Petrobras will be an integrated energy company with a strong international presence and leader in Latin America, operating with its focus on profitability and on social and environmental responsibility.

Introduction

Transparency is key to the disclosure of information on Petrobras to all its stakeholders. This principle is integral to the best practices of corporate governance adopted by Petrobras and underlies the content of this Annual Report, the objective being to provide shareholders, clients, employees, government and society with a comprehensive knowledge of the businesses.

Additional information can be found in the web site www.petrobras.com.br
The Castor Oil Biodiesel Pilot Plant in Guamaré (RN) has a capacity to produce 5,000 liters/day on a continuous basis as from 2005. With technology developed by Petrobras, Brazil is the only country able to extract biodiesel from the castor oil seed.

**Areas of operation**

Petrobras in Brazil and in the World

**Credits**

Preparation, Editing and General Coordination: Investor Relations and Institutional Communication

Revision of Content: The Global Consulting Group / Global RI

Graphic Project: CorpGroup

Photographs: Bruno Veiga, Claudia Martins, Cris Isidoro, Fábio Corrêa, Felipe Goifman, Geraldo Falcão, Giovani Sérgio, José Caldas, Juarez Cavalcanti, J. Valpereiro, Maurício Simonetti, Rogério Reis, Walter Firmo e Banco de Imagens Petrobras.

Graphic Design: CorpGroup - Alexandre Dian

Printing: Gráfica Santa Marta

Paper: This report was printed on Reciclato paper.

Cover Photograph: Petrobras Images Bank - LNG / Liquefied Natural Gas
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Cover Photograph: Castor Oil Plant Leaf – Petrobras Images Bank

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Petrobras is a publicly listed company which operates on an integrated and specialized basis in the following segments of the oil, gas and energy industry: exploration and production; refining, commercialization, transportation and petrochemicals; distribution of oil products; natural gas and energy. Founded in 1953, the Company is the world’s 15th largest oil company according to the periodical Petroleum Intelligence Weekly. Leader in the Brazilian hydrocarbons sector, Petrobras has been expanding its operations to become an international energy company and a leader in Latin America.

To operate safely and profitably in the oil, gas and energy domestic and international markets in a socially and environmentally responsible manner, supplying products and services to meet the needs of its clients and contributing to the development of Brazil and the countries in which it operates.

• Focus on the Company’s principal stakeholders: shareholders, clients, employees, society, government, partners, suppliers and the communities in which the Company operates;

• A spirit of entrepreneurship and an ability to meet challenges;

• A permanent quest for business leadership;

• Excellence and leadership in questions of health, safety and preservation of the environment;

• Innovative and competitive spirit with a focus on providing services with a competitive edge and technological competence;

• Achieving excellence in results.
Conduct

- Ethics in business;
- Leadership by example;
- Emphasis on integration and the development of team work;
- Focus on development and the sustainability of competitive advantages;
- Rigorous monitoring of results with recognition and accountability by performance;
- Transparency in the relations with the shareholders, employees, communities and the other stakeholders.

Vision 2015

Petrobras will be an integrated energy company with a strong international presence and leader in Latin America, operating with its focus on profitability and social and environmental responsibility.
## Operational summary – 2004

**PROVED RESERVES** (billions of barrels of oil equivalent – boe)\(^{(1)(4)}\) 11.8
- Oil and condensate (billions of barrels) 9.9
- Natural gas (billions of boe) 1.9

**AVERAGE DAILY PRODUCTION** (th. boed)\(^{(1)(3)}\) 2,020
- Oil and NGL (th. bpd) 1,661
  - Onshore 407
  - Offshore 1,254
- Natural gas (th. boed) 359
  - Onshore 217
  - Offshore 142

**PRODUCING WELLS** (oil and natural gas) – 12/31/2004\(^{(1)}\) 13,821
- Onshore 13,156
- Offshore 665

**DRILLING RIGS** – 12/31/2004\(^{(7)}\) 50
- Onshore 19
- Offshore 31

**OPERATING PRODUCTION PLATFORMS** – 12/31/2004 95
- Fixed 72
- Floating 23

**PIPESINES (km)** – 12/31/2004\(^{(4)}\)
- Oil and oil products\(^{(5)}\) 11,317
- Natural gas\(^{(2)}\) 19,001

**TANKER FLEET** – 12/31/2004
- Vessels – company owned 46
  - chartered 74
- Tons (millions of deadweight tons – dwt) 7.7

**TERMINALS** – 12/31/2004
- Private maritime\(^{(3)}\) 19
- Private fluvial\(^{(3)}\) 5
- Third party maritime, fluvial and lake ports\(^{(5)}\) 1
- Onshore 29
- Storage capacity (million barrels)\(^{(8)}\) 63.3

**REFINERIES** – 12/31/2004\(^{(7)}\)
- Number\(^{(6)}\) 15
- Nominal installed capacity (th. bpd)\(^{(9)}\) 2,125
- Average throughput processed (th. bpd) 1,847
- Brazil 1,728
- Overseas 119
- Average daily production of oil products (th. bpd) 1,797
IMPORTS (th. bpd)

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil</td>
<td>450</td>
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<tr>
<td>Oil products</td>
<td>109</td>
</tr>
</tbody>
</table>

EXPORTS (th. bpd)

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil</td>
<td>181</td>
</tr>
<tr>
<td>Oil products</td>
<td>228</td>
</tr>
</tbody>
</table>

COMMERCIALIZATION OF OIL PRODUCTS (th. bpd)

<table>
<thead>
<tr>
<th>Country</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>1,637</td>
</tr>
</tbody>
</table>

INTERNATIONAL SALES (th. bpd)

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil, Gas and Oil Products</td>
<td>416</td>
</tr>
</tbody>
</table>

ORIGIN OF NATURAL GAS (million m³/day)

<table>
<thead>
<tr>
<th>Source</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic gas</td>
<td>45.8</td>
</tr>
<tr>
<td>Bolivian gas</td>
<td>19.5</td>
</tr>
</tbody>
</table>

NATURAL GAS MARKET DISTRIBUTION (million m³/day)

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributors</td>
<td>30.4</td>
</tr>
<tr>
<td>Thermoelectric power plants</td>
<td>7.2</td>
</tr>
<tr>
<td>Domestic consumption</td>
<td>27.7</td>
</tr>
</tbody>
</table>

ENERGY(1)  

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of thermoelectric power plants</td>
<td>10</td>
</tr>
<tr>
<td>Installed capacity (MW)(5)</td>
<td>1,912</td>
</tr>
<tr>
<td>Energy sales (GWh)</td>
<td>11.32</td>
</tr>
<tr>
<td>Number of hydroelectric power plants</td>
<td>2</td>
</tr>
<tr>
<td>Installed capacity (MW)</td>
<td>1,685</td>
</tr>
<tr>
<td>Transmission lines (km)</td>
<td>15,414</td>
</tr>
<tr>
<td>Energy distribution (TWh/year)</td>
<td>13</td>
</tr>
</tbody>
</table>

FERTILIZERS (number of plants – 2)(1)

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average daily amonia production (tons)</td>
<td>1,852</td>
</tr>
<tr>
<td>Average daily urea production (tons)</td>
<td>1,598</td>
</tr>
</tbody>
</table>

Notes:
(1) Includes overseas data, corresponding to Petrobras’ stake in each partnership.
(2) Includes the Brazilian stretch of the Bolivian-Brazil Gas Pipeline.
(3) NGL is not included under natural gas production.
(4) Proved reserves are calculated according to Securities and Exchange Commission (SEC) criteria.
(5) Includes flow lines.
(6) Includes assets with a stake equal or larger than 50% only.
(7) Includes Company and third-party drillings rigs.
(8) Includes Transpetro port terminals only.
Voting Capital – Common Shares

- Federal Government
- BNDESPar
- ADR Level 3
- FMP – FGTS Petrobras
- Foreign Investors (Resolution nº 2,689 C.M.N.)
- Other private individuals and corporates (1)

Non-voting capital – Preferred Shares

- BNDESPar
- ADR Level 3
- Foreign Investors (Resolution nº 2,689 C.M.N.)
- Other private individuals and corporates (1)

(1) Covers Bovespa custody and other entities.

Production of Oil, NGL, Condensate and Natural Gas (Consolidated) (th. boed)

- Oil, NGL, and Condensate
- Natural Gas

(1) Covers Bovespa custody and other entities.
Evolution in Proved Reserves of Oil, NGL, Condensate and Natural Gas
(SEC criteria)
(billions boed)

Processed Throughput
Consolidated (million bpd)

Oil and Oil Products Spills (m³)

Lost Time Injury Frequency Rate
- LTIFR/TFCA

Spills of more than 1 barrel (0.159 m³) impacting the environment outside installation perimeter

Number of lost time injuries per million men-hours of exposure to risk.
Note: TFCA covers employees and outsourced workers.
Net Income – US GAAP criteria
Consolidated (US$ million)

Gross and Net Margin
US GAAP criteria – Consolidated

Gross Debt – US GAAP criteria
Consolidated (US$ billion)

(1) Includes Project Finance and leasing
Earnings/Share – US GAAP criteria
Consolidated (US$/share)

Petrobras Debt Ratio

- Short term debt/Total debt
- Net debt/Net capitalization
The year saw a combination of challenges and important progress in Petrobras’ strategy of leading the oil, natural gas and oil products markets in Latin America on the basis of growth, profitability and social and environmental responsibility.

While we experienced a decline in domestic oil production of 3.1% due to delays in the start-up of new platforms, at the same time, we recorded major sustainable progress in exploration activities in Brazil and overseas, in refining, petrochemicals, distribution, natural gas and transportation. With the reduction in domestic output, the Company imported more oil and exported less to ensure the market was fully supplied. To offset the cost, the Company adopted a strategy of processing more imported oil through its refineries thus adding more value to the product. The outcome was a 4% increase in the output of oil products over the previous year to 1,797 thousand barrels per day (bpd).

The international scenario was marked by a much tighter relationship between demand and production capacity, driving oil prices to record nominal levels. Significant domestic economic growth resulted in a recovery in consumption following three years of lackluster demand.

Net revenues reached US$ 37.4 billion, 22% higher than the preceding year, driven by domestic sales and in spite of the reduction in exports. Net income was US$ 6.2 billion, the same level as the excellent result posted for the previous year (of US$ 6.5 billion), reflecting our long-term strategy of significant investments for increasing competitiveness, production capacity and reserves. In this context, during the year, the Company invested US$ 7.7 billion, 18% more than in 2003, the larger portion of which – US$ 5.2 billion – dedicated to increasing both production and also oil and gas reserves in Brazil and overseas.

The progress in exploration activities and the results of the National Petroleum Agency’s (ANP) sixth bidding round – disputed by major international competitors – has made the target in our Strategic Plan of reaching 17.3 billion barrels of oil equivalent in proved domestic reserves by 2010, a perfectly achievable one. This compares with the current 13.02 billion boe based on Society of Petroleum Engineers (SPE) criteria.
At the last ANP bidding round, the Company bid for 113 blocks, and was successful in 107, thus ensuring its continued momentum in exploration and resulting in important finds. A highlight in this respect is the beginning of production of more commercially valuable light oil, and the detection of reserves representing a daily output of 150 thousand barrels of this type of oil with the start-up of the first producing systems in Espírito Santo and Sergipe in 2006.

We proceeded apace with our expansion program, which provides for 16 new heavy duty platforms by 2008 in the Campos Basin as well as P–52, the construction contract for which was signed in December 2003. The contract for building the P–34, P–54 and P–51 platforms was signed in June, representing a total capacity of 420 thousand barrels per day (bpd). Not only will this new platform complex contribute to Brazilian self-sufficiency in 2006, but it will also pave the way for hitting our domestic production target of 2.3 million bpd in 2010.

The Company also made steady progress in natural gas production. This is a fuel of growing importance in the domestic energy matrix, combining lower costs with a reduced environmental impact. In addition, other important initiatives were our debut in the Uruguayan natural gas distribution market and the export of Bolivian gas to Argentina – both important in strengthening Petrobras’ role as an integrated energy company in the Southern Cone.

Another step forward was the acquisition of 100% of Agip do Brasil’s capital stock, resulting in the incorporation of the Liquigás brand name and the distribution of Liquefied Petroleum Gas (LPG) to 21.2% of the domestic market, in addition to taking over a 1,550 service station network and 5,000 lubricant points of sale.

The Company was also able to consolidate its strategy of selectively expanding its activity in the Brazilian and Southern Cone petrochemical market. In this respect, we increased Petroquímica Triunfo’s voting and total capital to 70.45% and 85.04%, respectively.

In the downstream area, we began operating diesel hydrotreatment units at the Presidente Getúlio Vargas, Duque de Caxias and Gabriel Passos refineries as part of our ongoing policy of upgrading quality. The delayed coking and diesel hydrotreatment units were also commissioned at the Paulínia Refinery, in line with the strategy of processing a greater volume of heavy domestic crude and adding value to the Brazilian product.

Our international presence has been further expanded with the beginning of deepwater exploration in Colombia, E&P in Tanzania and Iran and gas distribution in Uruguay. In June, we signed a contract with the National Iranian Oil Company (NIOC), marking the Company’s return to the Middle East after 20 years. Moreover, the good results from oil and gas exploration in the US sector of the Gulf of Mexico and the acquisition of further exploration rights have enhanced the Company’s business in that area.

In 2004 we approved the merger of EG3, Petrolera Santa Fé and Petrobras Argentina with Petrobras Energia S.A. This will simplify business operations and will capture operational and fiscal synergies for these companies.

From the financial point of view, the Company’s improved international risk
agency rating was one of the major achievements of 2004. In December, Petrobras’ rating reached one notch below investment grade, the best classification on the international scale, placing it in an even more favorable position to raise funds in the market at more competitive costs. Petrobras’ robust cash generation reduced the need for third party funding. Total lines of only US$ 600 million were arranged in the international capital markets during the year, 60% less than 2003, and at lower costs for funding at a ten–year maturity. The net debt to equity ratio declined from 41% to 35%.

The equity market has given due recognition to the Company’s performance and outlook. While oil industry share prices rose an average of...

Our capital expenditures were concentrated on increasing our competitiveness, production capacity and reserves.

During 2004, capital expenditures amounted to:

US$ 7
of 28% on the international market, Petrobras stock appreciated 36% (PBR) and 35.8% (PBRA) on the New York Stock Exchange. During the year, Petrobras’ ON and PN shares rallied by 26.6% and 27.2% respectively on the São Paulo Stock Exchange compared with 17.5% for the Bovespa Index.

We also improved our corporate governance practices for which we were awarded the Transparency Trophy by the Institute for Accounting, Actuarial and Financial Research Foundation (Fipecafi) of the Universidade de São Paulo (USP), Anefac and Serasa. We made important progress in our commitment to the best corporate governance practices with the creation of a Committee for Management of Internal Controls to coordinate the groundwork for complying with the strictest regulatory standards, controls and procedures. The Company also set up a Social and Environmental Responsibility Management Committee for coordinating its initiatives for sustainable growth.

We believe that Petrobras also has a social and environmental responsibility dimension which must be integrated with our commitment to the growth and profitability of the business. Not only does the Company have a tradition of supporting and sponsoring social, cultural and sporting projects but also in 2004, it adopted initiatives in parallel with the Brazilian government’s campaign to combat hunger and poverty through the Petrobras Zero Hunger Program. As part of this program, we selected 73 development projects for fostering the dignified social inclusion of the poorest communities in Brazilian society.

We also believe that it is Petrobras’ duty to contribute to the improvement of the environment through the prevention of accidents, the maintenance of trained and proactive teams for dealing with emergencies and a permanent quest for improving production processes to ensure that the business model has sustainable development as its bedrock.

These results and the progress achieved could only have been made possible with the talent, dedication and exceptional performance of the thousands of employees at all Petrobras’ units. To all, we wish to extend a vote of thanks and recognition for their dedication and professionalism. We would also like to thank our shareholders for their support in implementing the Company’s strategy, the partnership of the suppliers and the preference of our clients who in our day-to-day activities are constantly challenging us to exceed our quality and performance targets.

José Eduardo Dutra
President and CEO
Tendencies in the oil and natural gas market

Oil prices rose sharply during the year, driven by such market factors as major growth in demand for oil products and pressure on production and refining capacity.

In relation to its recent history, the year was an atypical one for the oil industry. For the first time since the oil shocks of the seventies, the market experienced a vertiginous price spiral driven by market fundamentals and not only by geopolitical factors as in the crises of 1973, 1979 and 1990.

There was a record nominal rise in oil reference prices from US$ 29.14 to a peak of US$ 52.09 (Brent) and from US$ 32.46 to a maximum of US$ 56.30 (WTI), together with substantial volatility. The robust prices reflected a combination of factors, notably the strong growth in demand for oil products and the pressure on oil production and refining capacity.

The narrowing gap between growth in demand and production capacity saw OPEC's idle capacity dwindle resulting in the risk that even a small interruption to supplies could lead to a world oil shortage. The risk premium was further exacerbated by political instability in the Middle East and at the end of the year, by climatic factors in the United States substantially reducing output in the Gulf of Mexico due to a series of hurricane strikes.

Opec

Various members of Opec were unable to ramp up output to maximum capacity or even fulfill their quotas. Security problems in Nigeria cut capacity by 200 thousand bpd. In Venezuela, production capacity has yet to recover to pre-strike levels while in Iraq, the forecasted increase in production from 2 to 3 million bpd was abandoned due to sabotage to the petroleum infrastructure and the growing instability of the country.

The year began with oil inventories at their lowest level in the United States for three decades. On the other hand, growth in demand was also the highest in the last 30 years, particularly influenced by oil consumption in China, which climbed 14%, and by relatively inelastic demand in important consuming centers.

The dollar's depreciation was another factor driving prices higher in 2004.
With export revenues in dollars and imports denominated in Euros and Yen, Opec apparently abandoned its official price target (between US$ 22 and 28/bbl for the Opec basket price) and began to pursue an informal target of over US$ 30/bbl to sustain its effective buying power.

The combination of production factors and high prices resulted in record oil revenues for Opec, estimated at about US$ 323 billion. With output close to 30 million bpd, the largest volume since the oil shocks, Opec has exhausted its excess capacity to satisfy global demand.

The productive capacity, which the Organization holds idle, is typically of heavy oils while the extraordinary growth in world demand in 2004 was largely concentrated in medium and light oil products. Thus, increased refinery utilization in the principal consuming markets and the consequent increase in fuel oil production has led to a sharp widening in price differentials between light and heavy oils. Since the Opec basket is made up of some heavy oils, the price differential with Brent and WTI (light oils) also increased. As the Organization sets its price target based on its basket benchmark price, the increase in the differential between light and heavy oils similarly explains higher Brent and WTI prices with greater international market visibility.

Consequently, 2004 may well be seen as a transitional year towards prices at a higher plateau for a prolonged period. In an environment of major uncertainties in which the market tends to react sharply to changes in fundamentals, the events of 2004 indicate that the focus should be on tendencies in the international oil industry in the coming years.

The increase in the difference between light and heavy oils and refineries working at or close to capacity also resulted in record refining margins in the international market. Opec boosted its production of heavy oils thus increasing the supply of fuel oil in the market. Given the strong demand for medium
to light oil products, refiners with
the technical capability of processing
heavy oils for production of products
at the lighter end of the spectrum, saw
healthy gains in a segment historically
characterized by slim margins. Margins
were also enhanced by the introduction
of new environmental specifications for
automotive oil products in the North
American and European markets at
a time of reduced oil and oil product
inventories and refinery capacity nearing
its ceiling.

It is clear from the events of the year that
some fundamentals which resulted in
higher oil prices are structural or, at least,
will be long lasting, examples being the
increase in exploration and development
costs, the expansion in demand due
to world economic growth and Opec’s
decline in spare production capacity
compared to the nineties.

Brazil
After a three–year period of falling
demand for oil products, 2004 recorded
an increased consumption of 3.5%
compared with 2003, a rise from 1,700
thousand to 1,761 thousand bpd.
The decline in the average real price of oil
products (despite higher oil prices on the
international market) and the significant
economic growth both contributed to
this expansion.

Demand for LPG grew 2.7% during the year
driven largely by residential consumption,
a consequence of higher disposable
incomes and the effective decline in
consumer prices. In turn, the automotive
gasoline market saw a recovery after

Domestic demand for oil products increased 3.5%,
driven by economic growth and the fall in average
prices in Reais.

Monthly Oil Prices (nominal values)
(US$/bbl)
five consecutive years of falling sales. This principally reflected the recovery in disposable incomes with a consequent growth in sales, an expanded vehicle fleet and the fall in average real prices to the consumer (more than 6% if compared to the average for 2003). Likewise, the demand for aviation fuel jumped 6.5% in line with the economic recovery as domestic tourism improved while the substantially appreciated exchange rate also brought overseas tourism back to life. Demand for diesel also reported strong growth of 5.9% (higher than GDP growth) on the back of strong economic growth in general and agricultural production in particular. In spite of a decline of more than 8.2% in 2004, fuel oil posted the lowest falls in the last four years and again attenuated by the sharp improvement in industrial activity.

**Natural Gas**

Over the past twenty years, natural gas has increased its share of global energy supplies from 20.1% in 1982 to 24.3% in 2002. Over the same period, oil’s share of the cake fell approximately five percentage points, accounting for about 37.5% of the world energy matrix in 2002. In line with global tendencies, the share of natural gas in Brazil’s total energy requirements has risen from 2.7% in 1987 to 7.5% in 2002, according to the National Energy Balance published by the Ministry of Mines and Energy. Petrobras has contributed to the development of this market with a growth of 32% in natural gas sales volume between 2002 and 2004.

The increasing importance of this primary energy source is due to the enhanced level of natural gas reserves, as well as the expansion in the natural gas distribution infrastructure and growing pressures for the use of more environmentally friendly fuels. Industrial deregulation and restructuring have also been contributing to the global push in natural gas sales, principally in the form of liquefied natural gas (LNG), and to encouraging integration of energy flows among neighboring countries. Working in the same direction, natural gas is increasingly used for the chemical transformation into liquid fuels – gas to liquids (GTL), methanol and fertilizers.
Petrobras’ strategy is to lead the oil, natural gas and oil products market in Latin America, acting as an integrated energy company with a selected expansion in the petrochemicals industry and in international activities. The implementation of the strategy involves five objectives:

- Consolidate and expand the competitive advantages on in the Brazilian and South American markets for oil and oil products;
- Develop and lead the Brazilian natural gas market and act on an integrated basis in the gas and electric energy markets in the Southern Cone;
- Selectively expand the international activity on an integrated basis with the Company’s business;
- Selectively expand activities in the Brazilian and Southern Cone petrochemicals’ markets;
- Operate selectively in the market for renewable energies.

The Strategic Plan, announced in May 2004, provides for investments of US$ 53.6 billion between 2004 and 2010 in order to reach these objectives. Out of this total, US$ 46.1 billion will be invested in Brazil and US$ 7.5 billion overseas. Third party funding of US$ 16.1 billion during the period is forecasted to top up this investment, representing a leverage of between 25% and 35%.

Petrobras estimates that in 2010 it will be producing 3,421 thousand boed in Brazil and internationally, at a lifting cost of US$ 3.00/bbl and US$ 2.4/bbl respectively. From 2006, light oil production from new projects is forecasted to reach 150 thousand bpd.

Overseas, the larger part of the growth will come from assets in Argentina and Nigeria.
Latin America is a target region for Petrobras, its strategy being to become the leader in the regional oil, natural gas and oil products markets.
The Company will have to add a further 10.7 billion boe to proved reserves between 2004 and 2010 in Brazil to achieve the target of 17.3 billion boe at the end of the period – based on Society of Petroleum Engineers (SPE) criteria.

With investments in the downstream area in Brazil estimated at US$ 7.9 billion, Petrobras will be able to increase throughput of Brazilian crude at its refineries by 320 thousand bpd, reaching 1,700 thousand bpd by 2010. By the end of the period, oil imports will have been reduced to about 170 thousand bpd and exports will be running at 550 thousand bpd.

The Company’s target in 2010 is to be refining 1,870 thousand bpd in Brazil at a cost of US$ 1.58/bbl. In this context, installed refinery capacity will stand at about 2 million bpd in 2007.

Processed throughput at overseas refineries will remain at the current 100 thousand bpd, with a refining cost of US$ 1.20/bbl.

Investments in the Transportation segment of US$ 1.2 billion will be used to renew the tanker fleet with a total of 53 vessels on order from Brazilian shipyards. About US$ 1 billion will be used to expand and improve operating and safety conditions of the terminals and pipelines.

Growth in the Distribution area will come from the supply of new products, services and innovative solutions to enhance BR brand loyalty.

The Company will invest US$ 6.1 billion in Gas and Energy, of which more than US$ 3.0 billion for the development of the natural gas market in Brazil, boosting gross sales to 77.6 million m³ day by 2010.
Energy from thermo–electric power plants and co–generation will reach 5,044 MW in 2010, while energy from renewable sources will amount to 96 MW. Production of biodiesel is forecast at 2,300 bpd.

Corporate policies
Guideline policies have been established for all levels of the corporation to facilitate the implementation of the strategies, objectives and targets:

• Conduct the businesses and activities on the basis of ethics and transparency to ensure the Company’s credibility among its shareholders, investors, employees, clients, suppliers, authorities, communities where the Company operates and society in general;

• Conduct the businesses and activities with social and environmental responsibility in the context of the Company’s commitments to sustainable development and the Global Pact;

• Offer clients better products, services and conditions of supply than the competition;

• Develop a long–term relationship with the suppliers of vital goods and services;
Corporate policies guide all areas in complying with the strategy and meeting targets and objectives.

- Contribute to the development and competitiveness of the goods and services industry, to scientific and technological know-how and to expanding the labor market;

- Promote the efficient use of energy in the community;

- Adopt a proactive attitude in the relationship with governments, regulatory and supervisory organs, and entities of importance to the interests of Petrobras;

- Manage the businesses of the Petrobras Group on an integrated basis, seeking to reduce costs and maximize synergies;

- Evaluate the performance of the business units in terms of the Company's overall results and integrated to a system of accountability and consequences;

- Manage the Petrobras brand as a strategic asset;

- Administer the activities of marketing, commercialization, communication and client relationships on an integrated basis;

- Foster the operational and managerial competences, the harnessing of technology and technological innovation for the creation and sustaining of competitive advantages;

- Ensure the internal dissemination of knowledge, seeking to promote the competitive advantages;

- Ensure that strategic information is handled with due discretion and confidentiality;

- Promote the continual transformation of the Company, permanently aligning its administration and organization to the Strategic Plan in a transparent and participative manner;

- Manage the Company's assets to ensure that they meet the projected returns;

- Manage the Company's projects portfolio on an integrated basis with the focus on profitability and financial feasibility; (Table: Client Satisfaction Rate – Downstream (%);

- Manage the inherent risks of the business on an integrated basis;

- Consider mergers, acquisitions and the exchange of assets as options for accelerating growth and the feasibility of new businesses;

- Use partnerships to leverage market share, dilute risks and attract investments;

- Prioritize segments which promote the Company's integration and core business.

For more information, access: 
www.petrobras.com.br
### Other Corporate Targets

<table>
<thead>
<tr>
<th>Environmental and Operational Indicators</th>
<th>2005</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum acceptable volume of spills (m³)</td>
<td>633</td>
<td>598</td>
</tr>
<tr>
<td>Total SOx emissions (Tons)</td>
<td>160,128</td>
<td>153,804</td>
</tr>
<tr>
<td>Carbon credits generated from renewable energy projects (thousand tons of CO₂)</td>
<td>130</td>
<td>1,200</td>
</tr>
<tr>
<td>LTIFR/TFCA - Lost Time Injury Frequency Rate(1)</td>
<td>0.92</td>
<td>0.5</td>
</tr>
<tr>
<td>Client satisfaction – Downstream (%)</td>
<td>78</td>
<td>85</td>
</tr>
<tr>
<td>Employee satisfaction rate (%)</td>
<td>69</td>
<td>74</td>
</tr>
</tbody>
</table>

(1) TFCA – Number of lost time injuries per million men-hours exposed to risk.
The annual production of oil, natural gas liquids (NGL) and condensate declined year-on-year by 3.1%, to 1,493 thousand bpd.

The production of natural gas (excluding NGL) was 42.1 million m³/day, 5.8% more than in 2003. Onshore production of oil and NGL was 250.6 thousand bpd, 0.9% more than in 2003 (248.4 thousand bpd). The average lifting cost per barrel or equivalent was US$ 4.33.

Production volume of oil, condensate and natural gas liquids was less than forecast, principally due to delays in commissioning two platforms (P–43, in the Barracuda field, and P–48, in the Caratinga field) and the submarine production manifold in the eastern section of the Marimbá field.

The start-up in two major production projects – the FPSO–MLS (100 thousand bpd) in the Marlim Sul field in June and the P–43 (150 thousand bpd) platform in the Caratinga field in December – resulted in a recovery in average daily production growth over the last few months of the year to reach 1,511 thousand bpd in the last quarter.
In addition to the 20% increase in gas production between 2000 to 2004 – from 35.1 million m³/d to 42.1 million m³/d – the Company succeeded in reducing gas flaring by an average of 12.4% annually during the same period as the following graph shows:

Evolution of Natural Gas flaring in Brazil (th. m³/day)

Thanks to progress in exploration activities and the performance in the ANP’s sixth bidding round, the target of reaching 17.3 billion barrels of oil equivalent proved domestic reserves now appears readily achievable.
On June 17, the Company signed construction or conversion contracts for three new platforms which will be of major importance for growth in production in Brazil: P–34 in the Jubarte field (Phase 1), with a processing capacity of 60 thousand bpd; P–54 in the Roncador field (Module 2) which will process 180 thousand bpd; and P–51 in the Marlim Sul field (Module 2), with a production capacity of 180 thousand bpd. This will be the first semi-submersible platform built entirely in Brazil.

Two further platforms are at an advanced stage of conversion before going into production: P–50 – arrived in Brazil in September –, destined for the Albacora Leste field, with a processing capacity of 180 thousand bpd; and P–48, in the Caratinga field with a nominal capacity of 150 thousand bpd.

Discoveries
During 2004, five new onshore oil fields were discovered: two in the Potiguar Basin and three in the Recôncavo Baiano, Sergipe–Alagoas and Espírito Santo basins. During the same period, substantial volumes of oil were incorporated into the Roncador, Marlim Leste, Albacora, Albacora Leste, Espadarte, Jubarte and Golfinho fields as well as the Appraisal Plan area of 1–ESS–121 in the former BC–60 block to the north of the Campos Basin.

A total of 355 wells were drilled and completed: 279 for production development and 76 exploratory. Of the development wells for production, 211 were onshore and 68 offshore. In the case of the exploratory wells, 27 were onshore and 49 offshore. The success rate reached 50%, with 38 of the 76 wells either discovering oil or producing oil and gas.

In the light of the success of the discoveries in 2003, the Company’s investments and efforts in general focused predominantly on the Appraisal Plans in 2004, thereby optimizing the resources applied. With this, there was a relative increase in the percentage of extension and adjacent wildcat wells to...
the detriment of isolated wildcat drilling, especially in offshore areas. This, therefore, was above all a year for evaluating and delineating volume finds. It was not a year of blockbuster discoveries: for instance, only five offshore wildcat wells were drilled during the year.

At the end of 2004, during the delineation of the Golfinho area – discovered in 2003 in the former BES–100 block (the ANP’s Zero Bidding Round) in the Espirito Santo Basin – the Company drilled the 3–ESS–156A extension well. Drilling confirmed the existence 90-meter thick sandstone reservoirs saturated with excellent quality light oil, the discovery and commercial viability of which have already been disclosed.

This well is important due to the major reservoir thicknesses and the presence of excellent quality light oil, factors that could lead to increased recoverable volumes from the area. Prospects for oil volume and quality are excellent although the final appraisal must be awaited in December 2006 before precise quantification of the find can be announced.

**New concessions**

Of the 913 blocks offered by the National Petroleum Agency in the August bidding round, Petrobras bid for 113 and acquired, either exclusively or in consortium, 107 new exploratory concessions with an area of 36,157.60 km². The total signature bonus paid by the Company and its partners was US$ 215 million, of which Petrobras’ share was US$ 165 million. In 55 of the concessions for which it bid successfully, the Company retains exclusive rights. In 52, it will operate on a partnership basis with other companies, being the operating company in 32.

In August 2004, Petrobras’ exploration portfolio was made up of 58 blocks and 35 areas covered by Discovery Appraisal Plans with a total area of about 126.4 thousand km². At the end of the year, after further acquisitions, surrendering some blocks to the ANP according to contractual requirements, and the successful outcome to the latest bidding round, the Company held 96 blocks and 33 areas covered by Discovery Appraisal Plans, a total exploratory area of about 148.1 thousand km².

The good results of the auction – in competition with some of the international majors – has minimized losses of arising from the surrender of areas in August (Bid Zero) and September (50% of Bid 2) of 2003 and in August and September 2004 (Bid 3). The Company has replaced a substantial part of its portfolio and extended the profile of the exploratory concession periods. The concessions are geographically distributed as shown in the following map:
2004 was an important year for evaluating and delineating volumes where discoveries had been made in preceding years, notably the Golfinho field in the Espírito Santo basin. This field has saturated reservoirs of light oil, indicative of excellent prospects both in terms of volume and quality.

Of the 107 concessions acquired, 46 are located in mature onshore basins and 61 in offshore basins. Of the offshore basins, 30 are in new frontier areas and 31 in areas considered of high potential.

**Mature Basins** – From the exploratory point of view, the objective of acquisitions in the mature basins was for the short-term incorporation of volumes of oil in areas where Petrobras has an infrastructure and where the quantity of hydrocarbons is sufficient to offset production declines. The onshore blocks are important regionally for maintaining the production of the Business Units where they are located. Under the Minimum Exploratory Program (PEM), the Company will acquire 400 km of 2D seismic data and drill 25 wildcat wells in onshore areas.

**New frontiers** – The new frontier areas are normally little explored. While the exploratory risk is high, these areas can also lead to major finds. The Company has acquired 30 blocks in new frontier areas, 13 in the Brazilian Equatorial Margin – the shallow waters of the Amazon Estuary in the deep waters of the Pará – Maranhão and Barreirinhas areas; and 17 in the Brazilian Eastern Margin – the Camamu–Almada and Jequitinhonha basins – and the Brazilian South–Southeastern Margin in the Pelotas Basin. The Minimum Exploratory Program for the new frontier areas provides for the acquisition of 6,083 km² of 3D seismic imaging, 100 km of 2D seismic data and the drilling of seven wildcat wells.

**High potential** – The majority of high potential areas coincide with the Bid Zero blocks, partially surrendered to the ANP in 2003 for contractual reasons. These areas saw a substantial appreciation in value during 2003 due to Petrobras’ important discoveries of natural gas and light oil in that year. Acquisition of these areas was of enormous strategic importance to the Company. These areas were the most sought after in the last auction and in which the majority of total funds was invested. Petrobras and its partners offered a total value of US$ 166 million, the Company’s contribution being US$ 126 million.

The Minimum Exploratory Program for these areas provides for the acquisition of 3,843 km² of 3D seismic imaging and the drilling of 31 wildcat wells.

**Proved reserves**

Petrobras’ proved reserves of oil, condensate and natural gas in Brazil were 13.02 billion boe according to ANP/SPE criteria, a 3.3% increase compared with 2003.

This achievement reflects the incorporation of 1.02 billion boe during the year against a production volume of 0.60 billion boe. Consequently, the proved reserves replacement ratio (IRR) reached 170%. In other words, the Company incorporated a volume of oil equivalent to 1.7 times more that than it produced during the year. The reserve/production (R/P) ratio thus increased to 21.7 years.

**Evolution of Proved Reserves of Oil, NGL, Condensate and Natural Gas – SPE criteria (billion boe)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Oil, NGL and Condensate</th>
<th>Natural Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>9.65</td>
<td>1.36</td>
</tr>
<tr>
<td>2001</td>
<td>9.67</td>
<td>1.35</td>
</tr>
<tr>
<td>2002</td>
<td>11.01</td>
<td>1.45</td>
</tr>
<tr>
<td>2003</td>
<td>12.59</td>
<td>1.99</td>
</tr>
<tr>
<td>2004</td>
<td>13.02</td>
<td>1.97</td>
</tr>
</tbody>
</table>

CAGR of oil 7.49% p.a.
CAGR of Natural Gas 9.71% p.a.
Discoveries made over the past few years contributed to proved reserve volume – with the commercial feasibility of new fields being confirmed recently resulting in the incorporation of a further 0.39 billion boe. Also contributing to this result was the confirmation of an additional 0.63 billion boe of proved reserves in existing fields in December 2003.

The incorporation of additional reserves from existing fields reflects the transformation of probable and possible reserves into proved reserves, as a result of ongoing development. Incorporations have also occurred due to reservoir management with the latest enhanced recovery techniques. These incorporations are shown in the following chart.

Evolution of Proved Reserves in Brazil SPE criteria (billion boe)

<table>
<thead>
<tr>
<th>Year</th>
<th>Oil, NGL and Condensate</th>
<th>Natural Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>12.6</td>
<td>0.39</td>
</tr>
<tr>
<td>2004</td>
<td>13.02</td>
<td>0.63</td>
</tr>
</tbody>
</table>

According to SEC criteria, the Company’s proved reserves increased by 1.6% in relation to 2003 to a total of 10.57 billion boe. The lesser volume is due to different criteria used by the SEC and SPE. According to the SEC criteria, the calculation of proved reserves is limited to the amounts to be produced for the duration of the concession contracts for the areas in development and production and to the amounts of natural gas relating to sales contracts signed up to the date reserves were calculated. The reserves replacement ratio was 128%, and the reserve/production ratio 17.6 years.

Evolution of Proved Reserves of Oil, NGL, Condensate and Natural Gas – SEC criteria (billion boe)

The targets in the Strategic Plan require the incorporation of 9.7 billion boe between 2005 and 2010 and the implementation of 15 major new oil production development projects and a further two large natural gas development projects. Oil and gas volumes to be incorporated will come from existing probable and possible reserves, from already discovered sources in the appraisal phase, and from discoveries.

The Company implemented the Mature Fields Recovery Enhancement Program–Recage in August. This, together with the development of existing reserves and discoveries will contribute to reaching E&P targets through the use of enhanced recovery methods in developed areas. The Recage Program focuses on three main objectives: cost optimization, risk management and the increase in production. The principal objective is to retard, or even reverse, whenever possible, the decline in the production of fields which are already past their prime. Recage will focus especially on 199 oil fields accounting for about 30% of Petrobras’ reserves in Brazil and for more than 60% of domestic commercial production.

Strategy

The growth in Exploration and Production will be based on the following strategy:

- Augment production and reserves;
- Strengthen corporate positioning in deepwater and ultra–deep water fields;
- Operate in onshore and in shallow water areas that offer good profitability;
- Adopt practices and new technologies in already heavily worked areas for optimizing the recovery factor;
- Develop exploration in new frontier areas to ensure a sustainable reserve/production ratio.
Capital expenditures of US$ 1.4 billion in the Downstream area are aimed at consolidating market share and competitiveness, the resources being applied in the maintenance and infrastructure of pipelines and terminals and expansion in refining activities.

In 2004, Petrobras’ Downstream business area – made up of refining, commercialization, petrochemicals and transportation – consolidated and expanded its competitive advantages in the Brazilian oil and oil products markets through the effective performance of its refineries, the force of its integrated logistics chain and the dynamism of its marketing and commercialization areas.

The year was particularly significant for the consolidation of the strategy of selective expansion in the Brazilian and the Southern Cone petrochemical markets. The key event of the year in this area was Petroquisa’s increased stake in the voting and total capital of Petroquímica Triunfo to 70.45% and 85.04%, respectively.

The Strategic Plan for the Downstream area examined the nature of this business to determine the way forward as follows:

• Expand through enhancing the competitive advantages in the national market for oil products and commercialization overseas;

• Diversify, consolidating alternatives for growth and maximizing potential synergies in the petrochemical area and the fertilizer business with the natural gas and refining segments;

• Enhance efficiency along the entire logistics chain to the end client with emphasis on operational excellence;

• Add value to raw materials, adjusting the installed capacity for the Group’s oil and gas processing and pursuing increased quality in the production of oil products;

Investments totaled US$ 1.4 billion. In the pipeline and terminal (oil and oil products transportation) area, the Company spent US$ 625 million, basically on the maintenance of infrastructure while the rest was dedicated to refining activities.

Refining
During the year, the main feature of oil products output was the reduction in fuel oil and a year-on-year 4% increase in diesel production. Incremental production in absolute values was 65 thousand bpd or 4% over 2003 due to greater throughput.
In 2004, the processed throughput was 1,728 thousand bpd, of which 1,293 thousand was domestic oil, or 76% of the total. Processing of domestic oil was less than in 2003 due to lower production and a reflection of commercial strategy. During the year, processed throughput peaked at 1,881 thousand bpd on October 14.

The average unit refining cost was US$ 1.36/bbl, 16% higher than in 2003 reflecting a larger number of maintenance stoppages.
The Company has 11 refineries in Brazil. Installed processing capacity increased from 1,956 thousand bpd in 2003 to 1,996 thousand bpd in 2004 due to the expanded refining capacity at Landulpho Alves Refinery.
**Capital Expenditures**

In January, July and August 2004 respectively, the diesel hydrotreatment units at the Paraná (Repar), Duque de Caxias – RJ (Reduc) and Gabriel Passos – MG (Regap) refineries came on stream. These units are part of the strategy of continuously improving product quality, especially in the case of diesel, due to a reduction in sulfur content. These units have a total capacity of about 70 thousand bpd. Investments over three years amounted to US$ 470 million, of which US$ 74 million was spent in 2004.

The new effluent treatment system at the Alberto Pasqualini Refinery – RS (Refap S.A.) started operations in June at a total investment of US$ 23 million – part of the refinery’s ongoing modernization program, most of which will be concluded in 2005.

This project will allow the refinery to operate at its total nominal capacity of 189 thousand bpd compared to current throughput of about 126 thousand bpd. The construction of the fluid catalytic cracker, coke and diesel hydrotreatment units, as well as complementary units for hydrogen production and treatment of gases, will all contribute to the optimizing of the refinery’s production from 2005 onwards. The project’s total capital expenditures amount to US$ 804 million.

In October, the delayed coking and diesel hydrotreatment units at the Paulinia Refinery – SP (Replan) came on stream. This will allow diesel production to be ramped up through the enhanced processing of heavy crude, diesel fuel being the most consumed oil product in Brazil. One of Petrobras’ strategic objectives is to maximize the use of the large volume of domestic heavy crude, thus adding value to Brazilian oil resources. The forecasted additional diesel output is about 10 thousand bpd. The total investment was worth US$ 394 million of which US$ 158 million was expended in 2004.

**COMMERCIALIZATION**

The area’s activity provides flexibility in the commercialization of oil products by exporting surpluses when production exceeds domestic demand, a case in point being gasoline.

The total volume of oil products sold by Petrobras to the Brazilian market increased by 6% compared with 2003, reaching a total of 1,637 thousand bpd. The improvement was achieved thanks to the domestic economic recovery and lower oil product imports by other companies. As a result the Company recorded a market share of 92%, 1% more than in 2003.

Among the initiatives for increasing market share, marketing activities were particularly important and reflected in the increase of the customer satisfaction index from 84% in 2003 to 85% in 2004.

**Customer Satisfaction Index**
Foreign trade
Oil and oil product exports diminished 8% compared with 2003, recording a daily average of 409 thousand bpd. Oil and oil product imports amounted to 559 thousand bpd.

Exports of Crude Oil (th. bbl)

Imports of Crude Oil (th. bbl)

Oil Products Exports and Imports (th. bpd)

Exports of Oil Products (th. bbl)

Imports of Oil Products (th. bbl)

Oil Exports and Imports (th bpd)
PETROCHEMICALS

The strategy for the petrochemicals area is to selectively expand the business in the Brazilian and Southern Cone markets, with the emphasis on new projects to satisfy domestic market demand. Petrochemicals play an important role in the Company’s strategy since they add value and enhance returns to the refining and natural gas production flows. The subsidiary Petrobras Química S.A. (Petroquisa) leads the Petrobras Group’s business in the petrochemical sector, holding stakes in sector companies.

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>PRODUCT</th>
<th>VOTING CAPITAL</th>
<th>TOTAL CAPITAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Braskem S.A.</td>
<td>Basic, intermediate and final petrochemicals</td>
<td>10.0</td>
<td>8.4</td>
</tr>
<tr>
<td>Cia. Petroquímica do Sul – Copesul</td>
<td>Basic petrochemicals</td>
<td>15.6</td>
<td>15.6</td>
</tr>
<tr>
<td>Petroquímica União S.A.</td>
<td>Basic petrochemicals</td>
<td>17.5</td>
<td>17.4</td>
</tr>
<tr>
<td>Metanol do Nordeste – Metanor S.A.</td>
<td>Methanol</td>
<td>49.5</td>
<td>33.4</td>
</tr>
<tr>
<td>Deten Química S.A.</td>
<td>Linear alkylbenzene</td>
<td>28.6</td>
<td>27.5</td>
</tr>
<tr>
<td>Fábrica Carioca de Catalisadores S.A.</td>
<td>Catalysts</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Petroquímica Triunfo S.A.</td>
<td>Calcined petroleum coke</td>
<td>35.0</td>
<td>35.0</td>
</tr>
<tr>
<td>Companhia Alagoas Industrial – Cinal</td>
<td>Utilities and services</td>
<td>16.6</td>
<td>13.7</td>
</tr>
<tr>
<td>Rio Polímeros S.A. (projeto)</td>
<td>Polyethylene</td>
<td>16.7</td>
<td>16.7</td>
</tr>
</tbody>
</table>

Petroquisa

In May, Petroquisa exercised its preemptive right to acquire the shares held by Primera (part of the Dow–Química group) in Petroquímica Triunfo’s capital. On the conclusion of this operation, Petroquisa’s stake in the voting capital was increased from 45.22% to 60.63% and corresponding to 80.07% of Petroquímica Triunfo’s total capital. Petroquisa disbursed approximately US$ 25.5 million for this additional stake.

Subsequently, Petroquisa acquired the remainder of Primera’s stake in the company given that the other partner, Petroplastic, decided not to exercise its preemptive rights. As a result, Petroquisa’s final participation in the company was increased to 70.45% of the voting capital and to 85.04% of the total capital, the company disbursing a further US$ 32 million.

Rio de Janeiro Gas–Petrochemicals Complex

Rio Polímeros S.A. a company owned by Suzano (33.3%), Unipar (33.3%), Petroquisa (16.7%) and BNDESPar (16.7%), is concluding the construction of a new petrochemicals plant in Duque de Caxias, state of Rio de Janeiro. With operations scheduled to come on stream in the first half of 2005, Rio Polímeros will have an annual production of 515 thousand tons of polyethylene with various specifications and 76 thousand tons of propene, using as raw materials ethane and propane extracted from Campos Basin natural gas. The total investment is estimated at US$ 1 billion.

Other petrochemical projects

In line with the Strategic Plan, several business opportunities in the petrochemical industry are being evaluated. These businesses include the production of basic petrochemicals such as: polyethylene, polypropylene, acrylic acid, para-xylene and terephthalic acid. This portfolio of business opportunities marks the revamping of Petrobras’ activities in the petrochemical industry, driven by the growing demands of the Brazilian market.

Fertilizers

Petrobras’ nitrogenous fertilizer plants, located in Camacari (BA) and Laranjeiras (SE), increased their output by 16% in total sales and 8% in domestic sales compared with the preceding year. This was equivalent to an average monthly
output of 106 thousand tons, the result of a recovery in the agricultural sector.

**TRANSPORTATION**

Through its wholly owned subsidiary, Petrobras Transporte S.A. – Transpetro, Petrobras operates in the competitive oil, oil products and gas bulk transportation and storage segments, operating port terminals, pipelines and ships, supplying integrated logistics solutions and providing services in South America. The company is supported overseas by its Fronape International Company (FIC) subsidiary.

**Maritime transportation**

Transpetro continued to be the largest shipping company in South America with a fleet of 50 vessels and a total transportation capacity of 2.5 million dwt. In addition to the vessels, the company operates a maritime support vessel owned by Petrobras, and chartered on a bareboat basis, and a floating storage and offloading unit (FSO).

The current fleet consists of 40 vessels owned by Transpetro; four Petrobras vessels chartered on a bareboat basis; six chartered on a bareboat basis from third parties; a maritime support vessel owned by Petrobras and chartered on a bareboat basis and a floating storage and offloading unit (FSO), the property of Transpetro itself.

As part of the Fleet Renewal Program, two shuttle tankers, the Nordic Rio and the Nordic Brasilia with 151 thousand dwt each, have gone into service. The vessels were chartered by Fronape from Ugland Nordic Shipping, part of the Teekay Navion Shuttle Tankers Group on a bareboat basis. Both vessels are modern and specialized in offloading production from platforms and will operate in the Campos Basin. They are equipped with dynamic positioning (DP) systems together with a bow loading system (BLS). They will add to the fleet of four other DP shuttle tankers that are already operating in the Campos Basin.

**Fleet renewal and expansion**

According to the Strategic Plan, the Company's target is to construct 42 tankers by 2015 at a total investment of US$ 1.2 billion, and financed by the Brazilian Economic and Social Development Bank (BNDES) with resources from the Merchant Marine Fund. The principal objective of the fleet modernization and expansion is to serve all Petrobras' coastal shipping, and 50% of its ocean-going requirements.

The program also establishes the conditions for the development of sustainable shipbuilding industry in Brazil by guaranteeing scale and adequate size to compete in the international market. The program will also increase competition in the domestic steel industry for the supply of steel raw materials as well as stabilizing the market and inhibiting fluctuations in prices.

**Assumptions**

- Construct ships;
- Achieve up to 65% of national content according to the criteria set out in the Program for Mobilizing the Domestic Oil and Gas Industry (Prominp);
- With the development of the program, compete internationally on price and delivery;
- Guarantee scale to the shipyards allowing them to invest in installations, technology and training and consequently making for a viable learning curve.

**Phases and orders**

- Phase 1 – building of 22 vessels of the Suezmax (6), Panamax (4), Aframax (5), Products (4) and LPG (3) types with deliveries to be completed by 2010;
- Phase 2 – building of a further 20 ships of the Suezmax, Aframax, Products and LPG types with deliveries to be completed by 2015.

Phase 1 began on November 25, 2004 with the publication of the prequalification notice for the companies wishing to participate in the tender bid. The contracts are expected to be signed in the second half of 2005.

The program will create about 20,000 direct and indirect jobs/year for the building of the first 22 vessels alone.

**Pipelines and Terminals**

As the operator of the larger part of the Company's oil and gas pipelines, onshore terminals, waterway terminals and natural gas processing units, Transpetro
was responsible for the monthly transportation of about 50 million m³ of oil and oil products and 1 billion m³ of gas during 2004.

The company operates a pipeline network of 10,050 kilometers of which, 7,007 kilometers are oil and oil product pipelines and 3,043 kilometers are gas pipelines (excluding the Brazil–Bolivia pipeline), of which 148 kilometers were added in the network in 2004 with the commissioning of three E&P gas pipelines (known as the Malha Bahia). In addition, Transpetro operates 43 land–based and maritime terminals with a tankage capacity of 63.3 million barrels or the equivalent of about 10 million m³.

The subsidiary is also responsible for maintaining the installations in suitable conditions for their operation and safety. As part of this objective, the company invests in the Pipeline Integrity and the Installations and Systems Reliability programs in addition to work on eliminating operational bottlenecks. The company also carries out systematic inspections of the domestic pipeline network to identify and correct any weaknesses that could impair the quality of the operations as well as the operational safety, environmental preservation and personal health.

**Gas Pipelines**

Signed in 2004, the Networks Project (Projeto Malhas) will guarantee the supply of demand from the industrial sector in the Northeast and Southeast regions. It will also stimulate the dissemination of the use of natural gas, in co–generation projects and for residential or industrial heating and refrigeration processes. The project will place Transpetro in the position of carrier of choice for existing and future installations and expand the supply of gas to 9 million m³/day to the Northeast Region (14 million by 2012) and 13 million m³/day to the Southeast Region.

Still in the gas segment, the company concluded a further phase of the Cabiúnas Project, with the commissioning of a further liquid gas recovery unit. The project is designed to increase the supply of processed natural gas from the Campos Basin to 20 million m³/day to meet demand from the Rio de Janeiro Gas–Petrochemical Complex.
The Agip do Brasil acquisition in August boosted Petrobras’ business in LPG distribution to 27% of the nationwide demand while consolidating its leadership in fuel distribution with a 32.8% market share and increasing its presence in some regions of Brazil.
In the distribution segment, Petrobras operates through its Petrobras Distribuidora (BR) subsidiary – the company with the most comprehensive coverage in its sector in the Brazilian market with a network of 6,785 service stations. The company’s own network numbers 631 service stations, the remaining 6,154 being run on a franchise basis under the BR flag.

The strategy for sector operations is based on two principal objectives:

- With a multi–business retail network, to be the preferred flag for consumers, offering excellence in the quality of products and services, enhancing its leadership, and ensuring the expected profitability;

- Add value to the Petrobras Group by leading all the segments of the consumer market through the supply of new products, services and solutions, at the same time consolidating brand loyalty.

In 2004, the company invested US$ 120 million, principally for expanding and modernization its service station network, in the support of its industrial and commercial clients, and in Safety, Environmental and Health programs. Further capital expenditures of US$ 161 million are slated for 2005.

**Entry in to the LPG market**

On August 9, 2004, Petrobras Distribuidorai acquired Agip do Brasil S.A. for expanding its participation in the LPG distribution segment as well as consolidating market share in the distribution of automotive fuels in certain regions of Brazil. The total value of the acquisition was worth US$ 511 million, adjusted according to the company balance sheet on the date the acquisition was concluded.

Since January 1, 2005, the LPG distributor, controlled by Petrobras Distribuidora, has adopted the corporate name of Liquigás Distribuidora S.A., succeeding Agip do Brasil S.A. and, for a short transitional period, Sophia do Brasil S.A. Liquigás Distribuidora S.A. will operate exclusively in the LPG segment, including the bulk commercialization of this product – an operation previously carried out on a small scale by Petrobras Distribuidora S.A. In the four months following the acquisition, BR’s market share averaged 22.1%.

**Leadership**

Petrobras’ share in the Brazilian fuel distribution market in 2004 was 32.8% (31.5% in 2003), the result of an 8.1% growth in sales volume. The company continues to lead the Vehicular Natural Gas (VNG) market – with a 27% share and a network of 245 VNG outlets in Brazil. The Company also continues to be the leading supplier to the direct consumer market represented by large industrial clients, trucking fleets, airlines and public authorities.

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**Market Share of Fuel Distribution Companies in Brazil**

![Market Share Chart](chart.png)
Automotive Segment
Petrobras was the first Brazilian company to distribute VNG, which among other advantages, is characterized by lower prices to the consumer – compared to gasoline and alcohol – and lower emissions.

In addition to fuel sales, BR’s outlets are being transformed into full-service stations, geared towards maintaining an excellent standard of service. Customers have access to convenience stores (BR Mania), carwash facilities (Lava Mania), advanced lubrication centers (Lubrax Center), video rentals and 24-hour service ATMs, among other services.

In 2004, BR’s loyalty programs were given a major boost with the launching of the Petrobras private label card with the objective of providing greater consumer convenience and advantages in the purchase of fuels and products from Petrobras service stations and from accredited BR Mania convenience stores.

The company has also implemented a series of channels for communicating with its retailers, principally through the ‘Retailer’s Journal’ and periodic meetings for strategy and action plan presentations.

### Service Station Network

<table>
<thead>
<tr>
<th>Service Station Network</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BR outlets</td>
<td>6,785</td>
</tr>
<tr>
<td>Urban</td>
<td>5,151</td>
</tr>
<tr>
<td>Highway</td>
<td>1,593</td>
</tr>
<tr>
<td>Maritime</td>
<td>41</td>
</tr>
<tr>
<td>Active outlets</td>
<td>5,047</td>
</tr>
<tr>
<td>Own outlets</td>
<td>631</td>
</tr>
<tr>
<td>Third-party outlets</td>
<td>6,154</td>
</tr>
<tr>
<td>Convenience stores</td>
<td>507</td>
</tr>
<tr>
<td>VNG outlets</td>
<td>245</td>
</tr>
</tbody>
</table>
In 2004, the sales growth in hybrid fuel (flex–fuel) vehicles surpassed forecasts. This, together with the reduction in ICMS fuel tax in the state of São Paulo, increased nationwide sales of the product in the formal market by more than 30% in 2004 compared with about a 6% increase in gasoline sales. Prospects for an accelerated expansion in the hybrid vehicle fleet should be reflected from 2005 in lower growth and higher volatility in gasoline demand. This may have possible impacts on the distribution logistics of the product as well as a significant increase in the formal alcohol market, an aspect which is being reinforced by the crackdown on the informal fuel market.

**Consumer segment**

Petrobras is also the leader in the segment, representing large industrial clients, trucking fleets, retail delivery fleets (TRR), airlines and public authorities. The company has a 45% market share, in turn breaking down into 57% in aviation fuel products, 40% in asphalt and 36% in the TRR sector.

BR has the largest fuel and lubricants distribution network in Brazil, with 115 strategically located operational installations, guaranteeing excellent market penetration of its products. This network is also conducive to the integration of transportation and inventory solutions.

One of the company’s principal competitive advantages is the technical support provided to clients, a factor which undoubtedly increases customer loyalty. In this context, the loyalty programs had a major impact in 2004, particularly through the Total Fleet Control Program designed to retain the loyalty of trucking companies to the BR brand. This program saw contracted volumes expanding 69% in relation to 2003.
The strategy for this business area will be: to develop the natural gas industry so as to guarantee the placement of the product, operating on an integrated basis with the other units of the Company along the entire production chain both in Brazil and other Southern Cone countries.

Petrobras has been posting strong growth in this segment with sales volume up 19% in 2004, reaching 33 million m$^3$/day. The Brazilian market as a whole performed well during the year due to the expansion of the logistics infrastructure and growing pressures for the use of more environmentally friendly fuels.

In 2004, Brazilian production reached an average of 42.2 million m$^3$/day, a year-on-year growth of 6%. Meanwhile, the supply of domestic and imported gas for sale increased 23%, reaching 37.7 million m$^3$/day.

Production of natural gas relates to gas volumes, which are lifted from the reservoirs through producing wells and delivered for sale once certain quality specifications have been satisfied (methane, sulfur, water content, etc.).

To meet the growing demand during the year, Petrobras imported 19.5 million m$^3$/day of natural gas. This volume corresponds to 41% of total Brazilian imports.

Brazilian Sales by Segment in 2004

In 2004, the following gas supply contracts were signed (UTE = Thermoelectric Power Plants):

- UTE Norte Fluminense – 3.4 million m$^3$/day;
- UTE Termorio – 5.1 million m$^3$/day;
- UTE Nova Piratininga – 2.76 million m$^3$/day;
- UTE Camaçari – 2.8 million m$^3$/day;
- Gasmig – non-thermal market – up to 5.0 million m$^3$/day;
- Sulgás, co-generation for Ulbra – 25 thousand m$^3$/day.

**Price structure for city public transportation services**

As a contribution to market stability, Petrobras has guaranteed that the price of natural gas for urban passenger transportation will not surpass the ceiling of 55% of diesel oil prices over the next ten years. With this formal commitment, the Company is sending a clear message to the market that natural gas is an economically viable fuel.

The decision is in line with practices prevailing in more developed countries where natural gas is recognized as superior to other vehicular fuels in preserving the quality of the air.

**Transportation**

Petrobras has established a new concept in the market with the setting up of the Basic Natural Gas Transportation Network (RBTGN). This is a four thousand kilometer pipeline network running from Fortaleza to Porto Alegre and from São Paulo to Bolivia. The Network is vital for supplying gas to
Expansion in infrastructure and growing pressure for the use of more environmentally friendly fuels saw natural gas sales grow by 19%, in line with the strategic objective of developing this industry in Brazil and being a integrated company that acts in all the production chain.

solve the energy deficit in the Northeast over the long term and for developing the natural gas market throughout Brazil.

In 2004, the conclusion of the environmental licensing process and the start of work on the Basic Gas Pipeline Network are of particular importance in expanding the infrastructure for natural gas transportation and distribution in Brazil. Investments of US$ 3.9 billion in building the Network are forecast up to the end of the decade.

The network will bring the production fields closer to the end consumer, ensuring gas supplies to the main consuming centers, and an annual domestic market growth rate of 14.2% up to 2010. The project is in line with the strategy of developing production in the Santos basin and expanding activity in the 48 offshore blocks along the route of the RBITG, since this will permit the off-take from future discoveries of fields with associated or non-associated natural gas reserves.

The first phase in the integration of the Basic Gas Pipeline Network was begun in September with work starting on the Campinas–Rio Gas Pipeline at an investment of US$ 308 million and a length of 453 kilometers, for conclusion in October 2005. This project integrates the Southeastern network, and will link into the Northeastern network and the Southeast–Northeast Pipeline (Gasene) as well as existing pipelines, thus expanding today’s network in operation (8,860 kilometers) by a further 4,200 kilometers.

The implementation of the Southeast–Northeast Interconnection (Gasene) project was seen as the best alternative for meeting demand from the Northeast Region in the short to medium term and providing a definitive solution to the problem in the long term (completer). In addition to the Cacimbas (ES)–Vitória (ES) pipeline, the Gasene project consists of two further stretches, Cabiúnas (RJ)–Vitória (ES) and Cacimbas (ES)–Catu (BA), which are in the early environmental licensing approval stages, the negotiation of the Engineering, Procurement and Construction (EPC) package and the legal and financial structuring. Capital expenditures are estimated at US$ 1.1 billion.
Stakes in natural gas transportation providers
Through its subsidiary Gaspetro, Petrobras also has stakes in pipeline transmission companies. The Company has a contract with TBG (Transportadora Brasileira Gasoduto Bolívia-Brasil S.A.), owner of the Brazilian stretch of the Bolivia Brazil Pipeline, and with GTB (Gás Transboliviano S.A.), owner of the Bolivian stretch for importing Bolivian gas.

TBG – This company operates the Brazilian section of the longest gas pipeline in Latin America (3,150 kilometers), linking Santa Cruz de La Sierra in Bolivia to Canoas in the Brazilian state of Rio Grande do Sul. On July 2003, the Bolivia–Brazil Gas Pipeline attained its full capacity of 30 million m³/day of natural gas.

GTB – This company owns the Bolivian section of the pipeline, a distance of 557 kilometers. It has contracted gas transportation out to three carriers: YPFB/Petrobras, BG Bolívia Corporation and Transborder Gas Services Ltda. (TBS). In March 2003, the company began invoicing its maximum transportation capacity – 30 million m³/day – based on contracts signed with Petrobras/YPFB. In addition, GTB has transportation contracts with BG Bolívia Corporation and Transborder Gas Services Ltda. (TBS) to carry smaller volumes.
GTB – Ownership Breakdown

<table>
<thead>
<tr>
<th>Company</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transredes</td>
<td>17%</td>
</tr>
<tr>
<td>Enron</td>
<td>17%</td>
</tr>
<tr>
<td>Shell Gas</td>
<td>17%</td>
</tr>
<tr>
<td>Gaspetro</td>
<td>51%</td>
</tr>
<tr>
<td>British Gas</td>
<td>2%</td>
</tr>
<tr>
<td>El Paso</td>
<td>2%</td>
</tr>
</tbody>
</table>

TSB – Transportadora Sulbrasileira de Gás S.A. is a Special Purpose Company (SPC), based in Porto Alegre and constituted for constructing, operating and owning the Uruguaiana–Porto Alegre Gas Pipeline (615 kilometers). At present, only two extremities of the pipeline are ready and operating, supplying approximately 3 million m³/day of natural gas to the Uruguaiana Thermoelectric Power Plant and the Triunfo Petrochemical Complex (RS).

TSB – Ownership Breakdown

<table>
<thead>
<tr>
<th>Company</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaspetro</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>15%</td>
</tr>
<tr>
<td>Ipiranga</td>
<td>15%</td>
</tr>
<tr>
<td>Repsol–YPF</td>
<td>25%</td>
</tr>
<tr>
<td>TecGas</td>
<td>25%</td>
</tr>
</tbody>
</table>
TMN – This company owns the Meio–Norte Pipeline (1,616 kilometers), which is to be constructed from the state of Ceará to the states of Piauí and Maranhão. The project is to be funded from the Energy Development Account (CDE), created by Law 10,438 of April 26, 2002 and regulated by Decree 4,541 of December 23, 2002, the purpose of which is the development of feasible power projects in the states. On July 9, 2004, Gaspetro’s Board approved a 45% stake in the company’s capital.

TNG – Transportadora Norte Brasileira de Gás S.A. – The company was set up for designing, engineering, construction, installation, ownership, use, financing, operation and maintenance of the Uruçu–Porto Velho Pipeline and associated installations. The pipeline, which will carry natural gas from the Uruçu region in the state of Amazonas to Porto Velho in the state of Rondônia, runs a distance of 516 kilometers with a capacity of 2.2 million m³/day. Work scheduled to begin on construction in April 2005, is contingent on the issue of the environmental license. The pipeline will allow Petrobras to supply gas to the states of Rondônia and Acre as well as ensuring the operational feasibility of the thermoelectric power plants in the region.

TAG – Transportadora Amazonense de Gás S.A. – Gaspetro controls 100% of the company, the objective of which is to build, operate and maintain the Coari–Manaus Pipeline. The pipeline links the municipalities of Coari and Manaus in the state of Amazonas, has a length of 397 kilometers and a capacity of 7.5 million m³/day. Capital expenditures are estimated at US$ 407 million. When complete the pipeline will meet demand from Manaus and neighboring markets for natural gas. Construction is to begin in April 2005.

TCG – Transportadora Capixaba de Gás S.A. – Gaspetro controls 100% of the company. Its purpose is to prepare the feasibility studies, the project, design, planning, the construction, installation, operation and maintenance of a gas pipeline (127 kilometers) for linking the gas treatment station at Cacimbas in

The Basic Natural Gas Transportation Network will link four thousand kilometers of gas pipelines and is crucial to the development of the domestic market.
the state of Espírito Santo to the cities of Linhares and Vitória as well as other pipelines and feeder lines that may eventually be built in the state, plus respective complementary installations.

**TNS – Transportadora Nordeste–Sudeste**
The company is wholly owned by Gazpetro and has been constituted for transportation of natural gas in the Northeast of Brazil (2,057.1 kilometers) and the Southeast (1,453.2 kilometers). Petrobras transferred the existing pipeline network assets to the company as a capital injection. TNS is the leader of a consortium made up of TNS itself, Transpetro (which will be the operator), NTN (Nova Transportadora do Nordeste S.A.) and NTS (Nova Transportadora do Sudeste S.A.). The latter two are owners of the new assets of the Northeastern Network and the Southeastern Network, respectively. The consortium will be responsible for the transportation, operation and maintenance of all existing and future installations to be built between 2006 and 2007.

**Gemini Project**
The purpose of the project is to supply liquefied natural gas (LNG) to regions not served by the pipeline system. In this way, market reach can be expanded, and in parallel, an anticipated demand promoted for the product in areas located within a radius of 800 kilometers from the production unit in Paulínia, state of São Paulo.

The project is a joint venture between Petrobras (40%) and White Martins (60%) with Petrobras supplying the natural gas and White Martins building and operating the LNG production unit. The plant will begin operations in January 2006 and will serve the states of Paraná, Mato Grosso do Sul, Goiás, Minas Gerais and the Federal District.

The unit will have a capacity to liquefy 380 thousand m³/day and store 2.7 million m³ of natural gas, corresponding to 4,500 m³ of LNG. Production will be sold to piped gas distributors, industrial and commercial customers and VNG service stations. A fleet of purpose built tractor–trailers and/or cryogenic tankers will be responsible for carrying the product.
Distribution of piped gas
Through the intermediary of its Gaspetro subsidiary, Petrobras has a stake in 19 piped gas companies. These companies have a total gas pipeline network of 2,900 kilometers, responsible in 2004 for selling an average of 16.4 million m³/day of natural gas, with net revenues of about US$ 890 million, against US$ 780 million in 2003.

<table>
<thead>
<tr>
<th>Company</th>
<th>Acronym</th>
<th>Total Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gás de Alagoas S.A.</td>
<td>Algás</td>
<td>41.5</td>
</tr>
<tr>
<td>Companhia de Gás da Bahia</td>
<td>Bahiagás</td>
<td>41.5</td>
</tr>
<tr>
<td>Companhia Brasiliense de Gás</td>
<td>CEBGás(*)</td>
<td>32.0</td>
</tr>
<tr>
<td>CEG RIO S.A.</td>
<td>CEG RIO</td>
<td>37.4</td>
</tr>
<tr>
<td>Companhia de Gás do Ceará</td>
<td>Cégás</td>
<td>41.5</td>
</tr>
<tr>
<td>Companhia Paranaense de Gás</td>
<td>Compagás</td>
<td>24.5</td>
</tr>
<tr>
<td>Companhia Pernambucana de Gás</td>
<td>Copergás</td>
<td>41.5</td>
</tr>
<tr>
<td>Companhia de Gás do Amapá</td>
<td>Gasap(*)</td>
<td>37.3</td>
</tr>
<tr>
<td>Companhia Maranhense de Gás</td>
<td>Gasmár(*)</td>
<td>23.5</td>
</tr>
<tr>
<td>Companhia de Gás do Piauí</td>
<td>Gaspísa(*)</td>
<td>37.3</td>
</tr>
<tr>
<td>Agência Goiana de Gás Canalizado S.A.</td>
<td>Golagás(*)</td>
<td>34.8</td>
</tr>
<tr>
<td>Companhia de Gás do Estado do Mato Grosso do Sul</td>
<td>MSGás</td>
<td>49.0</td>
</tr>
<tr>
<td>Companhia Rondoniense de Gás</td>
<td>Rongás(*)</td>
<td>41.5</td>
</tr>
<tr>
<td>Companhia Paraibana de Gás</td>
<td>PBBGás</td>
<td>41.5</td>
</tr>
<tr>
<td>Companhia Potiguar de Gás</td>
<td>Potigás</td>
<td>83.0</td>
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<tr>
<td>Companhia de Gás de Santa Catarina</td>
<td>SCBGás</td>
<td>41.0</td>
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<tr>
<td>Empresa Sergipana de Gás S.A.</td>
<td>Sergás</td>
<td>41.5</td>
</tr>
<tr>
<td>Companhia de Gás do Estado do Rio Grande do Sul</td>
<td>Sulgás</td>
<td>49.0</td>
</tr>
<tr>
<td>Companhia de Gás de Minas Gerais</td>
<td>Gasmig</td>
<td>40.0</td>
</tr>
</tbody>
</table>

(*) Companies not operational.

Gasmig stake
On December 15 2004, Gasmig and Petrobras concluded an agreement with Cemig in which the latter sold 40% of the capital stock in Gasmig to Gaspetro for US$ 54 million. Petrobras has committed to building the pipelines while Gaspetro and Cemig will provide the necessary construction funding. The immediate effect will be an expansion of Gasmig’s pipeline network in the state of Minas Gerais. Gasmig distributes about 1.6 million m³ of natural gas on a daily basis along its 130-kilometer network. The larger part of the investment will be used for building feeder distribution lines in the Vale do Aço and Triângulo Mineiro regions, the larger part of which will be completed by 2008. Forecasts are that Gasmig’s sales volume could grow at an annual rate of 15% over the next ten years.

CEG–Rio stake
Gaspetro increased its stake in the natural gas distributor, CEG–Rio by acquiring 65.58 million common shares (9.86% of the total common shares) and 181.92 million preferred shares (13.68% of the total preferred shares) worth US$ 16.54 million. As a result, Gaspetro now holds a 26.19% stake of the common and 43.01% of the preferred shares.

The increased shareholding in CEG–Rio, which operates in the interior of the state of Rio de Janeiro, is in line with the company’s strategic plan – namely to develop assured markets for the company’s natural gas and to increase its grip on the distribution market in the Southeast Region.

Commercial performance
Gaspetro’s gas distribution affiliates reported significant growth in average sales volume during the period from 2001 to 2004 increasing from 7.4 million m³/day to 16.4 million m³/day.

The thermoelectric segment’s natural gas consumption grew by 54% in relation to 2003. The increase reflects Brazilian economic expansion, which in turn increased the thermoelectric power plant’s dispatch of power to the transmission grid at the behest of the National System Operator (ONS).
Increased demand from the automotive segment exceeded the 22.3% expansion in the number of vehicles converted to VNG according to data from the Brazilian Petroleum Institute. This may be because of incomplete state traffic authority controls on the number of conversions or the fact that data is only supplied by VNG conversion companies ratified by the National Institute of Metrology, Standardization and Industrial Quality – Inmetro.

The increase in co-generation has little impact on overall results since this segment still plays an insignificant role in the distributors' sales mix. Natural gas consumption is still largely focused on the industrial, thermoelectric and automotive segments which together account for 91.8% of distributors' sales volume.

**Technology**

Investments in technology aim to stimulate the growth of the natural gas market in Brazil based on two initiatives: the GasEnergy Network and the Gas Technology Center.

The GasEnergy Network is designed to coordinate work involving universities and research institutes with the natural gas distributors, equipment manufacturers and commercial associations as well as governmental representatives. It is currently responsible for more than 90 ongoing projects for expanding the use of natural gas, examples being a natural gas vehicle motor, co-generation systems and small compressors, among others.

The Gas Technology Center is a partnership with Senai (National Service for Industrial Apprenticeship) for disseminating the use of natural gas. The Center was responsible for developing the Natural Gas Quality Project for analyzing the characteristics of gas throughout Brazil as well as several initiatives for the vocational training of specialized labor in this segment.
Petrobras’ strategy in this segment is to:

- Participate in the electric energy business to guarantee a market for the Company’s natural gas and oil products;

- Develop, coordinate and implement activities related to energy efficiency and renewable energy in the Petrobras Group and its final consumers considering the Company’s interests, the demands of society and sustainable development in Brazil.

Petrobras operates in the electricity sector through its stake in nine thermoelectric generating plants.

The changing circumstances of the electric power sector with demand being largely satisfied from hydro plants, have to a degree eliminated the need for recourse to dispatching electricity from alternative sources to the Brazilian market. However, this overcapacity is strategic. It is designed to avoid the risk of future energy rationing similar to 2001 and contributes to the reliability of the National Interlinked System.

In 2004, Brazil’s installed generation capacity was approximately 83 thousand MW. Of this total, 97.5% is hooked into to the National Interlinked System (SIN), which receives 83% of its power supplies from hydroelectric sources.

Plentiful rainfall during the greater part of the year has increased reservoir levels, which in most regions reported the
highest volumes in five years. This has meant that the thermoelectric plants have been dispatching less electricity than contemplated in the original projects.

The new Brazilian electricity sector model sees the coexistence of two contractual commercialization environments: Regulated (ACR), through the medium of auctions and Free (ACL), under which commercialization between market participants will be freely agreed and governed by bilateral purchase and sale contracts.

The first auction of electric power from existing power plants occurred in early December 2004 with the sale of 16 thousand average MW, being 9 thousand average MW for the 2005/2012 period at an average price of R$ 57.51/MWh, 5,800 average MW for 2006/2013 at an average price of R$ 67.33/MWh and 1,200 average MW for 2007/2014 at an average price of R$ 75.46/MWh. A further auction of this type is scheduled for March 2005.

The first electric energy auction for new power plants is scheduled for the middle of 2005. Those thermoelectric power plants, in which Petrobras has a stake and where the electricity produced was not totally contracted up to March 2004, are eligible to participate. These auctions are expected to produce long–term contracts, which will assure improved returns for plants successful in the bidding process.

**Performance**

Electricity sold by Petrobras in 2004 increased by about 126% (in MWh) compared to 2003 due to contracts signed in 2002/2003 with delivery scheduled to begin in 2004. During the year, Petrobras’ Units increased their participation by 137%. This led to considerable cost savings for the Company amounting to US$ 23 million in 2004.

**Thermoelectric Power Plants**

In 2004, UTE Norte Fluminense (780 MW) started commercial operations, Petrobras having a 10% stake in the business. In November, the two turbo–generators (208 MW) at the TermoRio plant (1,040 MW in total) began operating commercially.

During the year, the principal events involving the thermoelectric plants in which the Company has a stake were as follows:

- **UEG Araucária** – Petrobras and El Paso continued in litigation with Copel (Companhia Paranaense de Energia) to ensure the latter’s compliance with contractual obligations;

- **UTE Canoas** – In February and March the ONS dispatched supplies form the plant to satisfy demand in the Porto Alegre area and between May and August, exported electricity to Uruguay and Argentina;

The stake in nine thermoelectric power plants combines the strategy of expanding the natural gas market as well as ensuring the development of renewable energy and energy efficiency.
Petrobras promotes and coordinates projects for upgrading energy efficiency and supports studies and initiatives for developing renewable energy sources based on wind power, small hydroelectric power plants and biomass.

- **UTE Cubatão (CCBS)** – The revamping of this thermoelectric power plant project was approved for meeting demand for steam and electric energy from the Presidente Bernardes Refinery in Cubatão (SP). Petrobras also began basic engineering activities, the revision of the project in conjunction with Aneel (the National Electricity Energy Agency) and negotiations with the environmental agencies (State of São Paulo Environmental Secretariat – and Cetesb – São Paulo Environmental Sanitation Technology Company);

- **UTE Eletrobolt** – In August, Petrobras’ Board approved the financial conditions for the acquisition of this thermoelectric power plant, to be concluded in early 2005. The Association of Rio de Janeiro Banks is the current owner of Sociedade Fluminense de Energia (SFE), Eletrobolt’s controlling shareholder. This acquisition will automatically cancel the Eletrobolt Consortium’s contracts, the related contingency payments of which were generating losses for Petrobras;

- **UTE Fafan** – Phase II plant performance tests being undertaken. In December, approval was given for the acquisition of EDP’s (Eletricidade de Portugal) 80% stake, with Petrobras acquiring the totality of the plant’s shares;

- **UTE Ibirité** – This plant dispatched energy to the system in August and September in view of the need for improving the reliability of local electricity supplies;

- **UTE Norte Fluminense** – In December, Aneel authorized the commercial start–up of the last generator unit (the fourth) with a capacity of 291 MW, thus increasing installed capacity to 800 MW;

- **Termoaçu** – Approval of terms with the joint venture partner, Guaraniana S.A. and the resumption of the project; the Commitment Agreement was signed in September;

- **TermoRio** – Aneel authorized the commercial start–up of number one and two turbo–generators with a capacity of 208 MW. With the conclusion of arbitration proceedings for the complete acquisition of TermoRio, PRS Energia Ltda’s shares and rights (7%) were transferred to Petrobras, the Company taking over management control.

- **UTE Três Lagoas** – The contract with PIC Energy to provide operational and maintenance services was terminated and these functions transferred to Petrobras, representing savings of US$ 181 thousand/month for the Company.
The international growth of the Company will be based on the following strategy:

- Achieve leadership as an integrated energy company in Latin America;
- Expand operations in the United States sector of the Gulf of Mexico and in West Africa;
- Expand Petrobras' focus areas through businesses which contribute to portfolio growth and diversification;
- Add value to Petrobras' output of heavy oil;
- Accelerate the monetization of the natural gas reserves;
- Internationalize and increase the visibility of the Petrobras brand.

**Exploration and Production**

In 2004, the average daily production of oil and natural gas liquids (NGL) reached 168 thousand bpd, while the production of natural gas was 94 thousand boed, a total of 262 thousand boed. The Company's average lifting cost was US$ 2.60/boe.

The Company's proved foreign reserves amount to 1.87 billion boe according to SPE criteria and 1.25 billion boe according to SEC criteria.
Evolution of Proved Foreign Reserves of Oil, NGL, Condensate and Natural Gas
SEC criteria
(million boe)

<table>
<thead>
<tr>
<th>Year</th>
<th>Oil, NGL and Condensate</th>
<th>Natural Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>491</td>
<td>129</td>
</tr>
<tr>
<td>01</td>
<td>456</td>
<td>96</td>
</tr>
<tr>
<td>02</td>
<td>457</td>
<td>62</td>
</tr>
<tr>
<td>03</td>
<td>479</td>
<td>122</td>
</tr>
<tr>
<td>04</td>
<td>515</td>
<td>721</td>
</tr>
</tbody>
</table>

CAGR of Oil 53% p.a
CAGR of Natural Gas 11% p.a

The international Exploration and Production area ended 2004 with operations in 12 countries (Angola, Argentina, Bolivia, Colombia, Ecuador, United States, Iran, Mexico, Nigeria, Peru, Tanzania and Venezuela). Petrobras is associated with 70 oil companies and owns the rights to 296 blocks, of which it is the operating company in 145.

In 2004, together with associated companies, Petrobras drilled 13 exploratory wells, between wildcat and appraisal wells, of which five were considered productive, a 38% success rate. Exploratory investments in the international area amounted to US$ 191 million.
Petrobras Energía’s output was particularly important with 192.4 thousand boed, divided between Argentina (114.5 thousand boed), Bolivia (7.6 thousand boed), Ecuador (6.2 thousand boed), Peru (12.8 thousand boed) and Venezuela (51.3 thousand boed).

Argentina – In 2004, three wildcat wells were drilled in the Austral Basin situated in Santa Cruz Province. Two wells proved productive. A further 167 production wells were drilled. In Argentina, Petrobras is a partner in 55 blocks being the operator in 46. Average production was 114.5 thousand boed. In November, the merger of EG3, Petroleira Santa Fé and Petrobras Argentina with Petrobras Energia S.A. was approved. This will simplify business operations, capture operational and tax synergies as well as create the basis for a single business culture, facilitating Petrobras’ growth in the Southern Cone.

Bolivia – The Company is a partner in eight blocks, and is the operator in seven of them. In 2004, no wildcat wells were drilled. The average daily oil and natural gas liquids (NGL) output was 7.5 thousand bpd while natural gas production was 38.0 thousand boed, making a grand total of 45.5 thousand boed. In 2004, the floor of the Bolivian parliament began debating the new Hydrocarbons Law.

Colombia – Petrobras has a stake in 14 contracts, seven of them producing and seven exploratory, and is the operator in 12 of them. One wildcat well was drilled but was commercially uneconomic. A further 42 production wells were completed, 33 of them in the Guando field. In 2004, average production was 16.8 thousand boed. The highlight of the year was the signature of the Tayrona contract. This marks Petrobras’ first venture in offshore exploration in Colombia, the Company’s partners being ExxonMobil (40%) and Ecopetrol (20%). As operator, Petrobras holds the remaining 40%. The exploratory phase...
of the block of about 44,600 square kilometers could take as long as ten years. Petrobras also negotiated a 30% stake in the Achira, La Hocha Profundo, San Jacinto and Rio Paez blocks and a 25% share in the Upar block, all with Hocol as the operator.

USA – Petrobras America Inc. continued the strategy of consolidating its position in the new exploratory frontiers in the Gulf of Mexico, principally in ultra–deep water blocks, investing approximately US$ 130 million during the year. The discovery of the Coulomb North field was particularly significant with production beginning only 78 days after its discovery and establishing a new deep–water world production record at 2,301 meters. Promising results were also obtained from the first appraisal well in the St. Malo field in ultra–deep waters. The Company is a partner in 222 blocks, 65 of which, as operator. In 2004, average production was 5.1 thousand boed. Petrobras acquired a stake in the Treasure Bay project, which is made up of 60 concession blocks in the US sector of the Gulf of Mexico. Treasure Bay represents a project to test ultra–deep exploration in the shallow waters of the area. This project represents a new high–potential frontier where production infrastructure is already on site.

In addition, the Company successfully bid the third largest number of exploratory blocks in the 192nd bidding round for exploratory concession areas. The Company obtained 37 blocks, the majority being in the Corpus Christi quadrant, in which at least three prospects with major reserve potential were identified.

Mexico – In 2004, Petrobras began development and production operations in Mexico, in consortium with Pemex, the Company’s share being 45%. During the year, eight producing wells were drilled.

Nigeria – The Company has a partnership in four blocks, being the operator in one. In 2004, an appraisal well was successfully drilled in the Egina field operated by the French company, Total. A further two wildcat wells were drilled, one of them the first to be operated by Petrobras in deep waters outside Brazil. This well broke the record for both total depth and water–depth in Nigerian operations. Four production wells were successfully drilled in the Agbami field, operated by ChevronTexaco – one of the two mega fields in which Petrobras is a partner and due to go into production from 2008.

Ecuador – Petrobras Energia operates two blocks with fields already at a production development stage. A wildcat well was also sunk (results of which are still being assessed) together with a further five production development wells. In 2004, average production was 6.2 thousand boed.

Peru – Petrobras Energia is a partner in two blocks, one of them exploratory and one production, the company being responsible for operating the latter. A further 20 production development wells were drilled during the year. A more favorable royalty agreement was successfully negotiated with the Peruvian government resulting in new investments in production development. Average production in Peru was 12.8 thousand boed.

Venezuela – Petrobras operates six blocks, of which four are in production and two are exploratory. In 2004, two wildcat wells were drilled, the results of which are still being assessed. A further 24 production development wells were also drilled. Average production of oil and NGL in Venezuela was 47.0 thousand boed as well as 4.3 thousand boed of natural gas, a grand total of 51.3 thousand boed.
Tanzania – Petrobras signed a Production Sharing Contract with the Government of Tanzania and Tanzania Petroleum Development Corporation (TPDC), the state oil company, for the exploration of Block 5 with 9,250 square kilometers in waters between 300 and 3,000 meters deep in the Mafia Basin. The exploration contract could run for up to 11 years. In 2005, further seismic surveys are to be made. Should interest still remain, the contract can be extended for two more stages with a commitment to drill a wildcat well during each stage.

China – In May 2004, Petrobras signed a Strategic Cooperation Agreement with Sinopec, one of the three state oil companies in China. The Agreement provides for the study and development of business opportunities in partnership, including joint deep-water oil exploration and the future production, commercialization and supply of oil as well as the supply of infrastructure for oil and gas transportation and to the refining and petrochemical areas.

Iran – Petrobras signed a contract with the Iranian state oil company, National Iranian Oil Company (NIOC), for the exploration of the Tusun Block in the shallow waters of the Iranian section of the Persian Gulf. This contract marks the Company’s return to the Middle East after 20 years, and to Iran itself, where it operated previously in the seventies. The Company holds a 100% stake in the block and will use this new relationship as a bridgehead for identifying new opportunities in other countries of the region in addition to Iran itself. The contract will be managed by the Iranian branch of Petrobras Middle East B.V., constituted in Tehran in October 2004.

PETROCHEMICALS AND FERTILIZERS

Argentina

These operations are concentrated on four operational units of Petrobras Energia. The company is the only producer in the country of styrene butadiene rubber (SBR), polystyrene and urea + ammonium nitrate – UAN.

Refining

There are five refineries in Argentina and Bolivia with a nominal capacity of 136.4 thousand bpd and an average throughput of 106 thousand bpd.

In Argentina, the Company operates two refineries: Ricardo Eliçabe, in Bahía Blanca (Buenos Aires Province), and San Lorenzo (Santa Fé Province); it also holds a 28.5% shareholding in the Del Norte Refinery (Refinor) in conjunction with Pluspetrol (21.5%) and YPF (50%).

In Bolivia, Empresa Boliviana de Refinación (EBR) – in which Petrobras’ stake was increased to 100% with the acquisition of Perez Companc – is the owner of the Gualberto Villaroel (Cochabamba) and Guillermo Elder Bell (Santa Cruz) refineries.

In 2004, the combined throughput of these plants was about 63% of nominal capacity. The low Utilization Factor reflects the characteristics of Bolivian oil.

The consolidated operational cost of foreign refining was US$ 1.21/bbl, excluding Refinor.
It is also the only manufacturer of bioriented polystyrene – BOPS – in South America.

- Puerto General San Martin – integrated units for the production of ethylene (30,000 t/year), ethylbenzene (140,000 t/year), styrene (110,000 t/year) and SBR rubber (58,000 t/year) and nutrile rubber – NBR (3,000 t/year).

- Zárate – integrated units for the production of polystyrene (65,000 t/year) and BOPS (14,000 t/year).

- Campana – integrated units for the production of ammonia (two plants with capacities of 280 t/d and 90 t/d), urea (580 t/d) and UAN (1,500 t/d). In November, the ammonium thiosulfate unit (capacity for 370 t/y) was commissioned, thus expanding the company’s range of liquid fertilizers. The investment was US$ 7 million.

- Petroquímica Cuyo – a polypropylene plant (90,000 t/year). This is a very flexible unit, which is being used to increasingly produce special grade higher value added polypropylene. Petrobras holds a 40% stake in this business.

An ethylene unit with a 20,000 t/y capacity was acquired from ICI. Production is transferred along a new pipeline to the Puerto General San Martin Unit allowing ethylbenzene output to be increased to 190,000 t/y, 80,000 t/y of which is exported to Innova, in turn allowing styrene production to be ramped up to 250,000 t/y. The total investment was US$ 7 million, including the necessary infrastructural adaptations and the construction of two pipelines.

**Brazil**

Innova, a wholly owned subsidiary of Petrobras Energia, located in the Rio Grande do Sul Petrochemical Complex, has integrated units for the production of ethylbenzene (190,000 t/y) styrene (180,000 t/y) and polystyrene (120,000 t/y). The company accounts for 42% of Brazil’s installed styrene capacity (the largest producer) and 19% of its polystyrene.

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**Refinery Installed Capacity (th. bpd) Feedstock Processed throughput (th. bpd)**

<table>
<thead>
<tr>
<th>Refinery</th>
<th>Installed Capacity (th. bpd)</th>
<th>Feedstock</th>
<th>Processed throughput (th. bpd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bahía Blanca</td>
<td>30.5</td>
<td>Medanito and María Inés</td>
<td>29.8</td>
</tr>
<tr>
<td>San Lorenzo</td>
<td>37.7</td>
<td>Medanito and María Inés</td>
<td>33.4</td>
</tr>
<tr>
<td>Salta/Del Norte (*)</td>
<td>28.0</td>
<td>Condensates and Palmar Largo</td>
<td>17.4</td>
</tr>
<tr>
<td>Bolivia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Cruz</td>
<td>20</td>
<td>Bolivian blend</td>
<td>15.9</td>
</tr>
<tr>
<td>Cochabamba</td>
<td>40</td>
<td>Bolivian blend</td>
<td>21.9</td>
</tr>
</tbody>
</table>

(*) Petrobras’ shareholding is 28.5% (equivalent to 7.9 thousand bpd installed capacity and 4.96 thousand bpd processed throughput).
Argentina

<table>
<thead>
<tr>
<th>Controlled networks</th>
<th>Number of service stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrobras</td>
<td>330</td>
</tr>
<tr>
<td>EG3</td>
<td>337</td>
</tr>
<tr>
<td>SL –San Lorenzo</td>
<td>60</td>
</tr>
<tr>
<td>TOTAL</td>
<td>727</td>
</tr>
</tbody>
</table>

Note: In addition, there are service stations exclusively for CNG (Compressed Natural Gas) sales, 19 with the EG3 flag and 5 with the Petrobras flag.

The most important investment in the distribution area in Argentina was the continued project for consolidating the Petrobras brand at the service stations previously operating under the EG3 and SL–San Lorenzo flags. During the year, total sales volume was 43 thousand bpd, with the service station network accounting for 21.8 thousand bpd. Petrobras’ share of the automotive fuel market was 14.7%. Sales of Lubrax lubricants were 22,534 m³, 20% more than 2003, and representing an 8.1% market share.

In June, the Company launched the Petrobras Podium gasoline, the first RON 100 octane fuel in the market. The fuel was developed with the same technology used for fuel supplied to the BMW Williams racing team. The launch ceremony was at the Buenos Aires Race Track in the presence of Formula 1 driver, Juan Pablo Montoya. The fuel is produced at the San Lorenzo refinery and was developed by both Argentine and Brazilian technicians.

The first wind–powered service station in the Company’s international operations was opened in the city of Comodoro Rivadavia. In August 2002, the Company had already begun operating a solar energy–powered service station in Buenos Aires. Both are symptomatic of the concern for developing projects, which combine profitability with the commitment to social responsibility, preserving the environment and health.

Overseas refining and distribution activities, comprising five refineries with a nominal capacity of 135,400 bpd and 830 service stations in Argentina and Bolivia, enhance the strategy of seeking leadership in Latin America as an integrated energy company. In 2004, sales of Lubrax lubricants to these two markets increased while Petrobras Podium gasoline was launched in Argentina, the first 100 RON octane fuel in the country.
In 2004, the average sales volume in Bolivia was 6.46 thousand bpd. The Company operates 103 service stations (40 under the Empresa Boliviana de Refinación – EBR flag and 17 under the Petrobras brand). During the year, seven Spacio 1 convenience stores were opened.

The Company proceeded apace with the strategy of differentiating its service stations through the opening of Spacio 1 stores and Lubrax Center units, consolidating its position as the leading distributor in the Bolivian market with a 25% share.

The year also saw sales of Lubrax, lubricants increasing their market penetration from 4% in 2003 to 12%.

At the end of 2004, the Universitário service station was opened – owned and operated by Petrobras – and recommended for ISO 14001 and OSHAS 18001 certification, thus becoming the first in the international area to adhere to the criteria of excellence in safety and environmental preservation.

**Gas and Energy**

In 2004, Petrobras sold an average of 14.8 million m³/day through its foreign operations. In Venezuela and Peru, sales were of gas produced from Petrobras Energía’s own oil production facilities.

Sales in Argentina are conducted through short and medium term contracts with industries and regional distributors in Argentina and Chile, as well as for supplying thermoelectric power plants. By contrast, in Bolivia, sales are almost entirely in the form of exports to Brazil along the Bolivia-Brazil Gas Pipeline (Gasbol). A further development has been the start of Bolivian gas exports to Argentina in June 2004. Initial volume amounted to about 1.0 million m³/day – considering the Petrobras portion only.

<table>
<thead>
<tr>
<th>Country</th>
<th>Volume Carried (in millions of m³/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>6.1</td>
</tr>
<tr>
<td>Argentina</td>
<td>7.8</td>
</tr>
<tr>
<td>Venezuela</td>
<td>0.7</td>
</tr>
<tr>
<td>Peru</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**Bolivia**

<table>
<thead>
<tr>
<th>Networks controlled by Petrobras</th>
<th>Number of service stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrobras</td>
<td>17</td>
</tr>
<tr>
<td>EBR</td>
<td>40</td>
</tr>
<tr>
<td>Unbranded</td>
<td>46</td>
</tr>
<tr>
<td>TOTAL</td>
<td>103</td>
</tr>
</tbody>
</table>
In 2004, exports of Bolivian gas to Argentina began, the San Marcos gas pipeline was concluded in Bolivia, built entirely with Petrobras capital, and Conecta, a natural gas distribution company in Uruguay, was acquired.

**Argentina**

Petrobras has a 34% stake in the capital of Companhia Mega, which operates a natural gas separation unit in Loma La Lata (Neuquén province), a 600 kilometer oil products pipeline, a fractionation unit in Bahía Blanca (Buenos Aires province), as well as tankage and export shipping facilities. In 2004, the company sold 1,429 thousand tons of products (ethane, butane, propane and gasoline), with gross sales revenue of US$ 539 million.

Petrobras also has a stake in Transportadora de Gás del Sur (TGS), which owns 7.4 thousand kilometers of gas pipelines with a capacity of 62 million m³/day. The company has a natural gas processing plant in Bahía Blanca with a 42 million m³/day capacity. Plans are underway for expanding TGS’s capacity by 2.9 million m³/day along a 495-kilometer section in 2005 to meet growing demand from the Argentine market.

Petrobras’ electricity assets in Argentina encompass the entire production chain. Petrobras has 6.5% of the country’s generation capacity through its stake in three power plants, two of which are hydroelectric (Piedra Del Águila and Pichi Picún Leufú) and one, a gas-fired thermoelectric plant (Genelba). Transener is the principal electricity transmission company in Argentina, representing 95% of the high-tension transmission lines. On the distribution front, Petrobras’ stake in Edesur gives it a presence in the central region of Buenos Aires, an area with more than 2.1 million clients and more than 6 million inhabitants.

**Bolivia**

In Bolivia, the Company’s most important enterprise is the Yacuíba to Rio Grande pipeline, a 32-inch diameter gas pipeline, 431 kilometers in length. The pipeline, which began operating in April 2003, is owned and operated by Transierra S.A., a company in which Petrobras has a 44.5% stake. The pipeline serves production from the San Alberto and Sábalo fields and currently has a capacity to carry up to 17 million m³/day, ramping up to 23 million m³/day once one more compressor station is concluded.

In 2004, the San Marcos pipeline was concluded with construction costs totally funded by Petrobras. The pipeline began its activities in 2004, carrying gas to industrial clients
in the city of Puerto Suárez. Petrobras also has a stake in the Rio Grande Compressor Station, located at the head of the Bolivia–Brazil gas pipeline, with a capacity of 43.8 million m³/day, and two gas processing units in the San Alberto and Sábalos fields, each with a processing capacity of 13 million m³/day.

**Uruguay**

The Company began activities in Uruguay with the acquisition in December of the shareholding control (55%) of Conecta S.A., a natural gas, LPG and manufactured gas distribution concessionaire. The company operates a pipeline network, presently with a length of 300 kilometers and exclusive agreements to supply small and medium-size consumers (up to 5,000 cubic meters daily) to the upcountry areas of Uruguay, excluding the capital, Montevideo.

This acquisition, worth US$ 3.2 million was negotiated with the Spanish group Unión Fenosa through the purchase of the participation of the latter’s subsidiaries, Gaufil and Lufirel of 30% and 25%, respectively, in the voting capital of Conecta. Administración Nacional de Combustibles Alcohol y Portland (Ancap), a Uruguayan state controlled company, continues to hold the remaining 45% of Conecta’s capital. At present, Conecta has 4,200 clients, of which 4,100 are residential. It is estimated that this number represents no more than 10% of the market potential adjacent to the company’s distribution network in the cities of Paysandú and Ciudad de la Costa. Annual sales are currently running at about US$ 2.7 million.
The growth in Brazilian Gross Domestic Product in 2004 was 5.2%, much above the figure for previous years. This reflected positively in Petrobras’ domestic sales volume with an increase of 19% in natural gas sales and 6% in oil products.

Crude oil prices were very volatile in 2004, with Brent rising to an average of US$ 38.21, and impacting directly on costs of raw materials, of lifting of domestic oil and on imported oil, which represented an average of 24% of processed crude throughput.

The Company adopted a policy of avoiding an immediate pass-through of price volatility to the consumer, as a result, operating income remaining at the similar levels to 2003.

Increased revenue
The Company’s gross operating revenue reached US$ 51.9 billion, 22% higher than reported in 2003. Increased oil and oil product prices in the domestic and overseas markets together with a 6% hike in domestic sales volume, both contributed to this result.

Net operating revenue reached US$ 37.4 billion, a year-on-year growth of 22%. This result reflected higher sales volume in the domestic market; higher realization prices in the domestic and overseas market; the offshore sales of Petrobras International Finance Co. (Pifco); increased foreign oil and gas production; positive sales trends of Petroquisa’s subsidiaries; and an enhanced LPG market share following the acquisition of Liquigás Distribuidora.

Net operating revenue from the Gas and Energy area reported an especially strong performance, increasing by 37%, the result of higher volumes of natural gas sales and increased energy generated by the thermoelectric plants in which Petrobras has a stake.

Operational results
Oil and natural gas production reported a fall of 1% compared with 2003, principally the result of operational problems depressing production below 2003 levels for the greater part of the year. These problems were occasioned by the delay in the start-up of operations of the P-43 and P-48 platforms and the Marimbá Field sub-sea production manifold system.
Consolidated net operating revenues grew 22%, reaching US$ 37.4 billion, reflecting a 6% increase in domestic sales volume and an increase in oil and oil product prices both in Brazil and overseas. Increases in overseas sales and production, revenues from companies controlled by Petroquisa and a higher share of the LPG market with the acquisition of Liquigás Distribuidora, all further contributed to this performance.

Foreign oil and gas production grew by 7% in relation to 2003, reaching an average of 263 thousand boe/day.

In 2004, processed throughput of crude in Brazil and overseas amounted to 1,804 thousand bpd, 7% more than in the preceding year. This improvement can be ascribed largely to the modernization and expansion of the Rlam, Revap, Regap and Replan refineries in 2003 leading to a better operating performance in 2004. It also enabled oil product inventory to be replenished and used during programmed stoppages, as well as providing buffer stock for meeting demand during future stoppages. Increased domestic consumption in Brazil further contributed to this growth.
The Company’s pricing policy during the year of avoiding the immediate pass-through of international oil price volatility to the domestic consumer, kept operating profits at the same level as the 2003 fiscal year.

Financial–economic results
Operating income was US$ 10.6 billion, 4% more than in 2003 due to the increase in net operating revenue (22%), despite a growth of 32% in the cost of goods and services sold.

The financial result was a negative US$372 compared to US$136 million in 2003, mainly due to Increase in financial expense resulting from PEPSA’s hedge operations (US$233 million), as well as a loss on repurchases of our own securities (US$137 million).

Capital expenditures
Petrobras invested US$ 7.7 billion, in accordance with its Strategic Plan and 18% more than 2003.

The Company allocated US$4.6 billion of investment to the Exploration and Production (E&P) business area, largely applied in increased production and for augmenting oil and gas reserves. A further US$1.4 billion was directed to refining, commercialization, petrochemicals and transportation as part of the process of adding value to the Petrobras Group’s raw materials (oil and gas), the focus being on a higher value-added and better quality product mix. Petrobras dedicated a further US$ 727 million to the international area, in line with its objective of achieving leadership as a Latin American integrated energy company.

Capital Expenditures (US$ million)
Risk Management

In 2004, the Company instituted a Risk Management Committee made up of representatives of management from all areas of the business and the various corporate areas. The objective of the Committee is to ensure the integrated administration of risk exposure and to formalize the principal guidelines for managing the uncertainties of the Company’s activities and see that growth opportunities can be maximized even under external adverse conditions.

The purpose of the committee is to focus information and discussion of risk management initiatives, facilitating communication with the Board of Executive Officers and the Board of Directors on aspects relating to requirements of the Sarbanes–Oxley Act and best corporate governance practices.

Policy for managing financial risks
The philosophy behind the policy on managing financial risk is to guide decisions on risk transfer and is sustained by actions based on capital discipline and debt management. These actions are:

- Produce cheaply – capital discipline ensures competitive costs for all products sold in the market;
- Future investments are decided on a realistic basis by seeking a balance between profitability, growth and the strategic compliance of the project portfolio on the one hand, while preserving the liquidity and solvency of the Company’s balance sheet and creating the essential conditions for sustainable growth, on the other;
Prudent management of debt, seeking to match the operational cash flows with debt amortizations, taking into account amounts, currencies, maturities and indexes, and consequently reducing the risk of insolvency.

Other important characteristics in risk management are:

- Integrated management of market risks that quantifies total exposure, identifies natural hedges and acts on net Company exposure, while avoiding isolated initiatives on the part of the Business Units that do not contribute to the optimization of corporate risks;
- Respect for the concepts of market efficiency and diversification. Petrobras is aware that it operates in some of the most liquid markets in the world where the possibility of systematically predicting prices is very limited. As a result, the Company's risk management is focused on avoiding extremely adverse events rather than minimizing oscillations in results, cash flow, etc.;
- The highest standards of transparency in disclosing the Company's potential exposure.

Risk assessment
The risk assessment of the financial feasibility of the Company's strategic plan is based on probability analysis of projected cash flows for a two-year period. The economic–financial projections are up–dated annually in conjunction with the review of the strategic plan.

The model used for quantifying risk (Cash Flow at Risk) considers the variations in key factors that have the most impact on cash generation – namely, prices, amounts (production and markets), foreign exchange and interest rates.

In essence, cash balances are projected under an infinite number of scenarios involving the principal risk factors using Monte Carlo Simulation analysis. The cash balance is estimated for the intended confidence level and then periods in which the balance may be lower than the minimum, analyzed.

Among the alternatives that could be adopted for preserving the minimum predetermined cash balance are financial derivatives, additional funding and optimization of the disbursement profile.

Transactions using derivatives are not limited to the processes described above, but are also important tools for protecting transactions and in the matching of assets and liabilities.

Specific treasury exposure to financial investments is assessed using value at risk (VaR). The economic results of projects worth more than US$ 25 million are examined on the basis of evaluation models appropriate to each business segment using Monte Carlo Simulation methods.

Oil and oil product market risks –
As with all its peers, Petrobras is subject to the international price volatility of the energy market (principally oil), which can materially affect cash generation.

Petrobras' policy consists basically in protecting import and export margins for specific short–term positions (six months at the most) using hedging mechanisms such as futures, swaps and options. These mechanisms are always linked to effective transactions in the physical market and are not held or issued purely for trading purposes.

In 2004, hedging operations accounted for 33.06% (40.5% in fiscal year 2003) of the total volume transacted (imports and exports).

In line with specific business conditions, Petrobras may exceptionally transact long–term hedge operations. A case in point involves the sale of put options on 52 million barrels of West Texas Intermediate (WTI) oil for the period 2004 – 2007. The puts were written to establish a price protection mechanism for this quantity of oil to ensure that the financial institutions participating in the finance of the Barracuda/Caratinga project receive the price required to generate the minimum debt service coverage.

Petrobras Energia Participaciones S.A. (Pepsa), a crude oil producer has recourse to several financial derivative instruments using WTI prices as their benchmark.
The Risk Management Committee, instituted in 2004, centralizes information and discussion of risk management actions as well as implementing guidelines for managing uncertainty and ensuring that growth opportunities are to be fully maximized even under unfavorable conditions.

In 2004, hedge operations were transacted for a volume of oil sold to third parties amounting to approximately 8 million boe.

Foreign Exchange Risk – A considerable part of the Company’s total debt and future operational cash flow is in dollars or strongly indexed to the dollar. For this reason, Petrobras does not have an excessively large exposure to foreign exchange risk.

Depending on a case-by-case basis, the use of derivatives is limited to mitigating exposure in relation to other currencies such as the Euro and the Yen.

In 2000, Petrobras contracted hedge operations to cover Notes issued abroad in Italian lira and Austrian schillings as a means of offsetting the appreciation of these currencies against the US dollar.

The transaction related to the loan in schillings expired in December.

Interest rate risks – The interest rate risk that the Company runs depends on its long-term debt and, to a lesser degree, short-term debt as well. Floating rate debt in foreign currency is subject principally to fluctuations in Libor, and debt in Reais at fluctuating rates of interest is subject principally to the long term interest rate (TJLP), periodically announced by the Brazilian Central Bank. Currently, the Company does not employ derivative instruments to manage its exposure to fluctuations in interest rates. The only exception is the Company’s indirect subsidiary Petrobras Energia Participaciones S.A. (Pepsa), which uses various financial derivative instruments to reduce certain exposure to interest rate volatility.

Derivative instruments
The Company uses derivative and non-derivative instruments to implement its overall risk management strategy. However, by using these instruments, Petrobras exposes itself to credit and market risk. Credit risk is the failure of the counterparty to perform under the terms of the derivative contract. Market risk is the adverse effect on the value of the financial instrument that results from a change in interest rates, foreign exchange rates or commodity prices. Petrobras addresses credit risk by limiting its counterparties in such financial derivative instruments to first class financial institutions. Market risk is managed by the Company’s executive officers. The Company does not hold or issue financial instruments for trading purposes.

Credit risk
In 2004, Petrobras implemented a new system of credit analysis called Credit Flow as well as instituting two Credit Committees: Downstream and Natural Gas and Energy. These committees are forums for discussing various aspects relating to the concession and management of credit.
Insurance

In 2004, the Company was able to successfully reduce the final premium paid on its principal policies: major fire/operational risk and petroleum risk. The premium fell from US$ 31.9 million in 2003 to US$ 25.2 million in 2004, a nominal reduction of 21% under similar coverage conditions. Over the same period, the insured value went up 28%, from US$ 20.8 billion to US$ 26.6 billion.

The larger part of Petrobras' risk is laid off in the international reinsurance market. For this purpose, the Company maintains a permanent policy of disclosing the quality and practices of its risk management through road shows and periodic contacts with the market in Brazil and overseas. The Company's installations are regularly inspected by independent companies and the results and remedial actions taken to meet any recommendations are disclosed to the market. Additionally, pertinent information, such as losses, their causes and improvements made, are promptly passed onto the insurance market, providing total transparency to Company risk.

In the light of the commitments and investments made in the Safety, Environment and Health (SMS) and Quality areas, Petrobras, like other oil companies of a similar size, has opted to retain a significant portion of the risk, which includes increasing deductibles to as much as US$ 20 million.

As part of this policy, the Company does not insure against lost profits neither does it insure wellhead controls nor the pipeline network.

All installations – including refineries, platforms and terminals – are insured against major fire/operational and petroleum risk. Both national and international freight movement is covered by national and international transportation policies. Petrobras' fleet is covered by hull and engine insurance policies. Civil liability and environmental risks, as the case may be, are covered by one or more policies with limits compatible with companies of a similar size.

Projects and installations are insured against construction risks through a policy taken out by Petrobras or the contractor, as appropriate.

For insurance purposes, the Company's assets are valued at replacement cost, evaluated by the Company and/or appraisal companies depending on each individual situation. In order to calculate the maximum probable damages at each installation (under various hypotheses and scenarios) in the case of a claim, Petrobras uses a proprietary program or appraisals by outside consultants.
The assessment of the maximum probable damages sets a base for the Maximum Indemnity Risk (LMI) for major fire/operational risk policies of US$ 600 million.

Overseas activities are insured or reinsured almost entirely by the captive insurance company, Bear Insurance Co. Ltd., domiciled in Bermuda. Bear retains none of the risk, laying it off completely in the market.

**Legal actions and contingencies**

Given the dimension of its activities, Petrobras is subject to different legal actions of a commercial, labor and fiscal nature. Petrobras minimizes these risks by complying rigorously with all the legal provisions of the various aspects involved with its businesses. In the case of legal actions in progress, the Company has recourse to the courts to defend itself and reverse unfavorable decisions.

**Environmental matters**

Petrobras is subject to various environmental laws and regulations which discipline the movement of oil, gas and other materials. These laws and regulations establish that the Company must correct or mitigate the impact of its operations on the environment. Management believes that eventual expenses for correcting or mitigating possible environmental impacts should not have a significant effect on Company operations or its cash flow.
Capital Markets

Share performance
While oil company share prices rallied strongly in 2004, according to the Amex Oil Index (XOI) increasing by an average of 28%, Petrobras’ ADRs (PBR and PBRA) – traded on the New York Stock Exchange – appreciated more sharply still at 36% and 35.8%, respectively. The Dow Jones Industrial Index rose only 3.15% during the year.

In Brazil, the São Paulo Stock Exchange (Bovespa) recorded an average appreciation of 17.8%, while Petrobras common ON and preferred PN shares rose 26.6% and 27.2%, respectively. The Company’s market capitalization at the end of the year was US$ 42 billion.

Petrobras shares and ADR indicators

<table>
<thead>
<tr>
<th></th>
<th>ON</th>
<th>PN</th>
<th>PBR</th>
<th>PBRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closing price on</td>
<td>12/31/2004</td>
<td>R$ 106.50</td>
<td>R$ 97.15</td>
<td>US$ 39.78</td>
</tr>
<tr>
<td></td>
<td>12/31/2003</td>
<td>R$ 84.10</td>
<td>R$ 76.40</td>
<td>US$ 29.24</td>
</tr>
<tr>
<td>Daily average volume (*)</td>
<td>2004</td>
<td>30.50</td>
<td>99.61</td>
<td>42.85</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>19.59</td>
<td>63.81</td>
<td>20.82</td>
</tr>
<tr>
<td>Average price</td>
<td>2004</td>
<td>R$ 92.95</td>
<td>R$ 83.88</td>
<td>US$ 32.01</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>R$ 60.83</td>
<td>R$ 56.19</td>
<td>US$ 20.11</td>
</tr>
<tr>
<td>Average number of daily transactions</td>
<td>2004</td>
<td>396</td>
<td>1,401</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>262</td>
<td>974</td>
<td></td>
</tr>
<tr>
<td>Participation in IBOVESPA</td>
<td>2.68</td>
<td>9.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.46</td>
<td>8.36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*) Average daily volumes of ON and PN share are expressed in R$ million and ADRs in US$ million.
<table>
<thead>
<tr>
<th>Date</th>
<th>MV (US$)</th>
<th>PBR (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/31/02</td>
<td>15.5 bi</td>
<td>14.9</td>
</tr>
<tr>
<td>06/30/03</td>
<td>20.7 bi</td>
<td>19.8</td>
</tr>
<tr>
<td>12/31/03</td>
<td>30.9 bi</td>
<td>29.2</td>
</tr>
<tr>
<td>06/30/04</td>
<td>39.8 bi</td>
<td>36.6</td>
</tr>
<tr>
<td>12/31/04</td>
<td>42.0 bi</td>
<td>39.8</td>
</tr>
</tbody>
</table>

**Economic Context – Shares**

- Petrobras PN
- Petrobras ON
- Ibovespa

Market Value calculated on the basis of prices of common (PETR3) and preferred (PETR4) shares listed on Bovespa.

Source: Bloomberg

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**Corporate financing**

One of the principal events of 2004 was the increase in Petrobras’ rating by the international risk rating agencies. In December, the Company was classified at only one notch below investment grade, leaving it well placed to raise future funding in the international markets under more advantageous conditions.

In 2004, Petrobras renewed its strategy of using a combination of funding sources to finance its activities. With the quality of its credit recognized by banks, capital markets investors and rating agencies alike, the Company was able to obtain more competitive conditions than had been the case in previous years.

The Company’s strong cash position reduced the need to go to the market and the total of new funding during the fiscal year – US$1,873 billion – was 29% less than in 2003 but at more attractive costs and maturities.
Transactions with the official credit agencies
During the year, Petrobras drew down US$ 129 million of financing guaranteed by export credit agencies (ECAs) against contracts signed in previous years.

Petrobras Netherlands B.V. (PNBV) signed a European Multi-source Facility Agreement with BNP Paribas and guaranteed by the export credit agencies of Norway, United Kingdom and Italy (GIEK – Garanti-Instituttet for Eksportkreditt, ECGD and Sace Servizi Assicurativi del Commercio Estéreo, respectively) for US$ 280 million to finance the purchase of goods and services from those countries for the construction of the P–51 and P–52 platforms.

The Company also signed a credit line with the Canadian export credit agency EDC for US$ 125 million to finance Canadian goods and services.

BNDES operations
During the year, Petrobras Netherlands B.V. signed buyer’s credit worth US$ 378.5 million from the BNDES, to finance Brazilian goods and services for the construction of the P–52 platform.

Bank guarantees
Bank guarantees contracted by Petrobras, Petrobras International Finance Company (Pifco) and Brasoil amounted to US$ 1,926 billion in 2004, against US$ 1,176 billion in 2003. These bank guarantees supported oil and oil product imports and exports (58%), as well as performance and bid bonds (42%) for various areas of the Company.

Commercial credit lines
Petrobras, Pifco, Brasoil, PEB and EBR raised a total of US$ 650 million in the international markets, 37% less than in 2003, when funding amounted to US$ 1,028 billion. This reduction is once again a reflection of the Company’s favorable cash position.

In 2004, Petrobras continued its policy of extending the debt maturity profile. Of the total finance raised, US$ 535 million (82%) was for maturities from two to seven years and the remainder of US$ 115 million (18%) at terms of up to 360 days. In 2003, these percentages were 25% and 75%, respectively.

Out of the total new funding of US$ 650 million in 2004, US$ 590 million (91%) was used to support the commercialization of oil and oil products. The remaining US$ 60 million (9%) was for specific operations at the subsidiaries.

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Structured Projects

<table>
<thead>
<tr>
<th>Projects</th>
<th>Year Structured</th>
<th>Value USD Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marlim</td>
<td>1998</td>
<td>1,500</td>
</tr>
<tr>
<td>Albacora</td>
<td>2000</td>
<td>410</td>
</tr>
<tr>
<td>Barracuda Caratinga</td>
<td>2000</td>
<td>3,100</td>
</tr>
<tr>
<td>Cabiunas</td>
<td>2000</td>
<td>850</td>
</tr>
<tr>
<td>Espadarte, Voador and Marimbá (EVM)</td>
<td>2000</td>
<td>1,078</td>
</tr>
<tr>
<td>Novamarlim</td>
<td>2001</td>
<td>834</td>
</tr>
<tr>
<td>Pargo, Congo, Garoupia, Cherne and Carapeba (PCGC)</td>
<td>2001</td>
<td>92</td>
</tr>
<tr>
<td>Malhas</td>
<td>2003</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Note: The CLEP project, structured in 2003, worth USD 1,760 million was not included since funds were raised through PIFCO.

New Projects Currently being Structured

<table>
<thead>
<tr>
<th>Projects</th>
<th>Value USD Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Plan for Delivery and Treatment of Oil from the Campos Basin</td>
<td>900</td>
</tr>
<tr>
<td>Malhas Expansion Project</td>
<td>900</td>
</tr>
<tr>
<td>Urucu–Coari–Manaus Gas Pipeline and the Manaus Thermoelectric Power</td>
<td>1,000</td>
</tr>
<tr>
<td>Expansion of Revap Refinery</td>
<td>800</td>
</tr>
<tr>
<td>Construction of P–53 Platform</td>
<td>1,000</td>
</tr>
<tr>
<td>Gasene</td>
<td>1,300</td>
</tr>
</tbody>
</table>
Structured operations

Financing – Continuing the trend in 2003, the capital markets continued to be among the principal channels of finance for Petrobras, the so-called high grade, high yield and emerging markets’ global investors being particularly important sources. Once more, this is indicative of the recognition of the credit quality and the broad-based acceptance of the Company by the international capital markets.

In September, Petrobras International Finance Company (Pifco) issued US$ 600 million in Global Notes in the international market maturing in 2014 with a coupon of 7.75% p.a. and with good investor acceptance.

Structured Projects – Petrobras obtains additional financial resources in the domestic and international market through project finance operations, thus complementing its corporate funding sources.

Using financial engineering based on future cash flow, the Company arranges funding for the projects from investors and financiers through the medium of Special Purpose Companies (SPCs), specifically set up for each project.

Since 1997, Petrobras has used this form of funding to finance major projects in the Exploration and Production area. Among these is the complementary development of oil production in the Marlim field and more recently, projects for the lifting and transportation of natural gas. At the end of 2003, the Company concluded the structuring of the Malhas Project (Projeto Malhas) for financing the construction of a network of pipelines and citygates for the delivery of natural gas to the Southeast and Northeast Regions. The Project’s increased scope is currently being negotiated and will involve additional finance of US$ 900 million over and above the US$ 1 billion financial package already concluded.

The structuring of the Master Plan for Delivery and Treatment of Campos Basin Oil (PDET) is in its final stages. Funding for implementing the Plan is worth approximately US$ 900 million and will be spent on optimizing the delivery of oil produced in the Campos Basin totaling 630 thousand bpd.

In 2004, the Company also began negotiations for the structured financing of the Uruçu-Coari–Manaus Gas Pipeline Project and the Manaus Thermoelectric Power Plant. Investments will be approximately US$ 1 billion and will allow natural gas from the Solimões Basin in the Amazon Region to be harnessed on an economically viable basis. In addition, the project for the construction of the Gasoduto Sudeste–Nordeste (Gasene), responsible for connecting the pipeline systems of the Southeast with the Northeast regions, will involve finance of approximately US$ 1.3 billion.

All the projects are structured in compliance with Brazilian accounting rules and legislation, Petrobras always seeking to minimize the company resources used and guarantees required.
Intangible Assets

Competitive advantages give Petrobras an outstanding position in its chosen markets and allow it to compete effectively in the domestic oil and gas sector.
Its successful consolidation as an international energy company is due to a series of competitive advantages in which Petrobras invests continuously:

- Dominant market position in the production, refining and transportation of crude oil and oil products in Brazil;

- Reserve base and comparatively long reserve life;

- Technological specialization in deep water operations;

- Cost efficiency due to large scale operations combined with vertical integration in each one of the business segments;

- Major position in the growing markets for natural gas in Brazil; and

- Success in attracting international partners in all its activities.

Our legacy as Brazil’s former sole supplier of crude oil and oil products has provided us with a fully developed operational infrastructure throughout Brazil and a large proved reserve base. These advantages allow Petrobras to compete effectively in the recently deregulated domestic oil and gas sector. Its proved reserves provide it with significant opportunities to:

- Sustain and increase production growth;

- Substitute imported light crude for recently discovered indigenous supplies of lighter crude; and

- Control future costs as greater economies of scale are achieved.

Over the past 35 years, Petrobras has acquired know-how in deep-water drilling techniques and technology, and development and production – a specialization, which allows the Company to achieve high production volumes at low lifting costs (excluding royalties, government participation and leasing of areas, denominated the “government parcel”).

Among other factors, the Company is cost-efficient due to:

- More than 80% of its proved reserves being located in large adjacent, highly productive fields in the Campos Basin, allowing the Company to concentrate its operational infrastructure and thus reduce the costs of exploration, development and production; and

- The location of most of its refining capacity in the Southeast Region, in the vicinity of the Campos Basin, and situated in the most densely populated and industrialized markets of the country.

The advantages of the natural gas sector are:

- Increased production of non-associated natural gas and of natural gas associated with the production of domestic crude, together with the necessary investments in processing capacity plus the recent discoveries of non-associated gas, principally in the Santos Basin;

- Planned investments in the gas transportation network throughout Brazil; and

- Investments in thermoelectric power plants, which are a source of demand for the Company’s natural gas.

In view of its experience, expertise and the comprehensiveness of its Brazilian infrastructure, Petrobras has been able to attract such joint-venture partners for its exploration, development, refining and energy activities as Repsol–YPF, ExxonMobil, Shell, British Petroleum, Chevron–Texaco and Total. This joint approach has allowed the Company to spread the risks, technology and capital requirements.

**Trademarks**

In its Strategic Plan 2015, Petrobras has approved the management of its trademarks as strategic assets, recognizing them as having financial value. The objective is to segment products and services in the various markets, adding value to the business and maximizing the results. This policy becomes of enhanced importance as the Company expands its activities internationally, with a correspondingly greater visibility to the Petrobras trademark.

**Patents**

Petrobras is currently the company that files the most patents in Brazil. It
is also the Brazilian company that has registered the largest number of patents in the United States. During 2004, the Company filed 70 patent applications in Brazil and 10 overseas while 22 were approved in Brazil and 37 in other countries. Particularly important were the registration of patents for refining of heavy oils, the improvement in oil product quality and deep-water exploration.

In addition, 15 trademarks were registered in Brazil and a further 19 overseas, together with the registration of four computer programs and another four copyrights. The Company’s strategy is to seek defensive patents by registering key technologies as soon as they are developed. In this way the Company is not prevented from using the solutions due to the existence of a third party domain.

### Research and development

The harnessing of technology is part of the bedrock of corporate strategy in the Petrobras Plan 2015. The role of the Leopoldo A. Miguez de Mello Research and Development Center (Cenpes) is to harness all technologies, which are material to the needs of the Exploration and Production, Refining, Transportation, Distribution and Energy and the Sustainable Development areas.

Cenpes was set up in 1966 and currently has a team of 1,560, of whom 509 are college graduates, 255 have master’s degrees and 87, PhD qualifications. Petrobras’ expenditure on Research, Development and Basic Engineering (RD&E) amounted to US$ 235 million in 2004, thus once more meeting the target of investing at least 1% of net sales revenue for the previous year in the area. Of this total, R$ 203.7 million was injected directly into Cenpes.

Located in the “Cidade Universitária”, Ilha do Fundão district of the city of Rio de Janeiro, Cenpes occupies a total area of 122 thousand m² of which 47 thousand m² is constructed area with 150 laboratories and 30 pilot plants. The Center is currently undergoing modernization. New installations are to be constructed to incorporate the latest concepts in ecological efficiency with effluent treatment and recycling plants and cost-beneficial systems for energy generation and utilization. These installations will occupy an area facing the existing RD&E complex and will include laboratories and purpose-built plants for new areas of research, especially related to the Environment and Gas and Energy areas.

The existing installations also include two rooms for 3D visualization used in the study of oil reservoir properties as well as other applications. This facility is also used in the development and application of instruments for 3D geological visualization, collaboration and modeling.

In 2004, 112 affiliations and multi-client projects were developed in partnership with other overseas oil companies and RD&E centers involving contracts amounting to US$ 2 million. A further US$ 51 million was invested in 420 contracts in partnerships with 79 Brazilian RD&E institutions and universities.

### Technological programs

Since 1993, the Company has been running a series of structured programs in a portfolio of Research and Development (R&D) and Basic Engineering (BE) projects, the purpose of which is to anticipate and meet the needs of the various areas in the Petrobras Group. These encompass research...
into exploratory frontiers, deep-water technology, oil field rehabilitation, fuel innovation, refining and the environment, among others.

During 2004, the Company reported significant advances in the development of technological programs, among them:

**Preservation and Environmental control**

- Identification and development of vegetal biocides based on the biodiversity of the Amazon region for controlling the bacterial corrosion in metallic tubes subject to exposure to sea water;

- Technological evaluation for the treatment of solid waste and the use of charcoal generated in the process as an aid to the elimination of heavy metals and other contaminants in aqueous effluent;

- Identification and quantification of pollutants discharged from drainage basin rivers flowing into the Guanabara Bay region;

- Creation of cognitive tools for identifying the aesthetic and logical standards in the Solimões River alluvial plain;

- Installation in the Sergipe – Alagoas Business Unit of the first contaminated soil treatment center using soil microorganisms;

- Specification of effluent pre-treatment allowing the injection of water into the Carmópolis field (SE) and preventing discharge into local water bodies;

- Evaluation of advanced effluent treatment technologies for recycling water at the Gabriel Passos Refinery (Regap);

- Development of interpretative techniques for reading satellite images allowing improved distinguishing of discoloring caused by oil spills and by the proliferation of algae, biological oils, the inflow of fresh water into the sea, and others;

- Development of a process for improving soil quality through the use of landtreatment technique, in the form of paraffin-based gravel, which results in the creation of an organic arable soil and in the increase of the paraffin content.

For more information, access: [www.petrobras.com.br](http://www.petrobras.com.br)
Exploration and production

- Development of methodologies for using advanced numerical simulation techniques in the characterization of reservoir properties;

- Improvement and development of computer tools for 3D simulation of geological processes in sedimentary basins, which reproduce details of the Brazilian basins more accurately;

- Development of less environmentally damaging drilling fluids than those available on the market and which can be used under high pressure and temperature conditions;

- Development of software (GeoCenpes) for the geochemical classification of oils in Brazilian sedimentary basins;

- Adaptation of the Atalaia natural gas processing unit for increasing processed gas flows and the installation of a natural gas condensate processing unit for the stabilization of condensate and production of liquefied petroleum gas (LPG);

- Appraisal and review of the hydrocarbons systems in the Sergipe – Alagoas Basin;

- Development of a specialist system for classification of oil types in the Brazilian sedimentary basins;

- Development of the concept for a new oil production platform with greater stability and cost benefits as an alternative interconnection with the offshore wells;

- Appraisal of the potential for biogenic H₂S generation in the Marlin field, resulting in fuller data on the prevention or minimization of the problem;

- Tests on the riser mooring buoy model in LabOceano – UFRJ experimental tank for substituting flexible flow lines with more economical rigid lines;

- Conclusion of basic floating production unit (FPU) P–53 (Marlim Leste), preparing it to receive produced H₂S and adapting it to the recently acquired vessel, the Setebello, the production capacity of which will be 180 thousand...
barrels/day of oil and 6 million m³/day of natural gas;

- Certification of the anchoring method known as the torpedo stake, a concept with a low manufacturing and installation cost;
- Development of methodology for evaluating the useful life of oil flow lines for offloading fluids containing H₂S, providing additional input on an eventual decision to substitute production flow lines;
- First remote operation for inhibiting incrustations in offshore wells, carried out in the Campos Basin;
- Geological 3D modeling in the Magdalena Basin in Colombia for analyzing the factors influencing the occurrence of hydrocarbon bearing rock formations in that area and for the improvement of exploration techniques;
- Structuring of the Geochronos Network through an agreement between Brazilian universities and companies, the purpose of which is the incorporation of advanced technologies in the study and dating of rock formations;
- Adoption of high resolution analytical geochemical techniques applied to oil, gas and hydrocarbon generating rocks with notable results for the knowledge of sedimentary basin hydrocarbon systems and the assessment of exploratory risk;
- Simulated drilling of wells which penetrate great thicknesses of salt – a high risk operation in the hydrocarbons industry – the conceptual advances of which have been reflected in the operational success of the Campos Basin wells and in the Innovation in Science and Technology award presented by the government of the state of São Paulo to Cenpes;
- Conclusion of the stage of feasibility analysis and decision on the configuration of the risers for the P–53 platform in the Marlim Leste field; P–54 in the Roncador field and P–34 in the Jubarte field;
- Development and application of high-resolution bio–stratigraphy for the adequate surveying of the active well network of producing oilfields thereby increasing the recovery enhancement factors in the economic results.

**Downstream**

- Development of technologies for obtaining special asphalt mixtures with greater durability and resistance for roads with heavy traffic flows;
- Process study for increasing the production of diesel by transforming low grade unstable fractions and residues originated from off-spec streams, considering 2009 diesel specification;
- Ratification of additives for low sulfur content Formula 1 gasoline;
- Development of diesel oil and lubricants with low sulfur content tested under extreme conditions during Amyr Klink’s Antarctic expedition;
- Adaptation of additives for reducing attrition in Supra gasoline, resulting in the reduction of fuel consumption without affecting the performance of other additives used for inhibiting deposits in valves and fuel injectors;
- Experimental application at the Regap refinery of the refinery separator improvement project, with plans to extend this to another six units;
- Project for expanding the diesel unit at the Repar refinery for making use of domestic oil and increasing the unit’s production;
- Development of Heuristic Optimization Systems in real time, increasing the return from the process units through the
Technological programs structured around a portfolio of Research and Development and Basic Engineering projects, enable the Company to anticipate and meet the needs of its various business areas.

Calculation of optimum variable values;

• Development of Podium gasoline for the Argentine market, this product posting a 100% sales increase in the first month of commercialization;

• New diesel specification for Petrobras Bolivia, which resulted in a 22% increase in production;

• Industrial testing of a new concept for cracking naphtha, resulting in a 10% and 3% increase in the production of propylene and ethylene, respectively.

Energy and Sustainable Development
• Production on a pilot plant scale of biodiesel from castor oil, a renewable fuel with a lower environmental impact;

• Production of diesel/biodiesel mixtures obtained from Brazilian native oil plants and the monitoring of their performance with a view to reduced environmental impacts;

• Evaluation of the quality of natural gas and vehicular natural gas distributed in Brazil, contributing to the increased percentage use of both in the Brazilian energy matrix;

• Development of a catalyst for converting natural gas into liquid fuels with a high purity content;

• Training of Cenpes technicians in processes for producing liquefied natural gas (LNG processes) for supporting the Company’s business areas;

• Creation and implementation of methodology for evaluating bioaerosols under different environmental conditions and the training of Petrobras’ technical personnel;

• Creation of a unit for removing ammonia in accordance with the legislation and also representing savings in capital expenditures;

• Development of economically viable technologies for the sequester of CO₂, a method for mitigating the effects of climatic change and allowing the continued use of fossil fuels.

Projects in progress
• Adaptation of the refinery area for processing heavy domestic crude;

• Evaluation of technologies for substituting diesel oil for natural gas in urban transportation fleets;

• Improvement in performance and quality of the fuel produced based on the fluid catalytic cracking method (FCC);

• Development of technologies for producing diesel oil with specifications that comply with international quality standards;

• Development of a hull of the FPSO – Floating Production, Storage and Offloading type –, with specifications for operating in ultra-deep waters;

• Development of technologies for processing and delivering heavy oils;

• Development of technologies for rehabilitating pipelines;

• Development of technologies for handling produced water;

• Development of technology for detecting leakages from gas pipelines;

• Qualification of domestic suppliers of epoxy paint for offshore use;

• Evaluation of secondary and tertiary treatment for recycling refinery effluent for use in cooling towers;

• Study of a self-sustaining hybrid riser for use in production system projects and
at depths of over 1,000 meters in West African operations;

• Evaluation of biodiesel production technology based on castor oil seeds for adoption in fuel projects;

• Contributions to expanding stratigraphic resolution through the integration of various tools that allow a better understanding of the dating and distribution over time, and the spatial origin of generating rocks and reservoirs.

Information Technology

In October, Petrobras concluded one of the biggest undertakings for implementing an integrated management system anywhere in the world: the SAP R/3. This combines Company data and operational information in a single database.

In adopting the SAP R/3, all operational activities were taken into account: production, refining, sales and distribution, procurement and contracting, inventory management, finance and accounting, project management and maintenance, in all involving a total of 24,000 users of the system.

The integrated system will improve responsiveness, facilitate ongoing business analyses and allow greater safety and control over the Company’s processes. The database is continually updated according to the single source concept, which is a used in all the processes.

Coordinated action

About 800 professionals from the Company, SAP itself, the BearingPoint consultancy and other partner companies were brought in to coordinate the collective use of the SAP platform and train the users. In addition, the Company employed the services of 100 local coordinators, 1,400 support staff and 470 instructors involving 500 training courses and 200 classrooms.

The migration to the new system involved about 2,200 managers from all levels as well as coordinators and supervisors. Additionally, the project employed a structured communication program as a basis for several initiatives for mobilizing staff and disseminating the solution at all the units.

The global adoption of the SAP system was spread over five years, the first companies in the Petrobras System to install it being Alberto Pasqualini Refap S.A. in the state of Rio Grande do Sul and Petrobras Distribuidora (BR) – considered to be one of the largest users in Latin America.

Knowledge management

The Company’s intangible assets have been identified and classified according to the Intellectual Capital Model proposed in 2003. The categories of Intellectual Capital are considered to be Human, Organizational, Relationship and Technological Know–how Capital. The methodology has provided a broad vision of the initiatives that the various areas and the Business Units are adopting to protect, maintain, acquire and increment the Company’s intangible assets.

During the year, the Exploration and Production segment set up the Practical Communities pilot project for the Reservoir Properties Characterization, Well Engineering Safety and Production Installation Risk and Reliability Analysis areas. The purpose is to provide short–term solutions for some of the challenges the oil and gas industry is facing, such as how to accelerate the learning process of the employees and capture and retain part of the accumulated employee knowledge, enhance the innovation process and replicate the best practices to reduce time spent in looking for new solutions to old problems.

The Company’s tacit knowledge bank was given special attention in 2004. Based on the Petrobras Workers’ Memory project, out of which the *Workers’ Memory Almanac* originated, the Company also began the *Memory of Knowledge project*, which seeks to collate and register the Company’s knowledge bank. This initiative will focus on deep–water oil exploration and production technology and is aligned with the strategic plan, which points to the need to “guarantee the in–house dissemination of knowledge, seeking to leverage competitive advantages”.

In 2004, the focus was on recording the technical and managerial knowledge in geophysics as a way of commemorating fifty years of Company activities in this area. This project proved to be a successful way of registering the events of the past and will be extended to other areas. The idea is to disseminate the knowledge in a natural manner through sentiments, thoughts and experiences expressed in words, without the formality of a lecture.

Management Practice

Since the Company implemented the Management Quality Evaluation Program
in 1993, four evaluation cycles have been completed encompassing all the units.

In 2004, Petrobras began a new round of evaluations, this time involving the units in the International Area. The evaluations of the Units in Brazil are scheduled for 2005. Armed with the results of each cycle, the units organize programs for implementing improvements. Many of the management practices widely used by Petrobras today, have originated from this program or improvements have been made as a result of it.

The best practices observed at the units are disseminated as part of the process of consolidating an integrated management model. In 2004, the second edition of “Petrobras’ Best Practices” was published.

**Strategic project**

The Petrobras Strategic Plan 2015 introduces innovations by emphasizing the search for operational excellence, management and the mastering of technology as part of corporate strategy. The Excellence in Business Management Project is being implemented as part of the Company’s drive to reach international standards. This focuses on the integration and capture of synergies, excellence in all dimensions and the treatment of duplication in management activities and of administrative vacuums.

**An organization that learns**

In line with world tendencies in learning organizations, the Company has adopted the guideline of sharing management practices with domestic public and private companies and with multinationals from various sectors of the industry. This relationship has led to improvements in Petrobras’ own management model.

In addition to business partnerships, the Corporate Management area fosters a closer relationship with other oil companies in the Southern Cone as a means of sharing best practices. One of the objectives of the 2004 South American Quality Congress for the oil industry area was to share information and experiences in relation to quality in the Latin American oil and gas industry.

**National community for quality management**

In exercising socially responsible actions, the Company is encouraging a process of strategic reflection on quality, productivity and competitiveness themes. This initiative has as its partners, the leading players in this area: for example, MBC (Brazil Competitive Movement), the Public Service Quality Program, the Forum for State Quality and Productivity Programs, Inmetro (National Institute of Metrology, Standardization and Industrial Quality), Sebrae (Brazilian Service for the Support of the Micro and Small Business), MCT (Ministry of Science and Technology), Furnas Centrais Elétricas S.A. and ABNT (Brazilian Association of Technical Norms).

In addition to providing further support for integration and synergies among all the parties fostering quality, productivity and competitiveness, the process has contributed to a more focused stance on the part of domestic industry in relation to foreign competitors. It has also been an important instrument in introducing improvements at suppliers and service providers.
Telecommunications
Petrobras invested US$ 38 million in telecommunications during the year. This was principally for the implementation of infrastructure for supporting automation of operational processes, data security, integration of new units into the Company and the adaptation of telecommunications networks for supporting new corporate applications such as SAP/R3 and video links.

Significant resources were also dedicated to fiber optic networks along the various oil and gas pipelines such as Osbra (Oleoduto São Paulo–Brasília), Gaspal (Gasoduto Rio de Janeiro/(Volta Redonda) –São Paulo), Gasbel (Gasoduto Rio de Janeiro/(Reduc)–Belo Horizonte (Regap)), Orduc (Oleoduto Cabiúnas/(Reduc)–Macaé (RJ)) and Gasbol (Gasoduto Bolivia–Brasil). All these investments complement the integration of the Petrobras Group’s private networks by improving their reliability, security, enhanced data transmission capability as well as optimizing costs.

Market recognition
Petrobras received several awards and recognition from the market for outstanding achievements in the business field (management, technology, social and environmental) and publicity.

Business highlights
• Petrobras won the Transparency Trophy 2004, as the most transparent company in Brazil based on the criteria of the Institute for Accounting, Actuarial and Financial Research Foundation (Fipecafí), from the University of São Paulo (USP), together with Anefac and Serasa. The selection of the companies considers, among other items, the quality, consistency and transparency of the information and financial statements; compliance with accounting principles; absence of qualifications in the independent auditor’s report; legibility and clarity of presentation and the disclosure of material aspects not legally mandatory but important to understanding the business. The adjudicating commission is made up of professors and consultants from the accounting area;

• For the second consecutive year, the Petrobras Investor Relations website was elected the best in the oil, gas and petrochemicals sector in the world according to analysts from MZ Consult (Top 1). The website was also chosen as the best in Latin America (Top 5);

• For the second consecutive year, the Investor Relations website was elected the best in the world and was also chosen as the best IR website in Latin America for the fourth time in succession following a direct vote by investors, analysts and other capital markets’ entities (POP+);

• The national IR campaign was elected the best in the printed media for 2004 by About magazine;

• The Company was elected the third most admired company in Brazil, this award presented by Carta Capital and Interscience. In 2003, Petrobras was placed ninth and in 2002, 15th in the same award scheme;

• Respect for the Individual Investor award from Tradenetwork, the organizer of the Expomoney event. Petrobras won this award thanks to the

Transparency Trophy 2004, awarded by Fipecafí, Anefac and Serasa, recognizes quality and consistency in the Company’s relationship with the market.
outstanding treatment it provides to the individual shareholders;

• The Company was classified among the ten leading oil and gas companies that most effectively apply their knowledge in their business activities and in the development of their products and services. Petrobras was the only Latin American company to be selected for the Make (Most Admired Knowledge Enterprises) prize sponsored by Teleos, a British company specialized in Knowledge Management;

• International Refiner of the Year awarded by World Refining Magazine and delivered during the 22nd World Fuels Conference, held in San Antonio, Texas for outstanding performance in three categories: the environment, growth and profitability, and vision;

• The V ABML Logistics Prize – Awarded to the Canal Cliente (Customer Channel) by the Brazilian Association for Movement and Logistics. The award was created in 1999 for recognizing and fostering new projects in logistics-related areas and among companies which are users of systems, equipment, software, hardware and logistic concepts;

• State Fiesp 2004 Award – Presented to Recap for the Conservation and Rational Use of Energy – Oil Products and Natural Gas category. The prize was awarded to the project, Increased Efficiency of the Recap Co-generation System. Thanks to the installation of energy recovery equipment, the refinery’s energy efficiency increased by 6%;

• The Chico Mendes Social Environmental International Prize – Awarded to SIX (Shale Industrial Division) for two projects: SER + Adult Education (social responsibility) and the Lago Sul Project (environmental management). The award is sponsored by the International Quality Service, which for 26 years has recognized companies that stand out in the culture of quality;

• The Amazonas Quality Award 2004 – The Manaus Refinery was the champion of the 11th edition of this prize in the Management category, promoted by the Federation of Industries for the State of Amazonas for recognizing endeavor by organizations in the State to improve quality, productivity, competitiveness and excellence;

• Best Practice – The Reduc refinery gasoline portfolio project was classified as best practice based on the FEL index according to the assessment of Independent Project Analysis, a consultancy that carries out benchmarking studies of company projects around the world;

• Safety, Health and Environment (SMS) Pole Award – 2003 Edition – For the second consecutive year, Fabrica de Fertilizantes Nitrogenados – Fafen was one of the winners for the best SMS practices, obtaining 72% in the audit report and being classified with four stars. The prize is an initiative of the Camaçari Industrial Development Committee (Cofic);

• The Best Company in the Chemical and Petrochemical Sector – for the second consecutive time, Refap S.A. won the prize awarded by Exame magazine;

• Quality in Work Award – Reduc won the Sesi Award for Quality in Work 2003;

• Top Social Prize – The Special Lives project, supported by RPBC, won the Top Social 2004 prize;

• Social Merit – Revap won the Social Merit medal awarded by São José dos Campos city council;
• Quality Standard in B2B Award – For the second year running, Petrobras won this award – Petrochemical category.

**Highlights in the publicity field**
The Company's marketing activities were awarded various prizes during the year. Among these were:

• **Top of Marketing Rio 2004** (Association of Sales and Marketing Directors of Brazil);

• **Marketing Best 2004**, Brazil’s most prestigious marketing award, a joint initiative of Editora Referência, the São Paulo Business Management School of the Getúlio Vargas Foundation (FGV–Eaesp) and Madiamundomarketing;

• **Outstanding Name in Marketing Award** – The Brazilian Marketing and Business Association (ABMN) elected the Customer Channel (Canal Cliente) as the Highlight in Marketing.
Consolidating the changes. That is how 2004 can be viewed for Petrobras in relation to its employees, the community and in the initiatives for preserving the environment.

During the year, the Company progressed further following the decisive steps taken in 2003 with the signing of the United Nations Global Compact and the launching of the Zero Hunger Program, a veritable milestone in the area of Social Responsibility. Initiatives in this area are driven by a concern for the sustainable development of the environment and the communities where the Company operates, the commitment to improving the living conditions of the population and the promotion of social inclusion. The result has been the implementation of innumerable actions throughout Brazil with the direct participation of the communities.

The development of educational facilities and professional qualifications, creation of jobs and income, guarantee of the rights of the child and the adolescent, social projects and volunteer work as well as initiatives in the fields of environmental responsibility, support for culture and sporting sponsorships provide additional vigor to the Company's purpose: the Development with Citizenship.

Global Compact
Petrobras' management approved adherence to the Global Compact in October 2003, thus assuming a commitment to comply with the Pact's principles and disseminate them among its employees, shareholders, consumers, suppliers and other stakeholders. The participants were selected by the European Foundation for Management Development (EFMD), in association with the Global Compact/UNO. Petrobras was the first company to be chosen in the light of its involvement and professional handling of questions of corporate social responsibility involving the Company's projects in both Brazil and also overseas.

The Company's initiatives reflect its concern with sustainable development and commitment to the improvement in the life of the population and to social inclusion.
Outreach sponsorship

Petrobras’ corporate strategy supports federal government efforts for combating hunger and misery. The Petrobras Zero Hunger Program, with investments slated for US$ 104 million up to 2006, allows the Company to play an active role in social projects throughout the country, the results of which bring improvements to the poorest segments of the community. In September 2004, the program was able to commemorate its first year’s results on the back of US$ 33 million invested in several actions.

These actions are focused on the creation of jobs and income, professional qualification of youngsters and adults, protecting the rights of the child and adolescent, volunteer work, among others.

In 2004, the Company also held its first Public Selection of Petrobras Zero Hunger Projects. The chosen theme was “Development with Citizenship”. Out of the 5,884 projects chosen, 73 were selected – small, medium and large-size projects covering all states in the Brazilian Federation. Each project is to receive up to US$ 188,000 a year, representing a total company investment of US$ 6 million.

Among the selected projects are: “Agrarian Reform and Social Inclusion in the Far South of Bahia”, for training 50 newly settled small farmers in sustainable organic agriculture; “Solidarity Action for Combating Hunger in the Semi-arid Region of the Brazilian Northeast”, for combating malnutrition and misery among about 3,200 children and adolescents in 26 communities in the semi-arid sertão of the state of Ceará; “Qualification and Generation of Income in the Countryside”, for providing training in the cultivation of vegetables, breeding of free range chickens and beekeeping in the state of Pará; “Professional Qualification Program – from the First Job to Reinsertion in the Labor Market”, in Rio de Janeiro; “Ecological Agriculture and Nutritional Sovereignty”, along the northern coastal strip of the state of Rio Grande do Sul.
Other outreach initiatives
Petrobras also encourages social responsibility at its subsidiaries.

In the Gas area, SCgás (SC) runs the Intelligent Garbage project, paying a wage to the inmates of the Florianópolis Penitentiary to correctly dispose waste paper. Compagás (PR) also operates a wide-ranging environmental education program for the local population.

In the Downstream area, US$ 9 million was spent on various socio-cultural projects, such as: “Dancing so as not to lose out”, BR Mangueira Cultural Center, Cinema BR in Movement, Dance and Social Action, as well as sponsoring several events related to the cinema, theater and dancing.

In the Refining area, Refap S.A. invested US$ 1.3 million in social, sporting, cultural and environmental projects, notable among these being the Human Tissue Bank for treating children suffering from burn injuries; Young Volunteer Partners (Parceiros Jovens Voluntários); Vila Restinga Olimpica, which uses sport as a basis for keeping students motivated in their school activities as well as for social inclusion reasons; a training and vocational qualification project in partnership with Senai (National Service for Industrial Training), responsible for training more than a thousand professionals in 2004.

In Transportation, Transpetro runs several social and community programs in partnership with city governments and local entities for developing a closer relationship with the communities surrounding the installations, principally those living in the vicinity of the pipelines and maritime port terminals.

A good example of Transpetro’s social action is the “Fio da Meada” program run in conjunction with the Casa da Cultura in the city of Araquari (SC). This program is designed to prepare the community for developing handicrafts through learning to use manual looms, work which is the principal cultural characteristic of the municipality. A further initiative is the educational “Legal no Mar” campaign for raising the awareness of the need for safe navigation and run together with the state of Bahia Port Authority.

Environmental sponsorship
In 2004, Petrobras announced the results of its first public selection of projects under the auspices of the Petrobras Environmental Program with the theme “Water”, classified as bodies of fresh and sea water and their respective biodiversities.

The projects presented in the selection comply with the Program’s guidelines as defined in the pre-qualifying regulations. Of the 1,681 projects submitted, 30 were chosen for sponsorship.

The actions proposed were evaluated by a Selection Committee and a Deliberative Council made up of representatives from several areas of Petrobras as well as outside professionals of recognized competence in the environmental area.

In parallel with government policy, the Company committed US$ 104 million in investments through 2006 to the Petrobras Zero Hunger Program for combating hunger and misery, as well as to the support of hundreds of social projects throughout Brazil.
The initiatives selected comprise the rehabilitation of fresh water bodies, the dissemination of good practices for reducing water wastage, the reduction of the impacts and the improvement in the management of marine life environments, the preservation of the species of the biodiversity and the recovery of vegetation cover surrounding water bodies.

In addition to the recent public selection process, the Petrobras Environmental Program continues to be involved in projects previously sponsored by the Company as well as local Business Unit initiatives in accordance with the new guidelines for sponsorship policy.

Cultural sponsorship
With annual investments of about US$ 38 million and more than 450 active projects, Petrobras continued to be the largest sponsor of culture in Brazil. This is a reflection of the Company’s commitment to Brazilian society as well as an expression of its values and identity.

While Petrobras’ cultural sponsorship goes back to the eighties, it was only in 2003 that the multitude of isolated initiatives in the areas of cinema, the scenic and visual arts, and music were integrated under the Petrobras Cultural Program. The program is now based on a system in which projects are selected publicly, an innovation introduced for the first time in 2004.

Out of 3,736 entries from the length and breadth of Brazil, 141 projects were selected at a total investment of US$ 15 million. A further 48 projects were invited to participate in the Program directly at an additional sponsorship cost of US$ 5 million. A new round in the Program, announced in November maintained an allocation of 75% of total investments of US$ 21 million to projects chosen by public selection such as bands, choral groups and youth orchestras from all over Brazil. The new edition has a conscious focus on attracting expressions of regional culture, the Company making presentations in 15 state capitals to this end.

Petrobras Cultural has a fundamental commitment to guaranteeing the democratic access to sponsorship and supporting projects of public interest covering the complete spectrum of Brazil’s ethnic and regional diversity. The Program is structured in coordination with public policies for culture and according to federal government priorities for the area.
This coordination is reflected in the direct participation of representatives of the Ministry for Culture and the Presidential Secretariat for Communication and Strategic Affairs (Secom) in the Petrobras Cultural Committee, the ultimate authority for the program, together with members of the Parent Company and Petrobras Distribuidora, as well as outside consultants. The Committee decides on the areas to be included in the public selection process, as well as the projects that are to be supported.

In addition to the Petrobras Cultural Program’s selected projects, the Company maintains ongoing sponsorship of various activities. Among these are the Petrobras Pró–Música Orchestra, the Corpo Group, the Deborah Colker Company, the Galpão Group, the Clube do Choro of Brasília, as well as several film and audiovisual, music and scenic arts festivals throughout Brazil. The Company also supports archeological parks such as the Serra da Capivara in the state of Piauí, and the Xingó Museum in the state of Sergipe, as well as the Wajápí Documentation Center in Amapá. Petrobras contributes to the restoration of national heritage buildings and some of the more important museums such as the National Museum, the National Fine Arts Museum and the Inconfidência Museum.

Sports sponsorship
In 2004 Petrobras consolidated its position as one of the largest sponsors of Brazilian sport. During the year, it invested US$ 12 million in several sporting activities. As well as traditional investments in Formula 1 motor racing, the Petrobras Lubrax team and yachting, the Company increased its support for sports where the potential for social inclusion is greater, handball being an example. The purpose is to transform this category into a sport with Olympic pretensions.

• Formula 1 (BMW WilliamsF1) – The contract signed in 1998 represented an enormous challenge: to develop a high technology fuel for the English BMW WilliamsF1 Racing Team to ensure the motor’s optimum performance in both training sessions and official races. The new technologies, both projected and applied in Formula 1, have immediate applications in the development of commercial gasoline as well as directly and indirectly influencing fuels to be used commercially. As a socially and environmentally responsible Company, Petrobras focuses its development activities on environmentally friendly products;

• Stock Car – The underlying purpose of this sponsorship is aimed at upgrading gear oil and self blocking gear systems;

• Petrobras Lubrax Team – This is the Company’s longest running sponsorship of a motor sport. Over ten years, it has contributed to the testing of lubricants and fuels. The Lubrax Team competes in some of the major Brazilian and world rallies;

• Formula Truck – Petrobras has been the sole supplier of fuels and lubricants to this category since 1996. Like all the categories it sponsors, the Company transforms the race tracks into laboratories for developing and improving the products it sells;
• **Pick–Up Racing** – The Petrobras Pick–Up Racing GNV Cup has gone into the annals of motor–sport as the first category to use vehicular natural gas (VNG) as a fuel. Before being used on the race tracks, the fuel undergoes strict testing at the Petrobras Research Center;

• **Mini–Baja** – Involves about a thousand engineering students from all over Brazil as well as some foreign universities. The challenge is to design and build an off–road vehicle according to strict specifications (such as safety, driveability, acceleration, braking, ascending a 45° ramp, for example) and using a standard engine;

• **Formula SAE** – An initiative unveiled in 2004 in São Paulo, is a tradition in overseas universities. The Formula SAE competition is to conceive, design, fabricate and compete with a small formula–style racing car using engines of up to 610 cc, in compliance with the standards and regulations established by SAE International;

• **Motorcycle Speedway Racing** – Petrobras participates in this as part of the technological development of GP Lubrax lubricants.

**Human Resources**

In the human resource management area, 2004 was dedicated to improving the administration of the Company's organizational climate, starting with the diagnosis of the corporate culture. This will produce a survey of Petrobras' main cultural features, allowing among other aspects, a better match between the corporate culture and the practices and instruments proposed for the area. The Automatic Organizational Climate Monitoring System (SMAO) has been implemented with the same objective in mind.

The process for managing employee performance in the Brazilian and overseas units has also been fully installed, helping to develop a single business culture. A closer relationship with the labor unions has been achieved thanks to the committees set up for monitoring the Collective Wage Agreement and the improved mechanism for conducting, negotiating and preparing this agreement.

**Professional skill building**

The Petrobras University's courses and events are slanted according to the requirements of an international energy company. The teaching staff consists of 56 professors, 13 of them with PhD's, 28 with master's degree qualifications and 15 specialists.

In 2004, a total of 1,762 new employees, including professionals from Petrobras Bolivia and Transpetro participated in the training programs. Of the total participants, 1,043 concluded vocational training programs.

The newly structured virtual campus played a fundamental role during 2004, in particular for implementing the SAP/R3 project. The e–learning project now has more than 30,000 students and monthly enrollment is averaging about 6,000. TV Universitária's visual network also continued to expand and is now installed in the international units in Colombia and Bolivia. The number of domestic locations with access via workstations through the intermediary of WebTV has grown further.

**Educational benefits**

The benefits provided to the employees are essentially of a supplementary nature and complement the beneficiary's contribution to the overall cost. In January, a Supplementary Secondary Education course was added as a further fringe benefit with 7,294 employees and 8,219 employees' children currently registered under the scheme. The amount disbursed to the employees was US$ 5.8 million, while the cost to the Company including taxes was approximately US$ 8 million.

Petrobras continued to offer other educational benefits: daycare facilities, supervision, pre–school, basic education and complementary education. During the year, including Supplementary Secondary Education, amounts disbursed directly to employees amounted to US$ 23.8 million with a total cost to the Company of about, US$ 32.7 million.
Hiring
The Company held a public selection process to fill management and technical positions at several Units. During the course of 2004, Petrobras hired 2,949 professionals, 1,266 of them college-educated and 1,683 high school educated, to fill positions at the Company.

In parallel to this, the Company has completed a survey of staffing requirements for the 2004–2006 period, with the focus on the expansion of the business, replacement of existing staff and reduction in outsourced labor. These new staff requirements will be taken up by using the manpower register and, if necessary, through further public selection processes.

Career – specialist function
In March, the Company introduced a new scheme for career progression and professional recognition through the appointment of more than 300 senior consultants, one of the categories in the specialist function. The objective is to retain technical staff with knowledge, skills or with capabilities in technologies and methods relating to processes essential and strategic to Petrobras’ businesses.

The specialist function is aimed at increasing the importance of technological know–how and a technical career in the Company by creating opportunities for growth and development. By implementing this initiative, the Company believes that it can always count on motivated and prepared groups in various segments of its activities with the ability to meet challenges and ensure Petrobras’ technological supremacy.

Collective Wage Agreement
Petrobras negotiates two Collective Wage Agreements annually with the labor unions: with the land–based employees in September and the offshore employees in November. The Collective Wage Agreements are the result of ongoing negotiations with periodic monitoring. They have resulted in some important advances in employee conditions, consolidating and governing the labor relations with the Company.

Petrobras will be able to identify the principal cultural traits of the Company and adjust its personnel management practices and instruments, thanks to the improvement in the process of managing the organizational climate.
Key results from the last negotiations were:

- A 7.81% increase and the concession of a wage level for each employee;
- Elimination of different compensation rules for new and long-standing employees with newly hired employees now to receive the Years of Service Premium and Vacation Gratuity;
- Rules for overtime payment in employee standby situations;
- Improved reimbursement scheme of educational benefits;
- Career Progression Plan – preparation of technical study and creation of a corporate forum for the presentation of ideas and discussion of the results of the studies;
- The setting up of joint commissions with the labor unions to monitor specific matters.

**Compensation policy**
Petrobras has a fixed and variable compensation policy. The former includes wages, extras, bonuses, promotion increases, etc. The variable element (profit and results sharing – PLR), links business results to meeting Strategic Plan targets.

Payroll expenses in 2004 amounted to US$ 1,779 million. As in previous years, the Company paid out a share in results based on 2003 profits, equivalent to an average of 4.7 wages per employee.

**Pension plan**
The Petros Plan is a defined benefit plan and no longer admits new members. New employees are currently covered by a life insurance policy, the cost of which will be entirely underwritten by the Company until such time that a complementary pension plan can be implemented.

The working party – made up of representatives of the Company, Petros, the Petroleum Workers Federation (FUP) and the labor unions – set up to examine and propose alternatives for the new pension plan, has already sent the result of its findings to Senior Management. Given the importance and complexity of the matter, additional studies on some topics are underway for closer examination of some questions and to enable a final solution to be reached.
Multidisciplinary Health Care Scheme
The Multidisciplinary Health Care Scheme (AMS) is provided to employees, retirees and pensioners and their dependents. It is offered through a network of 20,128 accredited healthcare establishments throughout Brazil, including hospitals, clinics, laboratories and healthcare specialists. Under the free choice option, the beneficiary may choose professionals who are not part of the accredited network. During the 2004 fiscal year, a monthly average of 244,791 people benefitted from the scheme at a cost of US$ 150,017 thousand in medical appointments, examinations and hospitalization.

Clubs
Employees, retirees, pensioners, members of the local community and dependents can enjoy the membership of more than 30 Petrobras recreational clubs located around the country. These clubs offer a leisure infrastructure, which helps towards the integration and wellbeing of the family. The clubs are also used as venues for running social inclusion projects – an example being a program for children residing in a socially vulnerable area and sponsored by Cepe Pernambuco with financial support from Petrobras.

Organizational climate
Once again in 2004, the Company conducted its Organizational Climate Survey in line with the practice of previous years. The aim of the survey is to obtain the necessary information for ongoing improvements at the Company as well as the living and working conditions of the employees. The response level to the survey was high – 70% – principally bearing in mind that it is voluntary and was completed in December, traditionally a peak vacation period and in the midst of year-end festivities.

One of the survey’s findings showed that employee satisfaction continues to grow. All the items in the questionnaire got high ratings. In 2004, the Employee Satisfaction Index (ISE) reached 70% against 68% in 2003.

One of the variables which most contributed to this result was the Recognition and Reward item which scored nine percentage points more than in 2003. The employee is signaling that he has a better appreciation of the Company’s practices and believes that his performance is being appraised correctly and duly rewarded. This largely reflects a greater understanding of the basic criteria used for moving up the wage/salary scale and for promotion.

There was also a year-on-year increase from 76% to 79% in the Commitment Level to the Company (NCE) indicator, which was measured for the second time in the survey. The results show commitment to the Company, above all when the employee states that he/she is "motivated to contribute actively to the development and success of Petrobras".
**Operational Safety, Environment and Health**

Petrobras’ Corporate Health, Safety and Environmental (SMS) Policy is laid out in the 2015 Strategic Plan. SMS management in the Company’s is based on 15 Corporate Guidelines, approved by the Executive Board on December 27, 2001. For each Guideline, the Company has created a Management Standard comprising a SMS Management Manual – also approved by the Executive Board.

The SMS Management Committee performs a fundamental role in the corporate governance of questions relating to health, safety and environment. The Committee is chaired by the corporate SMS executive manager and includes representatives from the Business and Service areas and directors from the subsidiaries. The Committee’s objective is to ensure that questions of health, safety and environment are integral to all the Company’s activities and businesses.

**Process Safety Program (PSP)**

The SMS Corporate Guidelines are being implemented through the Process Safety Program (PSP), which received investments of US$ 48 million. PSP’s objective is to improve and integrate the health, safety and environment management system so that it reaches international levels of excellence. The Program has been instrumental in training 25,000 participants between 2002 and 2004.

Another essential aspect of PSP is the need for a visible commitment to SMS on the part of Company’s Upper Management, in line with the concept of leadership by example. In this context, the CEO and members of the Executive Board take part in periodic audits of the units, directly interacting with the labor force. In 2004, the Company carried out 18 audits involving Upper Management at various Business Units.

The SMS Management Evaluation Process evaluates compliance of the SMS management process practiced by each unit with the Corporate Guidelines. In 2004, ten such evaluations were carried out in Petrobras Units. The evaluations also cover requirements under ISO 14001 and OHSAS 18001 or BS 8800 standards, which certify the health, safety and environment management systems at all the 33 Brazilian Business Units as well as 24 overseas Units.

**Pegaso Program**

The Program for Excellence in Environmental Management and Operational Safety (Pegaso), was created in April 2000, and up to 2004 has invested about US$ 3 billion in the areas of emissions, effluents and solid waste, contingency plans, automation, inspection and repair of pipeline, among others.

The program’s success was corroborated by an external audit concluded in December 2003. Among other questions, the report noted that more than 90% of Transpetro’s major pipeline network stretching an estimated 7,300 kilometers was already equipped with automatic supervisory systems.

**Expenditures**

Petrobras’ expenditures in environmental responsibility actions and initiatives in 2004 were US$ 527 million. These initiatives include the evaluation and monitoring of ecosystems, management and control of emissions, effluents and solid wastes, decommissioning of installations, rehabilitation of contaminated areas, emergency response to accidents and payment of environmental compensations.
Environmentally responsible actions and initiatives are a priority for the Company, which in 2004, allocated US$ 527 million to investments and operations in this area.

**Emissions**
The Company implemented the Air Emissions Management System – developed in partnership with an international consultancy – in all its South American installations.

By the end of 2004, US$ 2.3 million had been invested in the System allowing it to establish an inventory of atmospheric pollutants, including those contributing to the greenhouse effect (carbon dioxide, methane and nitrous oxide) as well as local pollutants (carbon monoxide, sulfur and nitrogen oxides, volatile organic compounds and particulate matter). The inventory uses a bottom-up methodology, consolidating emissions from the sources in each installation and then gathering the data and classifying it at various organizational levels starting from Business Units and Areas and eventually arriving at a picture of the Company as a whole.

2000 and 2001 – Emissions related only to the consumption of fuels in Petrobras’ installations in Brazil, based on a top-down methodology;

2002 and 2003 – Inventory results collated using the Air Emissions Management System;

2004 – The value is still of a preliminary nature. The values for 2002–2004 are being reviewed for methodological standardization purposes and are subject to alteration. The Air Emissions Management System and the consolidated values it has compiled are being verified by a specialized international company, specifically hired for the purpose.

Additionally, Petrobras created an Emissions and Climatic Change Subcommittee made up of representatives from various business and service areas and from the subsidiaries, its principal functions being to:

- Identify threats and opportunities relating to the so called “carbon risk”;
- Propose performance objectives, indicators and targets;
- Identify mechanisms for leveraging projects for mitigating emissions: carbon reduction and sequestration, and the carbon credits market;
- Establish general criteria for developing projects appropriate to the rules and standards of the various emission regimes and markets;
- Periodically monitor and report on Company’s results and management of emissions.

**Effluents**
Petrobras adopts several initiatives for promoting excellence in the management of effluents and hydrological resources. One of the most notable is a survey of river water resources from which the Petrobras units draw. This work was completed on behalf of the refineries located in the Southeastern Region, the production and exploration units in the Campos Basin and Transpetro’s Cabiúnas Port Terminal. During a second phase in 2005, a similar study will be completed for the units in the Northeastern and Southern Regions. The Business Units...
are developing several projects for optimizing effluent management and hydrological resources:

- Partial closure in January 2004 of the Reduc cooling system – which was drawing water from Guanabara Bay – as an anti-pollution measure. This initiative is due to be concluded in April 2006;

- Over the past five years, Replan has reduced effluent disposal by approximately 360 m³/h, consequently using less fresh water, a scarce commodity in the region. The Business Unit is also developing a project for recycling about 80 m³/h of water used in the vacuum distillation units for reuse in the cooling towers. This project is forecast to be commissioned in 2006;

- Refap S.A. and the Regap, RPBC, Reduc and Reman refineries have installed tertiary systems for reducing the ammonium content in effluent based on biological systems using biodisk or biodrum technology, thus ensuring compliance with the legislation on the pollutant concentration;

- Expansion of the Revap effluent treatment plant, improving the quality of effluent discharged into the Paraíba River and the recycling of 300 m³/h of this effluent using advanced generation technology based on membrane bioreactors. The system is expected to go into operation in 2006. A similar system will also be commissioned in 2006 at the Lubnor plant for recycling 50 m³/h of effluent;

- Between 2001 and 2004, Refap S.A. and the Revap, Reman and Repar refineries installed effluent segregation projects for increasing the reliability of drainage systems and optimizing operations at their respective Industrial Sewage Treatment Plants; similar projects are being implemented at SIX and Riam with completion scheduled for 2005;

- Transpetro is installing or improving Effluent Treatment Plants at the port terminals in Cabiúnas (RJ), Angra dos Reis (RJ), São Francisco (SC) and Osório (RS) for treatment of oil–water mixtures prior to discharge into the sea from sewage outfalls. The new and modified effluent treatment plants are to be concluded in 2006;

- Cenpes is running a research project into Refinery Effluent Reuse for selecting and assessing technologies for effluent treatment by maximizing the reuse of water contained in this waste material. Based on these findings, membrane bioreactor units have been installed at Revap and Lubnor, and another, based on reverse electro-dialysis, at Regap;

- The SMS area, together with the Company’s business areas, is finalizing the preparation of a Petrobras Standard for the Management of Hydrological Resources and Effluents and the implementation of a Corporate Hydrological Resources and Effluent Data System (Data Hidro), representing an important tool in the management of these processes.
**Management of solid waste**

In 2001, Petrobras began the implementation of the Corporate Waste and Contaminated Areas Management System. At the end of 2004, the Company’s hazardous solid waste inventory totaled approximately 502 thousand tonnes.

**Biodiversity**

Biodiversity conservation of the ecosystems influenced by Petrobras is an essential aspect of the planning, installation, operation and decommissioning of the installations and operations. It is a component of the concept of social and environmental responsibility, one of the strategic pillars on which the Company’s business rests.

During the year, Petrobras invested US$ 5 million in partnerships with universities, research institutes and consultancies for raising environmental data. The data provides the basis for applying the correct actions for preserving the biodiversity in areas subject to the Company’s activities and will also be instrumental in speeding up environmental licensing approvals.

Among the principal projects in this area are:

- Deep Water Environmental Characterization of the Campos Basin;
- Environmental Monitoring of the Rio Grande do Norte and Ceará Basins and the Sergipe and Alagoas Basins;
- Environmental Management of the Amazon Basin – Piatam II Project;
- Environmental Management of the Amazon Coast – Piatam Mar I Project;
- Preparation of maps showing the environmental sensitivity to oil spills for coastal and continental areas influenced by Petrobras’ activities.

The Petrobras Environmental Program is dedicating an investment of US$ 14 million over two years to 30 projects involving water as their central theme and chosen via public selection from more than 1,600 proposals submitted by organizations representing civil society. The Company also supports the Brazil das Águas project, which has collected 5,900 water samples from rivers, lakes and reservoirs throughout the country. The results will produce a contemporary and unique picture of the conditions of Brazilian hydrological resources. In addition, Petrobras sponsors various projects for protecting threatened species such as the Tamar Marine Turtle, Humpback Whale, Southern Right Whale, Spinner Dolphin and the Manatee Projects.

**SMS Contingency Plans**

With an investment of US$ 34 million, Petrobras has further boosted its capacity to meet emergency situations by periodic audits and improvements to the infrastructure, equipment and personnel manning the nine Environmental Protection Centers (CDAs) operating around the country. Six Emergency Regional Plans have been structured, by amalgamating and coordinating the actions of the emergency teams at the various units. In addition, the Company has evaluated and updated 57 Individual Emergency Plans, 56 Local Emergency Plans and Petrobras Distribuidora’s Emergency Highway Routes.

Petrobras operates CDAs in Guarulhos (SP), Manaus (AM), São Luís (MA), Guamaré (RN), Madre de Deus (BA), Goiânia (GO), Macaé (RJ), Rio de Janeiro (RJ) and Itajaí (SC).
The start-up and optimization of sulfur recovery units has been instrumental in reducing sulfur dioxide emissions in 2004.

**International**

Overseas activities are aligned to the Company’s Policy and Corporate Health, Safety and Environment Guidelines as well as the ISO 14001, OHSAS 18001 and BS 8800 international standards.

In Argentina, the Company’s operations are ISO 14001, ISO 9001 and OHSAS 18001 certified. All certification was maintained in 2004, a reflection of the improvement and the way operational management has developed. Petrobras invested US$ 30 million in a series of Quality, Safety Environment and Health projects during the year.

In Mexico, operations began in February 2004 with a preliminary environmental study of the two blocks operated by Petrobras – Cuervito and Fronterizo – in addition to process and environmental risk studies.

In Bolivia, the active production fields of San Alberto and San Antonio were recommended for SA 8000/2001 certification (SA8000 is a Social Responsibility Standard). Among Petrobras’ environmental control initiatives in the country, of particular note is the reforestation with native species and other trees adapted to the region in areas impacted by the building of oil and gas pipelines.

In Colombia, Petrobras was the first company to obtain integrated quality certification according to international standards.

**Renewable energy sources**

The Company invests in studies and projects for the use of renewable sources of energy under the Alternative Electric Energy Sources Incentive Program – Proinfa, based on initiatives involving wind power, small hydroelectric power plants and biomass.

In this context, Petrobras has negotiated joint ventures for the expansion and modernization of energy generation from sugar cane bagasse in sugar–alcohol mills for internal consumption and the sale of any surplus to the local power grid. In addition, the Company has entered associations with urban waste management and sanitation companies to generate energy from biogas produced from garbage and sewage. Petrobras also has drawn up projects for prototype units for consolidating the development of the biodiesel production chain in the Brazilian Northeast based on indigenous oil plants. Units are currently

**Spills**

While the volume of oil spills in 2004 was higher than the preceding year, it continues well within the parameters of excellence in relation to the world oil and gas industry. Volumes in 2004 were strongly impacted by a pipeline rupture in São Sebastião [SP], on February 18, causing an oil spill of 274.8 m³.

On November 15, an exudation was detected on the seabed close by the 7–MLS–107H well in the Marlim Sul field in the Campos Basin at a depth of 1,250 meters and 110 kilometers from Macaé. This seepage ceased completely on December 22. Currently the Company is conducting geological, geo–mechanical and flow studies to investigate the possibility that the seepage may have been caused by oil escaping through fractures in rock formations overlying the producing reservoirs of the Marlim Sul field.

**SOX Emissions (tonnes)**

- 2004: 158,620
- 2003: 173,010
- 2002: 179,107
- 2001: 151,496
in the construction and assembly phase in Guamaré (RN), where energy is generated from castor oil, and Candeias (BA), with a daily capacity of 10 tonnes.

In 2004, the Petrobras Thermal Solar Energy Program began operating a solar water heating scheme for the restaurant at the Reduc refinery as well as erecting a 613 m² solar collector system to supply power to the restaurant and two employee changing rooms at the same refinery.

Petrobras also inaugurated a system for pumping oil using photovoltaic panels in Mossoró (RN) and the Company’s first wind farm in Macau (RN), with an installed generating potential of 1.8 MW.

**Energy efficiency**

Petrobras has adopted two additional initiatives for developing renewable energy sources and to promote efficient energy use: the Energy Conservation Program, developed internally and Conpet (National Program for the Rational Use of Oil Products and Natural Gas).

Among Conpet’s initiatives are the Brazilian Labeling Program for encouraging the use of gas powered home appliances which are more efficient and safer; the Economizar project, which provides free technical advice to the road transportation sector for rationalizing the consumption of diesel oil and the consequent improvement in air quality; the Transportar Project, for providing specialized technical advice to tanker truck fleets supplied by Petrobras; the Conpet nas Escolas project – Teaching Brazil to Save Energy, for creating an awareness among students on the need to preserve natural resources; and the Petrobras Ônibus a Gás project for assessing the use of natural gas as a substitute for diesel oil in road transportation.

**Principal causes of time off work in 2004 – Petrobras employees**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osteomuscular illnesses</td>
<td>24.28%</td>
</tr>
<tr>
<td>Lesions and poisoning</td>
<td>18.60%</td>
</tr>
<tr>
<td>Mental and behavioral disturbances</td>
<td>10.88%</td>
</tr>
<tr>
<td>Cardiovascular problems</td>
<td>8.12%</td>
</tr>
</tbody>
</table>

**Cause of death – Petrobras’ employees**

<table>
<thead>
<tr>
<th>Year</th>
<th>Violent causes outside work</th>
<th>Cardiocirculatory diseases</th>
<th>Work-related accidents</th>
<th>Occupational diseases</th>
<th>Other causes – causes unknown</th>
<th>Total number of deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>14</td>
<td>16</td>
<td>12</td>
<td>0</td>
<td>17</td>
<td>59</td>
</tr>
<tr>
<td>2002</td>
<td>11</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>21</td>
<td>42</td>
</tr>
<tr>
<td>2003</td>
<td>8</td>
<td>9</td>
<td>3</td>
<td>0</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>2004</td>
<td>19</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>27</td>
<td>57</td>
</tr>
</tbody>
</table>

**Health**

Petrobras’ approach to health rests on two main pillars: promoting and restoring the health of its employees, and preventive medicine, based on an integral health concept (occupational or otherwise).

Using epidemiological analysis of health data (mortality and morbidity rates, risk prevalence factors, etc.), such as shown in the following tables and graphs, Petrobras decides the nature of the health support structure to be implemented.

On the basis of the epidemiological information, Petrobras runs a series of programs and initiatives to encourage healthy life styles:
• Annual medical check–ups of an occupational and preventive nature for all employees, the main focus being on cardiovascular disease, cancer and infectious–contagious and tropical diseases. For contractual reasons, this check–up is also mandatory for outsourced companies;

• Procedures are being prepared to guarantee the health of employees when traveling: medical check–ups prior to traveling (including the family when the employee is to be accompanied on overseas jobs) and medical supervision on return. The procedure includes educative and informative themes appropriate to each traveler;

• Encouragement of physical activities, including the installation of Health Promotion Centers (CPSs) in the Company’s units for physical exercise, programs for nutritional guidance and fostering more active life styles. CPSs have already been installed at the Company’s head offices, the Cenpes R&D center and the Reduc refinery;

• Programs for prevention and control of smoking, alcohol and other drugs: the Company bans smoking in its installations and offers support and treatment to those employees wishing to give up smoking. Petrobras also provides treatment and supervision to those employees identified as being alcoholics or dependent on other drugs;

• Adoption of programs for healthy nutrition at all units and the development of tailor–made individual nutritional education programs;

• Corporate health education initiatives implemented at all the Company’s units and subsidiaries on special dates (World Health Day, World No–Tobacco Day, International Day against Drug Abuse, among others);

• Occupational hygiene and ergonomics programs, involving procedures for identifying, controlling and eliminating occupational risks.

Percentage of Time Lost (PTP) has developed satisfactorily with absence from work due to illness or accidents diminishing consistently over the past three years.

The Lost Time Injury Frequency Rate (LTIFR/TFCA) has also fallen in the last years and is now approaching levels of excellence prevailing in the international oil and gas industry. Petrobras’ goal is to reach this excellence level in 2010.

The number of fatalities has been on the decline but is still the focus of Company concern since the target for this kind of incident is zero. The number of men–hours exposed to risk has risen from about 415 million in 2003 to about 485 million in 2004 due to increased Company activity.
Fatal accident rate
The Fatal Accident Rate (TAF) corresponds to the number of fatalities per 100 million men–hours of exposure to risk. The level of the TAF in 2004 – including both employees and outsourced workers – is less than the average for the world E&P industry. According to Oil and Gas Producers data, this was 4.9 in 2003. This puts Petrobras in the same class as the major international oil companies.

<table>
<thead>
<tr>
<th>Year</th>
<th>Employees</th>
<th>Outsourced Workers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>4</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>2001</td>
<td>12</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>2002</td>
<td>3</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>2003</td>
<td>3</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>2004</td>
<td>1</td>
<td>15</td>
<td>16</td>
</tr>
</tbody>
</table>

Relationship with suppliers
On December 16, 2004, the Executive Board approved the contractual requirement that all companies providing outsourced services to Petrobras in Brazil must offer their employees healthcare coverage, extensive to spouse or partner and to their children under the age of 21. The Board also recommended that this guidance be adopted by its overseas subsidiaries in the light of the legal provisions in the countries where they operate.

The Board also approved the revision of contractual Health, Safety and Environment (SMS) requirements for all stages in the process of contracting outsourced services – definition of the scope of the services, tender bid or direct negotiation, formalization of the contract, management/supervision, evaluation post-finalization – aligning the SMS requirements of the Company with those of its suppliers as part of the process of achieving excellence. These new requirements will be incorporated into contractual agreements from December 2005.

The Company has about four thousand medium and large registered suppliers from which it acquires goods and services for its operating needs and new investments. Petrobras also has an additional list of more than 15,000 smaller companies from which it also acquires goods and services. In 2004, the Company began to integrate its supplier information registers to optimize its data and obtain a better idea of supplier capacity to fulfill the needs laid out in the Strategic Plan. A project is currently in progress for improving the technical, legal and economic aspects of the registration process.

In October, Petrobras signed an agreement with Sebrae (Brazilian Service for the Support of the Micro and Small Business) for the inclusion of micro and small companies in the oil, gas and energy production chain on a competitive and sustainable basis. The agreement covers those states where Petrobras has its Business Units and is worth US$ 4 million, 40% of which to be contributed by Petrobras, 40% by Sebrae and 20% from participating companies. The agreement will run for a period of three years. The resources will be applied in the qualification of the companies to equip them with the capability of becoming effective suppliers to Petrobras. The agreement will also be an incentive for the large suppliers to use these companies in a role as local subcontractors.
Program for Organizing Suppliers (Progefe)

This program was created in 2003 to provide a more detailed analysis of service providers with information on capacity and results as well as monitoring the companies in the context of economic, legal, technical, managerial, SMS (Safety, Environment and Health) and social responsibility. The Program's database will complement the Petrobras data by providing up-to-the-minute, reliable information and a global analysis of the suppliers.

More than 400 companies are now registered under Progefe, a program set up for perfecting the engineering goods and services selection process and encouraging continual improvements in the suppliers own operations. In 2004, 70 of these companies were visited and assessments concluded based on the program's criteria.

A further selection criterion is a contractual clause prohibiting the employment of child labor by suppliers along the entire production chain. This is one of the commitments Petrobras signed under the Abrinq Foundation’s Child Rights Charter Agreement allowing it to use the Company, Friend of the Child seal.

Materials procurement

The Materials Procurement System made direct purchases worth US$ 1.85 billion in 2004, of which 83.1% were contracted from Brazilian companies. The high percentage of domestic purchases is the result of pursuing a policy of sustaining traditional markets of hydrocarbons products and service suppliers. This is combined with a strategy of developing domestic suppliers of materials – today imported by the Company – and on the cutting edge of technology. However, at the same time, this does imply that Petrobras will neglect its technological and commercial base, which allows it to continue competing effectively. The Company employs a policy that enables its operational needs to be served with quality, reliability, reduced costs during the entire life cycle of the equipment and under guaranteed supply conditions.

The Program for Guaranteeing Quality of Materials and Associated Services is focused primarily on the domestic markets and has as its goal to foster guaranteed quality by contributing to minimizing the risks inherent in the Company’s investments and operations. In this context, during the year, the boiler, pumps and valves markets were researched and technically evaluated. Currently, a similar exercise is in progress for specific E&P materials such as tubes and connections, electrical materials and instrumentation. This initiative helps reduce costs due to poor quality materials, an important consideration for the Company which spends approximately US$ 34 millions/year excluding production losses. In addition, the Program contributes to increased reliability and diminished acquisition risks.

With the support of the National Petroleum and Natural Gas Industry Mobilization Program (Prominp), Petrobras has introduced a methodology for fostering the sustainability of domestic manufacturers based on the Agreement for Technological Development. These domestic companies, which compete directly with the major international suppliers and are generally at a disadvantage due to their smaller size, are now able to finalize long-term partnerships and ensure their sustainability.

Petrobras has reduced its operational costs by using e-procurement to acquire US$ 171 million in materials such as industrial equipment, IT hardware and communication equipment, valves, tubes, connections and chemical products. The e-trade portal, Petronet, includes more than 5,500 suppliers as well as 350 buyers in Petrobras’ Business Units in Brazil, Argentina, Bolivia and Colombia. Orders are delivered to suppliers via the B2B portal and numbered 55,000 transactions in 2004.
Petrobras is always looking to improve its corporate governance practices and relationships with shareholders, clients, suppliers, employees and other stakeholders. Given the markets where its securities are traded, the Company is subject to the rules of the Brazilian Securities and Exchange Commission (CVM) and the São Paulo Stock Exchange (Bovespa) in Brazil; the Securities and Exchange Commission (SEC) and the New York Stock Exchange (NYSE) in the United States; the Latibex market of the Madrid Stock Exchange in Spain; and the Buenos Aires Stock Exchange, Argentina, through the intermediary of Petrobras Energia. Trading in all these markets requires a continuous process of monitoring and implementation of each one’s individual practices.

In 2004, Petrobras continued to examine the process leading eventually to the Company’s formal adhesion to the differentiated levels of Bovespa's corporate governance criteria. Since the changes in Petrobras’ bylaws in 2002, the Company has been in compliance with current stock exchange practices. One of its objectives in 2005 is effective adhesion to the Brazilian Stock Exchange's Level 1 criteria.

During the year, Petrobras' corporate governance executive training program was improved and expanded with the inclusion of key themes on management functions and debates on the relationship between the Company and other Group subsidiaries. Internally, Petrobras has sought to disseminate the best practices of corporate governance adopted in Brazil and overseas and to promote awareness among members of Senior Management and the employees of its importance. The conclusions and recommendations drawn from these initiatives will be used in projects for improving corporate governance throughout the Petrobras Group.

In accordance with requirements for a listing on the New York Stock Exchange for foreign private issuers, in March 2004, the Company published a table on its website with a description of the significant differences between its own corporate governance practices and those of US companies.

Organizational Structure
The corporate governance structure is made up of the Board of Directors, Executive Board, Statutory Audit Committee, Internal Auditors and advisory committees. The latter play a fundamental role in discussing and detailing questions to be submitted to the Board of Directors and/or Executive Board.

Board of Directors and Executive Board
The Board of Directors is a collegiate and autonomous body in accordance with its legal powers and responsibilities and the Company bylaws. The Board’s principal functions are to establish the strategic guidelines of the Company and supervise the acts of the Executive Board. It is made up of nine members elected by the Ordinary General Shareholders’ Meeting, seven members representing the controlling shareholder, one, the minority common shareholders and one representing the preferred shareholders.
The Executive Board is responsible for the management of the Company’s business in accordance with the mission, objectives, strategies and guidelines set by the Board of Directors. It is made up of a president and CEO, and six directors elected by the Board of Directors. Among the members of the Executive Board, only the president and CEO is a member of the Board of Directors, without however himself presiding over the activities of this body.

Statutory Audit Committee
The committee is installed on a permanent basis and is independent of management and the external auditors as required by Brazilian Corporate Law. It is made up of five members, one of whom represents the minority shareholders, a representative of the preferred shareholders and three Federal Government representatives, one of which is appointed by the Finance Minister as Treasury representative. It is incumbent on the Audit Committee to substitute and represent the shareholders as part of its supervisory function, monitoring the actions of members of management to ensure compliance with their legal and statutory duties and to defend the interests of the Company and the shareholders.

Internal Auditors
The role of the Internal Auditors is to advise Senior Management in exercising internal controls over the Petrobras Group’s activities. The Company also has outside auditors, appointed by the Board of Directors. The outside auditors are restricted in the consultancy services they can provide to the Company. It is mandatory for the outside audit company to be rotated among the various audit companies every five years.

Management Advisory Committees
The Company has three Board Advisory Committees: Audit, Environment, and Compensation and Succession. These committees are made up of Board members and their purpose is to help the Board analyze and make recommendations on specific issues that require more detailed study. Internal corporate governance procedures have been reviewed by the Corporate Governance Commission, an internal multi-functional group set up in 2003, and are now being analyzed prior to approval by the Board of Directors.
Business Committee and the Management Committees

The Business Committee is a forum for the integration of material and strategic matters, promoting synergies between business development, Company management and Strategic Plan guidelines.

The Management Committees are forums for the discussion and detailing of questions presented for their consideration. Each committee operates on a coordinated, integrated and complementary basis with the Business Committee, the other management committees as well as the Board Advisory committees. The Company currently has the following management committees: Downstream, E&P, Gas & Energy, HR, SMS, Organization and Management Analysis, IT, Internal Controls, Risk, Technology and Social and Environmental Responsibility, the last four of which were constituted in 2004.

Sarbanes–Oxley Act

Petrobras has been working since 2002 to adjust its procedures to the requirements of the Sarbanes–Oxley Act (SOX), which introduced new standards of corporate governance for companies listed on the US stock exchanges and subject to SEC regulation. The Act introduces mandatory controls and procedures, which increase the responsibilities of the senior executives of companies listed in the United States markets. During the year, the Corporate Governance Commission intensified its analysis of SOX’s impacts on Petrobras’ corporate governance model as well as the appropriate adjustments to be made. The Company now complies with those requirements in the Act that have already become mandatory. According to section 301 of the Sarbanes–Oxley Act and its relevant regulations, by July 31 2005, Petrobras must constitute an audit committee made up of members independent of the Board of Directors, or appoint a Fiscal Council as the responsible corporate body for performing the audit committee’s obligations, albeit respecting any conflicts arising from provisions under Brazilian legislation. The Company is examining the best way to comply with this requirement within the allotted time. Whatever the final decision, changes in the powers of the relevant organs will have to be made. Currently, the Board of Directors carries out the functions of the audit committee for the purposes of section 301.

Petrobras disclosed in the 2004 Form 20–F (Annual Report, a document required by the SEC) that in the fiscal year 2003, among the nine members of the Board of Directors elected by the Ordinary General Shareholders’ Meeting of March 29, 2004, two are financial specialists as called for under section 407 of the Sarbanes–Oxley Act.

Also as part of compliance with the dictates of SOX, in 2004, the Executive Board approved the creation of an Internal Controls Management Committee subordinated to the Business Committee. Its functions are to monitor and coordinate the procedures for adjusting the internal controls of the business and corporate processes of Petrobras, its subsidiaries and affiliates, to comply with the Law.

Controls and Procedures for Disclosing Information (CPDI)

The Company has prepared an internal document, which formalizes the Controls and Procedures for Disclosing Existing Company Information. This lays down the rules to be followed by Petrobras employees, such that information released to the market can be registered, processed, prepared and disseminated within the appropriate period and in accordance with the prevailing legislation.

According to section 302 of the Sarbanes–Oxley Act and SEC Rule 13a–14, the filing of the Annual Report on Form 20–F must be accompanied by certifications signed by the Company’s president and CEO and CFO. In these certifications, both must affirm that they are responsible for the preparation and maintenance of the Controls and Procedures for Disclosing Company Information.

The Investor Relations Department under the supervision of the president and the CFO is responsible for designing and up-dating these controls and disclosure procedures.

The process delineated in the internal document allows a large flow of information generated by the Company to be collated, controlled, analyzed and tracked. Compliance with the guidelines formulated in the system permits the identification of all the information periodically provided by Petrobras in the form of the quarterly and annual reports required by the legislation, including the Annual Report in Form 20–F. The system enshrined in the CPDI enables information to be identified as to origin or in what corporate system it is recorded and those responsible for its processing, composition and registration in the reports within the legal timeframe for doing so.
Controls and procedures for disclosing information apply to the preparation of the following documents:

- Annual Report;
- Annual Information Report to the CVM;
- Annual Report to be submitted in Form 20-F to be filed with the SEC;
- Form 6-K reports;
- Prospectuses for the issue of securities filed with the regulatory agencies for each issue in Brazil and overseas;
- Announcement of Material Facts as required;
- Disclosure on the Company’s website;
- Other communiqués and announcements to the market.

**Internal Controls**

In addition to the Controls and Procedures for Disclosing Company Information, Petrobras has been working on an integrated basis for adapting its business to other requirements of SOx. This is particularly the case with section 404, according to which, the first certification with respect to the Financial Statements of December 31, 2005 must be filed with the SEC by June 30, 2006 together with the annual report prepared in accordance with the requirements of this institution (Form 20-F).

Section 404 has stricter requirement in that it becomes mandatory for companies to establish and maintain an internal control structure for adjusting the relevant processes, which impact the financial reports. This assessment must be acknowledged by the company through its CEO and CFO as well as being certified by the Independent Auditors.
Accordingly, section 404 requires that the CEO and the CFO must formally declare that they have assessed and monitored the effectiveness of the internal controls over these processes according to the Sarbanes–Oxley Act and complemented by the appropriate SEC regulations and by the Public Company Accounting Oversight Board (PCAOB), a legally constituted council for regulating and supervising the independent auditors of listed US companies.

As part of the process of compliance with section 404, and in line with the majority of companies registered with the SEC, Petrobras has been documenting its internal controls structure based on the recommendations of the Committee of Sponsoring Organizations of the Treadway Commission (Coso), the members of which are renowned names in the field of Accounting and Auditing in the United States. While there are alternative internal controls structure methods, the Coso model is expected to predominate among SEC–registered companies, having already been adopted by the majority of them.

The Coso framework is divided into five interrelated components: the Control Environment, representing the ethical values and the competency of the Company's employees; Risk Assessment, which consists in the identification and analysis of risks which might inhibit the achievement of business objectives; Control Activities or specific initiatives to attenuate each one of the identified risks; Information and Communication, as a means of support for internal controls, transmitting guidelines established at senior management level to the employees; and Monitoring or the assessment and examination of the internal controls.

This work is being conducted and monitored internally at five levels at Petrobras:

- The president and CEO, and CFO, who recognize the responsibility for ensuring compliance with the rules and transmitting the information to Senior Management and the employees;

Investor Relations

Petrobras understands that it has two distinct market constituencies and therefore conducts two different annual investors/shareholder surveys as part of the process of continually upgrading its relationship with these key stakeholders.

A perception survey of institutional investors and market analysts evaluates the quality of the work of the IR area. The results are performance indicators for the area's Balanced ScoreCard (BSC). Some of these performance indicators are replicated in the Financial Directorate's panel. The perception surveys cover the various channels for disclosing information as well as the entire IR program. In addition, at the end of each one of the Company's quarterly results conference calls, a perception survey is made to evaluate the understanding of the message conveyed by the IR director and the other managers.

The IR area runs a quantitative and qualitative survey in the case of the minority shareholders which establishes a socio–economic profile, assesses the quality of service and shareholder perception of the Company, touching on the following aspects: competitiveness, technology, future vision, profitability, international activity, administration, the environment, diversification/energy, social actions, transparency, ethics, corporate governance, communication with society, communication with the shareholders. The results of this survey are also an indicator of performance in the BSC.
The Internal Controls Management Committee, made up of executives from all areas of the Company, for coordinating the involvement of their units with the internal audit and control organs of the Petrobras Group, seeking to achieve the best risk and control management practices;

Managers of the units, who prepare self-evaluations of the risks and controls;

Internal Auditing that tests the working of the internal controls;

The Board of Directors, which supervises the commitment to the work.

The internal controls certification process of the Petrobras Group is being developed on the basis of careful planning, definition of scope, design, assessment and storage in an institutional portal. The purpose of this is to ensure integrated and shared risk management and continuous and monitored controls over business and service processes of material importance to the Company, subsidiaries and affiliates.
Results of the Image Survey with Minority Shareholders

Average Number of Accesses to IR Website

Number of One-on-one Meetings with Investors

Number of Roadshows and Presentations

Number of Telephone Calls for Clarifications
Petrobras’ current organization model, approved by the Board of Directors in October 2000, is constantly being improved and in 2004, the Company made changes in the general structure of its business areas – Downstream (Refining, Commercialization, Petrochemicals and Transportation), Exploration and Production, Gas and Energy and International to ensure the more effective implementation of their strategies.
Basic Organization

José Eduardo de Barros Dutra
President and CEO

CORPORATE

President’s Office
Diego Hernandes

Petrobras General Secretary
Hélio Shiguenobu Fujikawa

Internal Auditing
Gerson Luiz Gonçalves

Institutional Communications
Wilson Santarosa

Administrative Systems
Development
Irani Carlos Varella

Strategy and Business Performance
Celso Fernando Lucchesi

Legal Area
Nilton Antonio de Almeida Maia

New Business
José Lima de Andrade Neto

Human Resources
Heitor Cordeiro Chagas de Oliveira

DOWNSTREAM

Paulo Roberto Costa
(from 05/14/2004)
Director

Rogério A. Manso da Costa Reis
(01/01 to 05/13/2004)
Director

Corporate
Paulo Maurício Cavalcanti Gonçalves
(new position from 05/08/2004)

Logistics
Sergio Abramant Guerbatin
(01/01 to 06/24/2004) and
Alípio Ferreira Pinto Júnior
(from 06/24/2004)

Marketing and Trading
Carlos Ney Martins de Andrade
(01/01 to 06/24/2004) and
Nilo Carvalho Vieira Filho
(from 06/24/2004)

Petrochemicals
Carlos Alberto de Meira Fontes
(01/01 to 08/25/2004) and
Kuniyuki Terabe
(from 08/26/2004)

Refining
Eider Castro Andrade Prudente de Aquino
(01/01 to 06/24/2004) and
Alan Kardec Pinto
(from 06/24/2004)

EXPLORATION AND PRODUCTION

Guilherme de Oliveira Estrella
Director

Corporate Exploration and Production
Francisco Nepomuceno Filho

Exploration and Production
North–Northeast
Solange da Silva Guedes

Exploration and Production
South–Southeast
José Antonio de Figueiredo

Exploration and Production
– Production Engineering
José Miranda Formigli Filho
(new position from 02/01/2004)

Exploration and Production
– Exploration
Paulo Manuel Mendes de Mendonça
(new position from 08/01/2004)

Exploration and Production
– Services
Eraldo Gomes Barbosa Filho
(new position from 08/01/2004)

Gas and Energy
Rafael Mauro Comino
(01/01 to 11/11/2004)

Natural Gas
Djalma Rodrigues de Souza
(01/01 to 11/11/2004)

Structure (from 11/12/2004)

Gas and Energy – Corporate
Rafael Schettini Frazão

Gas and Energy – Energy Development
Paulo Kazuo Tamura Amemiya

Gas and Energy – Marketing and Trading
Rogério Almeida Manso da Costa Reis

Gas and Energy – Operations and Participations
José Maria Carvalho Resende
INTERNATIONAL

Nestor Cuñat Cerveró
Director

Structure (01/01/04 to 31/07/04)
International Downstream Supplies
Abílio Paulo Pinheiro Ramos

Exploration & Production
International
João Carlos Araújo Figueira

International Gas, Energy & Engineering
José Fernando de Freitas

International Planning and Services
Cláudio Castejon

Structure (from 08/01/2004)
International: Corporate
Cláudio Castejon

International: Americas, Africa and Eurasia
João Carlos Araújo Figueira

International: Southern Cone
Décio Fabrício Oddone da Costa

International: Business Development
Luís Carlos Moreira da Silva

International: Technical Support to the Businesses
Abílio Paulo Pinheiro Ramos

FINANCE

José Sergio Gabrielli de Azevedo
Director

Tax Administration
Maria Alice Ferreira Deschamps Cavalcanti

Accounting
Marcos Antonio Silva Menezes

Corporate Finance and Treasury
Almir Guilherme Barbassa

Project Finance
Pedro Augusto Bonesio

Financial Planning and Risk Management
Luciana Bastos de Freitas Rachid (01/01 to 11/30/2004) and Jorge José Nahas Neto (from 12/01/2004)

Investor Relations
Raul Adolberto de Campos

Services

Renato de Souza Duque
Director

Engineering
Pedro José Barusco Filho

Materials
Armando Oscar Cavanha Filho

Research and Development Center (Cenpes)
Leopoldo A. Miguez de Mello
Carlos Tadeu da Costa Fraga

Safety, Environment and Health
Cláudio Fontes Nunes

Shared Services
Ricardo Antonio Abreu Ianda

Information Technology
Washington Luiz Faria Salles

BOARD OF DIRECTORS

Dilma Vana Rousseff
Chairwoman

José Eduardo de Barros Dutra
Cláudio Luiz da Silva Haddad
Jorge Gerhard Johannpeter
Antonio Palocci Filho
Fábio Colletti Barbosa
Gleuber Vieira
Jaques Wagner
Gerald Dinu Reiss

Board Member (up to 03/28/2004)
Arthur Antônio Sendas

Board Member (from 03/29/2004)

FISCAL COUNCIL

Eduardo Coutinho Guerra
President

Effective Members
Maria Lúcia de Oliveira Falcão
Nelson Rocha Augusto
Tálio Luiz Zamin
Ronald Araújo Vieira Júnior (to 03/28/2004)
Denise Maria Ayres de Abreu (from 03/29/2004)

Alternates
Celso Barreto Neto
Cláudia Rebelo Massa
Edison Freitas de Oliveira
Maria Auxiliadora Alves da Silva
Oswaldo Petersen Filho

For more information on the management profile, please access: www.petrobras.com.br
Absorption in activated charcoal – A physical–chemical process for removing certain substances from liquids, such as chlorine and dissolved organic substances, whereby the liquid passes through finely granulated activated charcoal, used in water and effluent treatment.

Acuo Center – Car wash services at service stations in Argentina.

American Depositary Receipts (ADR) – Negotiable certificates in the United States and representing one or more shares of a foreign company. A US depositary bank issues the ADRs against a deposit of underlying shares, held by a custodial institution in the country of origin of the shares.

American Petroleum Institute API Degree (‘API’) – A measurement of the relative density of an oil or oil product. The API scale, measured in degrees, varies inversely with the relative density – in other words the greater the relative density, the lower the API degree. Conversely, the lighter the oil, the higher the API degree. Oils with an API of more than 30 degrees are considered light; between 22 and 30 degrees API are medium; lower than 22 API degree are heavy while an API degree equal or lower than 10 indicates an extra–heavy oil. The higher the API degree, the greater the product’s market value.

Associated gas – Natural gas produced together with oil. Crude petroleum is made up of three states: oil, gas and water. In this respect, gas is obtained after the physical separation of the liquid fraction of the petroleum. Gas can also be of a non–associated nature and produced from purely gas deposits. Under these circumstances, there is no need for physical separation during production. However, in both cases, after production and/or separation, the gas is processed to the required standards and quality before being sold.

Back Testing – Technique that consists basically in using historical data in a model to test the precision of its past results.

Balanced scorecard – Described by Kaplan and Norton, is more than a tactical or operational measurement system. An explicit strategy and a vision form the basis for four perspectives (financial, customer, business process and learning and growth). For each one, strategic objectives, measurements, specific targets and action plans are formulated.

Barium sulfate incrustation – (see Salt precipitation).

Basic petrochemicals – These are divided into two groups: olefins (ethene or ethylene, propene or propylene, butane) and aromatics (benzene, toluene, xylene). They are produced from different feedstock by a process known as cracking.

Bioaerosol – The aerial dispersal of organic or inorganic particles that contain all or parts of biological entities, such as bacteria, viruses, fungus or spores.

Biodisk – Type of biological reactor that operates with spinning disks covered with a fine layer of bacteria, partially immersed in the effluent to be treated – for reducing the concentration of organic material or ammonia.

Biodrum – A nitrifying bacteria production unit added to effluent to be treated in biological reactors for reducing the concentration of ammonia.

Biogenic H₂S – One of three known ways of generating hydrogen sulfide gases (H₂S) in petroleum reservoirs. Biogenic H₂S is produced by sulfate reducing bacteria (SRB). In general, the presence of biogenic H₂S is associated with the injection of seawater involved in the secondary recovery of petroleum.

Block – A small portion of a sedimentary basin where oil and natural gas exploration and production is carried out.

Bottom–Up Methodology – Methodology for developing an atmospheric emissions inventory which uses information on the consumption of energy and fuels from each issuing source of an installation, thereby
allowing the individualized management of each source.

**Bovespa Index (Ibovespa)** – Indicator of the price changes of a variable share portfolio that is defined periodically by the São Paulo Stock Exchange.

**Brent Dated** – Quotation published daily by Platt’s Crude Oil Marketwire which reflects the physical cargos of Brent oil shipped from 7 to 17 days after the date of finalizing the business at the Sullom Voe terminal in the United Kingdom.

**Brent petroleum** – A blend of petroleum produced in the North Sea from fields in the Brent and Ninian Systems with a 39.4 (thirty-nine and four tenths percent) degree API and a 0.34% (zero decimal point thirty-four per cent) sulfur content.

**BS 8800** – British Standard for implementing a SMS Management System.

**Bunker** – Fuel for ships.

**Carbon market** – Regulated trading system between companies or other institutions of credits corresponding to certified reductions in the emission of greenhouse gases, the objective being to meet business, regional, national or global targets for reducing the emission of these gases.

**Carbon risk** – Possible impacts on the operations and results of the companies due to their contribution to the worsening in global climatic change due to greenhouse gas emissions.

**Catalyst** – Any substance that speeds up or retards a chemical reaction but does not itself undergo any lasting chemical alteration during the process.

**Catalytic cracking unit** – Refining process whereby heavier distilled oils are converted into lighter fractions of greater commercial values, such as gasoline, liquefied petroleum gas (LPG) and naphtha.

**CDE (Energy Development Account)** – Created by Law 10,438 of April 26, 2002, and regulated by Decree 4,541 of December 23, 2002. Article 13 of this law states: “With a view to developing energy in the States and the competitiveness of energy produced from wind power, small hydroelectric power plants, biomass, natural gas and domestic mineral coal, in areas served by the interlinked systems, to promote universal access to the electric power service throughout Brazil and guarantee the resources for supplying power at a subsidized tariff to final consumers in the Low Income Residential Sub–Category...”

**CIF (Cost Insurance and Freight)** – Cost of merchandize including insurance and freight. The exporter assumes payment of cost and freight necessary for delivery to the final port of destination.

**Co–generation** – The simultaneous generation of electricity and thermal energy (heat/steam from the process), through the sequential and efficient use of quantities of energy from a single source. This increases the thermal efficiency of the thermodynamic system as a whole.

**Completion of well** – A well is only complete once it has been lined with a steel tube. A layer of cement is then placed around the tube to prevent the infiltration of undesirable fluids and to stop the walls from collapsing. Next, the bullet or jet perforator is lowered into the shaft and, activated from the surface, perforates the steel and cement lining, penetrating the oil and gas bearing rock formations and allowing these fluids to drain into the shaft. Another pipe of smaller diameter (the production column) is inserted into the well to carry the fluids to the surface. Finally, a set of valves known as a Christmas tree valve, is installed in the wellhead to control production.

**Condensate** – Natural gas liquids recovered in the normal oilfield separation process and maintained in liquid state under normal pressure and temperature conditions.
Conference call – A telephonic conference with market analysts, institutional and individual investors that takes place when the Company reports its most recent quarterly financial results. The conference call normally also includes information on the Company’s future prospects.

Corporate governance – The relationship between economic agents (shareholders, executives, board members) that can influence or determine the course and performance of a company. Good corporate governance assures stakeholders equitable treatment, transparency and responsibility for the results.

Correlation – Statistical indicator, which shows to what point two variables are related.

Crude petroleum (or crude oil) – The oil which first enters a refinery for processing.

Crude processed throughput – Total crude oil processed in the distillation plants.

Cryogenic wagons – Wagons (or tankers), which maintain the temperature of the product transported – in the case of LNG – at very low levels (about –160 degrees centigrade) to keep it in a liquid state.

Delayed coking unit – This is the most extreme form of thermal cracking, transforming vacuum residue into lighter products, in addition to coke.

Derivative – A contract or security, the value of which is related to the price of another security, instrument or underlying index. Consequently, it can be used as a hedge instrument.

Dispatch – Functioning (bringing into operation) of a thermoelectric power station (UTE), when this begins generating electricity for supply to consumers/grid – “to dispatch power from a thermoelectric power station” – means bringing it into operation for producing electric power. Currently, in Brazil with its predominantly hydroelectric generating capacity, thermoelectric plants only dispatch electricity at certain peak demand times (when hydro sources are insufficient to supply demand), during hydrological shortfalls (low rainfall) or whenever the National System Operator (ONS) so determines to stabilize the system.

Downstream – Collective term for the activities of refining, crude oil, treating natural gas, transportation and commercialization/distributing of oil products.

e-Commerce – Commercial transactions carried out electronically. The relationship is digital and therefore virtual. The sale of goods and services involve a digital communication medium – the multimedia – the principal vehicles for this type of transaction being: CD–Rom, kiosks, BBS and the Internet. Also known as virtual commerce or electronic commerce.

e-Procurement – Electronic negotiation and purchase of products and services.

E&P – Exploration and production of oil and natural gas.

EBITDA – Earnings before interest, taxes, depreciation and amortization expenses.

Ebitda margin – Informs how much net revenues contribute to the Ebitda.

ECA – Export Credit Agency.

ECGD – Export Credits Guarantee Department (United Kingdom).

EDC – Export Development Canada.

EPC (Engineering, procurement and construction) – A company or series of companies responsible for the execution of stages in a project(s), acquisition of material and contracting of services for the completion of construction work.

Ethene or ethylene – A basic petrochemical product of the light olefin family (C2H4) produced from naphtha or ethane.

Exploratory Success Rate – The number of exploratory wells with commercially viable oil and/or gas, as a proportion of the total number of exploratory wells drilled and evaluated in any given year.

Exudation – A natural seepage of hydrocarbons (petroleum and gas) from a rock formation.

Farm–in – The partial or total acquisition of the concession rights held by another company. Within the same negotiation, the company acquiring these rights is in the process of farm–in and the company selling the rights is in the process of farm–out.

Feedstock – Refinery input, the blend or crude oil mix that a refinery processes.

Field – An oil or natural gas producing area from a continuous reservoir or more
than one reservoir at variable depths, including the associated production installations and equipment.

**Floating, Production, Storage & Offloading (FPSO)** – A floating unit for the production, storage and transfer of hydrocarbons using a ship as platform.

**Fluid Catalytic Cracking (FCC)** – A cracking process in which the catalyst is characterized by small solid particles creating a fluid base. The cracking process is the transformation that takes place through the rupture of large into small molecules. Used to transform heavy oils of little value into lighter oil products such as LPG and naphtha, that is, higher value-added products.

**FOB (Free On Board)** – Price of sale of merchandise plus all the exporter’s expenses up to its placement in the market.

**FPU** – Floating Production Unit.

**Fuel oil** – The heavier fractions from the atmospheric distillation of petroleum, widely used as and industrial fuel in boilers, ovens, etc.

**Gas lift** – An artificial petroleum lifting method, in addition to several types of pumping. It consists in the injection of gas under pressure into the production train through valves located close to the producing reservoir. The gas mixes with the petroleum, diminishing its average density, making the reservoir pressure sufficient to lift the petroleum to the surface.

**GIEK** – Garanti-Instituttet for Eksportkreditt (Norway) – An Export Credit Guarantee Institution.

**GTL (Gas to Liquids)** – A chemical transformation process that converts natural gas into liquid fuels (diesel and gasoline) and in other products such as petrochemical naphtha and high viscosity lubricants. Under this conversion process, the result is an extremely pure synthetic petroleum, free of contaminants such as sulfur, heavy metals and aromatics.

**Hedge** – A financial position or combination of positions for the purpose of reducing some kind of risk.

**Heuristic Optimization System** – An optimization system in which the rules obtained by testing are used. This is not considered to be a rigorous method of analysis although its results are as good as the knowledge available for solving the problem in hand.

**High Grade Bond** – Bond classified as high grade by Standard & Poor’s (Triple A) and Moody’s (Double A) risk rating services.

**High Yield Bond** – Bond classified as higher yield with a credit rating equal to or lower than BB (predominantly speculative) with a high yield to offset the high risk.

**Ibama** – The Brazilian Environmental Agency.

**IGP–DI (General Price Index)** – Domestic Supply concept, calculated on a monthly basis by the Getúlio Vargas Foundation. It is one of Brazil’s most important inflation indicators.

**Installed capacity** – Project capacity of the unit authorized by the ANP.

**Interbank Deposit Certificate (CDI)** – A security that underlies loans between financial institutions.

**ISO 14001** – An international standard, prepared and managed by the International Organization for Standardization, which specifies the requirements for environmental management systems with a view to the certification of these systems.

**Liquefied Petroleum Gas (LPG)** – A mixture of hydrocarbons and high pressure steam obtained from natural gas at special processing units, which is kept in a liquid state under special conditions for surface storage.

**Liquified Natural Gas (LNG)** – Natural gas cooled to temperatures below 160°C for transfer and storage in a liquid state.

**Local goods content** – The percentage that is equivalent to the coefficient between:

- The difference between the total sale value of a good (excluding IPI and ICMS taxes) and the value of the associated imported portion and;
- Its total sale value (excluding IPI and ICMS taxes).

**Market share** – Percentage or participation of the market.

**Membrane bioreactors** – Advance generation biological reactor for reducing the concentration of organic material and ammonia in effluent and where the bacteria (activated sludge) is separated from the treated effluent by microfiltration and ultrafiltration plastic membranes.
Membrane filtration – Physical process of separating solids from liquids, also used in the treatment of wastewater and effluent, and able to remove particles with a vast range of diameters from ions to clays, the objective being the demineralization of water or the simple removal of suspended solids or turbidity.

Merchant power plant – In general, merchant power plants sell their power to the spot market. Under this form of business structure, there are natural gas supply contracts with clauses, which govern the division of gains and losses above those set from the outset of the agreement among the parties.

Methanol – Also known as methyl alcohol, produced from coking coal, naphtha and natural gas (methane).

Monte Carlo Simulation – A method which generates a large number of scenarios on a random basis (prices for example) for the purpose of determining statistical properties of the variables influenced by the scenarios (for example, future cash flow).

Naphtha – A petroleum product, mainly used as feedstock in the petrochemical industry to produce ethylene and propylene (or propene) together with other liquid fractions such as benzene, toluene and xylene.

National Petroleum Agency (Agência Nacional do Petróleo – ANP) – The Brazilian regulatory agency for the oil and natural gas sector.

Natural gas – Any hydrocarbons or mixture of hydrocarbons that remain in a gaseous state under normal atmospheric conditions, extracted directly from reservoirs of petroleum or gas, including moist, dry, residual and rare gases.

Natural Gas Liquids (NGL) – Refers to the portion of natural gas that is found in its liquid state under a given surface pressure and temperature, obtained during natural gas production through field separation processes, in natural gas processing units or in gas pipeline transfer operations.

Natural gasoline – Natural gas liquids with a steam pressure halfway between that of condensate and LPG, obtained from natural gas through a process of compression, distillation and absorption.

New frontiers – Areas of sedimentary basins or sedimentary basins where little exploration has occurred.

Note – A written promise to pay a specific value to a given institution at sight or on a specific date.

Octane rating – Property, which indicates how much a fuel can be compressed before it ignites spontaneously. A high octane rating such as Podium gasoline allows higher levels of performance (torque, power and economy) in high-performance vehicles due to greater thermal efficiency.

Offshore – Located or operating in the sea.

OHSAS 18001 – A standard prepared and managed by BSI Management Systems, which specifies the requirements for the health and occupational safety management systems with a view to certifying these systems among other purposes.

Oil – The portion of petroleum that exists in a liquid state under original reservoir conditions and remains liquid under surface pressure and temperature conditions.

Onshore – Located or operated on land.

Opacimeter – An instrument used to
measure the k index (quantity of smoke issued per meter) and the opacity (the darkening effect of smoke expressed as a percentage) of smoke exhaust fumes resulting from fuel burning efficiency of diesel engines.

**Opec basket price** – Saharan Blend (Algeria), Minas (Indonesia), Bonny Light (Nigeria), Arab Light (Saudi Arabia), Fateh (Dubai), Tia Juana Light (Venezuela) and Isthmus (Mexico).

**Opec countries** – Algeria, Indonesia, Iran, Iraq, Kuwait, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela.

**Option** – A type of derivative that gives the buyer the right to purchase (call option) or sell (put option) an asset or security for a given price (strike price) at a future date.

**Osteomuscular illnesses** – An illness involving debilitation of the bones, muscles or tendons; injuries caused by repetitive movements are an example of this type of illness.

**Overhead** – The general fixed costs of running a business.

**P–Tax** – The official currency exchange rate disclosed by the Brazilian Central Bank.

**Payout** – The ratio between the dividends paid out and the net income for the fiscal year. The payout ratio shows the percentage of net income to be distributed to the company's shareholders.

**Petroleum** – Any liquid hydrocarbon in its natural state such as crude oil and condensate.

**Pipeline extremities** – A pipeline is made up of one extremity and various outlets.

**Polyethylene** – A petrochemical product used to make casks, receptacles, film canisters, plastic packaging for clothing and lightweight objects.

**Polymer** – The generic designation for some second generation petrochemicals such as plastics, rubber and synthetic fibers.

**Polypropylene** – A petrochemical product with uses similar to those of high–density polyethylene, such as film, beverage crates and packaging, etc.

**Power Purchase Agreement (PPA)** – A fixed–term contract for the purchase and sale of power.

**Processed crude** – Total volume processed in a refinery.

**Propene or propylene** – A basic petrochemical product, produced from naphtha propane that serves as feedstock for making polypropylene.

**Proved reserve** – Reserves of petroleum and/or natural gas that, based upon analysis of geological and engineering data, are estimated to be commercially recoverable from discovered and evaluated reservoirs, to a high degree of certainty, taking into account the prevailing economic circumstances, the usually feasible operational methods and the Brazilian petroleum and tax regulations.

**Rating** – Classification or rating of risk.

**Realization price** – Relates to the system established by Administrative Ruling 3/98 of the Ministry of Mines and Energy/Ministry of Finance. This is Petrobras’ unit of net revenue for basic oil products sold in the domestic market whether imported or produced by its own refineries, the prices of which follow a parametric formula that keeps them in line with international market prices.

**Recoverable volume** – Volume of petroleum, expressed under basic conditions which can be obtained from the production of a reservoir from the time of its initial conditions to the time of its abandonment using the best alternative indicated by technical–economic studies carried out at the time of appraisal. Formula: recoverable volume = original volume x recovery factor.

**Reserve** – Discovered oil and/or natural gas resources that are commercially recoverable as of a given date.

**Reverse electro–dialysis** – Process for water demineralization, in which ions, attracted by electrodes under the effect of a difference in electric potential, are separated by membranes.

**Reserve Replacement Index (IRR)** – Variation in the proved recoverable volume of reserves in relation to aggregate production in a given year.
Residue – There are two kinds of residue: firstly the atmospheric (RAT) kind, the fraction of oil from an atmospheric distillation unit, the distillation of which varies from 420 degrees Celsius upwards; secondly – asphalt, the refined products from de-asphalting residue, resulting from the extraction of light fractions from vacuum residue using a paraffin solvent (propane or butane).

Riser – The vertical portion of a flow line for carrying oil and natural gas from the well to the platform. Flexible pipelines which connect the undersea flow lines to the production platform.

ROA – Return on Assets – Measures the efficiency of a company's use of resources by dividing the net earnings for the period by the total assets at the end of the period.

Road show – Presentation or event held for the purpose of disclosing the company and/or its products in a variety of locations.

Robustness criteria – Conservative assumptions associated to the variables that most affect the economic return of a project (prices, volumes, etc.) in or of an investment portfolio and used to evaluate investment projects and business plans, the purpose being to verify their profitability and solidness under worst-case scenarios for the Company.

ROCE (Return on capital employed) – Calculated by using the following formula: Net earnings – financial results (net of income tax (IR) and social contribution (CSSL)) / average borrowings (loans and financing) + average shareholders equity – financial investments.

Sace – Servizi Assicurativi del Commercio Estero (Italy) – Italian export credits insurance service.

Sale leaseback – Sale of a good and the subsequent leasing of the same good by the seller with a repurchase option.

Salt precipitation – An insoluble compound deposit found in equipment and producing wells. This build-up can be caused for several reasons during the lifting of oil and natural gas. For example: pressure variation which leads to an accumulation of carbonates (CaCO₃); evaporation of the aqueous phase in gas fields leading to the deposit of carbonates and sulfates; and the mixture of sea water, rich in sulfates, with formation water, in turn, rich in barium and strontium ions, causing barium and strontium sulfate incrustations.

SEC – Securities and Exchange Commission – The regulatory body that supervises the US capital markets equivalent to the Brazilian Comissão de Valores Mobiliários (CVM). The SEC criteria used to establish proved reserves does not take into account: proved volume of gas with, as yet, no signed sales agreement; projects in the initial stages of production development.

SPE – Society of Petroleum Engineers.

Specialist function (career in Y) – The objective of this position is to attract and principally, retain competencies. It is designed to retain technically high-performing and skilled employees or experts in technologies and methods that are linked to processes that are essential and strategic for the Company. The position is divided into two categories: technical consultant or business consultant / and senior consultant.

Swap – Contract between two parties to exchange payment flows. A typical oil swap consists of a contract in which one party buys at a certain price and sells at a future floating price.

Thermoelectric Power Priority Program (PPT) – A program instituted by the federal government on February 24, 2000.

Throughput capacity – Processing capacity. Maximum obtainable and sustainable throughput in the processing plant of a raw material under usual
circumstances over a given period, respecting the project limits of the equipment and SMS requirements and Product Quality. Due to changes in the oil processed between the time of the project and its construction, and the present, the throughput capacity can be higher or lower than the installed capacity.

**Top–Down Methodology** – Methodology for developing an atmospheric emissions inventory which uses consolidated information on the consumption of energy and fuels in an installation or a number of installations; this methodology does not allow the individualized management of each emission source.

**Total processed throughput** – Total of crude oil, plus reprocessing and intermediate products processed in the distillation plants.

**Turret** – A buoy anchoring system consisting of a tubular type structure with internal bearings moored to the seabed by a cable and lines. This buoy system allows the vessel to rotate in line with the wind and the movement of the sea.

**Upstream** – Collective term for the activities of exploration and production.


**Value at Risk (VaR)** – Measurement of the maximum monetary loss expected under normal market conditions of the value of a position or series of financial positions considering a given confidence level and timeline.

**Vegetal biocide** – A substance of natural origin that inhibits the growth of microorganisms or which exterminates them. In the hydrocarbons industry, vegetal biocides are used to combat corrosion in metal tubes.

**Volatility** – Statistical measure of variation of a price or rate over time. Normally calculated by variance or standard deviation – the higher the price volatility, the more extensive its variation above or below an average value.

**West Texas Intermediate (WTI)** – Petroleum with an API degree between 38 and 40 and approximately 0.3% of sulfur, the daily price of which reflects the price of a barrel of oil delivered in Cushing, Oklahoma, in the United States.

**Work–related illness** – Illness arising from or triggered by special conditions of work and related directly to it.

**Yield** – Percentage rate of return paid in the form of dividends on the market value of the common or preferred shares.
**ABBREVIATIONS**

*bbl*
Barrel.

*boe*
Barrels of oil equivalent. Normally used to express volumes of oil and natural gas in the same unit of measurement (barrels) by converting Brazilian gas at the rate of 1,000 cubic meters of gas to 1 cubic meter of oil. 1 cubic meter of oil = 6.289941 barrels of oil. As an international standard, one barrel of oil equivalent equals approximately 6,000 cubic feet of natural gas.

*boed*
Barrels of oil equivalent per day.

*bpd*
Barrels per day.

*dwt*
Deadweight tonnage. Unit that measures the freight transportation capacity of a ship.
CONVERSION TABLE

a) Cubic meters ($m^3$) into barrels (b):
   \[ b = m^3 \times 0.158984 \]

b) Barrels (b) into cubic meters ($m^3$):
   \[ m^3 = b \times 0.158984 \]

c) Cubic meters ($m^3$) into tons (t):
   \[ t = m^3 \times D \]

d) Tons (t) into cubic meters ($m^3$):
   \[ m^3 = t \times \frac{D}{0.158984} \]

e) Barrels (b) into tons (t):
   \[ t = b \times 0.158984 \times D \]

f) Tons (t) into barrels (b):
   \[ b = t \times \frac{D}{0.158984} \]

g) 1 $m^3$ = 1,000 liters = 6.28994113 b

h) 1 b = 158.984 liters = 0.158984 $m^3$

i) 1,000 $m^3$ natural gas = 1 $m^3$ oil (approximately)

j) $D = \frac{M}{V}$, where
   \[ D = \text{Density} \]
   \[ M = \text{Mass} \]
   \[ V = \text{Volume} \]
Corporate Information

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Tel.: 55 (21) 2223–9606 or 2223–9636
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**INVESTOR SERVICES**

Petróleo Brasileiro S.A. – Petrobras
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Av. República do Chile, 65 – sala 401–E
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e-mail: petroinvest@petrobras.com.br

**WEBSITE**
The address of the Petrobras website is www.petrobras.com.br. There you can find general information about the company including a section devoted specifically to investor relations, with details about the Company’s results, financial statements (Brazilian and US GAAP), annual reports, recordings and transcripts of presentations to investors, the bylaws, share prices, information for shareholders, etc.
**ANNUAL GENERAL MEETING**

The Annual General Meetings – AGMs are held within four months following the end of the fiscal year, at the Company’s head office at Avenida República do Chile, 65, Centro, Rio de Janeiro in accordance with Article 39 of the bylaws.

Addresses of head office, representative offices in Brazil and overseas and subsidiaries

**HEAD OFFICE**

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e–Petro – Petrobras Negócios Eletrônicos S.A.
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**Representative Offices in Brazil**

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Fax: 0.0021–1 (345) 949.8899

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Fax: 0.0021–1 (345) 949.8899

Termor Participações Ltda.
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20031–912 – Centro
Rio de Janeiro/RJ – Brazil
Tel.: (21) 3224–6861
Fax: (21) 3224–2591
The Castor Oil Biodiesel Pilot Plant in Guamaré (RN) has a capacity to produce 5,000 liters/day on a continuous basis as from 2005. With technology developed by Petrobras, Brazil is the only country able to extract biodiesel from the castor oil seed.
Petrobras will be an integrated energy company with a strong international presence and leader in Latin America, operating with its focus on profitability and on social and environmental responsibility.

Introduction

Transparency is key to the disclosure of information on Petrobras to all its stakeholders. This principle is integral to the best practices of corporate governance adopted by Petrobras and underlies the content of this Annual Report, the objective being to provide shareholders, clients, employees, government and society with a comprehensive knowledge of the businesses. Additional information can be found in the web site www.petrobras.com.br