were awarded in partnership with IST, UA and FEUP (engineering school of Oporto’s University). Since 2007, more than 100 projects were developed on energy efficiency in private or state-owned portuguese companies.
INNOVATION AND TECHNOLOGY

Companies and entities participating in Galp 20-20-20

1. Vulcano 49. Barraqueiro Transportes
2. Amorim Revestimentos 50. Renova
3. Corteira Amorim 51. Adelino Duarte da Mota
4. Gres 52. Margon
5. Portucel 53. IST
6. Lactogal 54. Hotel Corinthia
7. Adeia 55. Cober Telhas
8. Novages 56. Avihom
9. Marges 57. Parque Escolar
10. Sonae Indústria 58. Hospital Luís de Camões
11. Guf Quimigal 59. Temelec
12. BLB 60. Navaira
13. Funraip 61. Salda
14. Cerâmica Castros 62. Lameiriño
15. Sanindusa 63. António Almeida & Filhos
16. Revegres 64. Seva
17. Barbosa & Almeida 65. Somelos
18. Maltesâmica 66. TMG
19. Unicor 67. Valpi
20. BAR 68. Tracar
21. Monteiro Ribas 69. Sonafi
22. J Barneiro 70. Luis Leal & Filhos
23. Dacosta 71. Joalho Transdev
24. Sorgal 72. ERUSC Grupo ADP
25. Vista Alegre 73. UA/gises
26. Cinca 74. Grupo Pestana
27. Gresart 75. Segurança Social
28. Rogério Leal & Filhos, S. A. 76. Tapajal
29. Celhóceramic 77. Berol
30. Cerâmica de Quintãs 78. Coparm
31. Flulact 79. Panisco Donuts
32. Cliper 80. ANA
33. Campaoves 81. Akrada
34. Lasbedal 82. Sogapal
35. Celbi 83. Tate & Lyle
36. Aperer 84. Solanco
37. Joalho Transdev 85. Sovena
38. Cisral 86. TST
39. Sotelha 87. Lisboa e-nova
40. Adalberto Estampados 88. Sapopop
41. Indisa 89. Galuchô
42. Cerutel 90. Banco Espírito Santo
43. Danone Portugal 91. Sporting
44. Cerâmica Valadare 92. Porcelanhas da Costa Verde
45. Hospital Curry Cabral 93. AMS - Goma Camps
46. Hotel Sheraton 94. Prado Energia
47. Inopal Plásticos, S. A. 95. Santos Barosa
48. Rodoviária de Lisboa 96. Topper
49. Corpo de Bombeiros de Lisboa 97. Umbelino Monteiro
51. Adelino Duarte da Mota 99. Valbopan
52. Margon 100. Zollern & Comandita
53. IST 101. Francisco V Costa Marque
54. Hotel Corinthia 102. Ronutex
55. Cober Telhas 103. Saja
56. Avihom 104. TMG Acabamentos
57. Parque Escolar 105. Espírito Santo
58. Hospital Luís de Camões 106. Fásia
59. Temelec 107. Otojal
60. Navaira 108. Carvema Textil
61. Salda 109. Eurogalha
62. Lameiriño 110. FEUP
63. António Almeida & Filhos
64. Seva
65. Somelos
66. TMG
67. Valpi
68. Tracar
69. Sonafi
70. Luis Leal & Filhos
71. Joalho Transdev
72. ERUSC Grupo ADP
73. UA/gises
74. Grupo Pestana
75. Segurança Social
76. Tapajal
77. Berol
78. Coparm
79. Panisco Donuts
80. ANA
81. Akrada
82. Sogapal
83. Tate & Lyle
84. Solanco
85. Sovena
86. TST
87. Lisboa e-nova
88. Sapopop
89. Galuchô
90. Banco Espírito Santo
91. Sporting
92. Porcelanhas da Costa Verde
93. AMS - Goma Camps
94. Prado Energia
95. Santos Barosa
96. Topper


Energy efficiency in Palácio de Belém. Beginning of the project, in partnership with EDP and the national lab of engineering and geology (LNEG), with the installation of signal cables and information hubs, which will be followed by the construction of its own energy management system.

- During 2011, the first stage of the project was concluded, with the adaptation and installation of gas meters which will enable to separate the consumptions in three great areas: management services of documentation and archives (DSDA); palace and residences; civil and military house. This phase had the collaboration of Lisboa Gás and UN GN – Marketing and Development;

- In a second stage with 2012’s software development, the energy manager of Palácio de Belém will be able to check gas and electricity consumption, to compare consumption with the same period in the previous year, always aiming for the reduction of electrical bills.

Mobility

R&D fuels project. First steps of the R&D partnership with a university to create a core of development and verification of innovative and eco-efficient fuels, as well as fuel quality control.

Cooperation in project 3GForce. Characterisation of use of diesel cycle engines under hybrid functioning, using a mixture of diesel fuel and LPG propane, in heavy vehicles of passengers and goods. This project was developed in partnership with the Institute of Mechanical Engineering of IST (IDMEC-IST).

Living Lab Galp Toyota. Continuation of the long-term use test of Toyota Prius Hybrid Plug-in, in partnership with Toyota and IST (see following pages).
Biofuels

Creation of R&D consortia with Instituto Superior de Agronomia (ISA), Trás-os-Montes e Alto Douro University (UTAD), Instituto Politécnico de Portalegre (IPP) and VICORT and Domingos Reynolds de Sousa companies to develop processes of harvest, extraction, production and refining of jatropha oil to biodiesel (see chapter 6).

Innovation in Marketing

Cooperation agreement with the School of Business & Economics of Universidade Nova to solve two challenges of strategic marketing: Social Media (Galp Energia’s presence in social networks) and Loyalty (exploring new loyalty opportunities of Fast Galp card).

Relationship with the SCT

Consultation with interested parties of Galp Energia’s SCT to evaluate the Company’s network of collaborations with universities, state laboratories and technological companies (see chapter 12).

Expansion of Rede Galp Inovação to social network platforms LinkedIn and Facebook.

Performance table

<table>
<thead>
<tr>
<th>Research grants</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial PhD scholarships (R&amp;D projects)</td>
<td>17</td>
</tr>
<tr>
<td>Galp 20-20-20 scholarships</td>
<td>29</td>
</tr>
<tr>
<td>Research techniques scholarships</td>
<td>2</td>
</tr>
</tbody>
</table>


13.1 R&D in Exploration & Production

Advanced training programme and conjoined investigation in Exploration & Production of hydrocarbons in ultra-deep waters

The E&P activity is a major source of current and future value creation for Galp Energia, but is also the one that requires the most demanding technological challenges.

In this context, the Company signed a strategic alliance with Petrobras to launch a programme of advance training and shared investigation of hydrocarbons in ultra-deep waters in the E&P sector.

The first step of the programme was to approve the course on Advanced Training and Research in Geoengineering of Carbonate Reservoirs in collaboration with five Portuguese and Brazilian universities of reference in the sector (IST, UNI-FCT, UA, in Portugal, and UNICAMP and UNESP in Brazil).

The main motivation is to integrate different knowledge areas such as Geophysics, Geology and Engineering of Reservoirs, seeking to train professionals capable of working throughout the E&P oil process, namely on carbonate rocks of the Brazilian pre-salt.

The program also aims to develop R&D projects that overcome the industry technological challenges. This agreement is another example of Galp Energia and Petrobras conjoined efforts regarding Exploration & Production and it is a clear attempt to innovate and bring
13.2 R&D in refining

One of the pillars of Galp Energia’s sustainable competitiveness is the continuing development of its intellectual and strategic assets. Therefore, in refining the Company strengthened the laboratories infrastructures as well as the number of trainees and researchers in EngIQ programme.

Achievements

EngIQ programme

The EngIQ programme – PhD programme in Refining Engineering, petrochemicals and chemicals – is one of the structuring tools of R&D capacity and intelligent development of human capital in Galp Energia. The EngIQ is a partnership with five universities specialised in petrochemicals, chemicals and refining.

With only three years of existence, this initiative has already trained 40 technical experts and created 10 R&D projects in the refining business, which aim to increase the competitiveness of Galp Energia’s refining system.

It follows the list of ongoing projects:

- purification of the demetallization catalyst of heavy petroleum fractions;
- catalyst for oligomerization process of olefin to higher olefins (diesel);
- solid catalyst to alkylation of isobutene and butene mix;
- Parex unit optimization;
- jet’s mercaptans ionic liquid extraction;
- NMR technology to exploit the magnetic properties of heavy oil;
- industrial effluents quality;
- component characterization and technology modifications to cement production;
- acid gas system treatment optimization in Sines refinery;
- development of inferential predictors and advanced control means.

R&D Center of Galp Energia in refining

With the aim of increasing the R&D in the refining activity, it was implemented a research and development centre that include pilot units at a laboratory scale. The distillation, hydrocracking and hydrotreating units mimic the operation the industrial refining process.

R&D Centre integration in refining

<table>
<thead>
<tr>
<th>Raw materials</th>
<th>Physical processes</th>
<th>Catalytic chemical processes</th>
<th>Chemical and thermal processes</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude</td>
<td></td>
<td></td>
<td></td>
<td>Fuel oil</td>
</tr>
<tr>
<td></td>
<td>1. Distillation of crude oil</td>
<td>3. Catalytic reforming</td>
<td></td>
<td>LPG</td>
</tr>
<tr>
<td></td>
<td>2. Vacuum distillation</td>
<td>4. Hydrotreatment</td>
<td></td>
<td>Oil</td>
</tr>
<tr>
<td></td>
<td>5. Catalytic cracking</td>
<td>7. Visbreaker</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laboratory/Centre of research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Distillation pilot unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hydrotreatment and hydrocracking pilot unit</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

More information at:
13.3 Product and service development (sustainable energy and mobility)

Smart Galp – Tri-fuel approach

Smart Galp project – Energy Intelligent Solutions – is an innovative initiative of Galp Energia in the energy market. It is a service based on the development of a tri-fuel commercial portal, where Galp Energia interacts with its domestic customers (electricity, natural gas and fuel).

The Smart Galp solution will simultaneously promote an energy search management and the creation of innovative ways of commercial interaction with potential customers. At home or in the car, the project is based on an integrated system of intelligent devices, which have behaviour inducing solutions for energy saving and a more efficient modelling of energy consumption. This solution also allows testing new models of customer relationship.

In 2011, Galp Energia installed the necessary equipment on 120 pilot-customers and developed all information systems, required to support the project, with ISA, Logica and MIT-Portugal. At the end of the year, there were final tests to provide interfaces to pilot-customers in 2012.

PT Galp Innovation Challenge

Galp Innovation Challenge is an open channel of innovation with the SCT. This programme was launched specifically to the academic community and technological based enterprises to propose technological solutions to problems that Galp Energia has already identified. Winners receive a prize and a cooperation proposal to develop the project.

The first edition took place in 2009 with the main goal of developing a new concept of terrace heater (hotspot design).

The second edition was held in 2011 through a partnership between Galp Energia and Portugal Telecom, the leading telecommunications company in Portugal. The goal was to develop services (mobile applications – iOS and Android) that boost energy efficiency and sustainable mobility of its clients. The contest was widely publicized and ended in Sapo Codebits event. 243 contestants participated and presented 84 proposals. 20 applications reached final stage and the five best were awarded.

Achievements in PT Galp Innovation Challenge

1st award (7,500 euros): the application titled Fuel Drop was the winner. Fuel Drop allows to register the fuel spent through a simple QR code image, displayed in Galp Energia service areas.

2nd award (5,000 euros): Ecomobilidade (Ecomobility) – stand-alone app that helps the user to adopt an ecodriving behavior through vehicle monitoring.

3rd award (2,500 euros): Ecoescolhas (Ecochoices) – tool that helps user chose which household appliances are the most energetically efficient.

4th award (iPad 2+iPhone 4+iPod touch): Mobiishare – mobile app that allows you to calculate, by estimations, energy costs and CO2 emissions associated with a particular route defined by the user.

5th award (iPad 2+iPhone 4+iPod touch): DrivingCoach – mobile app that monitors, in real time, driving behaviour and recommends other actions to have a more energetically efficient driving. It uses a device connected to OBDII door of the vehicle.
Future developments
Galp Energia and Portugal Telecom are developing, in partnership with the winning teams, an application model and planning to introduce the systems in the market.

More information about PT Galp Innovation Challenge:
http://codebits.eu/ptgalpinov
http://www.facebook.com/pages/PT-GALP-Innovation-Challenge/118137628279194
http://www.facebook.com/groups/226488037402248/

More information at:

13.4 Living Lab Galp Toyota
Galp Energia and Toyota launched a living lab of sustainable mobility: three employees of Galp Energia will be testing for three years the use of three Toyota Prius Plug-In (PHEV) in a real environment. For monitoring purposes the driving behaviour of these three cars is currently undergoing an intensive and detailed collection.

Outcomes

- The three PHEV vehicles have been monitored for one year, traveling a total of 37,000 km under normal conditions of use.

- About 50% of the kilometres were travelled in electric mode – the use of electric mode varies between 40% and 60%, which corresponds to different patterns of travelling and battery charging for each use.

- Two of the three users travelled about 40% exclusively in electric mode; the third only travelled 20%. It appears this indicator is highly influenced by the charging availability at the workplace.

- Although the maximum theoretical capacity of the battery in electric mode is 20 km, a very small percentage of trips over 10 km were made exclusively in electric mode (energy stored runs out before the end of the trip or additional power is required – acceleration, air conditioning, for example).

- The fuel consumption measures are clearly below those that would be obtained with vehicles with internal combustion engine using gasoline, diesel or even hybrids without plug-in. The performed averages lie between 3,0 and 3,5 l/100 km.

- Regarding CO₂ emissions, there were savings of 40% vs. diesel and 35% vs. hybrid (also a result of the national electric mix, low in carbon).
14 • APPENDICES

14.1 APPENDIX I – ASSURANCE LETTER
14.2 APPENDIX II – TABLE GRI – KEY SUSTAINABILITY INDICATORS
14.3 APPENDIX III – ABBREVIATIONS AND ACRONYMS
14.1 Appendix I – Assurance letter

To the board of Directors of
Galp Energia, SGPS, S. A.

Independent verification report
of the Sustainability Report 2011
(Free translation from the original in Portuguese)

Introduction
In accordance with the request of Galp Energia, SGPS, S.A. (Galp Energia), we performed an independent verification of the “Sustainability Report 2011” (Report), regarding the performance indicators listed in the Scope below, included in the “GRI index” and presented in different sections of the Report. Independent verification was performed according to instructions and criteria established by Galp Energia, as referred in the Report, and according to the principles and extent described in the Scope below.

Responsibility
Galp Energia’s Board of Directors is responsible for all the information presented in the Report, as well as for the assessment criteria and for the systems and processes supporting information collection, consolidation, validation and reporting. Our responsibility is to conclude on the adequacy of the information, based upon our independent verification standards and agreed reference terms. We do not assume any responsibility over any purpose, people or organization.

Scope
Our procedures were planned and executed using the International Standard on Assurance Engagements 3000 (ISA 3000) and having the Global Reporting Initiative, version 3 (GRI3) as reference, in order to obtain a moderate level of assurance on both the performance information reported and the underlying processes and systems. The extent of our procedures, consisting of inquiries, analytical tests and some substantive work, was less significant than in a full audit. Therefore, the level of assurance provided is also lower.

The verification of the management self declaration on the application level of the Global Reporting Initiative GRI3, based on GRI’s Reporting Framework Application Levels, consisted on the verification of consistency with the applicable requirements. Part of the information required by GRI3 is available on the “Annual Report and Accounts 2011” and the “Corporate Governance Report 2011”, documents that should be used to obtain a full understanding of the developed activities, the corporate governance and the Group’s performance.

The following procedures were performed:

(i) Inquiries to management and senior officials responsible for areas under analysis, with the purpose of understanding how the information system is structured and their awareness of issues included in the Report;

(ii) Identify the existence of internal management procedures leading to the implementation of economical, environmental and social policies;

(iii) Testing the efficiency of process and systems in place for collection, consolidation, validation and reporting of the performance information previously mentioned;

(iv) Confirming, through visits to sites, that operational units follow the instructions on collection, consolidation, validation and reporting of performance indicators;

(v) Executing substantive procedures, on a sampling basis, in order to collect sufficient evidence to validate reported information;

(vi) Comparing technical data related to greenhouse gas emissions and primary energy consumption validated by the independent assurer under the European Emission Trading Scheme;

(vii) Comparing financial and economic data with those in the “Annual Report and Accounts 2011” audited by the external statutory auditor, to appraise the external validation of the reported information;

(viii) Comparing data related to refineries with previous data verified by us in the scope of the assurance of Sines and Matosinhos Data Books;

(ix) Validation of the material themes included in the Report based on the materiality principle of standard AA1000APS and GRI3, through the comparison of the Report’s content with the content of peer companies’ Sustainable Reports;

(x) Verifying the existence of data and information required to reach level A, self declared by Galp Energia for applying the GRI3.

Conclusions
Based on our work described in this report, nothing has come to our attention that causes us to believe that internal control related to the collection, consolidation, validation and reporting of the performance information referred above is not effective, in all material respects.

Based on the assumptions described on the scope, we conclude that the Report includes the data and information required for level A, according to GRI3.

As external auditors of Galp Energia, our opinion about financial data is expressed in the “Annual Report and Accounts 2011”.

Lisbon, June 1, 2012

Represented by:

António Joaquim Brochado Correia, ROC

PricewaterhouseCoopers & Associados - Sociedade de Revisores Oficiais de Contas, Lda.
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Tel +351 213 599 000, Fax +351 213 599 999; www.pwc.com/pt
Matriculada na Conservatória do Registo Comercial sob o NUPE 506.628.752, Capital Social Euros 314.000

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SUSTAINABILITY REPORT 2011 / GALP ENERGIA
### 1. Strategy and analysis

| 1.1 CEO Statement | Chapter 01 – Messages Page 15-18. |
| 1.2 Description of key impacts, risks, and opportunities | Chapter 02 – Sustainability at Galp Energia Page 20-22. |

### 2. Organization profile

| 2.1 Name of the organization | Cover. |
| 2.2 Primary brands, products, and/or services | Chapter 00 – Background. Galp in the world and infography. Page 8-9. |
| 2.3 Operational structure of the organization | See page 23 in the corporate governance report. |
| 2.4 Location of organization’s headquarters | Chapter 00 – Background. Galp in the world and infography. Page 7. |
| 2.5 Countries where the organization operates | Chapter 00 – Background. Galp in the world and infography. Page 8-9. |
| 2.6 Nature of ownership and legal form | See page 3 in the corporate governance report. |
| 2.7 Markets served | Chapter 00 – Background. Galp in the world and infography. Page 8-9. |
| 2.8 Scale of the organization | Chapter 00 – Background. Galp in the world and infography. Page 8-9. |
| 2.9 Significant changes during the reporting period | There were no significant changes. |
| 2.10 Awards received | Chapter 0 – Background. Page10-11. |

### 3. Report parameters

**Report profile**

| 3.1 Reporting period for information provided | Chapter 00 – Background. Page 7. |
| 3.2 Date of most recent previous report | Chapter 00 – Background. Page 7. |
| 3.3 Reporting cycle | Chapter 00 – Background. Page 7. |
| 3.4 Contact point for questions regarding the report or its contents | Chapter 00 – Background. Page 7. |

**Report scope and boundary**

| 3.5 Process for defining report content | Chapter 00 – Background. Page 7. |
| 3.6 Boundary of the report | Chapter 00 – Background. Page 7. |
| 3.7 Other specific limitations on the scope or boundary of the report | Chapter 00 – Background. Page 7. |
| 3.8 Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations | Chapter 00 – Background. Page 7. |

| 3.9 Data measurement techniques and the bases of calculation | Chapter 00 – Background. Page 7. |
| 3.10 Explanation of the effect of any re-statements of information provided in earlier reports | Chapter 00 – Background. Page 7. |

| 3.11 Significant changes from previous reporting periods | Chapter 00 – Background. Page 7. |

**GRI content index**

| 3.12 Table identifying the location of the standard disclosures in the GRI report | Chapter 14 – Appendix II. Page 91-97. |

**Assurance**

| 3.13 Policy and current practice with regard to seeking external assurance for the report | Chapter 00 – Background. Page 7-90. |
Avoiding the redundancy of Governance information is available in the Corporate Governance report 2011.

<table>
<thead>
<tr>
<th>4. Governance, commitments, and engagement governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Governance structure of the organization.</td>
</tr>
<tr>
<td>4.2 Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management).</td>
</tr>
<tr>
<td>4.3 State the number of members of the highest governance body that are independent and/or non-executive members.</td>
</tr>
<tr>
<td>4.4 Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.</td>
</tr>
<tr>
<td>4.5 Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).</td>
</tr>
<tr>
<td>4.6 Processes in place for the highest governance body to ensure conflicts of interest are avoided.</td>
</tr>
<tr>
<td>4.7 Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics.</td>
</tr>
<tr>
<td>4.8 Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.</td>
</tr>
<tr>
<td>4.9 Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.</td>
</tr>
<tr>
<td>4.10 Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.</td>
</tr>
</tbody>
</table>

**Commissions to external initiatives**

| 4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organization. | Chapter 04 – Risk management. Page 27-28 + See pages 31-36 in the corporate governance report. |
| 4.12 Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses. | Chapter 07 – Management of environment, health, safety (EHS) and quality. Page 46. |
| 4.13 Memberships in associations (such as industry associations) and/or national/international advocacy organizations. | APREN, Enegrin, CONCAWE, APIORB, CIP, CCIP, WavEC, ADEPorto, ADENE, Europa, COTEC, IEC, APETRO. |

**Stakeholder engagement**

| 4.14 List of stakeholder groups engaged by the organization. | Chapter 12 – Stakeholder engagement. Page 78. |
| 4.15 Basis for identification and selection of stakeholders with whom to engage. | Stakeholders were identified according to the criteria of the AA1000 Standard, namely influence, dependence and responsibility criteria in order to identify critical stakeholders and key stakeholders. |
| 4.17 Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns. | Chapter 12 – Stakeholder engagement. Page 79. |

Management approach, goals, performance, policies and framework.

**Economic performance**

**Aspect: economic performance**

| EC1 Direct economic value generated and distributed (including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments). | Chapter 00 – Background. Page 14. |
| EC2 Financial implications and other risks and opportunities for the organization's activities due to climate change. | Chapter 06 – Strategy for climate change. Page 33-43. |
| EC3 Coverage of the organization's defined benefit plan obligations. | See pages 91, 109 in the corporate governance report. |
| EC4 Significant financial assistance received from government. | Chapter 00 – Background. Galp in the world and infography. Page 14. |

**Aspect: market presence**

| EC5 Range of ratios of standard entry-level wage compared to local minimum wage at significant locations of operation. | N. A. |
| EC6 Policy, practices, and proportion of spending on locally based suppliers at significant locations of operation. | Galp Energia has not applied any policy for local suppliers at operational units – the policy is the same for all countries where Galp Energia operates. Whenever possible, Galp Energia makes a similar contract for all companies and businesses. |
**Economic performance (cont.)**

**EC7** Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation.

The hiring criteria are the same in the Galp Energia group and favour internal applicants. When external employees are required, at least three applicants are considered.

<table>
<thead>
<tr>
<th>Countries</th>
<th>Employees with top Positions</th>
<th>%Top positions occupied by individuals of the community total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expatriate</td>
<td>Local</td>
</tr>
<tr>
<td>Spain (s/ Gestes)</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Guinea-Bissau</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Angola</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Swaziland</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Gambia</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Mozambique</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Brazil</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

**Aspect: indirect economic impacts**

**EC8** Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in kind, or pro bono engagement.

Chapter 11 – Corporate responsibility + Chapter 06 – Strategy for climate change + Chapter 00 – Background: Galp in the world and infography. Galp Energia intends to join the London Benchmarking Group in 2012. This tool will enable to report this indicator in the best possible way. Page 6-9, 38, 70.

**EC9** Understanding and describing significant indirect economic impacts, including the extent of impacts.

Chapter 11 – Corporate responsibility + Chapter 06 – Strategy for climate change. Page 38-41.

Management approach, goals, performance, policies and framework.

**Environmental performance**

**Aspect: materials**

**EN1** Materials used by weight or volume.

Chapter 8 – Environmental performance. Page 54.

**EN2** Percentage of materials used that are recycled input materials.

Galp Energia does consider this indicator to be relevant.

**Aspect: energy**

**EN3** Direct energy consumption by primary energy source.


**EN4** Indirect energy consumption by primary source.

<table>
<thead>
<tr>
<th>Primary Energy Source</th>
<th>Mix EDP SU</th>
<th>Consumption per primary energy source (GJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydro Power</td>
<td>15.1%</td>
<td>365,791</td>
</tr>
<tr>
<td>Wind Power</td>
<td>31.8%</td>
<td>770,341</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>14.5%</td>
<td>351,256</td>
</tr>
<tr>
<td>Coal</td>
<td>14.0%</td>
<td>339,144</td>
</tr>
<tr>
<td>Other</td>
<td>15.4%</td>
<td>373,058</td>
</tr>
<tr>
<td>Other renewable</td>
<td>9.2%</td>
<td>222,866</td>
</tr>
</tbody>
</table>

* Source: website site EDP SU.

**EN5** Energy saved due to conservation and efficiency improvements.


**EN6** Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.


**EN7** Initiatives to reduce indirect energy consumption and reductions achieved.


**Aspect: water**

**EN8** Total water withdrawal by source.


**EN9** Water sources significantly affected by withdrawal of water.

N. A.

**EN10** Percentage and total volume of water recycled and reused.

Chapter 8 – Environmental performance. Page 52.

**Aspect: biodiversity**

**EN11** Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.

Chapter 8 – Environmental performance. Page 55.
Environmental performance (cont.)

EN12 Significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas. Chapter 8 – Environmental performance. Page 55.

EN13 Habitats protected or restored. N. A.


EN15 Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk. The studies on environmental impact performed at refineries did not show significant impacts on species included in the IUCN Red List.

Aspect: emissions, effluents, and waste


EN18 Initiatives to reduce greenhouse gas emissions and reductions achieved. Chapter 06 – Strategy for climate change. Page 35-37, 41-42.

EN19 Emissions of ozone-depleting substances by weight. Galp Energia does not produce any ozone-depleting substances.

EN20 NOx, SOx, and other significant air emissions by type and weight. Chapter 8 – Environmental performance. Page 54.


EN22 Total weight of waste by type and disposal method. This year it was not possible to report the final destination of the waste but Galp Energia is currently implementing a tool which in the next year will fulfill this indicator properly.

EN23 Total number and volume of significant discharges – spills. 108,775 litres corresponding to 103 incidents of loss of primary containment. Nonetheless the value we have may have some errors associated since:

• not all the received reports involving spills indicate the amount of loss of containment;
• some values are estimates;
• it is not possible to know how much actually affects the environment (many of these spills are contained in containment basins).

The new version of the internal standard, applied in 2012, allows the distinction between loss of containments that affect the environment from those that do not affect it.

EN24 Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally. N. A.

EN25 Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization’s discharges of water and runoff. N. A.

Aspect: products and services

EN26 Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation. Chapter 06 – Strategy for climate change. Page 35-37.

EN27 Percentage of products sold and their packaging materials that are reclaimed by category. N. A. It is not possible to track the amount of recycled packages.

Aspect: compliance

EN28 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations. Eleven environmental fines were incurred in 2011, whose amount has not been determined yet since it spans a broad range.

Aspect: transport

EN29 Significant environmental impacts of transporting products and other goods and materials used for the organization’s operations, and transporting members of the workforce. Chapter 06 – Strategy for climate change. Page 38-40.

Aspect: overall

EN30 Total environmental protection expenditures and investments by type. Chapter 00 – Background. Page 7.

Management approach, goals, policies and framework.

Social performance

Aspect: employment

LA1 Total workforce by employment type (full-time or part-time), employment contract (full or partial) and by region. Chapter 10 – Human capital. Page 62.

LA2 Total number of employees and turnover by age group, gender and region. Chapter 10 – Human capital. Page 63.
Social performance (cont.)

LA3 Benefits provided to full-time employees that are not provided to temporary or part-time employees by main operations. Mandatory benefits/conditions laid down in the Labour Code:
• employment security/ban on unfair dismissal;
• maximum duration of working period;
• minimum period of rest;
• holidays and allowances;
• christmas subsidy;
• minimum compensation and payment of supplementary work;
• terms of occasional secondment of employees;
• training;
• safety, hygiene and health at work;
• workplace insurance/right to indemnity for workplace accidents;
• protection of parenting;
• protection of the employment of underage people;
• status of worker-student;
• equal treatment and non discrimination;
• prohibition of harassment.

ASPECT: LABOUR/MANAGEMENT RELATIONS

LA4 Percentage of employees covered by collective bargaining agreements. The percentage of employees is 80.86%.

LA5 Minimum notice periods regarding operational changes, including whether it is specified in collective agreements. There is no minimum notice period regarding operational changes. Whenever changes occur, employees are warned.

ASPECT: OCCUPATIONAL HEALTH AND SAFETY

LA6 Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programmes. The percentage of employees represented at HSST committees is 36.02%.

LA7 Percentage of occupation diseases, lost days, absenteeism and fatalities related to work by region. The absenteeism in Galp Energia is 3.34%.

LA8 Education programmes, training, advisory, ongoing prevention and risk control to guarantee assistance to employees, their families or members of the community affected by serious diseases. For more information, read page 70 of the Sustainability Report 2005-2006 at www.galpenergia.com.

LA9 Health and safety topics covered by formal agreements with trade unions. Chapter 10 – Human capital. Chapter 11 – Corporate responsibility.

ASPECT: TRAINING AND EDUCATION

LA10 Number of hours of training: 141,235
Number of participations: 14,013
Number of training per employee: 18.7
Average hours of training per category professional: 63
Chapter 10 – Human capital. Page 63.

LA11 Programmes for skill management and continuous learning that support continued employability and assist them in managing career ends. Chapter 10 – Human capital. Page 61, 65.

LA12 Percentage of employees receiving regular performance and career development reviews. The percentage of employees is 59.21%.

ASPECT: DIVERSITY

LA13 Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity. Chapter 10 – Human capital. Page 62.

LA14 Ratio of basic salary of men to women by employee category. Executive/top managers = 1.0; first line management/supervisor = 1.05; middle/general management = 1.12; specialist groups = 1.06; other employees = 0.95.

Management approach, goals, policies and framework:

**Social performance – Human rights**

**Aspect: investment and procurement practices**

HR1 Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken. Galp Energia’s policy does not include human rights clauses in investment agreements. However, companies are subject to a certification process before becoming suppliers.

HR2 Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken. Galp Energia does not include human rights clauses in the assessment of suppliers and contractors. However, companies are subject to a certification process before becoming suppliers. This process focuses on financial and tax issues, as well as quality and safety processes.
### Social performance – Human rights (cont.)

<table>
<thead>
<tr>
<th>HR3</th>
<th>Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.</th>
<th>Galp Energia does not have any training programme on human rights for employees.</th>
</tr>
</thead>
</table>

#### Aspect: non-discrimination

<table>
<thead>
<tr>
<th>HR4</th>
<th>Total number of incidents of discrimination and actions taken.</th>
<th>In 2011, Galp Energia did not have or start a process with the described features.</th>
</tr>
</thead>
</table>

#### Aspect: freedom of association and collective bargaining

<table>
<thead>
<tr>
<th>HR5</th>
<th>Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.</th>
<th>There were no such operations.</th>
</tr>
</thead>
</table>

#### Aspect: child labor

<table>
<thead>
<tr>
<th>HR6</th>
<th>Operations identified as having significant risk for incidents of child labour, and measures taken to contribute to the elimination of child labour.</th>
<th>Galp Energia considers there is no risk of child labour in its operations.</th>
</tr>
</thead>
</table>

#### Aspect: forced and compulsory labor

<table>
<thead>
<tr>
<th>HR7</th>
<th>Operations identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of forced or compulsory labour.</th>
<th>Galp Energia considers there is no risk for incidents of forced or compulsory labour in its operations.</th>
</tr>
</thead>
</table>

#### Aspect: security practices

<table>
<thead>
<tr>
<th>HR8</th>
<th>Percentage of security personnel trained in the organization’s policies or procedures concerning aspects of human rights that are relevant to operations.</th>
<th>Galp Energia has no training programme of security personnel concerning aspects of human rights.</th>
</tr>
</thead>
</table>

#### Aspect: indigenous rights

<table>
<thead>
<tr>
<th>HR9</th>
<th>Total number of incidents of violations involving rights of indigenous people and actions taken.</th>
<th>In 2011, no suit was filed with the described features.</th>
</tr>
</thead>
</table>

### Management approach, goals, performance, policies and framework.

#### Social performance – Society

<table>
<thead>
<tr>
<th>S01</th>
<th>Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.</th>
<th>Chapter 11 – Corporate responsibility Page 67-75. Galp Energia intends to join the London Benchmarking Group in 2012. This tool will enable to report this indicator in the best possible way.</th>
</tr>
</thead>
</table>

#### Aspect: community

<table>
<thead>
<tr>
<th>S02</th>
<th>Percentage and total number of business units analyzed for risks related to corruption.</th>
<th>In 2011 there was no process with the described features. However, disciplinary proceedings were filed against 2 employees, leading to the disciplinary sanction of dismissal for breach of professional duties.</th>
</tr>
</thead>
</table>

#### Aspect: corruption

<table>
<thead>
<tr>
<th>S03</th>
<th>Percentage of employees trained in organization’s anti-corruption policies and procedures.</th>
<th>Galp Energia has no training programme of security personnel concerning aspects of human rights.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>S04</th>
<th>Actions taken in response to incidents of corruption.</th>
<th>Galp Energia did not organise any training session on anti-corruption policies and procedures.</th>
</tr>
</thead>
</table>

#### Aspect: public policy

<table>
<thead>
<tr>
<th>S05</th>
<th>Public policy positions and participation in public policy development and lobbying.</th>
<th>Meetings with parliamentary groups of the Assembly, meeting with local authorities and town councils, Palmela, Sindt, Matosinhos, Setubal, Funchal, participation in working groups to prepare and promote the International Year of Forests, in close collaboration with several companies and entities under the high patronage and coordination of the Ministry of Agriculture, meetings with AICEP. Established relationship with several agencies on East Timor, through several meetings and working groups, in order to set a partnership in the energy sector. And chapter 07 – Management of safety, health, environment and quality. Pag. 50.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>S06</th>
<th>Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.</th>
<th>Galp Energia did not fund any political party or related institutions.</th>
</tr>
</thead>
</table>

#### Aspect: anti-competitive behaviour

<table>
<thead>
<tr>
<th>S07</th>
<th>Total number of legal actions for anticompetitive behaviour, anti-trust, and monopoly practices and their outcomes.</th>
<th>One fine.</th>
</tr>
</thead>
</table>

#### Aspect: compliance

<table>
<thead>
<tr>
<th>S08</th>
<th>Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.</th>
<th>103 lines, which may amount to €31,140.25.</th>
</tr>
</thead>
</table>
Management approach, goals, performance, policies and framework.

### Social performance – Product responsibility

#### Aspect: customer health and safety

| PR1 | Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures. |
| PR2 | Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes. |

In 2012, with the beginning of the verification mechanisms of sustainability criteria imposed by Directive 2009/28/EC, in Portugal and Spain, Galp Energia will continue its policy of incorporating renewable fuels in the sector of transportation demanding their suppliers information on sustainability of acquired biofuels. For more information, see page 84 of the Sustainability Report 2010.

#### Aspect: product and service labelling

| PR3 | Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements. |
| PR4 | Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes. |
| PR5 | Practices related to customer satisfaction, including results of research on the subject. |

Galp Energia provides information on possible hazards related to products sold, as well as recommendations for safe use, through safety data files and labelling instructions drafted according to the law and subsequently placed on the packaging. There is an internal procedure that regulates the draft, attainment and internal and external spread of safety data files and labelling instructions.

#### PR6 | Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship. |

All marketing communications, including advertising, promotion and sponsorship, fulfill the government decree Decreto-Lei No. 300/90, of 23 October.

#### PR7 | Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes. |

11 fines for misleading advertising.

#### Aspect: customer privacy

| PR8 | Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data. |

None.

#### Aspect: compliance

| PR9 | Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services. |

The value of the fine is yet to be established since is currently defined in a range of values.
14.3 Appendix III – Abbreviations and acronyms

ABAE: Blue Flag Association for Europe
ADENE: Portugal’s agency for energy
APA: Portuguese agency for the environment
APETRO: Portugal’s oil trade association
APIC: Portuguese Association for Cardiovascular Intervention
BSC: balanced scorecards
CE: European Commission
CLP: classification, labelling and packaging
CML: Lisbon Municipality
CO₂: carbon dioxide
COMET: Integrated infrastructure for CO₂ transport and storage in the west Mediterranean
CONCAWE: European Association for Environment, Health and Safety in Refining and Distribution
COSO: Committee of Sponsoring Organizations of the Treadway Commission
CPT: Compliant piled tower
CWT: CO₂ weighted tonne
DGAE: General direction of economic activities
DGEG: General direction of energy and geology
DJSI: Dow Jones Sustainability Index
DUAT: right to use and explore land
E&P: Exploration and Production
EHS: Environment, Health and Safety
EI: energy intensity index
EITI: Extractive Industries Transparency Initiative
EMEL: Lisbon Parking Public Company
ENAC: National Strategy of climate change adaption
EQS: Environment, Quality and Safety
ERSE: Energy Services Regulator
EU ETS: European Emissions Trading Scheme
FAO: Food and Agriculture Organization of the United Nations
FCT-UNL: Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa (Science and Technology Faculty of New University of Lisbon)
FCUL: Science Faculty, University of Lisbon
FEED: front-end engineering and design
FEUP: Faculty of Engineering, University of Porto
FLNG: floating liquefied natural gas
GHG: greenhouse gas
GN: natural gas
GRACE: Corporate Citizenship Support Group
GRI G3: Global Reporting Initiative, third issue
GSE: Galp Soluções de Energia
GWh: gigawatt-hour
ha: hectare
IDMEC-IST: Mechanical Engineering Institute of Instituto Superior Técnico
IEA: International Energy Agency
IMC: Museum and Conservation Institute
IPSS: Private Social Solidarity Institutions
ISA: Instituto Superior de Agronomia (Agronomy Institute)
ISCTE-IUL: ISCTE - Instituto Universitário de Lisboa
IST: Instituto Superior Técnico
IUCN: International Union for Conservation of Nature
kboedp: thousand-barrels of oil equivalent per day
km: kilometre
KPI: key performance indicators
KW: kilowatt
LNEG: Portugal’s laboratory of engineering and geology
LNG: liquid natural gas
LPG: liquefied petroleum gas
ME: millions of euros
Mm³: million cubic meters
MMscf: million standard cubic feet
Mt: megaton
MW: megawatt
MWh: megawatt-hour
NERCHA: National Emergency Response Council on HIV and AIDS
OLB: International Labour Organization
OPAS: environment and safety preventive observations
PPEC: Electric Energy Consumption Plan
PT: Portugal Telecom
RCA: root cause analysis
RH: human resources
ROI: return on investment
SAM: Sustainability Asset Management
SCML: Santa Casa da Misericórdia de Lisboa
SCT: scientific and technological system
SPF: Portuguese Association of Physics
tCO₂: tonnes of CO₂
Tcf: trillion cubic feet
toe: tonnes of oil equivalent
UA: Universidade de Aveiro (University of Aveiro)
UBI: Universidade de Beira Interior (University of Beira Interior)
UC: Universidade de Coimbra (University of Coimbra)
UN: business unit
UNEP: United Nations Environment Programme
UNESCO: United Nations Educational, Scientific and Cultural Organization
UNESP: São Paulo’s State University
UNICAMP: Campinas State University
UTAD: Universidade de Trás-os-Montes e Alto Douro (University of Trás-os-Montes e Alto Douro)
WWF: World Wildlife Found
In search of more and better energy