

EDP ELECTRICIDADE DE PORTUGAL SA  
Form 20-F  
July 03, 2003

As filed with the Securities and Exchange Commission on July 3, 2003

## SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

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### Form 20-F

#### ANNUAL REPORT PURSUANT TO SECTION 13 OF THE SECURITIES EXCHANGE ACT OF 1934,

for the fiscal year ended December 31, 2002

Commission File Number: 1-14648

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### EDP Electricidade de Portugal, S.A.

(Exact name of registrant as specified in its charter)

**EDP Electricity of Portugal**

(Translation of registrant's name into English)

**Republic of Portugal**

(Jurisdiction of incorporation or organization)

**Praça Marquês de Pombal, 12**

**1250-162 Lisbon, Portugal**

(Address of principal executive offices)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class

Name of each exchange on which registered

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Ordinary Shares, with nominal value 1 per share\*  
American Depositary Shares (as evidenced by American  
Depositary Receipts), each representing 10 Ordinary Shares

New York Stock Exchange  
New York Stock Exchange

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\* Not for trading, but only in connection with the registration of American Depositary Shares, pursuant to the requirements of the Securities and Exchange Commission.

Securities registered or to be registered pursuant to Section 12(g) of the Act: **None**

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: **None**

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the last full fiscal year covered by this Annual Report:

At December 31, 2002, there were outstanding:

3,000,000,000 Ordinary Shares, with nominal value of 1 per share

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days:

Yes

No

Indicate by check mark which financial statement item the registrant has elected to follow:

Item 17

Item 18

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## Defined terms

In this annual report, EDP refers to EDP Electricidade de Portugal, S.A. and the terms we, us and our refer to EDP and, as applicable, its direct and indirect subsidiaries as a group. Unless we specify otherwise or the context otherwise requires, references to US\$, \$ and U.S. dollars are to United States dollars, references to escudo(s) or PTE are to Portuguese escudos, references to real or reais are to Brazilian reais, references to or GBP are to British Pounds Sterling and references to or euro are to the euro, the single European currency established pursuant to the European Economic and Monetary Union, or EMU. We have explained a number of terms related to the electricity industry in the Glossary of Terms included in this annual report.

## Forward-looking statements

This annual report and the documents incorporated by reference in this annual report contain forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 with respect to our financial condition, results of operations, business strategies, operating efficiencies, competitive positions, growth opportunities for existing services, plans and objectives of management, markets for stock and other matters. Statements in this annual report that are not historical facts are forward-looking statements for the purpose of the safe harbor provided by Section 21E of the Exchange Act and Section 27A of the Securities Act.

These forward-looking statements, including, among others, those relating to our future business prospects, revenues and income, wherever they may occur in this annual report, the documents incorporated by reference in this annual report and the exhibits to this annual report, are necessarily estimates reflecting the best judgment of our senior management and involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. As a consequence, you should consider these forward-looking statements in light of various important factors, including those set forth in this annual report. Important factors that could cause actual results to differ materially from estimates or projections contained in the forward-looking statements include, without limitation:

the effect of, and changes in, regulation and government policy;

the effects of competition, including competition that may arise in connection with the development of an Iberian electricity market;

our ability to reduce costs;

hydrological conditions and the variability of fuel costs;

anticipated trends in our business, including trends in demand for electricity;



our success in developing our telecommunications business;

future capital expenditures and investments;

the timely development and acceptance of our new services;

the effect of technological changes in electricity, telecommunications and information technology; and

our success at managing the risks of the foregoing.

We undertake no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after the date of this annual report or to reflect the occurrence of unanticipated events.

## Presentation of financial information

Unless we indicate otherwise, we have prepared the financial information contained in this annual report in accordance with generally accepted accounting principles in Portugal, or Portuguese GAAP, which differs in significant respects from generally accepted accounting principles in the United States, or U.S. GAAP. We describe these differences in Item 5. Operating and Financial Review and Prospects Portuguese GAAP Compared with U.S. GAAP and in note 33 to our consolidated financial statements. Unless we indicate otherwise, any reference in this annual report to our consolidated financial statements is to the consolidated financial statements, including the related notes, included in this annual report.

Beginning in 2002 (for fiscal year 2001 and thereafter), we published our consolidated financial statements in euros. Unless we indicate otherwise, we have translated amounts stated in U.S. dollars from euros at an assumed rate solely for convenience. By including these currency translations in this annual report, we are not representing that the euro amounts actually represent the U.S. dollar amounts shown or could be converted into U.S. dollars at the rate indicated. Unless we indicate otherwise, we have translated the U.S. dollar amounts from euros at the noon buying rate in The City of New York for cable transfers in foreign currencies as announced by the Federal Reserve Bank of New York for customs purposes (the Noon Buying Rate) on June 20, 2003 of \$1.1616 per 1.00. That rate may differ from the actual rates used in the preparation of our consolidated financial statements included in Item 18 and U.S. dollar amounts used in this annual report may differ from the actual U.S. dollar amounts that were translated into euros in the preparation of our consolidated financial statements. For information regarding recent rates of exchange between euros and U.S. dollars, see Item 3. Key Information Exchange Rates. In addition, for convenience only and except where we specify otherwise, we have translated certain reais figures into euro at the fixed rate of exchange between the real and euro of 3.3489 reais = 1.00. The rate of exchange between reais and euros represents the euro equivalent of the U.S. dollar/real fixed rate of exchange, calculated by translating reais into U.S. dollars using the Noon Buying Rate on June 20, 2003 of 2.8830 reais = \$ 1.00 and then translating U.S. dollars into euros using the rate of exchange between U.S. dollars and euros of \$1.1616 = 1.00, which was the applicable Noon Buying Rate on June 20, 2003. By including convenience currency translations in this annual report, we are not representing that the reais amounts actually represent the euro amounts shown or could be converted into euros at the rates indicated.

Prior to January 1, 2001, our reporting currency was Portuguese escudos. For convenience and to facilitate a comparison, our consolidated financial statements included in Item 18 and all other escudo-denominated financial data for periods prior to January 1, 2001 included in this annual report have been restated from escudos to euros at the fixed rate of exchange as of January 1, 1999 of PTE 200.482 = 1.00. Where escudo-denominated amounts for periods prior to January 1, 2001 have been rounded, the restated euro amounts have been calculated by converting the rounded escudo-denominated amounts into euros. The comparative balances for prior years now reported in euros depict the same trends as would have been presented had we continued to report such amounts in Portuguese escudos. Our consolidated financial statements and other financial data for periods prior to January 1, 1999 may not be comparable to that of other companies reporting in euros if those companies had restated from a reporting currency other than Portuguese escudos.

**PART I**

**Item 1. *Identity of Directors, Senior Management and Advisers***

Not applicable.

**Item 2. *Offer Statistics and Expected Timetable***

Not applicable.

**Item 3. *Key Information***

**SELECTED FINANCIAL DATA**

*You should read the following in conjunction with Item 5. Operating and Financial Review and Prospects and our consolidated financial statements and other financial data, including the related notes, found elsewhere in this annual report.*

The summary financial data below has been extracted from our audited consolidated financial statements for each of the five years ended December 31, 2002 and as of December 31, 1998, 1999, 2000, 2001 and 2002 and the related notes, which appear elsewhere in this annual report. The audited consolidated financial statements have been prepared in accordance with Portuguese GAAP, which differ in certain significant respects from U.S. GAAP. See Item 5. Operating and Financial Review and Prospects Portuguese GAAP compared with U.S. GAAP, note 33 to our consolidated financial statements for a discussion of the principal differences between Portuguese GAAP and U.S. GAAP with respect to our audited consolidated financial statements.

In 1999, we selected a new firm of independent public accountants to audit our consolidated financial statements based on a solicitation of bids to a number of firms, including our previous firm of independent public accountants. Our fiscal year 1999 consolidated financial statements were audited by PricewaterhouseCoopers, Lda. Fiscal years prior to 1999 were audited by Ernst & Young.

|   | Year ended December 31, |              |              |              |                 |                 |
|---|-------------------------|--------------|--------------|--------------|-----------------|-----------------|
|   | 1998<br>Euro            | 1999<br>Euro | 2000<br>Euro | 2001<br>Euro | 2002<br>Euro(1) | 2002<br>US\$(1) |
| (in millions, except per ordinary share and per ADS data) |                         |              |              |              |                 |                 |
| <b>Statement of income:</b>                               |                         |              |              |              |                 |                 |
| <b>Amounts in accordance with Portuguese GAAP</b>         |                         |              |              |              |                 |                 |
| Electricity sales   | 2,951                   | 2,966        | 3,676        | 5,201        | 5,876           | 6,826           |
| Other sales(2)  | 19                      | 38           | 61           | 98           | 112             | 130             |
| Services(3)   | 40                      | 68           | 110          | 351          | 398             | 463             |
| Total revenues  | 3,010                   | 3,072        | 3,846        | 5,650        | 6,387           | 7,419           |
| Raw materials and consumables                             | 714                     | 901          | 1,731        | 3,080        | 3,687           | 4,283           |
| Personnel costs   | 430                     | 463          | 439          | 592          | 625             | 726             |
| Depreciation and amortization                             | 611                     | 616          | 614          | 665          | 740             | 859             |
| Other external supplies and services                      | 227                     | 287          | 369          | 651          | 675             | 784             |
| Own work capitalized(4)                                   | (194)                   | (214)        | (229)        | (233)        | (242)           | (281)           |
| Concession and power-generation rental costs(5)           | 123                     | 129          | 133          | 149          | 158             | 184             |
| Hydrological correction(6)                                | 0                       | (60)         | (35)         | 0            | 0               | 0               |
| Other operating expenses, net                             | 38                      | 43           | 102          | 73           | 95              | 110             |
| Total operating costs and expenses                        | 1,949                   | 2,166        | 3,122        | 4,977        | 5,738           | 6,665           |
| Operating income  | 1,061                   | 906          | 724          | 674          | 649             | 754             |
| Net interest expense(7)                                   | 204                     | 140          | 175          | 205          | 223             | 259             |
| Other non-operating expenses (income), net                | (57)                    | (56)         | (289)        | (126)        | 139             | 161             |
| Income before income taxes                                | 914                     | 822          | 838          | 594          | 287             | 333             |
| Provision for income taxes                                | (395)                   | (308)        | (313)        | (203)        | (172)           | (199)           |
| Minority interest   | 3                       | 0            | 23           | 60           | 220             | 256             |
| Net income  | 523                     | 514          | 549          | 451          | 335             | 389             |
| Net income from operations per ordinary share(8)          | 0.35                    | 0.30         | 0.24         | 0.22         | 0.22            | 0.25            |
| Net income from operations per ADS                        | 3.54                    | 3.02         | 2.41         | 2.25         | 2.16            | 2.51            |
| Basic and diluted net income per ordinary share(8)        | 0.17                    | 0.17         | 0.18         | 0.15         | 0.11            | 0.13            |
| Basic and diluted net income per ADS(8)                   | 1.75                    | 1.72         | 1.83         | 1.50         | 1.12            | 1.30            |
| Dividends per ordinary share(9)(11)                       | 0.13                    | 0.14         | 0.14         | 0.11         | 0.09            | 0.11            |
| Dividends per ADS(9)(11)                                  | 1.30                    | 1.40         | 1.40         | 1.13         | 0.90            | 1.05            |
| <b>Amounts in accordance with U.S. GAAP (12)</b>          |                         |              |              |              |                 |                 |
| Net income  | 704                     | 644          | 405          | 519          | 300             | 348             |
| Basic and diluted net income per ordinary share(9)        | 0.23                    | 0.21         | 0.14         | 0.17         | 0.10            | 0.12            |
| Basic and diluted net income per ADS(9)                   | 2.34                    | 2.14         | 1.35         | 1.74         | 1.00            | 1.16            |

**Cash flow data:****Amounts in accordance with Portuguese GAAP**

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|  |       |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|-------|
| Net cash from operating activities           | 1,358 | 985   | 1,122 | 1,221 | 898   | 1,043 |
| Net cash used in investing activities        | 1,110 | 1,294 | 914   | 1,243 | 1,141 | 1,326 |
| Net cash used in (from) financing activities | 279   | (385) | 482   | 96    | 297   | 345   |

|   | Year ended December 31, |        |        |         |         |         |
|---|-------------------------|--------|--------|---------|---------|---------|
|   | 1998                    | 1999   | 2000   | 2001    | 2002    | 2002    |
|   | Euro                    | Euro   | Euro   | Euro(1) | Euro(1) | US\$(1) |
| (in millions, except per ordinary share and per ADS data) |                         |        |        |         |         |         |
| <b>Balance sheet data (at period end):</b>                |                         |        |        |         |         |         |
| <b>Amounts in accordance with Portuguese GAAP</b>         |                         |        |        |         |         |         |
| Cash and cash equivalents                                 | 1                       | 16     | 58     | 34      | 214     | 249     |
| Other current assets                                      | 580                     | 707    | 1,162  | 1,496   | 1,863   | 2,165   |
| Total current assets                                      | 581                     | 723    | 1,220  | 1,530   | 2,077   | 2,413   |
| Fixed assets, net(10)                                     | 10,550                  | 10,477 | 9,540  | 9,844   | 11,204  | 13,015  |
| Other assets  | 1,265                   | 2,510  | 4,128  | 4,901   | 4,844   | 5,626   |
| Total assets  | 12,396                  | 13,710 | 14,887 | 16,233  | 18,125  | 21,054  |
| Short-term debt and current portion of long - term debt   | 737                     | 598    | 1,807  | 1,744   | 1,887   | 2,192   |
| Other current liabilities                                 | 501                     | 621    | 890    | 1,286   | 1,631   | 1,895   |
| Total current liabilities                                 | 1,238                   | 1,219  | 2,697  | 3,030   | 3,518   | 4,087   |
| Long-term debt, less current portion                      | 2,734                   | 3,770  | 3,205  | 4,055   | 6,107   | 7,094   |
| Hydro account   | 388                     | 339    | 366    | 388     | 324     | 376     |
| Other long-term liabilities                               | 1,908                   | 2,319  | 2,377  | 2,423   | 2,616   | 3,039   |
| Total liabilities   | 6,267                   | 7,648  | 8,645  | 9,896   | 12,566  | 14,596  |
| Minority interest   | 1                       | 2      | 37     | 241     | 65      | 76      |
| Shareholders equity                                       | 6,127                   | 6,060  | 6,205  | 6,097   | 5,494   | 6,382   |
| <b>Amounts in accordance with U.S. GAAP (12)</b>          |                         |        |        |         |         |         |
| Fixed assets, net(10)                                     | 8,594                   | 8,750  | 5,316  | 5,929   | 6,602   | 7,668   |
| Total assets  | 11,464                  | 12,940 | 14,010 | 15,455  | 16,922  | 19,657  |
| Total current liabilities                                 | 1,257                   | 1,238  | 2,714  | 3,052   | 2,551   | 2,963   |
| Total long-term liabilities                               | 6,046                   | 7,415  | 6,776  | 7,721   | 10,420  | 12,104  |
| Total liabilities   | 7,303                   | 8,653  | 9,489  | 10,773  | 12,970  | 15,066  |
| Shareholders equity                                       | 4,161                   | 4,287  | 4,483  | 4,441   | 3,886   | 4,511   |

(1) For 1998, 1999 and 2000, escudos are translated into euro at the fixed rate of exchange established at the commencement of the third stage of European Monetary Union on January 1, 1999 by the European Council of Ministers between the euro and escudo of PTE 200.482 = 1.00. For 2002, euros are translated into U.S. dollars at the rate of exchange of \$1.1616 = 1.00, which was the U.S. Federal Reserve Bank of New York noon buying rate on June 20, 2003.

(2) Consists of sales of steam, ash, information technology products and sundry materials.

(3) Consists of electricity-related services, services to information technology systems, telecommunications, engineering, laboratory services, training, medical assistance, consulting, multi-utility services and other services.

(4) *Our consolidated income statements present expenses in accordance with their nature rather than their function. Therefore, costs incurred by us for self-constructed assets are capitalized as part of fixed assets and included as a reduction of total expenses under Own work capitalized when the related costs have been included in the relevant expense items.*

(5) *Substantially all of these amounts relate to rent expenses paid to municipalities for the right to distribute electricity in the relevant municipal areas.*

(6) *As required by government regulation, we record charges and credits to operating income, depending on hydrological conditions in a given year, to smooth the effect on our earnings and customer prices that result from changes in hydrological conditions. The difference between the economic costs of generating electric energy and the economic reference costs based on an average hydrological year are included in this item. The imputed interest on the accumulated balance of the hydro account and other adjustments are included in Other non-operating expenses (income).*

(7) *Includes interest and related expenses and interest and related income. See Item 5. Operating and Financial Review and Prospects 2002 compared with 2001 Other expenses (income).*

(8) *Basic and diluted earnings per ordinary share are based on our historical average number of ordinary shares outstanding after giving effect to a 5 for 1 stock split and our average number of ordinary shares outstanding after giving effect to the 5 for 1 stock split plus the effect of the exercise of employee stock options, respectively. Basic and diluted earnings per ADS are based upon basic and diluted earnings per ordinary share multiplied by 10 as each ADS is equivalent to 10 ordinary shares on a post-split basis.*

(9) *Based on 3,000,000,000 ordinary shares issued and outstanding.*

(10) *Substantially all of these assets are subject to reversion to the Republic or the municipalities. See Item 4. Information on the Company Regulation Reversionary assets.*

(11) *Dividends per ordinary share in US\$, translated at the prevailing rate of exchange at the date of payment between the dollar and the escudo for 1998, amount to US\$ 0.14 in 1998, US\$ 0.13 in 1999, US\$ 0.12 in 2000, US\$ 0.10 in 2001 and US\$ 0.11 in 2002 and dividends per ordinary share in euro, translated at the fixed rate of exchange between the euro and the escudo for 1998, amount to 0.11 in 1998, 0.14 in 1999, 0.14 in 2000, 0.11 in 2001 and 0.09 in 2002.*

(12) *U.S. GAAP amounts for 1998, 1999, 2000, 2001, and 2002 are not comparable due to the implementation of SFAS 142.*





## EXCHANGE RATES

Effective January 1, 1999, Portugal and 11 other member countries of the European Union, or EU, adopted the euro as their common currency. The euro was traded on currency exchanges and was available for non-cash transactions during the transition period between January 1, 1999 and December 31, 2001. During this transition period, the national currencies remained legal tender in the participating countries as denominations of the euro, and public and private parties paid for goods and services using either the euro or the participating countries' existing currencies. On January 1, 2002, the euro entered into cash circulation. Between January 1, 2002 and February 28, 2002 both the euro and the escudo were in circulation in Portugal. From March 1, 2002, the euro became the sole circulating currency in Portugal. As of January 1, 2002, we ceased to use the escudo.

The vast majority of our revenues, assets, expenses and liabilities have historically been denominated in escudos, and we prepared and published our consolidated financial statements in escudos through the 2000 fiscal year. Beginning in 2002 (for fiscal year 2001 and thereafter), our consolidated financial statements have been published in euros. A portion of our revenues and expenses and certain liabilities are nonetheless denominated in non-euro currencies outside the euro zone and fluctuations in the exchange rates of those currencies in relation to the euro will therefore affect our results of operations. To learn more about the effect of exchange rates on our results of operations, you should read Item 5. Operating and Financial Review and Prospects. Exchange rate fluctuations will also affect the U.S. dollar price of the ADSs and the U.S. dollar equivalent of the euro price of our ordinary shares, the principal market of which is the Euronext Lisbon Stock Exchange. In addition, any cash dividends are paid by us in euro, and, as a result, exchange rate fluctuations will affect the U.S. dollar amounts received by holders of ADSs on conversion of those dividends by the depositary.

The following table shows, for the periods and dates indicated, information concerning the exchange rate between the U.S. dollar and the euro. These rates are provided solely for your convenience. We do not represent that the escudo could have been, or that the euro could be, converted into U.S. dollars at these rates or at any other rate.

The column of averages in the table below shows the averages of the relevant exchange rates on the last business day of each month during the relevant period. The high and low columns show the highest and lowest exchange rates, respectively, on any business day during the relevant period.

| U.S. dollar per euro(1)<br>Year ended December 31, | End of Period | Average |
|--|---------------|---------|
| 1998   | 1.17          | 1.11    |
| 1999   | 1.01          | 1.06    |
| 2000   | 0.94          | 0.92    |
| 2001   | 0.89          | 0.89    |
| 2002   | 1.05          | 0.95    |

| U.S. dollar per euro(1)<br>Period | High | Low  |
|-----------------------------------|------|------|
| 2002                              | 1.05 | 0.86 |
| December                          | 1.05 | 0.99 |
| 2003                              |      |      |
| January                           | 1.09 | 1.04 |

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|          |      |      |
|----------|------|------|
| February | 1.09 | 1.07 |
| March    | 1.11 | 1.05 |
| April    | 1.12 | 1.06 |
| May      | 1.19 | 1.12 |

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(1) Amounts for 1998 are based on noon buying rates for the escudo, converted into euros at the fixed escudo/euro conversion rate of PTE 200.482 = 1.00 and then based on the U.S. Federal Reserve Bank of New York noon buying rate on January 4, 1999 of 1.00 = \$1.18. For 1999, 2000, 2001 and 2002, euros are based on the U.S. Federal Reserve Bank of New York noon buying rate.

Our ordinary shares are quoted in euro on the Euronext Lisbon Stock Exchange. Our ADSs are quoted in U.S. dollars and traded on the New York Stock Exchange. On June 20, 2003, the exchange rate between the euro and the U.S. dollar was \$1.1616 = 1.00.

### CAPITALIZATION AND INDEBTEDNESS

Not applicable.

### REASONS FOR THE OFFER AND USE OF PROCEEDS

Not applicable.

### RISK FACTORS

*In addition to the other information included and incorporated by reference in this annual report, you should carefully consider the following factors. There may be additional risks that we do not currently know of or that we currently deem immaterial based on information currently available to us. Our business, financial condition or results of operations could be materially adversely affected by any of these risks, resulting in a decline in the trading price of our ordinary shares or ADSs.*

#### RISKS RELATED TO OUR CORE ELECTRICITY BUSINESS

**The competition we face in the generation and supply of electricity is increasing, affecting our electricity sales and operating margins.**

The increase in competition from the Portuguese implementation of EU directives intended to create a competitive electricity market may materially and adversely affect our results of operations and financial condition.

While we currently face limited competition from independent power producers in generation, we expect that this competition will increase as the industry further liberalizes. Portuguese law requires that contracts for the construction of future power plants in Portugal in the Binding Sector be awarded through competitive tender processes, in which we expect to participate. In a competitive tender process, we may lose opportunities to generate electricity in the Binding Sector in Portugal.

In the context of liberalization of the electricity market within the EU, at the end of 2001 the Portuguese and Spanish governments entered into a cooperation protocol which sets forth the main principles for the creation of an Iberian electricity market – free competition, transparency, objectiveness and efficiency. The stated intent of the cooperation protocol is to guarantee for Portuguese and Spanish consumers access to electricity distribution and to create interconnections with third countries on equal conditions applicable to Portugal and Spain. In addition, it is intended that the production of electricity by producers in Portugal and Spain be subject to similar regulatory environments that allow producers in one country to execute bilateral agreements for electricity distribution to consumers in the other country. The cooperation protocol also calls

for the creation of an Iberian common electricity pool. Although there have been advances as a result of the October 2002 Valência summit, there is currently no specific organizational model for an Iberian electricity market. Accordingly, we cannot anticipate the specific organizational model that will be adopted nor can we anticipate the risks and advantages that may arise from such a model. When further defined and implemented, the organizational model and resulting competition may materially and adversely affect our results of operations and financial condition.

The Portuguese regulatory structure now allows for competition in the supply of electricity, which could adversely affect our sales of electricity. In particular, as more electricity consumers qualify to participate in the market-based Non-Binding Sector in Portugal, more electricity will be sold in the competitive markets where prices may be lower than existing tariffs. Prior to 2002, consumers of electricity were eligible to participate in the Non-Binding Sector as Qualifying Consumers based on minimum annual consumption thresholds set by regulation, which declined annually over the 1999-2001 period. Pursuant to EU directives, the threshold was 20 GWh for 2000 and 9 GWh for 2001. Since January 1, 2002, all electricity consumers other than low voltage consumers, which are generally residential and small commercial users, have been treated as Qualifying Consumers automatically upon notification to the Portuguese regulatory authority. As of March 2003, there were approximately 21,000 consumers eligible to be Qualifying Consumers, which represented approximately 44.5% of our 2002 sales in volume and 28.6% of our 2002 sales in monetary terms.

**Our core electricity operating results are affected by laws and regulations, including regulations regarding the prices we may charge for electricity.**

As an electricity public service, we operate in a highly regulated environment. An independent regulator appointed by the Portuguese government, the *Entidade Reguladora dos Serviços Energéticos*, referred to as ERSE or the regulator, regulates the electricity industry through, among other things, a tariff code that defines the prices we may charge for electricity services in the Binding Sector. In attempting to achieve an appropriate balance between, on the one hand, the interests of electricity customers in affordable electricity and, on the other hand, our need and the needs of other participants in the electricity sector to generate adequate profit, the regulator may take actions that adversely impact our profitability.

In real terms, adjusted for inflation, both high and medium voltage tariffs, generally applied to industrial customers, have declined by an average of approximately 6.0% per year over the period 1998 to 2003. The tariffs for low voltage customers have also declined in real terms by an average of approximately 3.3% per year over the same period. In 2002, in nominal terms, tariffs for all voltage levels increased, on average, by 2.2% from the 2001 levels. At the end of 2002, the regulator established new tariffs for 2003. Although the nominal final tariff charged to consumers increased, on average, across all voltage levels in 2003 by 2.8% from the 2002 levels, the component of the final tariff charged by EDP Distribuição, or EDPD, our distribution company, decreased for the second regulatory period, covering the years 2002-2004, from the tariff charged in the first regulatory period, covering the years 1999-2001. During the first regulatory period, the annual decrease in the tariff charged by EDPD was calculated on the basis of the Portuguese consumer price index, or CPI, less approximately 5%. During the second regulatory period, the figure subtracted from CPI, referred to as the efficiency factor, increased to approximately 7%. The net tariffs to be charged by EDPD in 2003 are lower than in 2002, which could adversely affect our profitability in 2003.

In addition, the Portuguese government has implemented selected measures to encourage the development of various forms of electricity production, including autoproduction (entities generating electricity for their own use that may sell surplus electricity to the national transmission grid), cogeneration, small hydroelectric production (under 10 MVA installed capacity) and production using renewable sources. These alternative producers compete with us in the supply of electricity in the Binding Sector.

**The Portuguese government's recently announced intention to renegotiate or terminate the PPAs could eventually adversely affect our revenues.**

According to the Resolution of the Council of Ministers no. 63/2003 of April 28, relating to the promotion of liberalization of the electricity and gas markets in furtherance of the organizational structure of the Iberian Electricity Market, the Portuguese government intends to renegotiate the existing power purchase agreements, or PPAs. Although the Portuguese government expressly declared that it intends to adequately compensate operators for the loss of the economic benefit of the PPAs, the amount of compensation has not yet been defined and our generation revenues could otherwise be adversely affected if our generation companies do not sufficiently replace electricity purchases previously made by Rede Eléctrica Nacional, S.A. or REN.

**If our concessions from the Portuguese government and municipalities were terminated, we could lose control over our fixed assets.**

Most of our revenues currently come from the generation and distribution of electricity. We conduct these activities pursuant to concessions and licenses granted by the Portuguese government and various municipalities. These concessions and licenses are granted for fixed periods ranging

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in most cases from 20 to 75 years, but are subject to early termination under specified circumstances. The expiration or termination of concessions or licenses would have an adverse effect on our operating revenues. Upon expiration of licenses or termination of concessions, the fixed assets associated with licenses or concessions will in general revert to the Portuguese government or a municipality, as appropriate. Although specified amounts would be paid to us with respect to these assets, the loss of these assets may adversely affect our operations.

**Our cash flow is affected by variable hydrological conditions.**

Hydroelectric plants, which are powered by water, account for approximately 55% of our generation capacity in mainland Portugal. Our hydroelectric generation in Portugal is dependent on the amount and location of rainfall and river flows from Spain, all of which vary widely from year to year. Consequently, there is a high degree of variation in levels of hydroelectric production.

In years of less favorable hydrological conditions, we generate less hydroelectricity and must rely more heavily on thermal production to meet demand for electricity. Thermal generation, which is fired by coal, fuel oil, natural gas or a combination of fuels, is more expensive in terms of variable costs than hydroelectric generation. Our total variable production costs and costs of purchased electricity in a very dry year can vary from those in a very wet year by approximately 200 million. These increased costs in a dry year could have an adverse impact on our operational cash flow.

**Our electricity business is subject to numerous environmental regulations that could affect our results of operations and financial condition.**

Our electricity business is subject to extensive environmental regulations. These include regulations under Portuguese law, laws adopted to implement EU regulations and directives and international agreements on the environment. Environmental regulations affecting our business primarily relate to air emissions, water pollution, waste disposal and electromagnetic fields. The principal waste products of fossil-fueled electricity generation are sulfur dioxide, or SO<sub>2</sub>, nitrogen oxides, or NO<sub>X</sub>, carbon dioxide, or CO<sub>2</sub>, and particulate matters such as dust and ash. A primary focus of environmental regulation applicable to our business is to reduce these emissions.

We incur significant costs to comply with environmental regulations requiring us to implement preventive or remediation measures. Environmental regulatory measures may take such forms as emission limits, taxes or required remediation measures, and may influence our policies in ways that affect our business decisions and strategy, such as by discouraging our use of certain fuels.

We have made capital expenditures to minimize the impact of our operations on the environment, including measures to comply with applicable law. Major expenditures so far include capital expenditures to limit SO<sub>2</sub> and NO<sub>X</sub> emissions in generation and to install underground cables in our distribution network. In October 2002 we initiated the use of fuel with a 1% sulphur content in order to comply with environmental regulations requiring us to reduce the level of sulfur in the fuel oil we consume, and as a result we have incurred higher fuel costs.

**RISKS RELATED TO OUR OTHER BUSINESSES**

**Our involvement in Brazil and in other international activities subjects us to particular risks that could affect our profitability.**

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Although we have not recently made new investments in our Brazilian electricity business, we have significant investments in electricity-related projects in Brazil and other international investments. Our investments in Brazil and in other countries present a different or greater risk profile than that of our electricity business in Portugal and Spain. Given the size of our operations in Brazil relative to that of our other international investments, these risks are particularly relevant to our Brazilian operations where, for example, we have experienced adverse currency fluctuations and an uncertain regulatory regime. Risks associated with our investments in Brazil and other international investments include, but are not limited to:

increased economic volatility;

exchange rate fluctuations and exchange controls;

stronger inflationary pressures;

greater government involvement in the domestic economy;



less political stability;

higher potential for civil unrest; and

unanticipated changes in regulatory or legal regimes.

There can be no assurance that we will successfully manage our operations in Brazil and other international operations.

**Regulatory, hydrological and infrastructure conditions in Brazil may adversely affect our Brazilian operations.**

We hold interests in Brazilian distribution companies and have invested in Brazilian generation projects. In 2002, our distribution activities in Brazil were adversely affected by regulatory, hydrological and infrastructure conditions in Brazil. Our generation projects in Brazil were also adversely affected by these conditions. These conditions could have a similar adverse effect on our Brazilian generation and distribution operations in the future.

Delays by the Brazilian energy regulatory authorities in developing a regulatory structure that encourages new generation have led to, and will continue to contribute to, shortages of electricity to meet demand in some regions of Brazil. Additionally, drought conditions in Brazil have limited and will in the future limit the supply of electricity available for our distribution companies in Brazil. A lack of capacity in the electricity transmission system has limited and continues to limit the ability of generation plants operating in geographical areas with abundant rainfall to transmit generated electricity to distribution companies operating in areas experiencing drought conditions. Sales by these distribution businesses are and will continue to be affected by these conditions that limit the supply of electricity available for distribution.

As a result of a shortage of electricity and lack of transmission capacity, the Brazilian federal government implemented an electricity rationing plan in June 2001. Although the rationing program ended on February 28, 2002, its implementation had an adverse effect not only on electricity consumption, which decreased significantly during the period the program was in effect, but on consumption habits in affected areas. As a result, we anticipate that a recovery in consumption to pre-rationing levels may take some time. The lower demand from consumers has affected and will continue to affect demand for electricity from our distribution businesses in Brazil. While the period up to and during the rationing period was characterized by electricity shortages, the post-rationing period was characterized by surplus electricity as a result of decreased consumption combined with abundant rainfall after a long drought. Consequently, in 2002 our Brazilian operations could only dispose of surplus electricity at depressed prices.

The regulatory delays and lack of transmission capacity are also affecting our investment in generation projects in Brazil. These delays pose problems for the development of generation facilities, and the lack of transmission capacity will affect the ability of our generation businesses, once established, to transmit their generated electricity to distribution companies in Brazil.

**We face new risks and uncertainties related to our new non-electricity businesses.**

We have limited experience operating a large-scale telecommunications business and limited experience in gas. In entering and operating these business areas we face managerial, commercial, technological and other risks, as well as regulatory regimes, including fees and licensing requirements and operating restrictions, that are different from the ones we have faced in the past. If we fail to manage these risks and operate these businesses effectively, our ability to develop successfully and achieve profitability in these business areas would be affected.

**We face increasing competition from various types of providers in our telecommunications business.**

The telecommunications sector is highly competitive within Portugal and across the EU, and we expect competition to remain vigorous and increase in the future.

In the fixed line telephone area, we compete for market share primarily with Portugal Telecom, or PT, which historically held a monopoly on fixed line services in Portugal and continues to hold a dominant position in this market. We also face competition from other fixed line operators in Portugal.

Our fixed line telephone business also faces strong indirect competition from cellular telephone service providers, particularly those in the voice segment. Mobile subscriptions have already overtaken the number of fixed line connections in Portugal and we expect this growth to continue.

We also face significant competition from numerous existing operators in the Internet and data services areas, both of which we have targeted, and we expect that new competitors will emerge as these markets continue to evolve.

## **OTHER RISKS**

**The value of our ordinary shares or ADSs may be adversely affected by future sales of substantial amounts of ordinary shares by the Portuguese government or the perception that such sales could occur.**

The Portuguese government may sell all or a portion of its shareholding in us at any time through formal privatization stages, either through a public offering or by direct sales of our shares to third parties. Sales of substantial amounts of our ordinary shares by the Portuguese government, or the perception that such sales could occur, could adversely affect the market price of our ordinary shares and ADSs and could adversely affect our ability to raise capital through subsequent offerings of equity.

**Restrictions on the exercise of voting rights and on shareholdings, as well as special rights granted to the Portuguese government, may impede an unauthorized change in control and may limit our shareholders' ability to influence company policy.**

Under our Articles of Association, no holder of ordinary shares, except the Republic of Portugal and equivalent entities, may exercise voting rights that represent more than 5% of our voting share capital. In addition, specific notification requirements are triggered under our Articles of Association when shareholders purchase 5% of our ordinary shares and under the Portuguese Securities Code, or Cod.VM, when purchases or sales of our ordinary shares cause shareholders to own or cease to own specified percentages of our voting rights. Under Portuguese law currently in force, no person may acquire more than 10% of our ordinary shares without prior approval of the Portuguese Ministry of Finance. Such law may be amended or revoked in response to a June 4, 2002 judgment of the Court of Justice of the European Community. For more information on this law, please see Item 10. Additional Information Articles of Association Limitations on the purchase and transfer of ordinary shares; special rights of the Portuguese government. These limitations may impede an unauthorized change in control of EDP, and a failure to comply with these limitations could result in restrictions on the ability to exercise voting rights attaching to ordinary shares or the denial of registration of record ownership for ordinary shares. Holders of ADSs will be treated as holders of ordinary shares for purposes of the foregoing limitations.

In connection with the offering by the Portuguese government of our ordinary shares in October 2000, and pursuant to Article 13 of Decree Law 14/2000 of July 15, 2000, known as the Privatization Decree Law, special rights were granted to the Portuguese government. The government will have these rights so long as it is an EDP shareholder. These rights provide that, without the favorable vote of the government, no resolution

can be adopted at our general meeting of shareholders relating to:

amendments to our by-laws, including share capital increases, mergers, spin-offs or winding-up;

authorization for us to enter into group/partnership or subordination agreements; or

waivers of, or limitations on, our shareholders' rights of first refusal to subscribe to share capital increases.

The Privatization Decree Law also entitles the Portuguese government to appoint one member of our board of directors whenever the government votes against the list of directors presented for election at our general meeting of shareholders.

**Item 4. *Information on the Company***

**HISTORY AND BUSINESS OVERVIEW**

**History**

We are the largest generator and distributor of electricity in Portugal. In addition, we own 30% of REN, the sole transmitter of electricity in Portugal, and we have significant electricity operations in Spain and Brazil. Our principal executive offices are located at Praça Marquês de Pombal, 12, 1250-162 Lisbon, Portugal. Our telephone number at this location is +351-21-001-2500.

We were incorporated in 1976 under the name EDP Electricidade de Portugal, E.P., as a result of the nationalization and merger of the principal Portuguese companies in the electricity sector in mainland Portugal. Following the sale by the Republic of Portugal in October 2000 of 20% of our outstanding ordinary shares, after a period that started in 1997 of privatization in four phases of our share capital, we are approximately 26.1% owned, directly or indirectly, by the Republic of Portugal and an additional 4.75% of our shares are held by Caixa Geral de Depósitos, a state-owned bank. Other significant shareholders include Banco Comercial Português, or BCP (5.05%), Iberdrola (5%) and, indirectly, Brisa Autoestradas de Portugal, or Brisa (2%).

The following chart shows our current structure and a list of the primary companies within the investments of the EDP Group. For a more detailed listing, please see note 2 to our consolidated financial statement.

General Note

The percentages are rounded. Some ownership percentages indicated above reflect indirect ownership.

(1) For a more detailed listing and description, please see [Subsidiaries, Affiliates and Associated Companies](#) below.

(2) EDP Energia S.A., or EDP Energia, is an electric trading company operating in the independent electricity system

that operates five small hydroelectric plants

## Business Overview

### Iberian Energy

Historically, electricity has been our core business. We underwent a restructuring in 1994, at which time we formed subsidiaries to operate in the areas of electricity generation, transmission and distribution. Following the government's purchase from us of a 70% interest in REN, our two principal electricity subsidiaries were our electrical generation company, CPPE, and our distribution company, EDPD, which was formed in early 2000 by the merger of our four wholly-owned distribution companies. These two wholly-owned subsidiaries, together with REN, carried out electricity generation, transmission and distribution activities in Portugal. On March 29, 2001, we announced the formation of EDP - Gestão da Produção de Energia, or EDP Produção, a subsidiary that began operations in July 2001 and now holds all of our Portuguese energy production-related units as part of measures we are implementing to boost efficiency.

As the largest producer and distributor of electricity in Portugal, we currently hold the leading position in the Portuguese market. In 2002, we accounted for approximately 82% of the installed generation capacity in the Public Electricity System and 99% of the distribution in the Public Electricity System. REN, in which we hold a 30% equity interest, accounted for 100% of the transmission in the Public Electricity System. Our 2002 operating revenues amounted to 6,386.6 million (US\$ 7,418.6 million), approximately 92% of which represented electricity sales, yielding operating income of 648.7 million (US\$ 753.5 million). At December 31, 2002, our total assets were 18,125.2 million (US\$ 21,054.2 million), and shareholders' equity was 5,494.2 million (US\$ 6,382.0 million).

The following table sets shows our revenues by activity and geography:

|                           | Year ended December 31, |              |              |
|---------------------------|-------------------------|--------------|--------------|
|                           | 2000                    | 2001         | 2002         |
|                           | (millions of EUR)       |              |              |
| <b>Energy (1)</b>         |                         |              |              |
| Portugal                  | 3,701                   | 4,530        | 4,898        |
| Spain                     | 0                       | 0            | 321          |
| Brazil                    | 0                       | 691          | 669          |
| <b>Telecommunications</b> |                         |              |              |
| Portugal                  | 17                      | 126          | 190          |
| Spain                     | 0                       | 62           | 131          |
| Information Technology    | 22                      | 150          | 107          |
| All Other                 | 106                     | 93           | 72           |
| <b>Total</b>              | <b>3,846</b>            | <b>5,650</b> | <b>6,387</b> |

(1) Consists of electricity in Portugal and electricity and gas in Spain

In Portugal, we create power for consumption in both the Public Electricity System and the Independent Electricity System. In 2002, our generating facilities in Portugal had a total installed capacity of 7,654 MW. In the transmission function, REN operates the national grid for



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transmission of electricity throughout mainland Portugal on an exclusive basis pursuant to Portuguese law. REN also manages the system dispatch and the interconnections with Spain. In our distribution function, EDPD carries out Portugal's local electricity distribution almost exclusively. EDPD provided more than 5.6 million customers with 35,973 GWh of electricity in 2002.

We expect regional markets for electricity to develop in Europe as an initial stage in the development of an integrated and liberalized electricity market with the EU. For geographical and regulatory reasons, we anticipate that an Iberian electricity market will be the regional market for our core electricity business in the near future. Accordingly, we consider our core electricity business to include our operations in the Portuguese and Spanish electricity markets. In a process that took place during 2001 and 2002, we expanded our energy operations with the acquisition of a 40% interest in Hidroeléctrica del Cantábrico S.A., or Hidrocantábrico, a Spanish electricity and gas utility company. Hidrocantábrico operates electricity generation plants and distributes and supplies electricity and gas in the Iberian Peninsula, mainly in the region of Asturias in Spain. Beginning in June 2002, we have

consolidated on a proportional basis 40% of Hidrocantábrico. In March 2003, Hidrocantábrico won the privatization auction process that will lead to the acquisition of Naturcorp, the major gas distribution company operating in the Basque region of Spain.

### **Telecommunications and Information Technology**

In 2000, taking into consideration our existing resources and expertise, we decided to pursue the telecommunications and information technology businesses.

Currently, ONI, SGPS, S.A., or ONI, our 56% owned subsidiary and the holding company for our telecommunications businesses has the overall responsibility for strategic and financial matters relating to our telecommunications business segments. Pursuant to a recent reorganization, ONI's businesses are currently pursued in two main areas: wireline Portugal and wireline Spain, which areas are discussed in more detail in Telecommunications .

In addition, we pursue the information technology business through our wholly owned subsidiary EDINFOR Sistemas Informáticos, S.A., or EDINFOR, which holds a 60% interest in ACE Holding SGPS, S.A., or ACE. ACE owns 100% of CASE Conceção e Arquitectura de Soluções Informáticas Estruturadas, S.A., or CASE. CASE provides consulting and information systems services to us and to third parties.

### **Group capital expenditures and investments**



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Our total capital expenditures in the electricity business in Portugal were 666.1 million, 409.2 million and 351.0 million in 2002, 2001 and 2000, respectively. One of our strategic goals in recent years has been to reduce the overall level of capital expenditures in our core electricity business. However, we had higher capital expenditures in 2002 compared with 2001 primarily as a result of expenditures in generation relating to the TER CCGT plant and the Venda Nova hydroelectric plant, operational and financial expenditures relating to Hidrocantábrico that are discussed below, telecommunications expenditures and the acquisition of U.S. dollar denominated notes that had been issued by Escelsa. We expect lower total capital expenditures in 2003 since the investment related to the acquisition of Hidrocantábrico has been completed, the operational investment in Hidrocantábrico in 2003 is expected to be lower than in 2002, expenditures in telecommunications will decrease as a result of our divestment of the UMTS business and, having reduced the exchange rate risk relating to U.S. dollar debt of our Brazilian subsidiaries, we do not foresee the need for further debt acquisition programs. We do expect a similar level of operational investment in generation in Portugal in 2003.

Our acquisition of a 40% interest in Hidrocantábrico involved a total investment of 783 million, of which 262.4 million was invested in 2001. For more information about our Hidrocantábrico investment, you should read Spain History and Overview below. In 2002, we also consolidated Hidrocantábrico's capital expenditures relating to generation and distribution.

The following table sets forth our capital expenditures and investments for the years 2000 through 2002. Capital expenditures in electricity in Portugal are broken into two categories: technical and financial costs. Technical costs refer to all amounts expended other than interest. Expenditures in Spain, Brazil, telecommunications and information technology are broken into two categories: operational investment, which generally refers to the development and acquisition of fixed assets, and financial investment, which generally refers to the acquisition of equity interests in companies.

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|  | Year ended December 31, |         |           |
|--|-------------------------|---------|-----------|
|  | 2000                    | 2001    | 2002      |
|  | (thousands of EUR)      |         |           |
| <b>Energy:</b>   |                         |         |           |
| <b>Portugal:</b>   |                         |         |           |
| Generation:  |                         |         |           |
| Thermal/Hydro  | 56,406                  | 109,646 | 204,979   |
| Renewable: wind  | 11,190                  | 6,574   | 11,397    |
| Renewable: biomass(1)                                    | 0                       | 0       | 35,205    |
| Cogeneration   | 25,459                  | 13,142  | 9,619     |
| Engineering (2) and Operations and Maintenance           | 1,051                   | 2,371   | 15,262    |
| Total Generation   | 94,106                  | 131,733 | 276,462   |
| Transmission(3)  | 15,079                  | 0       | 0         |
| Distribution(4)  | 232,310                 | 260,636 | 365,961   |
| Supply(5)  | 1,970                   | 980     | 8,337     |
| Total technical costs                                    | 343,422                 | 393,352 | 650,759   |
| Financial costs  | 7,622                   | 15,867  | 15,361    |
| Total Portugal   | 351,087                 | 409,217 | 666,121   |
| <b>Spain:</b>  |                         |         |           |
| Operational Investment:                                  |                         |         |           |
| Hidrocontábrico  |                         | 0       | 211,938   |
| Financial Investment:                                    |                         |         |           |
| Hidrocontábrico(6)                                       | 0                       | 262,388 | 520,591   |
| Total Spain  | 0                       | 262,388 | 732,529   |
| Total Energy Portugal and Spain                          | 351,087                 | 671,605 | 1,398,649 |
| <b>Brazil:</b>   |                         |         |           |
| Operational Investment:                                  |                         |         |           |
| Generation   | 25,703                  | 40,836  | 55,600    |
| Distribution:  |                         |         |           |
| Bandeirante  | 63,828                  | 47,226  | 25,413    |
| Escelsa  | 0                       | 0       | 16,208    |
| Enersul  | 0                       | 0       | 25,152    |
| EDP Brasil   | 0                       | 1,608   | 261       |
| Total Operational Investment                             | 89,531                  | 89,670  | 122,634   |
| Financial Investment:                                    |                         |         |           |
| Bandeirante  | 206,023                 | 1,077   | 0         |
| Escelsa  | 0                       | 209,011 | 0         |
| Total Financial Investment                               | 206,023                 | 210,088 | 0         |
| Total Brazil   | 295,555                 | 299,758 | 122,634   |
| <b>Telecommunications(7) and Information Technology:</b> |                         |         |           |
| Operational Investment:                                  |                         |         |           |
| Telecommunications                                       | 219,601                 | 239,019 | 311,962   |
| Information Technology                                   | 29,998                  | 70,977  | 41,833    |
| Total Operational Investment                             | 249,599                 | 309,996 | 353,795   |
| Financial Investment:                                    |                         |         |           |
| Telecommunications                                       | 130,690                 | 69,554  | 0         |
| Information Technology                                   | 66,146                  | 2,913   | 1,961     |

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|   |           |           |           |
|---|-----------|-----------|-----------|
| Total Financial Investment                          | 196,836   | 72,467    | 1,961     |
| Total Telecommunications and Information Technology | 446,434   | 382,463   | 355,756   |
| <b>Other:</b>                                       |           |           |           |
| Other Operational Investment(8)                     | 33,040    | 29,529    | 45,364    |
| <b>Other Financial Investment:</b>                  |           |           |           |
| EDA Electricidade dos Açores                        | 5,726     | 813       | 0         |
| Geoterceira   | 0         | 0         | 499       |
| GALP Energia  | 317,974   | 0         | 0         |
| BCP   | 502,918   | 0         | 30,636    |
| Turbogás  | 0         | 0         | 20,986    |
| Affinis   | 0         | 0         | 13,757    |
| Other International Investments                     | 72,500    | 7,525     | 0         |
| Escelsa Notes(8)                                    | 0         | 0         | 379,964   |
| Others  | 219,182   | 0         | 0         |
| Total Other Financial Investment                    | 1,118,300 | 8,338     | 445,843   |
| Total Other   | 1,151,340 | 37,867    | 491,207   |
| Total Capital Expenditures and Investments          | 2,244,416 | 1,391,693 | 2,368,246 |

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- (1) *Renewable biomass investment in 2002 includes 35.2 million relating to an internal transfer of the Mortágua biomass power plant, from EDP S.A. to EDP Produção Bioelétrica. As such, this does not affect our cashflow in 2002.*
- (2) *In 2001, expenditures in engineering and O&M includes the expenditures made by Tergen, Hidroem and EDP Produção, which companies were created in 2001.*
- (3) *Transmission capital expenditures in 2000 only includes the first six months of 2000 due to the sale of a 70% interest in REN.*
- (4) *Distribution includes capital expenditures made prior to 2000 by three departments within EDP that worked exclusively on the distribution business and that in 2000 were transferred to EDPD.*
- (5) *Supply comprises the capital expenditures of EDP Energia, our company operating in the liberalized market.*
- (6) *Total investment in the acquisition of Hidrocantábrico amounts to 782.9 million, of which 262.4 million was invested in 2001.*
- (7) *Investments for telecommunications include primarily infrastructure and, in 2000, organizational costs relating to ONI.*
- (8) *Other Operational Investment includes investments by the EDP Group in installations and equipment at the holding company level, investments by our real estate companies and investments by our support services companies.*
- (9) *In 2002 we acquired certain notes issued by Escelsa. For more information on this transaction please see Item 11. Quantitative and Qualitative Disclosures About Market Risk.*

The capital expenditures set forth above have not been adjusted to reflect the fact that certain expenditures represent transfers between businesses within the EDP group of assets that had previously been accounted for by the transferors as their own capital expenditures. The capital expenditures above have also not been adjusted for divestments of certain financial investments. Adjusting for these transactions would result in the following:

|   | Year ended December 31, |           |           |
|---|-------------------------|-----------|-----------|
|   | 2000                    | 2001      | 2002      |
|   | (thousands of EUR)      |           |           |
| Total Capital Expenditures and Investments:                               | 2,244,416               | 1,391,693 | 2,368,246 |
| Internal Transfers:   |                         |           |           |
| IT Systems (from EDINFOR to EDP Distribuição)                             |                         |           | (80,500)  |
| Mortágua Biomass Power Plant (from EDP, S.A. to EDP Produção Bioelétrica) |                         |           | (35,180)  |
| Divestments:  |                         |           |           |
| ESSEL   |                         | (77,800)  |           |
| REN(1)  | (976,200)               |           |           |
| Redal   |                         |           | (26,905)  |
| Optep (Optimus)   |                         |           | (315,000) |
| Total Internal Transfers and Divestments                                  | (976,200)               | (77,800)  | (457,585) |
| Adjusted Total Capital Expenditures and Investments                       | 1,268,173               | 1,313,895 | 1,910,661 |

(1) Our divestment of a 70% interest in REN involved our receipt of an extraordinary dividend of 392.6 million, 106.2 million for intra group debt repayment and 477.4 million for the equity sold.

In recent years, a significant part of our capital expenditures on electricity projects in Portugal has been in distribution. Since EDPD is obligated by law to connect all customers who wish to be supplied by the Public Electricity System, a large part of capital expenditures is spent in connecting new customers, improving network efficiency and developing the network (installing new cables and lines) to accommodate the growth in consumption. In addition, we are obligated to meet government standards for meter control, which requires us to make further investments in new meters. Our investment in distribution in Portugal in 2002 totalled 366.0 million compared with 260.6 million in 2001 and 232.3 million in 2000, and mainly consisted of recurring capital expenditures necessary for the operation, improvement and expansion of our distribution network in Portugal, including expansion to accommodate growth in consumption and maintenance. In keeping with our strategic goal of reducing recurring capital expenditures in our core electricity business, capital expenditures in distribution have declined since 1998 due to decreased costs in materials and services, and a reduced allocation of these costs to capital expenditures. In 2002, the increase in EDPD capital expenditures reflects the internal transfer from EDINFOR to



EDPD of 80.5 million worth of assets that relate to non-recurring investments made in a commercial and administrative IT system based on the SAP platform. As such, this transfer does not affect our cashflow in 2002.

Under current regulations in Portugal, we receive contributions directly from customers for a portion of our capital expenditures for new connections to the transmission and distribution networks. The total amount of contributions from customers in 2002 was approximately 111 million compared with approximately 148 million in 2001.

During 2002, we invested 276.5 million in generation, compared with 131.7 million in 2001. This increase was mainly due to a 143.0 million investment in initiating construction of the TER CCGT power plant and a 25.7 million investment in additional capacity of the Venda Nova hydro power plant.

In Spain, apart from the our capital expenditure for the acquisition of a 40% stake in Hidrocantábrico, there were capital expenditures of 211.9 million during 2002 focused on generation (including the completion of the Castejón CCGT plant), electric distribution (including expansion to Madrid, València and Alicante) and on special regime generation projects (including a 34 MW wind farm near Burgos).

We expect to focus future capital expenditures in Portugal in distribution on connecting new clients and improving the quality of the electricity service through a more efficient network. We expect to concentrate generation capital expenditures in future periods on the development of new hydroelectric projects and in the construction of the new TER CCGT power plant. Future capital expenditures in generation may also include special projects such as co-generation and wind power generation opportunities. While the actual amount of our future investments will depend on factors that cannot be currently foreseen, we expect to incur recurring capital expenditures of approximately 300 million annually in our core electricity generation and distribution businesses in Portugal during this period.

In line with our strategic objectives in building our telecommunications and our international activities, we also may incur additional capital expenditures in connection with these activities and other strategic investments as well as non-recurring capital expenditures such as for information technology. Concerning investments in Brazil, we expect to fund any future capital expenditures with cashflow generated by local operations and or by debt denominated in reais.

We believe that cash generated from operations and existing credit facilities are sufficient to meet present working capital needs. We currently expect that our planned capital expenditures and investments will be financed from internally generated funds, existing credit facilities and customer contributions, which may be complemented with medium or long term debt financing and equity financing as additional capital expenditure requirements develop. To learn more about our sources of funds and how the availability of those sources could be affected, see Item 5. Operating and Financial Review and Prospects Liquidity and Capital Resources.

### **International investments**

We have made a number of international investments in the electricity and water sectors in Brazil, Cape Verde, Guatemala and Macau. We have actively sought opportunities outside of Portugal in which we could capitalize on our existing strengths. To date in 2003, we have not initiated any new international investment projects. In accordance with our strategy of shareholder value creation, we have divested in non-strategic

holdings in Chile and Morocco.

**Complementary businesses/other utilities**

We also have investments in activities that we regard as complementary to our core business, specially in gas utilities.

Since July 2000, we hold a 14.27% ownership interest in GALP Energia, or Galp, a holding company with interests in Gás de Portugal, S.A., and Transgás, companies that transport and supply natural gas throughout

Portugal, and Petrogal, a company involved in oil refining and distribution and the production of petroleum products.

In March 2003, Hidroantábrico won the auction privatization process that will lead to the acquisition of Naturcorp, the leading natural gas company in the Basque region of Spain. In April 2003, the Portuguese government made public its view and recommendations concerning the restructuring of the Portuguese energy sector, as a result of which we may become the major company in the Iberian combined gas and electricity sector. According to these recommendations, the gas and electricity economic activities should be combined and developed by us in order to strengthen our position in a competitive market. The terms and conditions under which such reorganization shall be put in place have yet to be clearly defined. The Portuguese government also recommended that Transgás should be integrated in REN, in order to form a single company for the transport of gas and electricity. In addition, the government intends to sell 18.3% of Galp to REN.

## STRATEGY

Our principal strategic objective is the creation of shareholder value through the achievement of sustained real earnings growth.

### **Primary strategic focus on core energy activities in the Iberian Peninsula**

Our primary strategic focus is the Iberian energy market. We are the leading electricity company in Portugal and have operating control of Hidroantábrico, the fourth largest electricity company in Spain. In Hidroantábrico we maintain a successful partnership with Energie-Baden-Württemberg AG, or En BW, a German utility company, and Cajastar - Caja de Ahorros de Asturias, a Spanish savings bank, or Cajastar. EDP and Hidroantábrico combined comprise a significant share of generation capacity and energy and distribution supply in the Iberian market. In March 2003, as a result of the privatization process launched by the Ente Vasco de Energia, the energy authority of the Basque region in Spain, Hidroantábrico will acquire 62% of Naturcorp, the second largest Spanish gas distribution and transmission company. Our other interests in the gas sector consist of a 14% stake in Galp and, through Hidroantábrico, operating control of Gas de Asturias.

In the Iberian energy market our objectives are to preserve the value of our domestic electricity business in light of the liberalization of the Portuguese electricity market and the creation of an integrated Iberian market, grow our electricity Iberian platform through Hidroantábrico and develop a gas business leveraging on our existing assets.

### **Preserving the value of our domestic electricity business**

In our domestic electricity business, we face increasing competition arising from the liberalization of the electricity market in Portugal, in the Iberian Peninsula market and throughout the EU. Additionally, we face increasing pressure on operating margins of our electricity distribution business in Portugal due to the regulation of electricity tariffs in the Public Electricity System.

In response to these challenges, we plan to:

continue efforts to enhance earnings by capitalizing on our competitive position and on anticipated growth in demand in the Portuguese electricity market and now in an Iberian electricity market consisting of Portugal and Spain;

maintain our leading market share of generation and distribution in the liberalized and growing Portuguese electricity market, while also capitalizing on growth opportunities created by increasing liberalization within the EU, particularly in an Iberian electricity market; and

continue in Portugal our program to increase the efficiency of our core electricity operations, reduce related costs with the goal of achieving international best practice standards, and minimize the impact of tariff reductions in the current regulatory period on operating margins of our electricity distribution business.

In pursuing these objectives, we intend to:

pursue effective marketing to both new and existing customers, particularly those that are, or will be, subject to competitive alternatives in the Non-Binding Sector;

continue to provide high quality and cost-effective services to the Binding Sector and the Non-Binding Sector;

further centralize our corporate structure, as we have done with the merger of our four distribution companies into EDPD and the centralization of all our generation companies under EDP Produção's umbrella;

continue to centralize our back office activities, such as administration and accounting, as well as procurement and suppliers relationship management, with the aim of achieving cost savings in supplies of goods and services and personnel reduction, to which end we created EDP Valor;

improve our procurement process for new equipment and the terms of business with subcontractors, particularly through continued renegotiations with suppliers and development of benchmark standards for procurement, also through EDP Valor;

identify opportunities to achieve future reductions in overhead expenses through the continued implementation of the Efficiency Program started in the beginning of 2002 and agree with the Portuguese electricity regulator on an appropriate tariff mechanism that can facilitate further efficiency improvements through personnel reduction at EDPD; and

continue to monitor the level of recurring capital expenditures in our core electricity business.

#### **Growing our Iberian electricity platform**

In light of the intended integration of the Spanish and Portuguese electricity sectors, the definition of our core market, which was traditionally focused in Portugal, has widened to embrace the Iberian Peninsula. Following the acquisition of a 40% interest in Hidrocantábrico at the end of 2001, we became the first Iberian company to own significant generation and distribution assets as well as a meaningful customer base in both Portugal and Spain – two EU countries with among the highest electricity consumption growth rates.

In this regard we intend to:

position ourselves to benefit from the creation of an Iberian electricity market and pursue growth opportunities in Spain by leveraging on our investment in Hidrocantábrico;

grow our customer base incrementally, capitalizing on full electricity market liberalization from 2003 onwards; and

increase generation capacity through the construction of a new CCGT (natural gas fired) power plant and the development of renewable energy generation projects, primarily through the construction of new wind farms and the increase of capacity in existing plants to cope with strong consumption growth.

#### **Developing an Iberian gas strategy**

In April 2003, the Portuguese government made public its views and recommendations concerning the restructuring of the energy sector, as a result of which we have the opportunity to become the major company in the Iberian combined gas and electricity sector. According to the government's recommendations, gas and electricity economic activities should be combined and developed by us in order to take advantage of synergy and flexibility that will result from integrated management of the activities. The terms and conditions under which such

reorganization will be put in place have yet to be clearly defined. The government also recommended that Transgás, a Portuguese gas transport company, should eventually be integrated into REN in order to form a single company for the transmission/transport of energy. In addition, the government intends to sell 18.3% of Galp to REN. Our current interests in the gas sector in the Iberian Peninsula include a 14.27% stake in Galp and, through Hidrocantábrico, full operating control of Gas de Asturias and Naturcorp.

We view the gas business as being highly complementary to electricity and of great strategic attractiveness. Both Portugal and Spain have gas and electricity consumption growth rates above the EU average. Each requires new capacity to be gradually added and CCGTs are clearly the best option to meet the Iberian system expansion requirements because of their lower investment costs required per MW, greater efficiencies, lower operating and maintenance costs and lower emission levels than other thermal generation technologies. Since new gas fired generation capacity is expected to be added to the Iberian electricity system, power generators, which are already among the largest gas consumers in the Iberian Peninsula, are and will continue to be the facilitators of the development and sustainability of the gas business in the Iberian Peninsula, although their competitive position will increasingly depend on gas prices and the flexibility of gas contracts.

There are two main reasons for us to develop an integrated Iberian gas strategy:

to capture synergies from distributing both gas and electricity to final consumers, leveraging on our existing electricity client base and on the sharing of infrastructure and system costs; and

to increase the competitiveness and efficiency of our gas fired power plants. The natural gas market is characterized by the existence of long term contracts. For electricity generators, long-term contracts in the natural gas market are usually indexed to the price of oil, are of a take-or-pay nature and restrict the final destination of contracted gas. Since gas represents a substantial portion of gas fired power plants total costs, access to flexible and competitive gas contracts is of paramount importance to increase the efficiency of CCGT power plants. By being involved in both gas distribution and electricity generation we will be able to mitigate the risk presented by variable gas prices while increasing the flexibility of gas sourcing and placing.

#### **Developing our telecommunications and information technology businesses**

Our telecommunications activities are centered on ONI, our telecommunications company comprised of various business units. ONI, which is primarily focused on corporate clients, is a fixed line telecommunications operator that provides voice and data services at a significant level in Portugal and Spain. Our information technology activities are focused on EDINFOR, our information technology subsidiary.

We plan to build on our existing operations in order to pursue a competitive role in the corporate fixed line telecommunications sector in Portugal and Spain, which we regard as attractive markets of suitable size with high growth potential. We based our decision to enter and develop this business on our ability to capitalize on our existing infrastructure, including access to an extensive fiber optic backbone, to leverage our existing resources, including a large base of customers and suppliers, and to use our existing telecommunications and information technology operations as a foundation for expanded activities.

Although our plans and strategy continue to evolve and adapt to trends in the telecommunications sector, we currently anticipate emphasizing the following business areas:

infrastructure operations, including alliances with partners to construct a nationwide telecommunications network in Portugal;

fixed line operations, using ONI's fixed line voice and data operations as a foundation;

Internet access services, building on ONI's Internet service provider activities; and

business solutions, building on EDINFOR's experience and expertise in systems integration.



We also have allied and expect to ally ourselves with other partners who may bring resources and synergies to facilitate our efforts to develop a presence in each of these business areas. For a more detailed discussion of our telecommunications activities, you should read [Telecommunications](#) below.

#### **Pursuit of international activities**

Our core electricity business has historically been in Portugal and is now in an Iberian electricity market. However, international opportunities arise in the electricity business and related businesses through which we believe we can achieve attractive returns. In international investments, we have looked particularly toward Brazil, where we believe we can play an active role in managing the electricity operations in which we are involved and where potential returns may be attractive. In the future, we may pursue attractive opportunities abroad, particularly generation projects in Brazil that complement our existing activities in Brazilian distribution. We regularly review our international investments and may change their focus consistent with our strategic objectives. In this regard, we continuously monitor our investment portfolio in order to capitalize on our ability to manage efficiently electricity operations through significant influence or control. For a more detailed discussion of our international activities, you should read [Brazil](#) and [Other International Activities and Strategic Investments](#) .

#### **Developing of complementary business activities/other utilities**

Consistent with our multi-utility strategy, we are selectively evaluating opportunities that are complementary to our core businesses and that may enable us to achieve cost savings along the chain of activities from us to the consumer and that management expects can generate additional shareholder value.

We expect that our purchase of an interest in Affinis will provide us with the opportunity to become involved in additional commercial activities related to the supply of electricity and gas, such as the provision and servicing of appliances and the installation of utility infrastructure in homes and businesses. For more information on our complementary business activities you should read [Subsidiaries, Affiliates and Associated Companies](#) below.

### **IBERIAN ELECTRICITY MARKET**

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On November 14, 2001, in accordance with the liberalization objectives contained in EU Directive 96/92/EC, the Portuguese and Spanish governments signed a Protocol for Cooperation between the Spanish and Portuguese governments for the Creation of the Iberian Electricity Market, or the Protocol, in which they undertook to create an Iberian electricity market based on the principles of free and fair competition, transparency, objectivity and efficiency. In particular, the Protocol was intended to:

guarantee consumers in Portugal and Spain access to the electricity network from either country and to interconnections with third countries on equal terms; and

give electricity operators in an Iberian electricity market the freedom to contract with consumers, to engage in distribution activities in both countries and to participate in a common Iberian electricity pool.

In late December 2001, the regulators from Spain and Portugal, (respectively, Comision Nacional de Energia, or CNE, and Entidade Reguladora dos Serviços Energéticos, or ERSE) presented a paper for public discussion on the Iberian Electricity Market (MIBEL) organizational model. In March 2002, based on that public discussion, they presented a compromise structure for MIBEL. As determined in the Protocol, the model took into consideration the principles stated in the Protocol, the applicable EU legislation, the recent experience of both countries' electricity markets and regulatory best practices. The model also introduced ideas to allow for the development of a competitive and efficient market, equipped with the necessary supervision and control mechanisms, in order to guarantee the satisfaction of consumers' needs, to provide for the security of electricity supply in the short and long term and to be fully compatible with the objectives of energy efficiency and the promotion of renewable energy in both countries. This general model constitutes the basis for both countries to present a detailed plan for the implementation of technical and organizational measures necessary for the functioning of an Iberian Electricity Market.

Although MIBEL was expected to come into force by January 2003, representatives of the Portuguese and Spanish governments at the October 2002 Valência summit established a new schedule for MIBEL's implementation. The revised timeframe was created in recognition of the fact that MIBEL would be delayed not only due to a change in the Portuguese government, but also because of the need for the harmonization of the Spanish tariff structure. Among other commitments achieved at the summit, a decision was reached to implement MIBEL in phases beginning in January 2003 and ending in 2006. According to the proposal presented at the Valência summit, it is expected that the new model will function with only one operator divided into two specialized establishments with separate management, one in Portugal operating the forwards market for electricity and one in Spain operating the daily and intra-daily market for electricity. It is also expected that there will only be one wholesale energy market that will function in parallel with bilateral contracts.

For the purpose of developing MIBEL, the Protocol contains a timetable for the development of the following interconnections between Spain and Portugal that was not amended at the Valência summit: Alqueva-Balboa, a 400kV line scheduled for completion in 2004; Douro Internacional-Aldeadavila, either the construction of a new 400kV interconnection or an increase of the existing interconnection capacity scheduled for completion in 2006; and Cartelle-Lindoso, a second interconnection for the purpose of increasing transmission efficiency scheduled for completion in 2006.

Within this context, changes introduced to the Portuguese energy policy in April 2003 resulted in the redefinition of the Portuguese government's main objectives in the energy sector, which comprise, among others: the liberalization of the market, improvement of the quality of service, security of supply and reinforcement of the productivity of the national economy. However, the main revision to the restructuring of the energy sector is the promotion of the combination of the management and supply of the gas and electricity businesses into a single company in line with dominant international practices and with Spanish utilities' practice.

By the end of 2003, Portugal, among other measures, intends to initiate the restructuring of the Portuguese electricity system, which includes renegotiating or terminating the existing PPAs through adequate compensation mechanisms and changing REN's single buyer status. It is also understood that both Portugal and Spain should take all the necessary measures to open the market to all consumers and harmonize both tariff structures through clear and transparent rules, particularly in Spain. For more information on the Portuguese energy policy see

Regulation—Portugal .

## **PORTUGAL**

### **ELECTRICITY SYSTEM OVERVIEW**

#### **Portuguese Electricity System**



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Since 1997, Portugal had an electricity market structure pursuant to the legislation enacted by the government that introduced the National Electricity System. The chart below illustrates the structure of the National Electricity System.

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*Note: Operations that are 100% owned by us are highlighted in bold.*

- (1) *We own 10% of Tejo Energia and 20% of Turbogás.*
- (2) *Began operations in early 1998.*
- (3) *As of June 2003, none existed.*

(4) *As of March 2003, approximately 21,000 Eligible Consumers existed, of which 1,657 have become Qualifying Consumers and 899 were already in the Non-Binding Sector. As of 2003, all consumers except low-voltage consumers may elect to become Qualifying Consumers.*

The National Electricity System consists of the Public Electricity System, or the Binding Sector, and the Independent Electricity System. The Public Electricity System is responsible for ensuring the security of electricity supply within Portugal and is obligated to supply electricity to any consumer who requests it. Within the Independent Electricity System is the Non-Binding Sector and other independent producers (including autoproducers). We and other generators can supply electricity to the Non-Binding Sector. The Non-Binding Sector is a market-based system that permits Qualifying Consumers to choose their electricity supplier. Over the past several years the minimum consumption level required to be a Qualifying Consumer has progressively declined and, as of May 15, 2003, Eligible Consumers, i.e., all consumers other than low voltage consumers, automatically become Qualifying Consumers after communicating their intention to the regulator to be treated as such. For more information on the liberalization of electricity sales you should read [Competition](#).

The National Electricity System is intended to improve transparency in the costs associated with the supply of electricity and to prepare for a more market-based and competitive electricity supply system in Portugal that continues to fulfill EU requirements.

### **The Public Electricity System or Binding Sector**

The Public Electricity System, or the Binding Sector, includes our generation company, CPPE, the transmission company, REN, in which we have a 30% stake, and our distribution company, EDPD. The Public Electricity System also includes two independent power producers: Tejo Energia's plant at Pego, in which we have a 10% stake, and the Turbogás plant at Tapada do Outeiro, in which we have a 20% stake. All plants in the Public Electricity System enter into PPAs with REN through which they commit to provide electricity exclusively to the Public Electricity System through REN, acting as the single buyer in the Binding Sector and operator of the national transmission grid. For more information on REN's activities, you should read [Transmission](#) below.

Power plants in the Binding Sector are each subject to binding licenses issued by the *Direcção Geral de Energia*, or DGE, which are valid for a fixed term, ranging from a minimum of 15 years to a maximum of 75 years, but which are revoked upon termination of the related PPAs with REN. These licenses, together with PPAs, require each power plant in the Binding Sector to generate electricity exclusively for the Public Electricity System.

While REN's responsibilities relate primarily to the transmission of electricity and system dispatch, it is also responsible for working with DGE to identify potential sites for the installation of new power plants and for the management of wholesale purchases of electricity and sales to distribution companies.

### **The Independent Electricity System**

The Independent Electricity System consists of two parts—the Non-Binding Sector and the other independent producers, including renewable source producers, which include small hydroelectric producers (under 10 MW installed capacity), and cogenerators.

### **The Non-Binding Sector**



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At present, the only producers in the Non-Binding Sector are our three wholly-owned embedded hydroelectric generators, which are small hydroelectric plants with more than 10MW installed capacity that deliver all of the energy they produce directly to the distribution system. Although producers in the Non-Binding Sector are required to obtain licenses, they have no obligation to supply electricity to the Public Electricity System. These entities are free to contract directly with Qualifying Consumers. In 2002, the total number of Eligible Consumers in Portugal represented 44.5% of our 2002 sales in volume and 28.6% of our 2002 sales in monetary terms. As of March 2003, out of approximately 21,000 Eligible Consumers, only 889 have become Qualifying Customers, of which 652 had entered into contracts with EDP Energia and 237 had entered into contracts with producers in the Spanish market. The total of 889 Qualifying Consumers represented approximately 7% of the total amount of energy sold and 1.2% of the revenues during the first quarter of 2003. We expect little impact on our earnings in 2003 as a result of competition in the Non-Binding Sector.

Producers in the Non-Binding Sector are able to use the national transmission grid and distribution system on an open-access basis to connect to Qualifying Consumers, which pay regulated transmission and distribution charges to REN for transmission and EDPD or other companies for distribution, respectively. Our hydroelectric plants in the Independent Electricity Systems deliver all of the electricity they produce directly to the distribution system without going through the national transmission grid. These plants pay regulated transmission charges to REN. Contractual relationships between producers and consumers in the Non-Binding Sector are freely negotiable between the parties.

#### **Other independent producers**

The Portuguese government has implemented selected measures to encourage the development of various forms of electricity production, including autoproducers (entities that generate electricity for their own use and may sell surplus electricity to REN), cogenerators, small hydroelectric producers and other producers using renewable sources. REN is currently required by law to purchase the excess electricity produced by these independent producers at a regulated price based on avoidable costs, defined as the costs REN avoids by receiving power from these producers rather than dispatching plants in the Binding Sector and/or investing in new plants to increase installed capacity, plus an environmental premium, referred to as the "green tariff". For more information on our electricity sales, you should read "Distribution" below.

#### **Size and composition of Portugal's electricity market**

During the period from 1998 through 2001, the total electricity supplied by EDPD (in both the Binding and Non-Binding Electricity Sectors) experienced an average growth rate of 5.6% per annum. In 2002, there was a reduction in the annual growth rate to 2.4% due to a slowdown in the economy. We expect the previous trend of higher growth rates to resume in future years, assuming that the Portuguese economy recovers from the slowdown that occurred in 2002.

The primary factors that management believes have an impact on demand are the rate of gross domestic product growth, electricity connections to new households and changes in electricity consumption per capita. After the period from 1998 through 2001, during which consumption in the Public Electricity System experienced an average growth rate of 2.1% above growth in Portugal's gross domestic product, or GDP, there was a reduction to 0.7% above the growth rate in Portugal's GDP in the year 2002 due to a slowdown in the economy. The previous growth trend is expected to resume in the future, assuming that the Portuguese economy recovers from the slowdown that occurred in 2002. We anticipate that the Portuguese economy will recover and that overall consumption in the National Electricity System will increase at an average of 3.9% per year in 2003, 2004 and 2005. Residential consumption is assumed to increase each year over the same period by an average of 3.2%, services by an average of 3.7%, and industrial by an average of 4.2%.

Peak demand as a percentage of the total installed capacity, which is the sum of the total installed capacity of the Public Electricity System and the total installed capacity of the Non-Binding System, has remained fairly constant in recent years. Our available capacity as a percentage of the total installed capacity has maintained a value of approximately 80% from 1998 through 2002. The ratio of peak demand to EDP's average available capacity indicates that EDP has sufficient available capacity to cover the total peak demand.

The following table sets forth the ratios of peak demand to installed capacity, EDP's available capacity to the installed capacity of the Public Electricity System and the Non-Binding System and peak demand to EDP's available capacity.

|  | As of December 31,          |       |       |       |       |
|--|-----------------------------|-------|-------|-------|-------|
|  | 1998                        | 1999  | 2000  | 2001  | 2002  |
|  | (in MW, except percentages) |       |       |       |       |
| Installed capacity of the PES (1)  | 8,144                       | 8,804 | 8,757 | 8,757 | 8,757 |
| Installed capacity of the NBES (2)   | 270                         | 270   | 270   | 310   | 255   |
| Total installed capacity (PES plus NBES)   | 8,414                       | 9,074 | 9,027 | 9,067 | 9,012 |
| Peak demand (PES plus NBES)  | 6,079                       | 6,122 | 6,557 | 7,142 | 6,766 |
| Peak demand as a percentage of the total installed capacity (PES plus NBES)              | 72%                         | 67%   | 73%   | 79%   | 75%   |
| <b>EDP:</b>  |                             |       |       |       |       |
| EDP's average available capacity (PES)   | 6,860                       | 6,837 | 6,795 | 6,904 | 6,980 |
| EDP's average available capacity (NBES) (3)  | 224                         | 196   | 215   | 247   | 226   |
| EDP's available capacity as a percentage of the total installed capacity (PES plus NBES) | 84%                         | 78%   | 78%   | 79%   | 80%   |
| Peak demand as a percentage of EDP's average available capacity (PES plus NBES)          | 86%                         | 87%   | 94%   | 100%  | 94%   |

(1) *Public Electricity System.*

(2) *Non-Binding Electricity System, which consists of generation in the Independent Electricity System other than the other independent procedures. All of the NBES hydroelectric plants with an installed capacity less than or equal to 10 MW became special regime producers in October 2002. Special regime generation generally consists of small or renewable energy facilities, from which the electricity system must acquire all electricity offered, at tariffs fixed according to the type of generation.*

(3) *Provisional values from 1998 to 2001 take into account the restructuring of the Vila Cova plant in 1999.*

The Portuguese overall growth rate in demand for electricity is slightly higher than the rate reflected in the figures above due to the growth of auto production of electricity in certain industries. Autoproducers supply their surplus electricity to REN, which displaces electricity generation in the Public Electricity System.

The term installed capacity in this report refers to the maximum capacity of a given generation facility under actual operating conditions. Maximum capacity of a hydroelectric facility is based on the gross electricity emission to the transmission network by the units of such facility, whereas maximum capacity of a thermal facility is based on the net electricity emission (net of own consumption) to the transmission network. In previous reports, installed capacity of a facility referred to the level of electricity emission to the transmission network based on the technical nominal specification of the units of such facility established by the manufacturer. Referring to installed capacity in terms of maximum capacity is preferable because in Portugal the PPAs remunerate electricity producers based on this concept and this concept is widely used by other

electricity companies in Europe.

## **GENERATION**

As of December 31, 2002, our Portuguese electricity generation facilities consist of hydroelectric, thermal (coal, fuel oil, natural gas and gas oil), biomass, cogeneration and wind generation facilities, and had a total installed capacity of 7,654 MW, 7,184 MW of which was in the Public Electricity System and 470 MW of which was in the Independent Electricity System, and approximately 55% of which was represented by hydroelectric facilities, 23% by fuel oil/natural gas facilities, 16% by coal-fired facilities, 4% by gas oil facilities and 2% by wind-driven, biomass and cogeneration facilities. We do not own or operate any nuclear-powered facilities in Portugal.

Our installed capacity in the Public Electricity System of 7,184 MW represents approximately 82% of the total installed capacity in the Public Electricity System. The total installed capacity of the Public Electricity System increased from 1998 to 1999 due primarily to the Turbogás plant at Tapada do Outeiro. From 1999 to 2000, total installed capacity of the Public Electricity System decreased to a small degree as a result of the decommissioning of one unit at our Tapada do Outeiro plant. From 2000 to 2002, the installed capacity of the Public Electricity System

remained constant. Our smaller hydroelectric plants, wind generating facilities and cogeneration and biomass plants are part of the Independent Electricity System.

EDP Gestão da Produção de Energia, S.A., or EDP Produção, holds, among others, the following companies in the generation sector: CPPE Companhia Portuguesa de Produção de Electricidade, S.A., which operates our plants in the Public Electricity System; HDN Energia do Norte S.A. and Hidrocenel Energia do Centro, S.A., which operate some of our smaller hydroelectric plants in the Independent Electricity System; TER Termoelectrica do Ribatejo, S.A., which is involved in the development of a new CCGT plant that will operate in the Non-Binding Sector; Enernova, which is involved in the development of renewable source energy projects and related services; EDP Produção Bioelétrica, S.A., which develops and manages biomass projects and that presently operates our biomass plant at Mortágua; EDP Cogeração, which develops and manages cogeneration projects; EDP Produção EM Engenharia e Manutenção, S.A., which undertakes hydroelectric and thermal engineering projects and studies, project management, engineering and consulting; HidrOeM Gestão, Operação e Manutenção de Centrais Eléctricas, S.A., a management and O&M service company for all smaller EDP hydroelectric power plants owned by HDN, Hidrocenel and EDP Energia, an electric trading company operating in the Non-Binding Sector.

The following map sets forth the CPPE power plants in Portugal:

**CPPE POWER PLANTS**







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Since its formation in 1994, CPPE has operated all of our conventional thermal plants and approximately 93% of our hydroelectric plants. It has also been responsible for 100% of our fuel purchases. On March 29, 2001, we announced the formation of EDP Produção, a subsidiary that began operations in July 2001 and now operates all of our Portuguese energy production-related units, including CPPE, as part of measures we are implementing to boost efficiency. In 2002, CPPE accounted for approximately 95% of our electricity generation.

CPPE generation capacity is bound to the Public Electricity System under PPAs between the company and REN. Under the PPAs, CPPE is guaranteed a fixed revenue component (capacity charge) based on the contracted availability and installed capacity, regardless of the energy produced. The PPAs also allow CPPE to pass-through to the final tariff its total fuel consumption through a variable revenue component (energy charge) that is invoiced monthly to REN. Pursuant to the Portuguese government's policy for the energy sector, the PPAs are expected to be renegotiated or terminated as a step in the creation of an Iberian electricity market. The Portuguese government has announced its intention that generators be adequately compensated for revision or termination of PPAs. The following table sets forth our total installed capacity by type of facility at year-end for the years 1998 through 2002.

| Type of facility                        | As of December 31, |       |       |       |       |
|---|--------------------|-------|-------|-------|-------|
|   | 1998               | 1999  | 2000  | 2001  | 2002  |
|   | (MW)               |       |       |       |       |
| Hydroelectric:                          |                    |       |       |       |       |
| CPPE plants                             | 3,903              | 3,903 | 3,903 | 3,903 | 3,903 |
| Independent System hydroelectric plants | 270                | 271   | 270   | 309   | 310   |
| Total hydroelectric                     | 4,173              | 4,174 | 4,173 | 4,212 | 4,213 |
| Thermal                                 | 3,327              | 3,327 | 3,281 | 3,281 | 3,281 |
| Wind                                    | 20                 | 20    | 30    | 41    | 41    |
| Biomass                                 | 0                  | 9     | 9     | 9     | 9     |
| Cogeneration                            | 0                  | 0     | 67    | 67    | 111   |
| Total                                   | 7,520              | 7,530 | 7,560 | 7,610 | 7,654 |

Hydroelectric generation is dependent upon hydrological conditions. In years of less favorable hydrological conditions, less hydroelectricity is generated and the Public Electricity System must depend upon increased thermal production. In addition, in years of less favorable hydrological conditions, imports of electricity may increase. For purposes of forecast models, our estimated annual hydroelectric production based on current installed capacity in an average year is 10.6 TWh and can reach about 15 TWh in a wet year and may fall to 7 TWh in a dry year. Between 1992 and 2002, our actual hydroelectric production has ranged from a low of 4,870 GWh in 1992, a very dry year, to a high of 13,920 GWh in 1996, a moderate wet year. In 2002, hydroelectric production was 7,336 GWh.

The following table summarizes our electricity production, excluding losses at our plants and our own consumption, by type of generating facility from 1998 through 2002, and also sets forth our hydroelectric capability factor for the same period.

| Type of facility                        | Year ended December 31,                             |       |        |        |       |
|---|---|-------|--------|--------|-------|
|   | 1998  | 1999  | 2000   | 2001   | 2002  |
|   | (in GWh, except by hydroelectric capability factor) |       |        |        |       |
| Hydroelectric:                          |   |       |        |        |       |
| CPPE plants(1)                          | 11,506  | 6,457 | 10,229 | 12,607 | 6,764 |
| Independent System hydroelectric plants | 718   | 447   | 624    | 790    | 573   |

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|                                    |        |        |        |        |        |
|------------------------------------|--------|--------|--------|--------|--------|
| Total hydroelectric                | 12,224 | 6,904  | 10,853 | 13,397 | 7,336  |
| Thermal:                           |        |        |        |        |        |
| Coal                               | 8,385  | 9,319  | 9,091  | 8,677  | 9,532  |
| Fuel oil and natural gas           | 6,926  | 7,596  | 4,631  | 5,583  | 7,848  |
| Gas oil                            | 8      | 2      | 38     | 50     | 13     |
| Coal and fuel oil(2)               | 73     | 85     | 11     | 30     | 44     |
| Cogeneration                       | 0      | 0      | 134    | 423    | 589    |
| Total thermal                      | 15,392 | 17,002 | 13,905 | 14,763 | 18,026 |
| Wind                               | 46     | 53     | 70     | 90     | 113    |
| Biomass                            | 0      | 2      | 5      | 18     | 37     |
| Total                              | 27,662 | 23,961 | 24,833 | 28,269 | 25,513 |
| Hydroelectric capability factor(3) | 1.04   | 0.68   | 1.08   | 1.19   | 0.75   |

(1) *Includes the following amounts of our own consumption for hydroelectric pumping, 100 GWh in 1998, 491 GWh in 1999, 558 GWh in 2000, 485 GWh in 2001 and 670 GWh in 2002.*

(2) *Our existing plant at Tapada do Outeiro used only fuel oil from 1998 onwards.*

(3) *The hydroelectric coefficient varies based on the hydrological conditions in a given year. A hydroelectric capability factor of one corresponds to an average year, while a factor less than one corresponds to a dry year and a factor greater than one corresponds to a wet year.*

The average availability for production of CPPE's plants increased from 1998 through 2002 from 92.84% to 94.44% for thermal plants, and remained stable from 96.12% to 95.89% for hydroelectric plants. Non-availability results from planned maintenance and forced outages. CPPE is reducing planned maintenance outages through more efficient maintenance techniques. Forced outage is unplanned availability at a power plant caused by trips, critical repairs or other unexpected occurrences. CPPE's generating facilities have experienced very low rates of forced outage over the past five years. Management believes these low rates compare favorably with the European average. In the period 1998 through 2002, forced outage of CPPE's thermal plants has ranged from 2.13% to 2.91%. During the same period, forced outage of hydroelectric plants ranged between a low of 0.3% in 1998 to a high of 1.0% in 2001. Forced outage of hydroelectric plants in 2002 was 0.47%.

The average availability factor is defined as the total number of hours per year that a power plant is available for production as a percentage of the total number of hours in that year. This factor reflects the mechanical availability, not the actual availability of capacity, which may vary due to hydrological conditions. During 2002, a workgroup within CPPE studied and revised our computations of the Average capacity utilization and Average availability factor indicators, in order to make them comparable with other European utilities. The table below sets out for each type of CPPE generating facility the average capacity utilization and average availability factor, each calculated in accordance with our revised computational method, for the indicated years:

| Type of facility                   | Average capacity utilization (1)<br>Year ended December 31, |        |        |        |        | Average availability factor<br>Year ended December 31, |        |        |        |        |
|------------------------------------|---|--------|--------|--------|--------|--|--------|--------|--------|--------|
|                                    | 1998  | 1999   | 2000   | 2001   | 2002   | 1998   | 1999   | 2000   | 2001   | 2002   |
| Hydroelectric                      | 33.655%   | 18.88% | 29.84% | 36.87% | 19.78% | 96.12%   | 95.12% | 95.02% | 94.76% | 95.89% |
| Thermal:                           |   |        |        |        |        |  |        |        |        |        |
| Coal(2)                            | 80.30%  | 89.25% | 86.82% | 83.10% | 91.28% | 90.48%   | 90.46% | 89.15% | 90.50% | 94.00% |
| Fuel oil and natural gas           | 46.16%  | 50.63% | 30.78% | 37.21% | 52.31% | 94.15%   | 93.23% | 94.57% | 96.55% | 93.73% |
| Coal and fuel oil                  | 8.91%   | 10.33% | 2.76%  | 7.23%  | 10.82% | 97.78%   | 98.62% | 99.59% | 98.90% | 98.17% |
| Gas oil                            | 0.29%   | 0.08%  | 1.32%  | 1.74%  | 0.44%  | 93.33%   | 99.64% | 99.40% | 98.38% | 99.14% |
| Total weighted average thermal (3) | 52.81%  | 58.33% | 47.79% | 49.90% | 60.68% | 92.84%   | 93.02% | 93.15% | 94.57% | 94.44% |

(1) *The average capacity utilization is defined as actual production as a percentage of theoretical maximum production.*

(2) *The average availability of the coal plants in 1998 and 1999 was affected by the installation of low NOX burners in each unit of the Sines plant, one per year, which required production from each unit to stop temporarily. In addition, there was a strike at the Sines plant in 1998.*

(3) *Weighted average is based on total installed capacity of the thermal system.*

During the period from 1998 through 2002, CPPE has had operating and maintenance costs, excluding fuel and depreciation cost, below the limits contained in the relevant PPAs over that time period. Management expects to continue to maintain these costs below the PPA limits in 2003.

CPPE's power plants, because they are in the Binding Sector, are required to have binding licenses issued by DGE. CPPE received the requisite binding licenses in June 1997, which were effective from January 1, 1995.

**Hydroelectric plants**



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As of December 31, 2002, we operated 25 hydroelectric generating facilities in the Binding System, with 63 total units and an aggregate installed capacity of 3,903 MW.

Based on an independent revaluation of our assets in 1992, management estimates that the average remaining useful life of our dams is approximately 45 years. The table below sets out our hydroelectric plants, installed capacity as of December 31, 2002, the type of hydroelectric plant, the year of commencement of operation and the year in which the most recent major refurbishment, if any, was accomplished.

| Hydroelectric plants                                   | Installed capacity<br>(MW)(1) | River reservoir<br>plant type | Year entered<br>into service | Year of last major<br>refurbishment |
|--|-------------------------------|-------------------------------|------------------------------|-------------------------------------|
| <b><i>CPPE Plants:</i></b>                             |                               |                               |                              |                                     |
| Alto Lindoso   | 630                           | Reservoir                     | 1992                         |                                     |
| Miranda  | 369                           | Run of river                  | 1960/95                      | 1970                                |
| Aguieira   | 336                           | Reservoir                     | 1981                         |                                     |
| Valeira  | 240                           | Run of river                  | 1976                         |                                     |
| Bemposta   | 240                           | Run of river                  | 1964                         | 1969                                |
| Pocinho  | 186                           | Run of river                  | 1983                         |                                     |
| Picote   | 195                           | Run of river                  | 1958                         | 1969                                |
| Carrapatelo  | 201                           | Run of river                  | 1971                         |                                     |
| Régua  | 180                           | Run of river                  | 1973                         |                                     |
| Torrão   | 140                           | Reservoir                     | 1988                         |                                     |
| Castelo de Bode  | 159                           | Reservoir                     | 1951                         | 1986(1)                             |
| Vilarinho Furnas                                       | 125                           | Reservoir                     | 1972/87                      |                                     |
| Vila Nova (Venda Nova/Paradela)                        | 144                           | Reservoir                     | 1951/56                      | 1994                                |
| Fratel   | 132                           | Run of river                  | 1974                         | 1997                                |
| Crestuma-Lever   | 117                           | Run of river                  | 1985                         |                                     |
| Cabril   | 108                           | Reservoir                     | 1954                         | 1986                                |
| Alto Rabagão   | 68                            | Reservoir                     | 1964                         |                                     |
| Tabuaço  | 58                            | Reservoir                     | 1965                         |                                     |
| Caniçada   | 62                            | Reservoir                     | 1954                         | 1979                                |
| Bouça  | 44                            | Reservoir                     | 1955                         | 1988                                |
| Salamonde  | 42                            | Reservoir                     | 1953                         | 1989                                |
| Pracana  | 41                            | Reservoir                     | 1950/93                      | 1993                                |
| Caldeirão  | 40                            | Reservoir                     | 1994                         |                                     |
| Touvedo  | 22                            | Reservoir                     | 1993                         |                                     |
| Raiva  | 24                            | Reservoir                     | 1982                         |                                     |
| <b>Total</b>   | <b>3,903</b>                  |                               |                              |                                     |
| <b><i>Independent System Hydroelectric Plants:</i></b> |                               |                               |                              |                                     |
| Hydrocenel(2)  | 107                           | Various                       | Various                      |                                     |
| HDN(3)   | 118                           | Various                       | Various                      |                                     |
| EDP Energia(4)   | 85                            | Various                       | Various                      |                                     |
| <b>Total</b>   | <b>310</b>                    |                               |                              |                                     |
| <b>Total maximum capacity</b>                          | <b>4,213</b>                  |                               |                              |                                     |

(1) We invested approximately 12 million in the modernization of the electricity generating turbines and other dam equipment at Castelo de Bode. We expect this modernization to be completed by the end of 2003.

(2) *Hydrocenel operates 14 plants with capacities ranging from 0.1 MW to 24.4 MW and dates of entry into service from 1906 to 2001.*

(3) *HDN operates 12 plants with capacities ranging from 0.9 MW to 44.1 MW and dates of entry into service from 1922 to 2001.*

(4) *EDP Energia owns five plants with capacities ranging from 0.2 MW to 80.7 MW and dates of entry into service from 1927 to 1951.*



**Thermal plants**



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CPPE operates all seven of our conventional thermal power plants, with total installed capacity as of December 31, 2002 of 3,281 MW and installed capacity per generating unit ranging from 16 MW to 298 MW. The following table sets forth, as of December 31, 2002, our conventional thermal plants by installed capacity, type of fuel, net efficiency at maximum output, number of units and year entered into service.

| Thermal plants                      | Installed<br>Capacity (MW) | Fuel                   | Net efficiency<br>at maximum<br>output | Number of<br>units | Years entered<br>into service |
|-------------------------------------|----------------------------|------------------------|--|--------------------|-------------------------------|
| Sines                               | 1,192                      | Coal                   | 36.9                                   | 4                  | 1985-89                       |
| Setúbal                             | 946                        | Fuel oil               | 38.3                                   | 4                  | 1979-83                       |
| Carregado I                         | 474                        | Fuel oil               | 37.4                                   | 4                  | 1968/1974                     |
| II(1)                               | 236                        | Fuel oil / Natural gas | 37.7                                   | 2                  | 1976                          |
| Tunes                               | 197                        | Gas oil                | 28.4                                   | 4                  | 1973/1982                     |
| Tapada do Outeiro (EDP facility)(2) | 47                         | Coal / fuel oil        | 29.5                                   | 1                  | 1967                          |
| Alto de Mira                        | 132                        | Gas oil                | 25.5                                   | 6                  | 1975-77                       |
| Barreiro                            | 56                         | Fuel oil               | 34.3                                   | 2                  | 1978                          |
| Total maximum capacity              | 3,281                      |                        |  |                    |                               |

(1) *These units began burning natural gas in 1997.*

(2) *This three-unit plant is scheduled to be progressively decommissioned until the end of 2004. The first unit of 50 MW was decommissioned on December 31, 1997. The second unit of 50 MW was decommissioned on December 31, 1999. In 2000, 2001 and 2002, one unit was operational, with an installed capacity of 50 MW. Since January 1, 1998, this facility has burned only fuel oil.*

There has been no significant change in average net efficiency of CPPE's thermal plants over the past five years. With continued proper maintenance of the thermal facilities, CPPE expects to maintain net efficiency at least at levels contracted in the PPAs.

### *Other energy sources*



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In addition to our hydroelectric plants, we promote the use of renewable source energy with other types of facilities. Enernova, our subsidiary specializing in this area, concentrated its initial investments in wind sources (due to greater technological advances made to date). Our first wind facility commenced operation in 1996. We now have four wind facilities with a combined installed capacity of 41 MW. In mid 2002, we created a new subsidiary for the biomass assets, EDP Produção Bioelétrica, which owns the Mortágua biomass (forestry residue) power plant. This plant commenced operations in 1999 and has an installed capacity of 9 MW. Enernova activities are now focused solely on wind projects.

### **Fuel**

CPPE uses a number of fossil fuels in the generation of electricity. The introduction of natural gas to Portugal is diversifying the sources of primary energy. For more information on our use of natural gas you should read

Natural gas.

CPPE fuel consumption costs including transportation were 434.6 million in 2002 and 353.6 million in 2001, which represented approximately 52.8% and 48.3%, respectively, of CPPE's total operating expenses. The increase in the total cost of fuel consumed from 2001 to 2002 resulted primarily from an increase in thermal production powered by fuel oil, explained by a dry 2002, as well as slightly higher prices for fuel oil.

The table below sets forth a breakdown of costs of fuel consumed by CPPE from 1998 through 2002.

| Type          | Year ended December 31, |         |         |         |         |
|---------------|-------------------------|---------|---------|---------|---------|
|               | 1998                    | 1999    | 2000    | 2001    | 2002    |
|               | (thousands of EUR)      |         |         |         |         |
| Imported coal | 120,445                 | 116,823 | 127,104 | 142,810 | 148,773 |
| Fuel oil(1)   | 109,167                 | 109,371 | 146,721 | 193,867 | 259,816 |
| Gas oil(2)    | 549                     | 219     | 1,895   | 4,618   | 1,512   |
| Natural gas   | 16,670                  | 42,163  | 25,364  | 12,260  | 24,497  |
| Total         | 246,830                 | 268,578 | 301,084 | 353,555 | 434,597 |

(1) *Includes consumption for the production of steam at the Barreiro power plant.*

(2) *Small amounts of gas oil are consumed by the gas oil plants for the operation of these plants in synchronous compensation mode for purposes of voltage regulation and a very small amount of generation.*

The following table sets forth the amounts of fuel purchased by CPPE in each of the last five years.

| Type           | Year ended December 31,                        |       |       |       |       |
|----------------|--|-------|-------|-------|-------|
|                | 1998   | 1999  | 2000  | 2001  | 2002  |
|                | (thousands of metric tons, except natural gas) |       |       |       |       |
| Imported coal  | 3,294  | 3,533 | 3,564 | 3,108 | 3,587 |
| Fuel oil(1)    | 1,484  | 1,712 | 1,052 | 1,237 | 1,941 |
| Gas oil        | 0  | 0     | 0     | 26    | 3     |
| Natural gas(2) | 164  | 376   | 142   | 60    | 150   |

(1) *Includes purchases for the production of steam at the Barreiro plant.*

(2) *Measured in millions of cubic meters.*

Coal





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As the Sines power plant is a base load, or continuous operation power plant, CPPE enters into supply contracts for more than one year for the major part of its consumption of coal. Pursuant to the PPAs, for purchases of coal, an annual Target Contract Quantity, or TCQ, is defined by REN based on the forecasts for coal consumption for a wet year. The TCQ is the basis for long-term supply and shipping contracts, which are negotiated by CPPE, subject to REN approval. In addition, CPPE makes spot-market purchases as necessary. In 2002, CPPE purchased 78% of its coal through long-term contracts and 22% of its coal on the spot market. In comparison, in 2001 and 2000, CPPE purchased 70% and 71.5% of its coal, respectively, through long-term contracts, and 30% and 28.5% of its coal, respectively, on the spot market.

The following table shows a breakdown of CPPE's coal purchases from 1998 to 2002 by geographic markets as a percentage of total purchases.

| Region         | Year ended December 31, |      |      |      |      |
|----------------|-------------------------|------|------|------|------|
|                | 1998                    | 1999 | 2000 | 2001 | 2002 |
| South Africa   | 30%                     | 28%  | 38%  | 28%  | 29%  |
| United States  | 14%                     | 12%  | 10%  | 17%  | 3%   |
| Australia      | 8%                      | 17%  | 0%   | 13%  | 24%  |
| South America  | 48%                     | 43%  | 48%  | 27%  | 16%  |
| Southeast Asia | 0%                      | 0%   | 4%   | 15%  | 17%  |
| Europe         | 0%                      | 0%   | 0%   | 0%   | 11%  |
| Total          | 100%                    | 100% | 100% | 100% | 100% |

In 2002, the average cost of coal consumed was \$41.4 per ton for imported coal. In 2001 and 2000, the average cost of coal consumed for imported coal was \$43.76 per ton and \$37.30 per ton, respectively. CPPE has not consumed domestic coal since 1997.

### Fuel oil and gas oil

Fuel oil purchases by CPPE are made in the spot market and pursuant to contracts. CPPE purchases fuel oil from refineries in Europe, primarily in Portugal and northwestern Europe, and is remunerated through PPAs based on, among other things, costs of fuel oil indexed to the spot market.

The average cost of fuel oil consumed in 2002 was 143.25 per ton, compared with 141.22 and 139.52 in 2001 and 2000, respectively. The increase in 2002 was due to higher market prices until September, 2002 and the increase in 2001 was due to slightly higher market prices for fuel in early 2001. To meet its objectives to improve air quality, CPPE has shifted its fuel oil purchases to lower sulphur fuel oil, which has increased the cost of consumed fuel oil. In 2002, the average sulphur content of fuel oil purchased by CPPE was approximately 2.1%. To comply with an EU Directive, in October 2002 CPPE initiated the use of fuel with a 1% sulphur content. The use of lower sulphur fuel oil has increased, and will increase in the future, the average cost of fuel oil consumed.

CPPE maintains gas oil reserves as fuel for emergency gas turbine generators. Since gas oil is very expensive and economically inefficient, these reserves are used on a very limited basis. Consequently, small purchases of gas oil have been made by CPPE, as required by REN.

### Natural gas

Since the introduction in 1997 of the import of natural gas from Algeria into Portugal by Transgás, CPPE has had access to natural gas as a source of primary energy. CPPE converted two units of Carregado to be dual-fired (fuel oil and natural gas) in late 1997. In 2002, CPPE purchased 150 million cubic meters of natural gas for a total of 24.5 million compared to 60 million cubic meters of natural gas in 2001 for a total of 12.3 million. For more information on our activities related to natural gas you should read Other International activities and strategic investments.

### Planned new plants

In order to meet increased demand for electricity in Portugal, additional capacity is planned for the National Electricity System. The following table sets out planned new power facilities in Portugal.

| Facility      | Type of generation | Developing entity | Planned capacity (MW) | Target year | Status             |
|---------------|--------------------|-------------------|-----------------------|-------------|--------------------|
| Alqueva (1)   | Hydroelectric      | EDIA/CPPE         | 240                   | 2003        | Under Construction |
| Venda Nova II | Hydroelectric      | CPPE              | 192                   | 2004        | Under Construction |
| Baixo Sabor   | Hydroelectric      | CPPE              | 180                   | 2010        | Planning           |
| Picote II     | Hydroelectric      | CPPE              | 236                   | 2010        | Planning           |
| TER           | Thermal            | TER(2)            | 2x392(3)              | 2004        | Under Construction |

(1) *EDIA Empresa Desenvolvimento Integrado do Alqueva, S.A. ( EDIA ) is a company wholly-owned by the Republic of Portugal that is developing a multi-purpose hydro scheme for irrigation and the production of electricity. CPPE will have the exclusive right to operate the Alqueva hydroelectric power plant for a period of 30 years.*

(2) *TER will operate in the Non-Binding Sector.*

(3) *We are studying the construction of a plant with installed capacity of three 392 MW units, in which case we would expect the last unit to be constructed in 2006.*

**Capital expenditures**



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In 2002, we spent 276.5 million in capital expenditures in technical costs for our generation facilities, compared with 131.7 million in 2001 and 94.1 million in 2000. Our capital expenditures in the generation sector have been concentrated on the following activities: conducting preliminary studies for and building of hydroelectric plants, maintaining and upgrading existing power plants, investing in environmental projects such as the installation of emission reduction equipment and, in 2002, investing 142.9 million in the new TER CCGT (combined cycle gas turbine) power plant.

At this stage, management expects that the TER plant will cost approximately 480 million to construct a two unit CCGT plant or 680 million if management decides to construct a third unit. Although the shareholder structure of our wholly owned subsidiary TER may change, we expect our portion of the investment in TER to be at least a majority.

The following table sets forth our capital expenditures in technical costs from 1998 through 2002 on plants by type and status of generating plant.

| Plant type and status                   | Year ended December 31, |         |        |         |         |
|---|-------------------------|---------|--------|---------|---------|
|   | 1998                    | 1999    | 2000   | 2001    | 2002    |
| (thousands of EUR)                      |                         |         |        |         |         |
| <b>Thermal/Hydro</b>                    |                         |         |        |         |         |
| <b>Public Electricity System</b>        |                         |         |        |         |         |
| Hydroelectric plants under construction | 6,943                   | 6,449   | 14,235 | 16,877  | 25,690  |
| Hydroelectric plants in operation       | 7,432                   | 10,475  | 9,038  | 10,289  | 12,756  |
| Thermal plants in operation             | 29,050                  | 25,199  | 17,623 | 14,764  | 16,261  |
| Plants under study                      | 2,240                   | 359     | 190    | 1,450   | 1,011   |
| Total CPPE                              | 45,665                  | 42,483  | 41,086 | 43,380  | 55,718  |
| <b>Independent Electricity System</b>   |                         |         |        |         |         |
| Hydroelectric plants                    | 17,922                  | 11,457  | 7,913  | 4,964   | 4,137   |
| TER                                     | 0                       | 0       | 3,571  | 58,535  | 142,946 |
| Wind                                    | 4,719                   | 5,726   | 11,128 | 6,521   | 11,159  |
| Cogeneration facilities                 | 16,046                  | 37,654  | 25,439 | 13,083  | 9,602   |
| Biomass (2)                             | 6,729                   | 12,679  | 0      | 0       | 35,180  |
| Total Independent Electricity System    | 45,416                  | 67,516  | 48,051 | 83,103  | 203,024 |
| <b>Non-specific investment (1)</b>      | 0                       | 4,070   | 4,969  | 5,250   | 17,721  |
| <b>Total Generation</b>                 | 91,080                  | 114,070 | 94,106 | 131,733 | 276,462 |

(1) *Non-specific investment refers to investments not directly related to our plants, such as administrative buildings, transportation equipment and implementation of new information systems.*

(2) *Investments in 2002 includes 34 million related to an intra-group transfer of the Mortagua Biomass power plant (built in 1999), to EDP Produção.*

We currently expect that our planned capital expenditures and investments will be financed from internally generated funds, existing credit facilities and customer contributions, which may be complemented with medium- or long-term debt financing and equity financing as additional capital expenditure requirements develop, particularly as our plans evolve with respect to our telecommunications business. To learn more about our sources of funds and how the availability of those sources could be affected, see Item 5. Operating and Financial Review and Prospects Liquidity and Capital Resources.

**TRANSMISSION**

The transmission system in mainland Portugal is owned and operated by REN, which is obligated by law to supply electricity within the National Electricity System. Electricity transmission in Portugal is the bulk transfer of electricity, at voltages between 150 kV and 400 kV, from generation or acquisition sites across a transmission system to areas of use via networks that are linked to each other to form an interconnected national transmission grid. As described above, the Portuguese government purchased a 70% interest in REN from us in late 2000. For more information on this purchase, you should read Item 5. Operating and Financial Review and Prospects Overview.

REN operates the national transmission grid on an exclusive basis pursuant to Portuguese law under a concession provided for by a 1995 decree law. The concession is valid for 50 years from September 2000, when the concession agreement was signed.

The Portuguese transmission system operates at a frequency of 50 Hz, which is in line with the majority of the European transmission systems.

At year-end 2002, there were 47 substations operating on the national transmission grid, not including power plants. All of these substations are now fully automated and operated by remote control. Of REN's transmission lines at December 31, 2002, approximately 2,420 km were 150 kV lines, 2,717 km were 220 kV lines and 1,301 km were 400 kV lines. In 1995, a new interconnection with the Spanish transmission system was established, enabling both systems to achieve economies of scale. Presently, REN has five interconnections with Spain, three of which are 220 kV lines and two of which are 400 kV lines. Management understands that REN plans to establish, by 2006, three additional interconnections with Spain: Alqueva-Balboa, a 400kV line scheduled for completion in 2004; Alto-Lindoso-Cartelle, a 400kV line scheduled for completion in 2006; and Douro Internacional-Aldeadavila, a 220kV line scheduled for completion in 2006.

*Managing and controlling the power system*



In addition to the construction and operation of the national transmission grid, REN is also responsible for central dispatch of all power plants with installed capacity of more than 10 MW. This includes scheduling generation to match, as closely as possible, the demand on the national transmission grid. As part of managing the national transmission grid, REN is also responsible for scheduling imports and exports with Spain.

As the sole holder of the concession for transmission, REN is required by law to develop and maintain an efficient, coordinated and economical system of electricity transmission and not to discriminate among competitors in the generation and distribution of electricity.

*Purchases of electricity*



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REN purchases electricity from all of the generators in the Binding Sector, consisting of CPPE's generating plant, (the 600MW Tejo Energia plant at Pego and the Turbogás 3x330 MW combined cycle gas turbine plant at Tapada do Outeiro), through Power Purchase Agreements, or PPAs, with each operator of any individual power plant within the Binding Sector that supplies electricity to the Public Electricity System.

The existing site locations for power plants in the Public Electricity System are owned by REN, which REN leases to the operators of the plants for the duration of the respective PPAs. REN is involved in selecting future site locations, which it will then lease to successful bidders.

The Turbogás plant at Tapada do Outeiro burns natural gas supplied by Transgás. REN has entered into an Energy Management Agreement, or EMA, with Transgás, which governs the use of natural gas in thermal plants and defines applicable prices. Transgás has the exclusive right to import gas to, and transport gas within, its concession area of Portugal for 35 years. However, in March 2003, the Portuguese government announced its view on the reorganization of the energy market, stating its intentions to liberalize both the gas and electricity sectors. Within this goal, the government has stated its intention to merge REN and Transgás by selling 28% of state owned shares of Galp to REN.

Apart from the power plants in the Public Electricity System, REN is also obligated to buy energy from autoproducers, cogenerators, small hydroelectric producers and other renewable source energy plants operating under Portuguese law within the Independent Electricity System.

REN supplies energy to EDPD at a uniform Bulk Supply Tariff, which is calculated by averaging all the individual power costs contracted with the generators through the PPAs after incorporating transmission, system management and regulatory costs, together with other costs for the purchase of additional electricity. During the 1999-2001 regulatory period, the Bulk Supply Tariff was adjusted every two years for changes in the generators' fuel costs, which are entirely passed on by the generators to REN pursuant to the PPAs. For the 2002-2004

regulatory period, changes in fuel costs are now incorporated into the Bulk Supply Tariff on a quarterly basis. REN also sells electricity into Spain's power pool at prevailing prices in the pool.

### Imports and exports

Prior to 1998, REN purchased electricity from Spain primarily under in-kind exchange agreements with Rede Eléctrica de España, or REE, Spain's national transmission grid company. The following table sets forth REN's net imports in each of the last five years in GWh and as a percentage of total demand.

| Year | Net imports |                            |
|------|-------------|----------------------------|
|      | (GWh)       | Percentage of total demand |
| 1998 | 272         | 0.8%                       |
| 1999 | (857)       | N/A                        |
| 2000 | 931         | 2.5%                       |
| 2001 | 239         | 0.6%                       |
| 2002 | 1,899       | 4.7%                       |

REN enters into a PPA with each operator of any individual power plant within the Binding Sector that supplies electricity to the Public Electricity System. Under each PPA, the operator is obligated to sell to REN all the electricity produced by a particular plant, as well as to provide ancillary and special services, such as synchronous compensation, pumping and automatic generation control.

The life span of a PPA is fixed according to the full technical useful life of the equipment and generally its remuneration scheme is based on a capacity charge. Under the PPAs, any extraordinary investments agreed upon with REN, in consultation with the regulator, can be reimbursed. These investments can be paid to the generator through a revision of the capacity charge.

According to the Resolution of the Council of Ministers no. 63/2003 of April 28, 2003 relating to the promotion of liberalization of the electricity and gas markets in furtherance of the organizational structure of the Iberian Electricity Market, the government intends to renegotiate or terminate the existing PPAs and adequately compensate the operators since REN will no longer be the exclusive purchaser of electricity.

### DISTRIBUTION

Electricity distribution in Portugal is a regulated business and involves the transfer of electricity from the transmission system and its delivery across a distribution system to consumers, meter reading and installation, and the billing of regulated consumers. Portugal's local electricity distribution function is carried out almost exclusively by EDPD. Through fourteen network distribution areas and seven commercial distribution areas, EDPD provided more than 5.6 million customers with 35,973 GWh of electricity in 2002. At December 31, 2002, EDPD employed approximately 6,981 personnel.

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Under Portuguese law, distribution of high voltage, greater than 45kV and less than 110kV, and medium voltage, greater than or equal to 1kV and less than or equal to 45kV, electricity is regulated by the issuance by DGE of a binding license with no time limitation. Our four distribution companies, subsequently consolidated into EDPD, were appointed by law as the holders of the license for distribution of high and medium voltage electricity. EDPD received the license in 2000. Distribution of low voltage electricity is regulated through 20-year municipal concession agreements with municipal councils. EDPD pays rent to each municipality as required by law. For more information on licenses and concessions held by us, you should read Regulation and note 30 to the consolidated financial statements.

Under the terms of the binding licenses, EDPD is obliged to supply electricity to all customers located within its licensed area that are part of the Public Electricity System. EDPD is also obliged to provide access to the distribution network to producers in the Independent Electricity System in return for a regulated access charge from consumers. EDPD owns, leases or has rights of way for the land on which its substations are situated. In addition,

EDPD has long-term rights of way for its distribution lines. If necessary, new properties may be acquired through the exercise of eminent domain. In those cases, EDPD compensates affected private property owners.

The authorized area of EDPD covers all of mainland Portugal. At December 31, 2002, EDPD's distribution lines spanned a total of approximately 190,147 kilometers. The only distribution lines in Portugal not owned by EDPD are those of the autoproducers and small cooperatives, which own their own lines. The following table sets forth the kilometers at December 31, 2002 EDPD's distribution lines by voltage.

| Distribution lines                | Km      |
|-----------------------------------|---------|
| <b>Overhead lines:</b>            |         |
| High voltage (60/130kV)           | 7,097   |
| Medium voltage (<6/10/15/30/40kV) | 51,460  |
| Low voltage (1kV)                 | 96,265  |
| Total overhead lines              | 154,821 |
| <b>Underground cables:</b>        |         |
| High voltage (60/130kV)           | 357     |
| Medium voltage (<6/10/15/30/40kV) | 10,995  |
| Low voltage (1kV)                 | 23,973  |
| Total underground cables          | 35,325  |
| Total                             | 190,147 |

#### Sales and customers

EDPD distributes electricity to more than 5.6 million customers. Approximately 65.5% of consumption of EDPD's electricity in 2002 was along the coast, with approximately 14.1% in greater Oporto and 19.9% in greater Lisbon. EDPD classifies its customers by voltage level of electricity consumed. The following chart shows the number of customers as of December 31, 2002, according to level of voltage contracted.

| Level of voltage  | Total customers |
|---|-----------------|
| High and very high voltage(1)   | 128             |
| Medium voltage(2)   | 20,465          |
| Special low voltage (between 20.7 kVA and 41.4 kVA contracted capacity)(3)(4) | 27,361          |
| Low voltage(4)  | 5,617,102       |
| Total   | 5,665,056       |

(1) High voltage is greater than 45 kV and less than or equal to 110 kV. Very high voltage is greater than 110 kV.

(2) Medium voltage is greater than or equal to 1 kV and less than or equal to 45 kV.

(3) *Special low voltage customers are primarily small industrial and commercial customers.*

(4) *Low voltage is less than 1 kV.*

EDPD has experienced increased sales over the past five years in all electricity voltage levels with the exception of high voltage and very high voltage use, which has remained steady largely due to the increase in autoproduction and cogeneration by some industrial clients. Consumption has grown at an average annual growth rate of 4.3% from December 31, 1998 to December 31, 2002, due primarily to increased consumption by medium voltage and low voltage customers. Consumption by medium voltage customers increased from 10,180 GWh in 1998 to 11,198 GWh in 2002, representing an average annual increase of 2.4%, primarily as a result of growth in Portugal's industrial sector. Consumption by low voltage customers, typically residential and services, increased from 15,460 GWh in 1998 to 19,425 GWh in 2002, representing average annual growth of 5.9%. The growth in low voltage consumption during this period resulted primarily from an increase in the number of low voltage customers from approximately 5.2 million to approximately 5.6 million, as well as an increase in annual consumption per consumer.

On a revenue basis, our domestic electricity sales grew from 2,950.1 million in 1998 to 3,456.4 million in 2002. The most significant increase in sales has been to low voltage customers (typically residential and services), to whom sales increased from 1,927.3 million in 1998 to 2,335.1 million in 2002. The table below sets forth our total domestic sales of electricity to customers by level of voltage required, illustrating steady overall growth in sales

from 30,364 GWh in 1998 to 35,973 GWh in 2002. Revenue from electricity sales decreased in 1999 compared with 1998 despite an increase in consumption due to a decrease in tariffs, which were defined by the regulator for the first time in 1999. Revenue from electricity sales increased in 2001 compared to 2000 due to expansion in consumption and a 1.2% tariff increase set by the regulator for 2001. The increase in revenue from electricity sales in 2002 compared to 2001 was influenced by the tariff adjustment, as discussed below the following table.

| Electricity sales(1)               | Year ended December 31, |           |        |           |        |           |        |           |        |           |
|------------------------------------|-------------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|
|                                    | 1998                    |           | 1999   |           | 2000   |           | 2001   |           | 2002   |           |
|                                    | GWh                     | EUR       | GWh    | EUR       | GWh    | EUR       | GWh    | EUR       | GWh    | EUR       |
|                                    | (thousands of EUR)      |           |        |           |        |           |        |           |        |           |
| Very high voltage and high Voltage | 3,840                   | 177,946   | 3,855  | 158,887   | 4,104  | 164,698   | 4,259  | 165,443   | 4,271  | 169,031   |
| Medium voltage                     | 10,180                  | 772,079   | 10,639 | 722,963   | 11,092 | 745,354   | 11,354 | 770,785   | 11,198 | 795,123   |
| Low voltage                        | 15,460                  | 1,927,300 | 16,839 | 1,981,460 | 17,884 | 2,078,905 | 18,828 | 2,193,066 | 19,425 | 2,335,135 |
| Public lighting                    | 884                     | 73,184    | 947    | 74,351    | 1,010  | 80,282    | 1,064  | 83,918    | 1,080  | 86,614    |
| Tariff adjustment                  |                         | 0         |        | (7,701)   |        | (9,093)   |        | 42,218    |        | 70,482    |
| Total                              | 30,364                  | 2,950,509 | 32,280 | 2,929,959 | 34,090 | 3,060,145 | 35,505 | 3,255,430 | 35,973 | 3,456,385 |

(1) Invoiced sales plus estimated meter readings at year-end. Electricity sales do not include REN's sales in the foreign market, which in 1999 and 2000 were more than offset by purchases from the foreign market and which, from the second half of 2000, are no longer consolidated in our results.

Tariffs are fixed by the regulator in advance for each year and are based in part on estimated data for variables such as demand and cost. If there are differences between the estimated data and the data actually experienced during the period, an adjustment as described in the table above will be made to the tariff in a subsequent period to account for these differences. The tariff adjustment, used for the first time in 1999, reflects our estimate of the amount that will be applied in fixing tariffs in subsequent periods as a result of these differences. The 1999 tariff adjustment was recorded to account for deviations from estimated cost and demand data related to REN. The 2000 tariff adjustment is an aggregate figure that represents adjustments related to REN and EDPD's distribution and supply activities. Because of our sale of a 70% interest in REN to the Portuguese government, the tariff adjustment for 2001 does not include adjustments related to REN. Due to consumption in 2002 below that assumed in the setting of the 2002 tariffs, amounts invoiced to final customers did not sufficiently compensate EDPD for the fixed amount that EDPD was required to pay REN for electricity acquired from REN, giving rise to a 50 million tariff adjustment. The 2002 tariff adjustment also includes 20.5 million for the repositioning of the 2000 tariff adjustment. For more information on the tariff adjustments you should read Operating and Financial Review and Prospects and note 3 to the consolidated financial statements.

In 2002, the total number of Eligible Consumers in Portugal represented approximately 44.5% of our total sales in 2002 in GWh and approximately 28.6% of our total sales in 2002 in euros. In March 2003, the approximately 21000 Eligible Consumers consisted entirely of industrial or services businesses. During the first quarter of 2003, the largest of these potential Eligible Consumers purchased 694 GWh for a total of approximately 11 million.



The following chart shows the consumption profile of binding customers supplied by the public network in the Portuguese mainland for the years from 1998 through 2002.

|   | Year ended December 31, |               |               |               |               |
|---|-------------------------|---------------|---------------|---------------|---------------|
|   | 1998                    | 1999          | 2000<br>(GWh) | 2001          | 2002          |
| <b>Consumption profile(1)</b>                               |                         |               |               |               |               |
| Residential   | 8,317                   | 8,987         | 9,678         | 10,188        | 10,513        |
| Cooking and heating   | 14                      | 8             | 8             | 8             | 8             |
| Non-Residential   | 6,897                   | 7,498         | 7,964         | 8,428         | 8,728         |
| Industrial uses (2)   | 11,894                  | 12,207        | 12,669        | 12,904        | 12,613        |
| Agricultural uses   | 607                     | 667           | 679           | 737           | 776           |
| Traction for railways                                       | 316                     | 364           | 360           | 358           | 439           |
| Lighting of State buildings,<br>Administrative Bodies, etc. | 1,366                   | 1,529         | 1,632         | 1,722         | 1,700         |
| Public Lighting   | 884                     | 946           | 1,010         | 1,065         | 1,080         |
| Other (3)   | 111                     | 121           | 129           | 137           | 137           |
| <b>Total</b>  | <b>30,407</b>           | <b>32,329</b> | <b>34,128</b> | <b>35,547</b> | <b>35,993</b> |

(1) *Includes our own consumption.*

(2) *Includes electrochemistry and electrometallurgy.*

(3) *Other non-EDP distributors.*

A breakdown of electricity consumption by sector of economic activity shows that, of the major consumer types, the fastest growing sector has been the power for railway traction, with an average annual growth rate of 8.5% between 1998 and 2002. During this same period, the agricultural, non-residential and residential sectors exhibited an average annual growth rate of 6.3%, 6.1% and 6.0% respectively.

The number of distribution customers per distribution employee is an important measure for EDPD. In the period from 1998 through 2002, the number of customers per employee has increased from 519 to 811.

#### Purchases of electricity



EDPD purchases all of its electricity in the Binding Sector from REN. In 1999, the regulator established a legal framework of limits for purchases of electricity by EDPD outside of the Binding Sector, which for the 2002-2004 regulatory period is 8%. EDPD has historically purchased less than 8% of its total energy from suppliers in the Non-Binding Sector and abroad.

**Distribution losses**

EDPD experiences both technical losses of electricity due mainly to the use of overhead lines and, to a far lesser extent, commercial losses of electricity due primarily to gaps between estimated meter readings and actual levels of consumption. Although losses are within the normal range for the types of networks employed, management to decrease further the amount of annual losses as a result of capital expenditures in our distribution network.

The following table sets forth data regarding the losses of EDPD in absolute terms and as a percentage of demand, as well as our own uses of energy.

|  | Year ended December 31,      |        |        |        |        |
|--|------------------------------|--------|--------|--------|--------|
|  | 1998                         | 1999   | 2000   | 2001   | 2002   |
|  | (in GWh, except percentages) |        |        |        |        |
| Demand on the distribution network                     | 33,243                       | 35,095 | 37,230 | 39,263 | 39,965 |
| Own uses of energy (1)                                 | 56                           | 61     | 51     | 52     | 32     |
| Distribution losses                                    | 2,757                        | 2,756  | 2,875  | 3,183  | 3,008  |
| Distribution losses/demand on the distribution network | 8.3%                         | 7.9%   | 7.7%   | 8.1%   | 7.5%   |

(1) Starting in 2002, supply to EDP group companies was included in PES supply (totalling 26GWh). Energy exchanges between EDP group companies (7GWh) were not considered sales.

(2) Includes electrochemistry and electrometallurgy.

### Capital expenditures

In recent years, our largest capital expenditures have been on the distribution system. EDPD is obligated by law to connect all customers who request to be linked to the Public Electricity System. As a result, the largest component of capital expenditures is spent on connecting new customers, improving network efficiency and developing the network (installing new cables and new lines) to accommodate the growth in demand.

EDPD's total 2002 capital expenditures in technical costs amounted to 366.0 million, of which approximately 34% are expenditures on non-specific administrative, technical and commercial systems and corresponding technology support infrastructure, primarily the acquisition of an IT system for EDINFOR from approximately 80.5 million. EDPD's capital expenditures in technical costs in distribution totalled 260.6 million in 2001, 232.3 million in 2000, 231.4 million in 1999 and 244.5 million in 1998. These amounts also include amounts paid by customer contributions in cash, but do not include in kind assets contributed by customers. New customers are required by current regulation to make a contribution, in cash or in kind, for connections based on factors such as the type of voltage, the amount of power to be supplied, and distance to the network. In 2002, total customer contributions, and certain amounts contributed for infrastructure improvements, amounted to approximately 111 million.

### Conservation measures

We have been progressively implementing a voluntary policy to promote electricity conservation in an effort to decrease the variability of the load on the system and to increase efficient use of electricity. In doing so, we have increased dissemination of information on the end-use

efficiency in several industrial subsectors, services and residential use. We have also launched a program of granting awards to industrial customers for successfully implementing electricity efficiency projects and have established a joint venture with other energy sector companies whose main goal is to promote energy conservation.

In addition, the tariff structure has been designed to promote the rational use of electricity, basing tariffs on marginal costs, which may vary by time of day or season. Large consumers with a capability to reduce demand are offered an interruptible tariff rate, which results in a discount to the consumer and helps to alleviate demand at peak times.

## **TARIFFS**

The prices we charge for electricity are subject to extensive regulation under a tariff regime that was revised in 1998, causing significant price reductions. In December 1998, the regulator implemented a new tariff regulatory code to be applied in Portuguese mainland, establishing a periodic definition of regulatory parameters for tariffs and a methodology for setting tariffs. During the first regulatory period, including the years 1999-2001, and the second regulatory period, including the years 2002-2004, prices were set annually according to a series of formulae that

were derived based primarily upon what was deemed to be an appropriate return on assets in transmission, a return fixed by price cap in distribution, and a return on assets and agreed costs in commercialization, i.e., the activity of supply, measurement and billing of energy sales to final clients.

For more information on tariffs during the 2002-2004 regulatory period, you should read Regulation Portugal Electricity/pricing tariffs. In April 2002, the Portuguese government extended the powers of the regulator to the Portuguese archipelagos of Azores and Madeira, with the intention of levelling the higher tariffs of these island regions to comparatively lower tariffs of the Portuguese mainland while providing adequate financial returns to island electricity companies. This levelling leads to an incremental increase in prices charged to mainland customers, although such prices cannot increase more than inflation.

In the Binding Sector, distribution tariffs for customers are differentiated by voltage level, tariff option and period of electricity consumption. These tariffs, when set, are uniform throughout mainland Portugal within each level of voltage.

For the 2002-2004 regulatory period, the regulator has applied a four-rate tariff price structure related to the time of day for medium, high and very high voltage consumers. Low voltage consumers with subscribed demands above 20.7 kVA have a three-rate time of day structure, while low voltage consumers with subscribed demands up to 20.7 kVA might choose between a single-rate tariff, or a day-night tariff option.

The producers and consumers in the Non-Binding Sector have a right to access and use the national transmission grid and our distribution network through the payment of access tariffs for the Global Use of System, the Use of the Transmission Network, the Use of the Distribution Network and Network Commercialization, which terms and conditions were established by the regulator. For more information on the tariff structure, you should read Regulation Portugal Electricity/pricing tariffs.

In real terms, adjusted for inflation, both high and medium voltage tariffs to final consumers in the Binding Sector, generally applied to industrial customers, have declined by an average of approximately 6.0% per year over the period 1998 to 2003. Tariffs in the Binding Sector for low voltage customers, typically residential, have also declined in real terms by an average of approximately 3.3% per year over the same period. For 2001, in nominal terms, tariffs in the Binding Sector for all voltage levels increased by 1.2% from the 2000 levels. For 2002, in nominal terms, tariffs in the Binding Sector increased by an average of 2.2% across all voltage levels from the 2001 tariff levels. For 2003, in nominal terms, tariffs in the Binding Sector for all voltage levels increased by 2.8% from the 2002 levels.

For the 2002-2004 regulatory period, the regulator considers the distribution function to consist of three business areas, which could in the future be liberalized at different times and subject to different tariff regulatory regimes: use of the distribution network, network commercialization services and commercialization of supply in the Binding Sector. The use of the distribution network area involves activities relating to investments in and the operation of the distribution grid. Tariffs applicable to the use of the distribution network are based on a price cap mechanism designed to reduce distribution tariffs on an annual basis by, an average over the three years of the regulatory period, a percentage equal to the Portuguese Consumer Price Index, minus a percentage referred to as the efficiency coefficient. The efficiency coefficient was approximately 5% for the 1999-2001 regulatory period and is approximately 7% for the 2002-2004 regulatory period. The network commercialization area consists of activities related to meter installation, reading and the billing of all services associated with the use of the distribution network. The commercialization of supply in the Binding Sector area consists of activities directly relating to the final consumer, such as customer service, billing of final consumers in the Binding Sector and collecting payments from consumers. The tariff applicable to the network commercialization services and commercialization of supply in the Binding Sector area is based on costs accepted by the regulator plus a 9% return on assets. During the 1999-2001 regulatory period, distribution tariffs in the Binding Sector were subject to a sliding scale profit sharing mechanism, which required us to return to customers a portion of our annual profits that exceeded specified levels designated by the regulator. This mechanism was abolished at the second regulatory period 2002-2004.

Tariffs are also subject to an annual extra adjustment mechanism that takes into account the deviations of actual costs compared to forecasted costs used to derive tariffs for the previous one or two years. As a result, we have adopted a tariff adjustment in our financial statements that reflects our estimate of the amount that will be applied

in fixing tariffs in subsequent periods as a result of differences between estimated and actual data. For the 1999-2001 regulatory period, the tariff adjustment also reflected our estimate of the portion of any excess profits or deficit in profits that would be applied in fixing tariffs in subsequent periods as a result of having achieved annual profits above or below levels set by the regulator. For more information on the tariff adjustment, you should read "Operating and Financial Review and Prospects" and note 3 to the consolidated financial statements.

## **COMPETITION**



Until 1988, we had a monopoly for the generation, transmission and distribution of electricity in Portugal, although a very small number of municipalities distributed low voltage electricity to consumers. Since 1988, measures have been taken to encourage limited competition in power generation in Portugal. In 1999, the regulator implemented measures to encourage competition in the supply of electricity in Portugal. For more information on these measures, you should read [Electricity System Overview](#) . In addition, as a result of political and regulatory developments, we expect increased competition from Spanish electricity companies. See [Iberian Electricity Market](#) and [Spain History and Overview](#) below.

## **Generation**

The existing power stations of CPPE, which form 94% of our generating capacity, are all part of the Public Electricity System. The earnings that CPPE derives from these power stations are unlikely to be affected by competition from generators in the Independent Electricity System. In accordance with the terms of the PPAs, CPPE's operating income is dependent on the availability of capacity and is substantially unaffected by levels of actual output. Under Portuguese law, any projects for construction of new thermal power plants in the Public Electricity System must be subject to an open tender coordinated by DGE. In the case of hydroelectric generation, all plants planned to be commissioned until 2010 are allocated by law to CPPE.

The Public Electricity System includes two power stations that are not owned and operated by us: the Pego power plant, which was constructed and commissioned by us and later sold to Tejo Energia; and Tapada do Outeiro which commenced full operations in 1999 and is owned and operated by Turbogás. The admission of these power stations to the Public Electricity System resulted from two international tender processes coordinated by us in accordance with Portuguese government policy in effect at that time to establish competitive practice in the electricity generation sector. We expect to participate in future tender processes.

Subject to the issuance of generation licenses, we may construct plants, such as TER, as part of the Independent Electricity System. These plants would operate in the openly competitive market and sell power to REN under competitive offers or make bilateral contracts with REN, Non-Binding Sector customers, Binding Sector distributors or Spanish agents.

Because Portugal is contiguous only with Spain and there are limited connections between Spain and the rest of Europe, and because of recent political and regulatory developments, management expects that a regional market on the Iberian peninsula will develop. Accordingly, we expect to face competition in generation and sales from Spanish participants in this market. See [Iberian Electricity Market](#) and [Spain](#) below.

## **Transmission**

As the sole provider of transmission throughout Portugal, REN is well insulated from the effects of competition. In its role as the wholesale buyer and seller of electricity in the Public Electricity System, it is entitled to recover the electricity purchase costs via the Bulk Supply Tariff charged to EDPD for electricity destined for Public Electricity System customers. In the Non-Binding Sector, however, EDPD is permitted to purchase electricity from sellers other than REN, up to limits set by the regulator. For more information on these purchases, you should read Distribution below.

## **Distribution**

EDPD, and previously, our distribution companies, has historically held an effective monopoly over distribution. However, increases in the levels of industrial autoproduction have reduced the amount of electricity

sold to these entities from the Public Electricity System. In addition, in early 1999, the regulator implemented legislation liberalizing the electricity supply business.

As of May 15, 2003, all Eligible Consumers, i.e., all consumers other than low-voltage consumers, automatically may become Qualifying Consumers. In 2002, the total number of Eligible Consumers represented approximately 44.5% of our 2002 sales in volume and 28.6% of our 2002 sales in monetary terms. Even if these Eligible Consumers all decided to switch suppliers, we would still continue to receive payments for access to our network. For more information on the tariff mechanism, you should read Regulation Portugal Electricity pricing/tariffs. On the January 1, 2004, the market will open to special low voltage consumers (consumers with a subscribed demand greater than 41.4 KVA). The complete liberalization of the electricity market is expected to be completed in July 2004 with the opening of the market to the rest of the low voltage consumers.

Although the regulator established a framework for the operation of a pool in Portugal in which non-binding generators and Qualifying Consumers could trade energy in March 2000, this pool never entered into operation. In late 2001, the Portuguese and Spanish governments signed a cooperation agreement for the creation of an Iberian electricity market that was expected to start operations in January 2003 and was later postponed to July 2003. The cooperation agreement calls for, among other things, the creation of a common pool for Portugal and Spain and the harmonization of tariff structures. See Iberian Electricity Market and Spain .

## SPAIN

### HISTORY AND OVERVIEW

The implementation of an Iberian Electricity Market is the driving force behind our decision to expand our operations to Spain. In 2001 we identified Hidroeléctrica del Cantábrico, or Hidrocantábrico, as an independent utility company that could facilitate our entry into the Spanish energy market.

In January 2001, Adygesinval, S.L., a company jointly and equally owned by us and Cajastur Caja de Ahorros de Asturias, a Spanish savings bank, launched an unconditional cash public tender offer for 100% of the outstanding shares of Hidrocantábrico at 24 per share. Cajastur and Caser Caja de Seguros Reunidos, Compañía de Seguros y Reaseguros, S.A., a Spanish insurance company, already held 14.97% of the shares of Hidrocantábrico. Adygesinval acquired a 19.2% shareholding in Hidrocantábrico directly from TXU Europe, an arm of the United States utility TXU Corp., for 24 per share, or approximately 522 million. Spanish industrial group Ferroatlantica, together with Energie-Baden-Württemberg AG, or EnBW, a German utility company, launched a rival tender offer for Hidrocantábrico shares. After the tender offers for Hidrocantábrico were completed in April 2001, a consortium formed by Adygesinval, Cajastur and Caser owned approximately 35% of the shares of Hidrocantábrico, of which only shares representing 25% could vote because Hidrocantábrico's by-laws limit the voting rights of any single shareholder to 10%. Adygesinval could exercise 10% of the voting rights, Cajastur could exercise approximately 10% of the voting rights and Caser could exercise approximately 5% of the voting rights. Ferroatlantica and EnBW owned approximately 60% of the shares and could exercise 10% of the voting rights of Hidrocantábrico. Pursuant to a Spanish merger law, Adygesinval and Ferroatlantica each notified the European Commission, or EC, of their respective acquisitions of Hidrocantábrico shares. The EC approved both the Adygesinval transaction and the Ferroatlantica/EnBW transaction, although with respect to the Ferroatlantica/EnBW transaction the EC required certain covenants from EnBW's controlling shareholder. Pursuant to a Spanish law aimed at shareholdings by state-linked businesses in certain sectors, the Spanish government temporarily suspended the political rights (including shareholder voting and rights to inspect corporate records) of Adygesinval and Ferroatlantica/EnBW pending the outcome of a procedure under this law, the purpose of which is to determine whether an acquiror is controlled by a government entity. These suspensions were both lifted subject to certain conditions, which in the case of Adygesinval were linked to the creation of an Iberian electricity market.

In December 2001, we signed an agreement with EnBW, Cajastur and Cáser concerning joint control of Hidroantábrico through Adygesinval. Ferroatlantica transferred its holdings in Hidroantábrico to EnBW at the time of the agreement. Under the agreement Adygesinval merged into Hidroantábrico. The agreement also contains provisions for the corporate governance of Hidroantábrico. Hidroantábrico is 40% owned by us, 35% owned by EnBW and 25% owned by Cajastur and Caser. The agreement of all parties is required for specified key corporate actions. Operational matters require only the consent of us and EnBW. In the event of a deadlock

concerning operational matters, we would ultimately be able to decide the course of action, but EnBW would have a right to require us to purchase its shares in Hidroantábriico in such an event. The appointment of Hidroantábriico's chief executive officer, non-executive chairman and the secretary of the board of directors requires agreement of all three parties. If agreement cannot be reached, we will designate the chief executive officer, Cajastur will appoint the non-executive chairman and EnBW will appoint the secretary of the board of directors. The EC's Merger Task Force approved the agreement in early March 2002. One of the conditions to the transactions contemplated by the agreement, the delisting of Hidroantábriico shares from the Madrid, Barcelona and Bilbao Stock Exchange, was completed in June 2002.

## **Market Structure**

The two major characteristics of the Spanish electricity sector are the existence of the wholesale Spanish generation market, or the Spanish pool, and the fact that any consumer is free to choose its supplier as of January 1, 2003. Competition was first introduced in the Spanish electricity market in 1997 through Law 54/1997, which provided a regulatory framework that reorganized the functioning of the market.

Generation facilities in Spain operate either in the ordinary regime or the special regime. The electricity system must acquire all electricity offered by special regime generators, which comprise small or renewable energy facilities, at tariffs fixed by decree law that vary depending on the type of generation and are generally higher than Spanish prices. Ordinary regime generators provide electricity to the Spanish pool and by bilateral contract to qualified consumers and liberalized suppliers at market prices.

Companies with the capability to sell and buy electricity may participate in the Spanish pool. Electricity generators sell electricity to the pool and the regulated electricity distributors, suppliers, in the liberalized, or unregulated, market and consumers that are permitted to participate in the pool, or qualified consumers, buy electricity in this pool. Foreign companies or consumers that have foreign agent status may also sell and buy in the Spanish pool. The market operator and agency responsible for the market's economic management and bidding process is Compañía Operadora del Mercado Español de Electricidad, or OMEL.

In addition to selling electricity to regulated consumers (customers that are subject to a regulated final tariff and are not qualified consumers), regulated distributors must provide network access to all qualified consumers that have chosen to be supplied in the liberalized market. However, qualified consumers must pay an access tariff to the distribution companies if such access is provided. At the beginning of each year, the Spanish government sets both the final and access tariffs. In 2003, by Royal Decree 1436/2002 the Spanish government established the electricity tariffs for 2003. For more information on tariffs, you should read [Regulation Spain Electricity Regulation](#).

Liberalized suppliers are free to set a price to qualified consumers. These entities' main direct activity costs are the wholesale market price and the regulated access tariffs to be paid to the distribution companies. Electricity generators and liberalized suppliers or qualified consumers may also engage in bilateral contracts without participating in the wholesale market.

## **GENERATION**

Hidroantábriico's installed capacity represents 5.4% of Spain's generation capacity (excluding special regime facilities, which are generally renewable energy facilities). In 2002, Hidroantábriico had a total installed capacity of 2,394 MW, approximately 63.4% of which are coal-fired.

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facilities, 15.7% is a CCGT facility, 16.5% of which are hydroelectric facilities, 1.6% of which are cogeneration facilities and 2.8% of which are renewable energy facilities. Hidroantábrico also holds a 15.5% interest in the Trillo nuclear power plant which accounts for 165 MW of the plant's total installed capacity of 1,066 MW.

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The following table sets forth Hidrocontábrico's total installed capacity by type of facility at year-end 2001 and 2002.

| Type of facility              | As of December 31, |       |
|-------------------------------|--------------------|-------|
|                               | 2001               | 2002  |
|                               | (MW)               |       |
| <b>Hydroelectric:</b>         |                    |       |
| Hydroelectric Ordinary regime | 408                | 413   |
| Hydroelectric Special regime  | 23                 | 23    |
| Total hydroelectric           | 431                | 436   |
| <b>Thermal:</b>               |                    |       |
| Coal                          | 1,588              | 1,588 |
| CCGT                          | 0                  | 393   |
| Nuclear                       | 165                | 165   |
| Total Thermal                 | 1,753              | 2,146 |
| Cogeneration                  | 38                 | 41    |
| Wind                          | 24                 | 30    |
| Biomass                       | 3                  | 5     |
| Waste                         | 13                 | 13    |
| Total                         | 2,262              | 2,671 |

The following table sets forth Hidrocontábrico's thermal plants, each of which consists of one unit:

| Thermal plants           | Installed capacity<br>(MW) | Fuel        | Net efficiency at<br>maximum output | Year entered<br>into service |
|--------------------------|----------------------------|-------------|-------------------------------------|------------------------------|
| <b>Coal</b>              |                            |             |                                     |                              |
| Aboño I                  | 360                        | Coal        | 37.07                               | 1974                         |
| Aboño II                 | 556                        | Coal        | 38.59                               | 1985                         |
| Soto de Ribera I         | 68                         | Coal        | 29.80                               | 1962                         |
| Soto de Ribera II        | 254                        | Coal        | 36.30                               | 1967                         |
| Soto de Ribera III       | 350                        | Coal        | 37.90                               | 1984                         |
| <b>Nuclear</b>           |                            |             |                                     |                              |
| Trillo                   | 165                        | Uranium     | 35.41                               | 1988                         |
| <b>CCGT</b>              |                            |             |                                     |                              |
| Castejón                 | 393                        | Natural Gas | 57.91                               | 2002                         |
| Total installed capacity | 2,146                      |             |                                     |                              |

The following table sets forth Hidrocontábrico's hydroelectric plants in the Ordinary regime:

| Hydroelectric plants | Installed capacity<br>(MW) | River reservoir<br>plant type | Year entered<br>into service | Year of last major<br>refurbishment |
|----------------------|----------------------------|-------------------------------|------------------------------|-------------------------------------|
| La Malva             | 9.14                       | Reservoir                     | 1917/24                      | 2002                                |



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|                          |        |              |         |      |
|--------------------------|--------|--------------|---------|------|
| La Riera                 | 7.82   | Run of river | 1946/56 | 2001 |
| Miranda                  | 64.80  | Run of river | 1962    | 2000 |
| Proaza                   | 48.00  | Reservoir    | 1968    | 2002 |
| Priañes                  | 18.43  | Reservoir    | 1952/67 | 2001 |
| Salime                   | 63.00  | Reservoir    | 1954    | 2002 |
| Tanes                    | 133.00 | Reservoir    | 1978    | 1995 |
| La Barca                 | 55.30  | Reservoir    | 1967/74 | 2002 |
| La Florida               | 8.00   | Reservoir    | 1952/60 | 1998 |
| Laviana                  | 1.10   | Run of river | 1903    | 2001 |
| Caño                     | 1.00   | Run of river | 1928    | 1996 |
| San Isidro               | 3.12   | Run of river | 1957    | 2002 |
| Total installed capacity | 413.00 |              |         |      |

The average remaining useful life of Hidrocantábrico's hydroelectric generation dams is approximately 48 years.

Since hydroelectric generation is dependent on hydrological conditions, for forecasting model purposes the estimated Hidroantábriico hydroelectric production based on current installed capacity in an average year is 806 GWh, ranging from a maximum of 1,058 GWh in a wet year to a minimum of 590 GWh in a dry year.

Generation activity in 2002 was characterized by high availability and efficiency of, and high production by, Hidroantábriico s power plants and by high Spanish pool prices. Hidroantábriico s generation in the Ordinary regime, excluding losses and its own consumption for pumping, rose 13.2% from 2001 to 13,503 GWh in 2002, of which hydroelectric generation represented 771 GWh, a reduction of 11.4% from 2001. Coal-fired thermal generation amounted to 10,997 GWh, up 11.8% in 2002 from 2001 because of a dry year. Nuclear generation, in respect of our 15% stake in the Trillo plant, amounted to 1,212 GWh, a reduction of 0.8% from 2001. In September 2002, Hidroantábriico started operating the Castejón CCGT plant, which produced 522 GWh in 2002.

The following table summarizes Hidroantábriico s electricity generation for 2001 and 2002, excluding losses and Hidroantábriico s own consumption for hydroelectric pumping, 140 GWh in 2001 and 131 GWh in 2002, and sets forth the hydroelectric coefficient at year-end 2001 and 2002.

| Type of facility                 | Year ended December 31,                              |        |
|----------------------------------|--|--------|
|                                  | 2001   | 2002   |
|                                  | (in GWh, except by hydroelectric coefficient factor) |        |
| <b>Hydroelectric:</b>            |  |        |
| Hydroelectric Ordinary regime(1) | 867  | 771    |
| Hydroelectric Special regime     | 78   | 41     |
| Total hydroelectric              | 945  | 812    |
| <b>Thermal:</b>                  |  |        |
| Coal                             | 9,832  | 10,997 |
| Natural Gas                      | 0  | 522    |
| Nuclear                          | 1,222  | 1,212  |
| Cogeneration                     | 68   | 110    |
| Total thermal                    | 11,122   | 12,841 |
| Wind                             | 59   | 61     |
| Biomass                          | 24   | 28     |
| Waste                            | 11   | 44     |
| Total                            | 12,161   | 13,786 |
| Hydroelectric coefficient(2)     | 1.08   | 0.96   |

(1) Includes the following amounts of our own consumption for hydroelectric pumping, 140 GWh in 2001 and 131 GWh in 2002.

(2) The hydroelectric coefficient varies based on the hydrological conditions in a given year. A hydroelectric coefficient of one corresponds to an average year, while a factor less than one corresponds to a dry year and a hydroelectric coefficient greater than one corresponds to a wet year.

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The average availability for production of Hidrocentrábrico s power plants increased from 93.51% in 2001 to 94.21% in 2002 for thermal plants and decreased from 93.21% in 2001 to 89.26% in 2002 for hydroelectric plants. Hidrocentrábrico s forced outages in 2002 were 1.89% at thermal plants and 2.40% at hydroelectric plants.

The table below sets out for each type of Hidrocentrábrico generating facility the average capacity utilization and the average availability factor for 2001 and 2002:

| Type of facility                   | Average capacity utilization(1)<br>Year ended December 31, |         | Average availability factor<br>Year ended December 31, |        |
|------------------------------------|--|---------|--|--------|
|                                    | 2001   | 2002    | 2001   | 2002   |
| Hydroelectric                      | 24.56%   | 21.66%  | 93.21%   | 89.26% |
| Thermal:                           |  |         |  |        |
| Coal                               | 74.97%   | 83.795% | 93.80%   | 93.94% |
| Natural Gas(2)                     | 0%   | 47.31%  | 0%   | 97.19% |
| Nuclear                            | 90.35%   | 89.57%  | 90.67%   | 89,66% |
| Total weighted average thermal (3) | 76.42%   | 81.75%  | 93.51%   | 94.21% |

(1) *The average capacity utilization is defined as actual production as a percentage of theoretical maximum production.*

(2) *Hidroantabrico s natural gas fixed CCGT plant began operations in 2002.*

(3) *Weighted average is based on total installed capacity of the thermal system.*

Increased production, increased plant efficiency in terms of output and availability, high Spanish pool prices and cost cutting policies allowed Hidroantabrico s generation activity in 2002 to increase its operating results by 43.81% from 2001.

Planned outages in 2002 occurred as a result of maintenance on the Abono 2, Soto 1 and Trillo power plants. Hidroantabrico s generation facilities benefited from several environmental improvements and equipment modernization. Hidroantabrico has improved its systems and management procedures through the integration of several functions and processes, including technical, administrative and purchasing processes.

Thermal generation consumed 4,071 thousand metric tons of coal in 2002, 72% of which was imported and 28% domestic. Fuel consumption costs including transportation amounted to 198.4 million in 2002 and 182.4 million in 2001, representing approximately 77.3% and 77.8%, respectively, of Hidroantabrico s total consolidated operating expenses. This increase occurred in a year of falling international spot market prices for coal but reflects the demand growth of the Spanish electricity market, a lack of rain in 2002 and a low system reserve, all of which resulted in a higher use of the Spanish electricity system s thermal plants and led to Hidroantabrico s higher generation output.

As a result of the increased thermal production, Hidroantabrico s market share in the Spanish pool rose from 6.8% in 2001 to 7.5% in 2002. Given that Hidroantabrico produced more electricity than was required by its customers in 2002 and is largely focused on thermal power, especially on coal-fired power plants, it was able to place its electricity surplus into the Spanish pool at very competitive prices.

In 2002, capital expenditures on technical costs in generation amounted to 86.8 million, down 29.1% from 2001. These expenditures are set forth below:

| Plant type and status             | Year ended December 31, |        |
|-----------------------------------|-------------------------|--------|
|                                   | 2001                    | 2002   |
|                                   | (thousands of EUR)      |        |
| Hydroelectric plants in operation | 1,106                   | 1,428  |
| Thermal plants in operation       | 9,801                   | 65,082 |
| Plants under study                | 101,776                 | 0      |
| Special regime:                   |                         |        |
| Hydroelectric plants in operation | 3                       | 2      |
| Wind                              | 6,147                   | 16,264 |

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|                         |         |        |
|-------------------------|---------|--------|
| Waste                   | 698     | 2,067  |
| Biomass                 | 2,194   | 1,120  |
| Cogeneration facilities | 1,339   | 814    |
| Total Generation        | 123,064 | 86,777 |

Hidroantábrico is planning to develop three CCGT plants as set forth in the table below:

| Facility   | Type of generation | Developing entity                        | Planned capacity (MW) | Target year | Status   |
|------------|--------------------|--|-----------------------|-------------|----------|
| Soto       | CCGT               | Contratación de Construcción y Servicios | 400                   | 2006        | Planning |
| Castejón 2 | CCGT               | Contratación de Construcción y Servicios | 400                   | 2007        | Planning |
| Cadiz      | CCGT               | Contratación de Construcción y Servicios | 400                   | 2007        | Planning |

**Special regime generation**

Special regime generation is developed by Hidroantábrico through Genesa, a 100%-owned subsidiary focused on cogeneration, and SINAE, a 80%-owned subsidiary focused on renewable energy. In 2002, delays in the launching of some projects contributed to a slowdown in Hidroantábrico's renewable energy business, as did the high natural gas prices that reduced cogeneration margins, one of the main activities of this business.

Throughout 2002, Hidroantábrico worked on the restructuring of SINAE's shareholdings, SINAE's industrial activities and SINAE's reorganization, with the objective of providing the basis for stable and sustained development of SINAE, with a focus on the promotion, operation and management of renewable energy sources, mainly wind power.

During 2002, work began at the Arlanzón wind farm in Burgos to install 34 MW of installed capacity, and work was continued on the construction of the 65 MW Parques eólicos del Cantábrico wind farm in Asturias. Both wind farms are scheduled to commence operations during 2003.

The cogeneration plants of Renovamed at Valladolid, with an installed capacity of 1.5 MW, and the Cerámica Técnica de Illescas at Toledo, with an installed capacity of 3 MW, started operations in 2002.

Hidroantábrico is planning to develop the following wind farms:

| Facility                            | Type of Generation | Planned Capacity (MW) | Target Year | Status          |
|-------------------------------------|--------------------|-----------------------|-------------|-----------------|
| P.E. Sierra del Cortado             | Wind               | 18.5                  | 2004        | In construction |
| P.E. Cuesta                         | Wind               | 7.92                  | 2003        | In construction |
| P.E. Los Lagos                      | Wind               | 17.82                 | 2003        | In construction |
| P.E. Acebo                          | Wind               | 38.94                 | 2003        | In construction |
| P.E. Arlanzón                       | Wind               | 34.0                  | 2003        | In construction |
| P.E. Cruz del Hierro (Improvements) | Wind               | 5.3                   | 2004        | Planning        |
| P.E. Albacete                       | Wind               | 124.1                 | 2004        | Planning        |
| P.E. Curiscao-Pumar                 | Wind               | 87.8                  | 2004        | Planning        |
| P.E. Brújula                        | Wind               | 73.5                  | 2005        | Planning        |
| P.E. Las Lomillas                   | Wind               | 49.5                  | 2005        | Planning        |
| P.E. Carondio                       | Wind               | 41.58                 | 2005        | Planning        |
| P.E. Avila Oeste                    | Wind               | 68.0                  | 2005        | Planning        |
| P.E. Munera I                       | Wind               | 39.1                  | 2006        | Planning        |
| P.E. Burgos Este                    | Wind               | 80.0                  | 2006        | Planning        |

**DISTRIBUTION AND SUPPLY**

## Transmission

**Electricity Distribution**

In the Asturias region of Spain, Hidrocantábrico's distribution market, Hidrocantábrico has a network infrastructure of 18,453 Km as follows:

| <b>Distribution lines</b>            | <b>Km</b>     |
|--------------------------------------|---------------|
| <b>Overhead lines:</b>               |               |
| High voltage (50/132kV)              | 1,162         |
| Medium voltage (5/10/16/20/22/24 kV) | 4,570         |
| Low voltage (<1kV)                   | 10,769        |
| <b>Total overhead lines</b>          | <b>16,501</b> |
| <b>Underground cables:</b>           |               |
| High voltage (50/132kV)              | 7             |
| Medium voltage (5/10/16/20/22/24 kV) | 689           |
| Low voltage (1kV)                    | 1,256         |
| <b>Total underground cables</b>      | <b>1,952</b>  |
| <b>Total</b>                         | <b>18,453</b> |

Energy distributed in 2002 through Hidrocontábrico's own network amounted to 8,375 GWh, a 6% increase from 2001 levels. As of December 31, 2002, Hidrocontábrico had 549,091 customers, representing a 2% increase from 2001 and includes 525 qualified consumers that previously had been supplied by non regulated suppliers. There is a total of 668 qualified consumers in Hidrocontábrico's market that could elect to be supplied by non regulated suppliers.

In 2002, the volume of energy distributed and the number of customers by tension level was as follows:

| Distribution by level of voltage | GWh          | 2002 Sales<br>% Annual<br>Increase | Total<br>customers |
|----------------------------------|--------------|------------------------------------|--------------------|
| High and very high voltage (1)   | 5,512        | 5%                                 | 548,423            |
| Medium voltage (2)               | 822          | 9%                                 | 649                |
| Low voltage (3)                  | 2,040        | 6%                                 | 19                 |
| <b>Total</b>                     | <b>8,374</b> | <b>6%</b>                          | <b>549,091</b>     |

(1) High voltage is greater than 36 kV and less than or equal to 145 kV. Very high voltage is greater than 145 kV.

(2) Medium voltage is greater than or equal to 1 kV and less than or equal to 36 kV.

(3) Low voltage is less than 1 kV.

During 2002, Hidrocontábrico's distribution business, Hidrocontábrico Distribución Eléctrica, S.A.U., continued its expansion outside of Asturias in the autonomic communities of Madrid, València and Murcia, all of which are geographic areas with strong economic activity. The operating results of the distribution business in 2002 declined from 2001 as a consequence of the initial expenses of launching activities outside of Asturias.

In 2002, Hidrocontábrico continued to improve technical and operational management activities. The networks and facilities were enlarged and Hidrocontábrico continued the development of information technology and automation of the distribution network.

### Gas Distribution

Gas invoiced in 2002 to the regulated market amounted to 1,416 GWh, representing a 4.3% decrease from 2001. Additionally, the volume of gas distributed in the liberalized market (in which we provide third party access to our network) reached 360 GWh. The number of regulated clients increased 7% from 2001 to 146,037 in 2002, and the operating results amounted to 27.0 million in 2002.



Through the acquisition of Gas Figueres, S.A.U., a gas company in the Catalonia region of Spain, in July 2002, Gas de Asturias, S.A.U. expanded its gas distribution business outside of its traditional distribution market.

### **Electricity and Gas Supply**

The energy supply activity performed by Hidroantábrico Energía, S.A.U. includes the supply of electricity to qualified consumers and to liberalized clients. Hidroantábrico Energía, S.A.U. invoiced 3,925 GWh of electricity supply. This figure represents 6.5% of the liberalized market and more than 72% of clients from outside of Hidroantábrico's traditional market.

In 2002, Hidroantábrico Energía, S.A.U. successfully participated in the annual auction of the RENFE electricity contract, the Spanish railroad and the biggest electricity consumer currently in the market. Hidroantábrico Energía, S.A.U. won 28% of the 2003 supply contract compared to 24% of the 2002 contract.

In 2002, Hidroantábrico Energía, S.A.U. began its natural gas supply service and entered into 84 contracts and invoiced 1,909 GWh, of which 86% are located outside of its traditional area.

## **OTHER ACTIVITIES**

### **Telecommunications**

In 2002, Hidroantábrico's cable telecommunications business continued its development through two subsidiaries, which are the concessionaires of television, fixed line telephony and internet for Asturias, Sociedad Promotora de las Telecomunicaciones en Asturias, S.A., a 45.95% owned subsidiary, and for Castilla y León, Retecal, Sociedad Operadora de Telecomunicaciones de Castilla y León, S.A., a 31.19% owned subsidiary.

As of December 31, 2002, there were a total of 718,000 cabled homes and 387,506 installed services for both subsidiaries, an increase of 42% from 2001. Sociedad Promotora de las Telecomunicaciones en Asturias, S.A. adopted a new network technology that allows voice over Internet Protocol (VoIP) services, deployed a television infrastructure improves image and sound quality, rolled out its cable network to the city of Pravia and moved its technical teams to its new headquarters at the Gijón City Technological campus.

Hidroantábrico increased its shareholding position in Retecal, Sociedad Operadora de Telecomunicaciones de Castilla y León, S.A., from 30.47% in 2001 to 31.19% in 2002, as a consequence of a shareholders agreement that increased their involvement in the management of the company. The transmission network among its 17 urban networks was finished, as was the fiber optics interconnection between León and Oviedo. Retecal, Sociedad Operadora de Telecomunicaciones de Castilla y León, S.A. also reached positive EBITDA in 2002.

### **Research and Development**

Research and development activities carried out in 2002 were aimed at the reduction of emissions, treatment of by-products, maintenance and the extension of equipment life at various plants and were conducted in coordination with various universities and industry groups and were partially subsidized by the Spanish government and European Union entities.

## **BRAZIL**

### **OVERVIEW**

Brazil's electricity industry is organized into one large interconnected electricity system, which is known as the Sistema Interconectado Nacional, or the Brazilian SIN, comprised of electricity companies in the southern, southeast, central-western, northeast and parts of the northern regions of Brazil, and several other small, isolated systems. Generation, transmission, distribution and supply activities are legally separated in Brazil. For more information on the legal framework of the Brazilian electricity market, you should read Regulation Brazil.

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Our electricity operations in Brazil consist of distribution, generation and related activities. The following companies are engaged in distribution:

Bandeirante Energia S.A., or Bandeirante, in São Paulo;

Espirito Santo Centrais Eléctricas S.A., or Escelsa, in the state of Espirito Santo; and

Empresa Energetica do Mato Grosso do Sul S.A., or Enersul, in the state of Mato Grosso do Sul.

In 2002 our distribution companies in Brazil served more than 2.8 million customers, distributed 19,279.6 GWh of electricity and had revenue of 2.8 billion reais, net of taxes.

| Company      | Customers        | GWh           | Net Revenue<br>(thousands of reais) |
|--------------|------------------|---------------|-------------------------------------|
| Bandeirante  | 1,297,170        | 10,160        | 1,520,677                           |
| Escelsa      | 954,381          | 6,365         | 813,951                             |
| Enersul      | 596,569          | 2,754         | 463,214                             |
| <b>Total</b> | <b>2,848,120</b> | <b>19,280</b> | <b>2,797,842</b>                    |

In recent years the electricity sector in Brazil has been adversely affected by economic circumstances internal and external to Brazil in general and by problems specific to the electricity sector. The Brazilian economy was affected by the worldwide economic slowdown in recent years and, in 2002, uncertainty inside and outside Brazil surrounding the October presidential elections. As a result, there was a sharp depreciation in the value of the real against other major currencies and increases in Brazilian inflation and interest rates. These conditions led to a scarcity of financing sources, which adversely affected the industrial sectors of the Brazilian economy including the electricity sector.

In addition to adverse economic circumstances, in recent years electric utility companies in Brazil have had to contend with a government imposed rationing program that was in effect from June 2001 until February 2002, low wholesale prices in the wholesale electricity market, or the MAE, and uncertainties regarding the electricity sector's regulations and framework.

As a result of a shortage of electricity, the Brazilian federal government implemented an electricity rationing plan in June 2001. Although the rationing program ended on February 28, 2002, its implementation had an adverse effect not only on electricity consumption, which decreased significantly during the period the program was in effect, but on consumption habits in affected areas. As a result, we anticipate that a recovery in consumption to pre-rationing levels may take some time. The lower demand from consumers has affected and will continue to affect demand for electricity from our distribution businesses in Brazil. In addition, 2002 was characterized by very favorable hydroelectric conditions, creating increased supply which, combined with continuing low demand, severely depressed prices on the MAE. There were uncertainties about electricity sector regulations and framework in 2002 due to the different programs proposed by the parties involved in the presidential election and the lack of an existing stable and consistent legal framework.

To reduce the adverse financial impact to electric utilities caused by rationing, the government and the electric utility companies signed the General Agreement of the Sector (*Acordo Geral do Setor*) in December 2001. The agreement, effective for all of 2002, approved an increase in the consumers' tariffs to partially recover the rationing losses and restore the economic-financial balance of the concession agreements under which the distribution companies operate.

The year-end results for companies in the distribution sector make clear that the Brazilian federal government's urgent measures were not enough to restore the economic-financial balance of the concessions. Most distribution companies reported losses. The low prices paid at the MAE made it difficult for generation companies to obtain long-term contracts for their own production.

Despite the adverse circumstances in the Brazilian electricity sector in 2002, there were positive developments, principally the entrance of major industrial customers into the competitive market for surplus electricity offered by distribution companies and electricity that becomes available as distribution companies are released from take-or-pay contracts. The opportunity to purchase electricity offered in this market through short and medium-term contracts was welcomed by industrial customers, in spite of the fact that the legislation bringing about these developments had not yet been fully defined. This legislation was eventually defined by the December 2002 publication of related National Agency of Electrical Energy, or ANEEL, regulations and by the Presidential Decree No. 4,562. The number of requests and bids from industrial customers in the competitive market increased sharply over the year. The interest and attendance of these customers was also noticed at the generation companies' auctions of electricity made available by releases from take-or-pay contracts. As a result, from January 2003, these customers are

responsible for 25% of the electricity volume represented in the contracts released. By law, state-owned generation companies are required publicly offer the production released from take-or-pay contracts.

In all, five large electricity auctions involving state-owned and private generation companies took place as well as an auction to buy electricity that was sponsored by a private distribution company. Although these electricity auctions represent a positive breakthrough, demand was lower than it could have been due to the strict conditions of the auction.

Some customers who could have participated in the competitive market opted to stay in the regulated market because they were uncertain of the future of the competitive sector. Other market participants also felt the effects of ambiguities in the legal framework of production, transmission, distribution and trading of electric energy activities. Contrary to other industries, the legal framework is not uniform and reflects Brazil's varied economic and political situations over the 80 past years. Consequently, there is different, and often conflicting, treatment of investments made in the electricity sector. At the recommendation of the Brazilian Crisis Management Committee (*Comite de Gestao da Crise*), new decrees and resolutions were issued to provide for new regulation, primarily in the competitive market. However, these actions were not enough to guarantee that regulations in the electricity sector are consistent. The absence of clear and stable rules, which hampered the competitive dynamic of the market, also caused delay in decisions to invest in the expansion of the electricity grid.

In 2002 we carried out a shareholding restructuring in Brazil. On October 31, we completed the first stage of the restructuring, which put the following companies under direct control of EDP Brasil S.A., our holding company for Brazil, or EDP Brazil: Energest S.A., Enertrade Comercializadora of Energia S.A., Bandeirante Energia S.A., EDP Lajéado S.A., FAFEN Energia S.A. and Enerpeixe S.A.

In furtherance of our Brazilian shareholding restructuring process, we expect that EDP Brazil will take control of our Escelsa and Enersul shareholdings in the second half of 2003. The restructuring process has the following objectives:

to improve investors' perception of our business and investment performance in Brazil;

to facilitate access to the Brazilian finance market, thereby reducing and/or eliminating exchange rate risks;

to simplify the company structure, by reducing the number of business levels, thereby eliminating inefficiencies; and

to take advantage of synergies in the operations of any affiliated Brazilian companies.

## **GENERATION**

In late 1997, we formed a consortium with three Brazilian distribution companies that was awarded the concession to build a dam and operate a hydroelectric plant in Lajéado, Brazil. We own 14.36% of the shares in the company that operates the plant and hold a 27.65% of the voting rights. The Lajéado hydroelectric power plant started full operation in November 2002, after the completion and commissioning of its fifth unit,

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and has an installed capacity of 902.5 MW. The plant produced 2,589 GWh in 2002, and plans to produce 4,468 GWh per year starting in 2003.

In November 2001, a consortium 49%-owned by EDP Brazil and 51%-owned by Grupo Rede was awarded a concession to build and operate a two unit 150 MW hydroelectric power plant on the Araguaia River in Brazil, the Couto Magalhães power plant. The total predicted investment is 33.8 million reais. Construction of the Couto Magalhães power plant was expected to start in 2003, with the expectation of commencing operations in the first generation unit in 2006. However, during 2002 we decided not to begin construction due to a lack of clarity in the Brazilian regulatory regime and insufficient availability of local financing.

In June 2001, a consortium 9%-owned by EDP Brazil and 5%-owned by Grupo Rede was awarded a concession to build and operate a three unit 450 MW hydroelectric power plant on the Tocontins River in Brazil, the Peixe Angical power plant. The concession was awarded in a public auction after the consortium made the highest bid for annual concession rent. The annual concession rent is 6.8 million reais for 29 years starting in the seventh year of

the 35 year concession. Construction of the Peixe Angical power plant was suspended in 2002. We estimated that a total investment of 1,295 million reais would be required to develop this plant. As of the end of 2002, we have invested 170 million reais in this project. Resumption of construction of the Peixe Angical plant depends on clarification of regulatory issues, the outcome of renegotiations of the cost of the plant and the availability of local financing.

The first phase of the FAFEN thermoelectric plant in the Bahia state of Brazil started operations on August 25, 2002. The EDP Group has an 80% participation in the venture with Petrobrás - Petróleo Brasileiro S.A. holding the remaining 20%. The original aim of the venture was to construct a cogeneration plant that was to supply electricity and steam to the Petrobrás fertilizer plant. The surplus production would have been routed to other customers. Since it was impossible to sell steam to other customers, however, it was decided to transform the surplus steam into electricity. In its final configuration, which should be complete by the end of 2003 or the beginning of 2004, it is estimated that by burning natural gas the plant will produce 133 MW of electric energy and 42 tons per hour of steam. In 2002, FAFEN produced 200.5 GWh and 127,585 tons of steam.

## **DISTRIBUTION AND RELATED ACTIVITIES**

### **Bandeirante**

We hold a 96.48% stake in the share capital of Bandeirante, a distribution company in the São Paulo state of Brazil. Bandeirante presently services more than 1.2 million customers. Bandeirante's market, influenced by the slowing economy and the extended effects of rationing, ended 2002 with a total of 10,160 GWh sold, a 1.8% decrease from the previous year. Consumption decreased by 2.5% in the residential segment, 0.5% in the industrial segment, and 11.9% in the commercial segment. The fall in the commercial segment was mainly due to the reclassification of a large commercial customer to an industrial customer. In the other segments consumption grew by 5.9%.

On October 23, 2002, Bandeirante's tariffs were increased by 19.09% for one pursuant to an annual adjustment. Of this increase, 16.56% is for passing on non-controllable costs and the remainder refers to controllable costs. The increase reflected the previous twelve months' inflation of 13.32% and the sharp increase of the U.S. dollar/reais exchange rate used for payment for energy from the Itaipu power plant, the counterparty to Bandeirante's take-or-pay contract. In addition to annual adjustments, Bandeirante's tariffs will be reviewed on October 23, 2003. Thereafter, the review will occur every four years. The preparation for this first review was one of 2002's main goals. Training was given, the information collection was systematized, estimates of the tariff repositioning were elaborated, and earnings impacts from the efficiency increase and changes in the current tariff structure were evaluated.

In 2002, Bandeirante made capital expenditures of 94.3 million reais focused on modernization, customer service, improving the network's operational conditions in expanding regions and increasing the electricity grid's operational flexibility. Two new substations were constructed, adding 140 MVA to the distribution grid. 18.7 million reais of the 2002 capital expenditures were invested in a program of modernization.

In order to improve productivity, Bandeirante has been encouraging its employees to adopt procedures that will build a creative and innovative culture that is results-focused and responsive to the customers and market. Training was provided to employees to this end. Because the workforce was reduced to 1,341, Bandeirante now has 965 customers per employee.



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In order to attract long-term funds at attractive costs, Bandeirante contracted with the Bank of German Development, or the DEG, to borrow US\$ 10 million. The loan matures in March 2006 and the interest rate is 9.5% a year. This financing is not exposed to variations in the U.S. dollar/real exchange rate as a result of a foreign currency swap to reais.

## Escelsa

We control 54.74% of Escelsa-Espírito Santo Centrais Elétricas S.A., or Escelsa, a distribution company in the Espírito Santo state of Brazil.

In September 2002, a lawsuit with GTD Participações, S.A., a Brazilian company, or GTD, was resolved in our favor. Previously, a shareholders' agreement with GTD provided for joint control of Escelsa. The lawsuit was filed by GTD when it contested the termination of the shareholders' agreement provided for in such agreement. Following the resolution of the lawsuit, we convened an extraordinary shareholders meeting of Escelsa in September 2002 at which we gained control of Escelsa, which control had previously been shared jointly with GTD. In October 2002, we took over the management of Escelsa and appointed new executive officers. Since that time, we have fully consolidated Escelsa.

The electricity required by Escelsa's distribution grid in 2002 totaled 7,236 GWh, a 5.9% increase from the previous year. In order to meet the market demand, Escelsa's hydroelectric plants generated 1,056 GWh internally, which represents 14.6% of the electricity required. Escelsa purchased the remaining 6,180 GWh from other suppliers. In addition, 134 GWh produced by other generators passed through Escelsa's grid.

Escelsa's total electricity sales volume was 6,365 GWh in 2002 and represents a 4.3% increase from 2001. Consumption by the residential segment, which represents 19.4% of the total sales volume, decreased 4.4% from 2001 due to new consumption habits formed during the rationing period and the use of efficient electric equipment by consumers. Consumption by the industrial segment, which represents 50.0% of total sales volume, increased 7.8% in 2002 and reflects the economic recovery in the state of Espírito Santo. Consumption by the commercial segment, which represents 13.2% of the total sales volume, increased 7.6% from 2001. The energy supply sold to other electric utilities, which represents 5.0% of the total sales volume, increased 1.2% from 2001. Finally, sales to other segments, which represents 12.4% of the total sales volume, increased 1.5% from 2001.

On August 7, 2002, ANEEL approved Escelsa's 15.97% increase to the supply tariffs for one year. This increase, provided for in Escelsa's concession agreement, consisted of:

14.27% to compensate for Escelsa's non-controllable costs, which are passed along to customers; and

1.70% for Escelsa's controllable costs, which were adjusted to reflect an inflation measure (IGP-M), and discounted by 0.51%, because of the pass-through to the tariffs of the year's productivity gains, or the X Factor.

In 2002, Escelsa had capital expenditures of 61 million reais, of which 56 million reais were technical costs invested in the enlargement and improvement of the distribution grids, new substations and in company modernization. The remaining 5 million reais were financial costs corresponding to financing expenses related to the expenditures.

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Escelsa's workforce at the end of 2002 totaled 1,353 employees, 4.1% less than in 2001. Escelsa continues to increase the customers per employee indicator, which was 654 in 2001 and 705 in 2002, an improvement of 7.8%.

In December 2002, we acquired US\$ 357.4 million of Escelsa's Senior Notes due July 2007. In the acquisition process certain covenants in the related debt agreement were eliminated, giving Escelsa increased operational and financial flexibility, which is important given the challenges of the Brazilian electric utility sector.

### **Enersul**

Escelsa indirectly holds a controlling stake in Enersul-Empresa Energética do Mato Grosso do Sul S.A., or Enersul, a distribution company in the Mato Grosso do Sul state of Brazil. Enersul's electricity grid required a total of 3,270 GWh in 2002, representing an increase of 6.8% compared to 2001. In order to meet market needs, Enersul's hydroelectric plants generated 129 GWh, which represents 3.9% of the total electricity required. The remaining 3,141 GWh were purchased from other providers.

Enersul's total energy sales volume for 2002 was 2,754 GWh and represents a 3.1% increase from 2001. Sales to the residential segment, which represents 31.3% of the total sales volume, decreased 0.7% from 2001. Sales to the industrial segment, which represents 24.4% of the total sales volume, increased 8.7% from 2001. Sales to the commercial segment, which represents 19.1% of the total sales volume, increased 0.9% from 2001. Enersul had 596,569 customers at the end of 2002, an increase of 4.2% compared to 2001.

On April 8, 2002, ANEEL granted Enersul a 11.96% tariff increase. This increase, provided for in Enersul's concession contract, consisted of:

6.97% to compensate for Escelsa's non-controllable costs, which are passed along to customers;

3.7% for controllable costs, adjusted to reflect changes in IGP-M, the index used to calculate the tariff's readjustment; and

1.29% to compensate for losses related to the rationing period and other cost increases.

In 2002, Enersul had capital expenditures of 56 million reais focused on modernizing the company, mainly to improve and enlarge the distribution grid.

At the end of 2002, Enersul's workforce totaled 926 employees, 5.3% less than in 2001. The company improved the ratio of customers to employees by 10.1%, to 644. In addition, in November 2002, EDP took over management of Enersul and appointed new executive officers.

## **CERJ**

In 1996, we formed a consortium with Chilectra and Endesa which acquired approximately 70% of the stock of Companhia de Eletricidade do Rio de Janeiro, S.A., or CERJ, an electricity distribution company in the Rio de Janeiro state of Brazil. We currently own 11.27% of CERJ, reflecting reductions in our stake as a result of capital increases that we did not participate in.

## **Enertrade**

Electricity trading for the EDP Group in Brazil is conducted by Enertrade Comercializadora Energia S.A., or Enertrade. In 2002, its first year of operation, Enertrade became the most active electricity trading company in Brazil by selling a total of 1,270 GWh to end-users. Most of these customers were heavy consumers of electricity outside of our electricity distribution areas in Brazil, thereby expanding the areas in Brazil in which we operate. The integrated functioning between Enertrade and Bandeirante, Escelsa and Enersul allowed us to retain customers who

opted for the competitive market within the distribution companies' concession areas.

Enertrade reallocated the surplus of EDP Lajado from a period during which low prices prevailed on the MAE to a later period by purchasing electricity from EDP Lajado and placing it with customers in the competitive market at a later time. As a result, Enertrade met its principal objective of mitigating the market risks related to the EDP Group's assets.

To meet the needs of the market, Enertrade offered the Southeast and Northeast markets the option of purchasing energy from EDP Lajado and FAFEN. This offer was well accepted in the market and 157.8 GWh was traded. Enertrade also gained clients by acting as a service provider in the representation of customers in the competitive market and generators in the MAE and at energy auctions.

The EDP Group signed long-term contracts among its Brazilian companies at the end of 2002 with the objective of replacing the electricity from take-or-pay contracts that will expire in 2006 and in order to meet the projected additional demand of the distribution companies. This electricity is produced by EDP Lajado and FAFEN. Accordingly, the integration of our generation and trading activities helps to manage the risks of our generation and distribution businesses and helps to diminish the price and volume volatility of our operations in Brazil.

## TELECOMMUNICATIONS

### History and Overview

In March 2000, we announced a strategic decision to pursue the telecommunications business. This decision provided us with an opportunity to leverage our existing resources and expertise and to build on our initiatives in the telecommunications and information technology businesses. At that time we held a 25% stake in Optimus, Portugal's third mobile operator, and had, on January 1, 2000, launched the fixed-line operations of our subsidiary, ONI Telecom. In June 2000, we announced a new organizational structure for our telecommunications and related activities, which focused these activities in ONI, SGPS, S.A., or ONI, a holding company owned by us and our partners, that operates various business segments discussed in more detail below. The current shareholder structure in ONI is as follows: EDP 56%, BCP 22.8%, Brisa 17% and GALP Energia 4.2%. Brisa acquired its stake in ONI in May 2001 through the integration of its 100% owned subsidiary, Bratisel.

On June 12, 2001, we announced ONI's acquisition of Comunitel enabling ONI to offer one-stop-shopping to the growing number of companies operating in both Portugal and Spain. Comunitel is a Spanish telecommunications operator with a portfolio of products and services directed to small and medium size enterprises.

For the year ended December 31, 2002, ONI had revenues of 295.6 million, of which services provided to the EDP Group amounted to 13 million, and an operating loss of 116.2 million compared with, for the year ended December 31, 2001, revenues of 187.9 million, of which services provided to the EDP Group amounted to 8 million, and an operating loss of 136.1 million.

In March 2002, we sold 100% of OPTEP, our subsidiary which indirectly held 25.49% of Optimus, to Thorn Finance SA for 315 million. Prior to this sale, OPTEP transferred its interest in ONI to us. Since our subsidiary ONI Way and Optimus were each awarded a UMTS license in late 2000, we were required to sell our stake in Optimus by March 31, 2002 in order to comply with Portuguese regulatory requirements. We no longer hold any shares in Optimus, directly or indirectly, although our agreement with Thorn Finance SA gives us a right of first refusal to purchase the shares sold if Thorn Finance SA reaches an agreement to sell the shares to a third party.

In early 2002, ONI renegotiated its lease agreement of the fiber optic network owned by REN. Under the renegotiated terms of this agreement, the duration of the lease has been reduced from 20 years to 5 years and fiber optic cable has been reduced 50% to approximately 1,850 kilometers.

In late 2002, ONI Way decided to significantly reduce its activity and proposed to its shareholders to decide whether the UMTS project should be temporarily frozen or terminated, due to several adverse economic, financial, technical and regulatory reasons. In order to optimize shareholder value, ONI Way entered into agreements with TMN, Vodafone-Telecel and Optimus under which ONI Way had the option to sell to those companies a substantial part of its assets. In addition, ONI Way reduced its workforce by 360 employees, terminated its distribution agreements and settled its commitments with suppliers, all in connection with reducing its activity. In addition, it was also agreed to enter into put and call options to sell to Vodafone-Telecel the entire share capital of ONI Way.

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On January 6, 2003, a 72% majority of the shareholders general meeting of ONI Way decided not to launch ONI Way's UMTS project and to confirm the decisions and acts of the board of directors in this regard. Subsequently, ONI Way's UMTS license was revoked on January 13, 2003 by the Minister of Economy with the consent of ONI Way.

In the first quarter of 2003, ONI revised its organizational structure to better achieve the goals and strategies defined for its business segments. Accordingly, ONI's businesses are currently pursued in two main areas: wireline Portugal and wireline Spain.

Wireline Portugal:

ONI Telecom, a wholly-owned subsidiary of ONI, is a licensed telecommunications company that develops and provides wireline communication services to corporate and residential clients and also serves as a carrier's carrier, selling capacity to other communications companies. In accordance with ONI's focus on the fixed line telecommunications business, ONI decided to merge all its wireline companies, namely ONI Grandes Redes, ONI One, ONI Solutions, ONI SI, Shopping Direct and Brisatel into ONI. The merger is under way and will be retroactive to January 1, 2003.

uCall, a 60% owned subsidiary offering call center services, fulfilling ONI's needs in back office support, as well as providing services to companies outside the ONI group.

Wireline Spain:

Comunitel, which is 99.9% owned by ONI, is a telecommunications operator specializing in providing communication services to corporate clients. Comunitel was one of the first operators to provide advanced telecommunication services in Spain. In December 2002, Comunitel acquired a controlling stake of approximately 39.5% in Ola Internet, a company offering voice and data services to medium size companies in Spain.

Germinus XXI, or Germinus, which is approximately 80.8% owned by ONI, is an incubator company developing services in the market where telecommunications, media, hardware and software converge. Consisting of five companies, the Germinus group offers services in four activities: applications and technological platforms, professional services, information services and network business.

ONI's management team is led by Pedro Norton de Matos, president, and the executive members of ONI's board. Executive board members have the following responsibilities: Jorge Cruz Morais, former director of EDP Strategic Planning, is the chief financial officer of ONI, and Luís Ribeiro Vaz, former board member of the retail group Jerónimo Martins, heads the business segment in Spain.

**Telecommunications market**

In accordance with EU requirements, the Portuguese government has taken significant steps during the past several years to open the telecommunications market to competition. In 1997, Portuguese regulations took effect that permitted us and others to install and provide infrastructure for telecommunications services, including cellular phone services, data transmission and voice services for closed user groups. On January 1, 2000, Portugal opened the entire telecommunications sector to competition.



As of January 1, 2001, alternative carriers have been permitted to offer local and regional indirect calls, and as of June 30, 2001, customers have been allowed to keep their existing phone numbers while changing to a different access operator. Although number portability now exists in Portugal, ONI believes that some additional technical issues need to be addressed by ICP-Autoridade Nacional de Comunicações, or ICP-ANACOM, to make number portability a more efficient process.

In January 2002, liberalization of the telecommunications sector advanced a step further with the long promised unbundling of the local loop (ULL). However, technical and administrative restrictions by the historical monopoly telecommunications operator Portugal Telecom, or PT, did not allow for widespread use of this technology, effectively preventing the new operators from exploiting this new opportunity.

### **Competition**

In the fixed line business area, ONI is competing for market share primarily with PT, which historically held a monopoly on fixed line services in Portugal. Currently, in the first stages of liberalization of this area, PT continues to hold a dominant position in this market. Other fixed line operators in Portugal include Novis, controlled by

Sonae.Com and France Telecom, and Jazztel. Based on data released by ICP-ANACOM, in the fourth quarter of 2002 new operators accounted for 11.2% of the total minutes in the fixed line area.

Indirectly, fixed line operators also face strong competition from cellular telephone service providers, particularly in the voice segment. Cellular services in Portugal are currently provided by TMN, Vodafone-Telecel and OPTIMUS.

We also face significant competition in data transmission services and as an Internet service provider. Numerous operators compete in these areas, including SAPO, a PT portal, Netc., a Vodafone-Telecel portal, IOL, a Media Capital portal, and Clix, a Sonae.Com portal.

### **Telecommunications activities**

*Infrastructure:* We have in place an extensive state-of-the-art infrastructure to provide telecommunications services, which includes approximately 4,900 kilometers of fiber optic cable, including multiple strings, for a total of approximately 140,000 kilometers of fiber optic backbone, in Portugal. We own approximately 110,000 kilometers of this backbone and lease approximately 30,000 kilometers under lease by REN, Transgás and EDPD. We currently have around 140 points of presence, or PoPs, about 120 points of interconnection and 2 network centers, in Lisbon and Porto. At the end of 2000, ONI linked its fiber optic network to Iberdrola's network, creating two new connections to Spain and adding to the existing connection with the network of Comunitel.

The incorporation of BrisaTEL's assets in the ONI group in October 2001 added approximately 1,300 kilometers of fiber optic cable (of which approximately 1,120 kilometers are already installed) to the fiber optic cable that we had already in place at the time. BrisaTEL also added 70 PoPs and two international links with RENFE, the Spanish railroad operator, which required a restructuring of ONI's PoPs to avoid redundancy. The incorporation of BrisaTEL's assets in the ONI group was one of the factors that led ONI to renegotiate its lease of the fiber optic network owned by REN in early 2002. Under the renegotiated terms of this lease, the duration of the lease has been reduced from 20 years to 5 years and fiber optic cable was reduced 50% to approximately 1,850 kilometers by the beginning of 2003.

We expect to increase consumer connections to our existing fiber optic backbone to provide telecommunications services. We have efforts underway to develop digital powerline technology and are currently conducting pilot tests.

*Telephone services:* In late 1999, we began aggressive efforts to build ONI brand recognition and generate customer pre-registrations. In November 1999, ONI acquired Connexo, a private data operator providing services to closed user groups. This acquisition was designed to expand the scale and reach of our data operations. ONI Telecom commenced operations in January 2000 as a voice and data fixed-line operator concurrent with the opening of competition in Portugal. We continue to provide services in this area through ONI. ONI Telecom's initial activities were focused on fixed-line voice services for businesses and high-value customers. We currently expect to develop other products and services, including value-added voice services, data transmission, and integrated voice, data and video services.

At December 31, 2002, ONI had approximately 400,000 registered voice lines generating demand for approximately 2 million minutes per day for an aggregate of 733 million minutes in 2002. In comparison, in 2001 ONI's fixed line operation in Portugal accounted for approximately 535 million minutes of voice traffic.

According to a report by ICP-ANACOM for the fourth quarter of 2002, ONI holds an overall market share in telephone traffic of approximately 5%, which corresponds to approximately 44.2% among the new fixed line operators in Portugal.

In Spain, our subsidiary Comunitel has approximately 108,000 registered voice lines, generating 919 million minutes of voice traffic in 2002. These figures do not include the traffic of Ola Internet, a Spanish operator acquired by Comunitel in December 2002. Ola Internet generated an average of approximately 34 million minutes of voice traffic per month in the first quarter of 2003.

*Internet access services:* ONI has high capacity platforms to provide Internet access services and is operating as an ISP. As of December 31, 2002, ONI had approximately 367,000 registered ISP customers generating approximately 1.9 million minutes per day for an aggregate of approximately 704 million minutes in 2002, an increase in minutes of approximately 30% from 2001.

In July 2002, ONI launched an Asynchronous Digital Subscriber Line or ADSL product that allows high speed Internet access over regular telephone lines and that can be easily installed by end users over their existing telephone lines.

### **Partnerships**

In March 2000, we entered into a strategic alliance with BCP to facilitate joint efforts in the areas of Internet-based electronic finance, or e-finance, non-financial Internet-based services and third generation wireless telephone services. E-finance activities will also involve Banco Sabadell, a Spanish bank. The EDP-BCP agreement provides for the establishment of cross-shareholdings between our companies. We have acquired 4.25% of BCP's outstanding shares, including share consideration for BCP's interest in our telecommunications holding company, and BCP has acquired approximately 5% of our outstanding shares.

On May 9, 2001, we entered into an agreement for a strategic alliance in the telecommunications sector with BCP, GALP Energia and Brisa. Under the terms of the agreement, Brisa became a shareholder of ONI in exchange for its 100% stake in BrisaTEL, which owned 4% of ONI Way. Within the context of this strategic alliance, Brisa proposed two members of ONI's board of directors and they were subsequently elected by the shareholders of ONI.

In 2002, following its decision to focus on wireline communications, ONI decided to gradually reduce its investment in B2C (business to consumer) and B2B (business to business) platforms, having already sold some of its subsidiaries in this area. Web development and B2B solutions will be provided by ONI Telecom and/or Germinus to ONI group companies.

### **Regulation**

Our activities in the telecommunication area subject us to a number of regulatory regimes, including licensing requirements and operating restrictions. For more information on the regulation of telecommunications, you should read *Regulation Telecommunications*. ONI holds licenses for the establishment and operation of public telecommunications networks (ICP-05/99-RPT, granted June 14, 1999) and the provision of Fixed Telephony Service (ICP-001/99-SFT, granted August 10, 2000). ONI also holds a registration for the provision of public use telecommunications services (Register-006/99 dated January 20, 1999). ONI was awarded two licenses for the use of frequencies aimed at fixed wireless access in the 3.6-3.8 Mhz and 24.5-26.5 Ghz bands (ICP-01/99-FWA and ICP-05/99-FWA granted December 29, 1999).

### **Employees**

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We have human resources with the experience and expertise to assist us in developing and growing in telecommunications businesses. As of December 31, 2002, ONI had approximately 1,300 employees, 55% in wireline Portugal and 45% in wireline Spain. Also, in December 2002, Comunitel acquired a stake of 39.5% of Ola Internet, which has approximately 220 employees.

## Financial Results

As a recent entrant in the telecommunications sector, during its first three years of operations ONI has incurred significant operating costs in connection with developing and sustaining its business while, at the same time, increasing revenues as a result of its growing customer base. ONI had revenues for 2002 of 295.6 million, of which services provided to the EDP Group amounted to 13 million, and an operating loss of 116.2 million. In comparison, ONI had revenues for 2001 of 187.9 million, of which services provided to the EDP Group amounted to 8 million, and an operating loss of 136.1 million. Excluding our investments in UMTS, ONI's 2002 capital expenditures in Portugal and Spain were approximately 89 million compared with approximately 84 million in 2001. ONI's total assets at the end of 2002 were 888 million compared with 1,063 million at the end of 2001.

ONI's current assessment of expenditures in the telecommunications area anticipates an investment by ONI and its partners of approximately 150 million by 2005 almost exclusively for network infrastructure, although the amount of investments may change as ONI's plans develop.

Due to divestiture of the UMTS project, we are no longer committed to the approximately 2,600 million of aggregate capital expenditures forecasted in the bid submitted by ONI Way in the public tender for the fourth UMTS license in Portugal.

## OTHER INVESTMENTS AND INTERNATIONAL ACTIVITIES

During 1998, we acquired in the market 3% of the share capital of Iberdrola, a Spanish utility company. In addition, Iberdrola holds a stake in us of slightly less than 5% of our share capital, which corresponds to slightly more than 5% of our voting rights.

We also have an interest of approximately 4% in ELCOGAS, S.A., a consortium that includes ourselves, EDF, Endesa, Iberdrola, International Power and others. ELCOGAS, S.A. was formed to build and operate a 300 MW integrated gasification combined cycle plant in Puertollano, Spain. This plant burns gas obtained from the coal gasification process.

We hold a 21% interest in a consortium indirectly owns an 80.88% interest in the capital of Empresa Eléctrica de Guatemala S.A., or EEGSA, which is an electricity distribution company with approximately 676,500 customers, a sales volume of 3,248 GWh and a service area of 6,200 square kilometers. EEGSA is Central America's largest distribution company. In 2002, EEGSA generated 339.3 million in revenue and net income of 1.2 million. The consortium is made up of EDP, Iberdrola and Teco Energy, a Florida electric company.

We also own a 22% stake in Companhia de Electricidade de Macau, S.A., or CEM, the electric utility company of Macau, and have an active role in CEM's management. In 2002, CEM had approximately 191,000 customers and sold 1,684 GWh of electricity. In 2002, CEM had revenues of 214 million and net income of 53 million. CEM has the concession for generation, transmission and distribution in Macau until December 2010. CEM serves a population of approximately 450,000 in an area of 28 square kilometers.

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In late 1999, we formed a consortium, 60% owned by us and 40% owned by AdP Aguas de Portugal, that was chosen by the government of Cape Verde to acquire a 51% interest in Electra, for which we paid 27 million. Electra produces electricity and distributes electricity and water in Cape Verde. In 2002, Electra produced 181 GWh of electricity, compared to 164 GWh in 2001, and distributed 117 GWh to 60,274 customers in an area of 4,030 square kilometers. Also in 2002, Electra produced 3.6 million cubic meters of water and distributed 2.6 million cubic water to customers. Electra had revenues of 21 million and a net loss of 11 million in 2002.

### **SUBSIDIARIES, AFFILIATES AND ASSOCIATED COMPANIES**

Apart from EDP Produção, EDP Distribuição, Hidrocantábrico, our Brazilian companies and ONI, we hold interests in a number of subsidiaries that provide various services to our other companies. Some of these subsidiaries also provide services to third parties. These entities contributed 178 million in revenues in 2002.

EDP Valor integrates some of our service companies with the objective of achieving cost reductions within EDP through the consolidation of resources and the centralizing of purchasing activities. Since the first quarter of 2002, EDP Valor has extended its services to EDP Produção and EDPD.

Electricidade de Portugal Internacional, S.G.P.S.S.A. provides management and organization consulting services in electricity generation, transmission and distribution, undertakes project management and promotion, and executes and supervises the performance of commercial contracts.

EDINFOR Sistemas Informáticos, S.A. develops, operates and markets software and systems, and also provides consulting and vocational training in information technology. See Telecommunications. EDINFOR holds a 60% interest in ACE-SGPS, which is holding for Portuguese companies that provides management, strategic and information systems consultancy, supply of corporate turnaround services, organization restructuring, e-trade, data warehousing, knowledge management, customer relationship management, planning and management of information implementation of IT Solutions, financial services and implementation and training in SAP R3. Amongst other companies, EDINFOR also holds major interests in: Copidata Industrial Gráfica e Equipamentos, S.A., a company that creates, executes and sells graphic systems; IT-Log, Logística e Gestão de Tecnologias de Informação, S.A., a company whose activities consist of the conception, production, installation, logistics and management of IT systems; and IT-GEO, Tecnologias e Informação Georeferenciadas, S.A., a company whose activities consist of the development and integration of geographic information systems and the production, maintenance and sale of geographic data.

Affinis Serviços de Assistência e Manutenção Global, S.A. provides home services and contractor management to residential and corporate customers through a network of skilled professionals. In the residential area, Affinis offers home services including the planning, installation, maintenance and repair of electrical, gas, plumbing and structural systems and the replacement of household appliances. In the corporate area, Affinis provides technical assistance with respect to many of the services provided in the residential area. In October 2002, our subsidiary EDP Participações acquired a 45% stake in the current share capital of Affinis from PROCME Gestão Global de Projectos, S.A., or PROCME, for a total of approximately 13.5 million. Of this amount, 4 million was paid in October 2002 and the balance is due in three approximately equal installments over 2003, 2004 and 2005, which installments can be adjusted depending on the financial performance of Affinis. Following the acquisition operation, EDP Participações and PROCME subscribed to a 5 million capital increase in Affinis in amounts proportional to their holdings in the company.

## REGULATION

### PORTUGAL

Until 1998, the Portuguese government, through Direcção Geral de Energia, or DGE, was responsible for the conception, execution and evaluation of the policy for the energy sector, notably by presenting proposals for necessary legislation and regulation. In addition, through the end of 1998, the *Direcção Geral do Comércio e da Concorrência*, or DGCC, was responsible for the definition of the annual tariff regime following negotiation with us.

The basis and principles of the organization of the electricity sector in Portugal were set out in 1995 legislation that was partially revised in 1997 in accordance with the general principles of EU Directive 96/92/CE. Following the 1997 revisions, the Regulatory Entity of the Electric Sector, or ERSE, was appointed as the independent regulator in February 1997. On April 12, 2002, ERSE became Regulatory Entity of the Energetical



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Services, with its authority extended to the domain of natural gas regulation. On March 25, 2002, by Decree-Law no. 69/2002, ERSE's authority with respect to the electric sector was extended to the Autonomic Regions of Madeira and Azores. The responsibilities for the regulation of the electricity sector in Portugal are now generally split between DGE and ERSE as described below.

### **Direcção de Energia**

DGE has the main responsibility for planning and developing the Public Electricity System including, among others, approving the issuance, modification and revocation of generation and distribution licenses and preparing

expansion plans for the Public Electricity Sector every two years, in conjunction with REN, for the approval of the Portuguese Ministry of Economy. DGE is also responsible for the regulations applicable to the transmission grid and the distribution network and service quality.

### **The regulator**

ERSE, or the regulator, has clearly defined regulatory duties, powers and objectives established by law, among which are the approval of the main regulations that are published in the form of the following codes:

the tariff code and the values for the tariffs and prices to be implemented;

the commercial relations code governing relations between entities in the Portuguese electricity system;

the dispatch code;

the access to the national transmission grid code; and

the interconnections code.

The codes listed above are applicable to the 2002-2004 regulatory period and were adopted by the regulator in September 2001.

### **National energy policy**

Pursuant to a public announcement made in March 2003, the Portuguese Council of Ministers passed two resolutions regarding, on the one hand, Portuguese energy policy, and, on the other hand, the Portuguese government's options for the restructuring of the Portuguese energy sector.

Resolution no. 63/2003 of the Portuguese Council of Ministers, of April 28, 2003, revoked the previous national energy strategy of September 2001, announced the new Portuguese energy policy and defined general objectives and specific measures to carry out the new policy. In accordance with this resolution, the Portuguese government intends to:

develop and assure the safety of the national energy supply by adopting measures necessary to (i) reduce the dependency of external sources of energy primarily by country and type of source, (ii) diversify external sources of energy by country and type of source, (iii) keep mandatory reserves of combustibles, and (iv) guarantee an adequate energy generation capacity;

develop rational energy needs in order to fulfill environmental requirements, namely by (i) setting up mechanisms to achieve the Kyoto Protocol's goals, (ii) participating in European market of emissions, and (iii) promoting the rational use of energy; and

promote national competitiveness in the new liberalized energy market, namely through, among other measures, (i) the creation of MIBEL by 2006, (ii) the promotion of competition and the opening of the Portuguese electricity and natural gas sectors, which involves, for instance, starting up procedures to renegotiate or terminate the existing PPA's by the end of 2003, and (iii) expansion of natural gas regulation, liberalization of combustibles prices and monitoring the functioning of the respective markets, which involves, for example, the separation of the gas high pressure transport network from other activities related with natural gas.

On May 10, 2003, Resolution no. 68/2003 of the Portuguese Council of Ministers defined the options the Portuguese government may utilize to restructure the Portuguese energy sector: (i) combine gas and electricity management and offer the two via the same entrepreneurial organization, allowing a better use of its synergies and complementarities; (ii) no unilateral imposition of energy sector model restructure on the sector's

companies and their shareholders; (iii) definition of the political, competition and regulatory framework of the energy sector; (iv) freedom of the market's functioning, requiring that from the strategic and organizational framework, rational solutions should arise for the interests of the companies, their shareholders, workers and costumers in order to assure competition of Portuguese companies and the economy within a progressively integrated European market.

For the execution of these options, the Portuguese government has decided, among other measures, (i) to promote the liberalization of the access to the gas infrastructures for electric companies operating in Portugal, starting as of July 1, 2004, (ii) to promote adequate legislative measures to open the gas infrastructures to eligible consumers under principles of equality, (iii) to promote and support the consolidation of the regulated infrastructures of gas and electricity under one company.

### **Electricity pricing/tariffs**

According to Portuguese law, the tariff regulation follows two basic principles: harmonization of tariffs throughout the country, according to which the tariff regulation will apply to all clients of the Binding Sector; and the principle of financial viability of all companies operating in the Binding Sector, subject to adequate management, according to which the changes in conditions of the license cannot endanger the viability of those companies.

Since December 1998, the regulator has implemented a new tariff regime, under which tariffs are periodically reviewed for a period of three years. The first regulatory period ranged from years 1999-2001, for which period the regulator defined tariffs for customers in the Binding Sector and customers in the Non-Binding Sector who access the national transmission grid. The regulator also defined the parameters for tariffs to be applied to distribution companies. Annual rates were set based primarily upon what was deemed to be an appropriate return on assets in transmission and by profit sharing and price cap mechanisms in distribution.

In the 2002-2004 regulatory period, annual rates are set in a similar fashion except that the profit sharing mechanism in distribution was eliminated. The tariffs for network services and supply in the Binding Sector were applicable in the 1999-2001 regulatory period and required us to return to customers a portion of our annual profits that exceeded specified levels designated by the regulator. Tariffs regarding the use of the distribution network continue to be based on a profit sharing mechanism similar to that applied in the 1999-2001 regulatory period. Currently, the overall electricity tariff comprises charges for generation, transmission and distribution, which includes physical distribution and commercial supply.

Under the applicable tariff regime, low voltage customers using up to 20.7 kVA are charged at rates applicable to defined consumption levels. Low voltage customers using more than 41.4 kVA and medium, high and very high voltage customers are invoiced for demand based on subscribed demand and average monthly peak demand.

The current tariff regime offers two discount schemes for customers in the Binding Sector, which apply to all customers equally. Under the first scheme, customers with contracted demand ranging from 4 MW to 17.5 MW and a yearly utilization greater than 5,000 hours or consumption above 30 GWh are entitled to a discount of 10% and customers with subscribed demand above 17.5 MW are entitled to a discount of 12.5%. Discounts are applied to monthly invoices. The second method available for obtaining discounts is through a reduction of a customer's load. A customer that is able to reduce its load by at least 4 MW can elect an interruptible tariff, which results in a maximum basic discount of 10%. In cases in which a distributor declares an interruptibility period and the customer complies with that period, the customer can receive an additional

discount. Under the load discount scheme, an eligible customer may elect one of two interruptible tariffs, which results in a maximum basic discount of 10% or 13%, depending on the number of interruptible periods.

At the beginning of the 2002-2004 regulatory period, the regulator introduced a new tariff structure, based on the concept of an additive tariff consisting of sub-tariff components using an approach that is more reflective of costs, both between the Binding and Non-Binding Sectors, and also in each sector. For example, in the 1999-2001 regulatory period, costs were less efficiently reflected in the tariff in the Binding Sector, thereby giving customers in the Binding Sector the benefit of lower tariffs than in the Non-Binding Sector where costs were more efficiently reflected in tariffs.

Generation revenues arising from power sold by CPPE and other plants in the Binding Sector under PPAs allow these plants to achieve a return on assets of 8.5% in real terms. For more information on the PPAs, you should read Portugal Electricity Transmission Purchase of Electricity. The price of electricity in each PPA consists of the capacity and energy charges, which account for 95% of PPA costs, together with costs associated with imports, autoproduction and generation facilities. The capacity and energy charges have been, and continue to be, passed through to the final tariff paid by customers in the Binding Sector.

Transmission revenues have been changed from the 1999-2001 regulatory period to the 2002-2004 regulatory period. The transmission component of the tariff is calculated annually by the regulator to cover operating and maintenance expenses of the national transmission grid as well as to provide to REN a return on assets in the 2002-2004 regulatory period of 9% in nominal terms, excluding the remuneration of the land used for generation sites owned by REN. During the 1999-2001 regulatory period, an 8.5% return on assets figure was used.

Because the transmission component of the tariff is based on estimated data for variables such as cost and demand, each formula incorporates an annual adjustment mechanism which operates with a two year time lag and is intended to adjust for differences between amounts recorded as revenue and the revenue level permitted by the tariff when applied to actual operational data. For more information on the tariff adjustment, you should read Item 5. Operating and Financial Review and Prospects.

The remuneration of distribution in the Binding Sector is the only one of the three businesses where returns are fixed primarily according to a price cap mechanism. For the 2002-2004 regulatory period, the commercial supply of electricity was split into network commercialization and Binding Sector commercialization, both with regulatory schemes of cost acceptance plus an allowed return on assets. As with generation and transmission, the distribution tariffs are subject to an annual adjustment mechanism with adjustments made based on actual costs two years after originally recorded. For the 2002-2004 regulatory period, the regulator fixed the price cap at 7.5% for high and medium voltage levels and 6.6% for the low voltage level. For the network commercialization and for the Binding Sector commercialization, the regulator set at 9% the fixed asset return rate. However, the profit sharing mechanism for this regulatory period was eliminated.

In the Binding Sector, customer tariffs for low voltage consumption cannot increase by more than the forecast inflation rate for a particular year.

#### **Other codes**

The Commercial Relations Code was published on September 1, 2001, and is intended to govern the commercial relations between entities within the Binding Sector as well as the commercial relations between the Binding Sector and the Non-Binding Sector. This code also governs the access to the Non-Binding Sector by Qualifying Consumers and the rules applicable to the purchase and sale of electricity within a system established for the Non-Binding Sector. The regulator has also enacted the rules of access to this system and the rights and obligations of the system's participants, including Qualifying Consumers who have elected to participate in the Non-Binding Sector, their agents and REN as the manager of the system.

The Dispatch Code, also published on September 1, 2001, establishes the rules of dispatch that are applicable to REN based on principles of equality of treatment and opportunity and safeguarding the public interest in the Binding Sector.

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The Access to the Grid and Interconnections Code published on September 1, 2001, is based on the same general principle as the Dispatch Code. Access to the grid is subject to the execution of an agreement in accordance with a model provided by the regulator.

On January 1, 2001, DGE issued a quality of service code. Under this code, DGE seeks to enhance the quality of service with a system of penalties assessed against electricity companies based on their performance. DGE has defined benchmarks against which a company's performance can be measured if requested by the company's customers. Fines are imposed against electricity companies in the event of power failures or any disturbances in

power supply that, in each case, cause an operator's performance to fall below DGE's benchmarks. These benchmarks were effective as of July 1, 2001.

### **Reversionary assets**

Our assets held under concession agreements with the Portuguese government or municipalities or licenses issued by the government for generation and distribution of electricity are treated either as being within the public domain of the Republic of Portugal or municipalities (for assets used in low voltage distribution) or dedicated to public service. We use assets that are part of the public domain and own and use assets that are dedicated to public service subject to limitations on their disposal.

Assets within the public domain that by their nature are replaceable may be replaced by another asset performing the same function, subject to prior authorization in certain cases. Any asset that has been replaced will thereafter be treated as a private asset. Other assets held by us, including land and buildings not held under concessions or license, are our private property.

Under Portuguese law, assets under public domain cannot be sold, pledged or otherwise encumbered and are not available for enforcement of judgments. The same regime applies to assets dedicated to public service, subject to specified exceptions.

The reversion of assets is subject, in specified cases, to payment as described in the following paragraphs:

### **Licenses for generation**

Assets held by the CPPE for generation revert to REN, as concessionaire for the national transmission grid, at the termination of the relevant PPA, subject to payment of the residual value of assets, in accordance with the PPA, provided that the assets are considered by REN to be necessary for generation in the Binding Sector according to the expansion plan for the Binding Sector in place at the time. If not considered necessary by REN, CPPE is entitled to purchase those assets for use in the Non-Binding Sector.

### **Licenses for distribution**

Our assets held under a binding license for distribution of high voltage and medium voltage revert to REN, as concessionaire for the national transmission grid, when the license terminates. If the termination occurs by revocation or resolution of the license, payments are due as established in the binding agreements entered into between the parties. If the license terminates for any other reason, the payment due will be the average of the net book value of the assets and value of lost profits.



### **Concessions with municipalities**

Assets held by EDPD in low voltage revert to municipalities at the end of the term of concession, subject to payment of the net value of assets as determined by a commission of three members, one appointed by each party and a third one by the Portuguese government. Both the expiration and early termination of these concessions can only take place if the municipalities meet specified conditions regarding the viability of the proposed distribution arrangements and the transfer of assets and workers.

### **Environmental**

#### **Overview**

In Portugal, the fundamental principles regarding environmental matters are set forth on the Portuguese Constitution, which guarantees each Portuguese citizen the right to a healthy and ecologically balanced human environment and establishes environmental protection as a duty of the state. Also, in 1987, the Portuguese government has adopted an environmental statute, the *Lei de Bases do Ambiente*, which (a) sets forth certain fundamental rules regarding air, light, superficial soil and subsoil, flora and fauna, (b) establishes certain principles

regarding environmental protection, including the polluter-pays principle, and (c) establishes a regime of civil and criminal liability.

Specifically, the Portuguese electricity supply industry, and we have to comply with a number of EU and Portuguese environmental laws and regulations, regarding, among others, (a) air emissions, (b) waste water discharges, (c) waste management, (d) use of water resources and (e) assessment of the environmental impact of new projects.

Management believes that we are in compliance with all existing material environmental laws and regulations to which we are subject and expects us to remain in compliance with these laws and regulations.

### **Specific regulation**

Concerning SO<sub>2</sub> and NO<sub>x</sub> emissions, EU Directive on Large Combustion Plants, or the LCPD, which has set a series of national targets for reductions in emissions of such gases from combustion plants, has been implemented by Decree Law 352/90 of November 1990 and Ordinance 286/93 of March 12, 1993. The LCPD, however, has been revised by Directive 2001/80/EC, into force since October 2001, but has not been implemented in Portugal. Nevertheless, management expects to be in compliance with the new LCPD by the time required by the EU since the necessary emissions abatement equipment is expected to be installed in the Sines power plant by 2008, while the Barreiro, Carregado and Setúbal power plants are exempt from compliance with new emission limit requirements.

Regarding CO<sub>2</sub> emissions, both the EU and Portugal are signatories to the UN Framework Convention on Climate Change, adopted in May 1992, and parties to the Kyoto Protocol of December 1997, under which the EU committed to reduce by 8% CO<sub>2</sub> and other greenhouse gases, or GHGs, from 1990 levels over the period 2008-2010. Both the EU and Portugal have ratified the Protocol in 2002. In 2002, a preliminary version of the Portuguese National Program on Climate Change, which defines GHG emission reduction measures, was put forward for public discussion. A final version is expected to be approved by the Portuguese government by the end of 2003. A new EU emissions trading program is currently in the final discussion stages. Under this program, Portugal is to draw up a National Allocation Plan, assigning GHG emission allowances to installations in specific industrial sectors, including CCGT plants, for the 2005-2007 regulatory period. Management expects to be able to fulfill our responsibilities under the national and industry specific implementation mechanisms for CO<sub>2</sub> and other greenhouse gas emissions.

As part of our strategy to address public concern over the possible effects of electromagnetic fields, or EMF, we adopted the International Radiation Protection Association, or IRPA, recommendations published in 1990 for the design of new overhead lines. These recommendations have been substantially confirmed by the International Commission on Non-Ionizing Radiation, or ICNIRP, guidelines (1998) which were adopted in the Recommendation on the Limitation of Exposure of the General Public to EMF of the EU Council (June 1999).

In connection with the establishment of new facilities or significant increase in capacity of existing power plants, Portuguese legislation requires us to undertake environmental impact studies. New thermal power plants must comply with specific emission limits for NO<sub>x</sub>, SO<sub>2</sub> and particles. EDP has only one such project current under development and it complies with the new LCPD Directive.

### **Our environmental policy and activities**

In 1994 our board of directors has adopted an Environmental Policy Declaration, which sets forth our principles for environmental policy and activities. Our policy is aimed at minimizing or, where possible, eliminating negative environmental impacts. Management believes that we are in compliance with all existing material EU and Portuguese government environmental regulations, and expects that we will comply with proposed changes in EU regulations.

We made capital expenditures related to environmental matters in 2002 of approximately the same amount as in 2001, which amounted to approximately 15 million. We do not expect these capital expenditures to be significantly higher in 2003.

## SPAIN

### Electricity regulation

With the enactment of Law 54/1997 of November 27, 1997, the Spanish electricity sector has recently changed from a regulated system to a free-market system with elements of free competition and liberalization. With this change the Spanish government intends to guarantee the electricity supply at the highest quality and at the lowest possible price. The new regulatory framework provides for:

the unbundling of activities so that no operator can carry out regulated activities (transmission, distribution, technical management of the system and economical management of the whole market) and liberalized activities (generation, trading and international/intra-community exchanges) at the same time;

a wholesale generation market;

freedom of entry for new operators with liberalized activities in the electricity business;

liberalized activities to take place in a competitive format, while transmission, distribution, technical management of the system and economical management of whole market activities will continue to be regulated because the activities' particular characteristics impose severe limitations on the possibility of introducing competition;

all consumers may select their suppliers and the method of supply (either with market prices or with tariffs fixed by the Spanish government);

all the operators and consumers have the right to access the transmission and distribution grid by paying access tariffs previously approved by the Spanish government; and

environmental protection.

On November 27, 1997, the Spanish government passed Law 54/1997, the Electricity Sector Law, which provides for a gradual transition to a liberalized system under which every consumer will be free to contract for electric power from generators or other suppliers. Before the

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above-mentioned Electricity Sector Law, the Spanish electricity operations were meant to be a public service provided by the government through Red Eléctrica de España, S.A., or REE, a state controlled entity. With this law REE continues to serve as the system operator but its dispatching functions have been taken over by the market operator, Compañía Operadora del Mercado Español de Electricidad, S.A., or OMEL. Accordingly, therefore, OMEL is responsible for the economic management of the wholesale market, and, or REE is responsible for the technical management of the transmission grid and the balancing mechanism which ensures that energy supplied is equal to the demand for energy. Both, REE and OMEL have been recently privatized.

On October 7, 1998, the Spanish government created the National Energy Commission with the Hydrocarbons Law, which replaced the National Electricity System Commission by performing the supervision of the electricity industry as well as the hydrocarbons and liquid natural gas industries in Spain.

The Electricity Sector Law seeks to create a competitive electricity generation market where power generation plants are dispatched based on the results of a competitive bidding process administered by OMEL. Moreover, the same law, as amended, provides for a transitional period until up to 2010 during which power generation companies subject to the Stable Legal Framework as of December 31, 1987, will be entitled to partial compensation for the costs they incur in connection with the transition to the competitive market regime. This payment is made from amounts collected from consumers and settled by the National Energy Commission. The Electricity Sector Law also provides for the installation of new power generation plants to be completely liberalized and not subject to government planning, subject only to the authorizations required by the applicable laws and regulations (on town

planning and environmental protection, for example). New electricity generators will be entitled to the same rights and remunerated.

On June 23, 2000, Royal Law-Decree 6/2000 was adopted to increase competition in the electricity and other sectors. The main consequences of these measures were:

a moratorium on generation capacity increases, which ended on June 23, 2003, was imposed on those operators with more than 20%, and less than 40% of the total Spanish installed capacity and a moratorium on those operators with more than 40% of the total Spanish installed capacity excluding capacity increases related to projects currently under construction at the date of the Royal Law-Decree that have received the necessary administrative permits and future projects to replace current generation capacity;

eligibility for all consumers to participate in the liberalized market from January 1, 2003;

a maximum reduction in residential tariffs during the period between 2001 and 2003 of 9% depending on the evolution of demand, interest rates and efficiencies resulting from the opening of the market to competition; and

a prohibition on from holding third parties stakes in more than one main operator and nor are main operators permitted to hold stakes in other main operators.

Spanish electricity tariffs are fixed annually by the government through Royal Decrees. Through 2002, these Royal Decrees fixed tariffs in accordance with the calculation method set forth by Royal Decree 2017/1997, of December 27, 1997. However, Royal Decree 1432/2002, of December 2002, established a new calculation method for the 2003-2010 period. The new calculation method allows tariffs to be fixed under more objective, transparent and predictable conditions. Increases on the tariffs cannot exceed 2% annually and electricity companies can recover the losses (known as *deficit tarifarios* or *rate deficits*) caused by the reduction of tariffs during the 2000-2002 period.

The Royal Decree 1436/2002, of December 31, 2002, fixed the tariffs for 2003. The average tariff (or *reference tariff*) for 2003 was increased by 1.69% (the residential tariff was increased, against the decreasing tend of recent years, by 1.5%). The cumulative rate of reduction in nominal terms for all Spanish customers from 1996-2003 was 15.7% in nominal terms and 32.6% in real terms.

Under some of the provisions of the new regulatory scheme, electricity transmission and distribution activities will continue to be regulated since their particular characteristics impose severe limitations on the possibility of introducing competition. The new regulatory framework changed, however, the manner in which electricity businesses receive payments, in order to promote efficiency and quality of service.

The regulations take into account the investment and operational costs related to transmission activities. Fixed remuneration for distribution is based on investment, operational and maintenance costs. They also take distribution areas, incentives for supply quality, loss reduction and commercial management costs into account.

### **Gas regulation**

Law 34/1998, of October 7, 1998, started the liberalization process of the Spanish natural gas sector and has been amended several times over the past four years.

The main features of the current regulatory framework are as follows:

Unbundling of activities so that no operator may carry out regulated activities (regasification, strategic storage, transmission, distribution and supplying at set tariffs) and liberalized activities (trading at market prices) simultaneously;

As of January 1, 2003, all consumers, regardless of their consumption, are eligible to select their suppliers as well as the price method of supply (either at market prices or with a set tariff);

All operators and consumers have the right to access the transmission and distribution grids by paying access tariffs previously approved by the Spanish government. This right is based on principles of free access, objectivity and transparency. Access to the grid can only be denied under circumstances set forth in certain laws and regulations in cases where there is a lack of capacity or reciprocity); and

System of tariffs: all the tariffs, tolls and royalties are based on costs which are transferred to consumers of natural gas. The tariff is based on levels of pressure and consumption rather than by type of use. The tolls and royalties for transport and distribution are based on the level of pressure at which the network is connected to the consumers installation and the volume of annual consumption rather than in distance.

#### **EU LEGISLATION**

Portugal became a member of the European Community (referred to as the European Union or EU in the context of the Maastricht Treaty on European Union) on January 1, 1986, pursuant to the Accession Treaty of June 12, 1985. The first steps to draw up a binding framework of common rules for an internal market in energy within the EU were a directive of June 29, 1990, to improve the transparency of gas and electricity prices charged to industrial end-users, and Directive 90/547/EC of October 29, 1990, on the transit of electricity through transmission grids, or the Transit Directive, EU directives are legislative instruments that are binding upon the Member States as to the result to be achieved while leaving national authorities the choice of form or method. The Transit Directive requires Member States to facilitate cross-border high-voltage transmission under fair and non-discriminatory standards.

On December 19, 1996, a major breakthrough was reached with the adoption by the European Parliament and the EU Council of Ministers of Directive 96/92/EC concerning common rules for the internal market in electricity, or the Access Directive. The Access Directive endeavors to promote a competitive open electricity market reconciling the following challenges: (1) increasing efficiency in production, transmission and distribution; (2) reinforcing security of supply; (3) increasing competitiveness of the European economy; and (4) setting high standards of environmental protection.

The Access Directive leaves to Member States, in respect of the important EU principle of subsidiary, the freedom of organization of the national power sector, in conformity with the principles of the directive, and with a view to achieving competitive, non-discriminatory and open power markets. The directive recognizes that access to the national power system may be granted within the context of a system of negotiated access, or a system where one single buyer centralizes buying and selling, and assumes public service obligations. The directive also recognizes the right for Member States to impose public service requirements, i.e., obligations imposed upon distribution undertakings to service customers in defined territories under regulated tariff structures.

The Access Directive has been under review since March 2001. As a result, a new directive that revises the Access Directive may be adopted. We believe that such a new directive would constitute another step towards the creation of an European electricity market.



On March 16, 2002, the European Council of Barcelona adopted some important conclusions on the internal electricity market to be taken into account by the European Commission and the co-legislators within the framework of the co-decision procedure for such new Directive. These conclusions include:

freedom of all European non-household consumers (accounting for approximately 60.0% of the total market) to freely choose their supplier of electricity and gas as of January 1, 2004;

the separation of transmission and distribution from production and supply;

non-discriminatory access for consumers and producers to the network based on transparent and published tariffs;

the establishment in every European Union member state of a regulatory function, within the appropriate regulatory framework, with a view to ensuring effective control of tariff-setting conditions; and

setting a target for European Union member states of a level of electricity interconnections equivalent to at least 10% of their respective installed production capacity by 2005.

#### **Planning of new generation capacity**

For the construction of new generating capacity, Member States may choose between a system of authorization, or tender, or a combination of both. Either procedure must be conducted in accordance with objective, transparent and non-discriminatory criteria. If a Member State opts for authorization, precise criteria for the grant of this authorization must be defined and published. In the event of a refusal to grant the authorization, applicants must be informed of the reasons, and appeal procedures must be available.

If a Member State opts for a tender procedure, the national competent authority must prepare an inventory of new capacity requirements and estimates, taking account, among other things, of the need for interconnection of systems. Tender specifications must be made available to any interested undertaking established in the territory of a Member State so that there is sufficient time in which to submit a tender. Member States must designate an independent authority which is responsible for the organization, monitoring and control of the tendering procedure.

#### **Transmission system operation**

Member States not only must ensure that technical rules establishing a minimum technical design and operational requirements are developed for connection within the system of generation, transmission and distribution assets, but also must designate or require businesses owning transmission systems to designate a system operator. The mission of the system operator is to be responsible for operating, ensuring the maintenance of, and, as the case may be, developing the transmission system in a given area, in order to guarantee security of supply. Therefore the system operator is in charge of managing energy flows in the system, and must ensure that the system is operated safely, efficiently and with a high degree of reliability. The system operator must also provide the operator of another system with which its system is interconnected, sufficient information to secure efficient cooperation between the systems. Unless a transmission system is already independent from generation and distribution activities, the system operator must be independent, at least in management terms from other activities not relating to transmission.

#### **Distribution system operation**

Member States may require distribution companies to supply customers located in a given area under a regulated tariff system. These are the so-called public service requirements. An operator must be appointed for distribution systems, and Member States may require the operator to favor environment-friendly installations.

#### **Unbundling and transparency of accounts**

Member States or designated authorities and dispute settlement authorities must have access to the accounts of the regulated businesses. We and other integrated undertakings must keep separate accounts for their respective activities so as to ensure transparency and more specifically, avoid discrimination, cross-subsidies and distortion of competition.

In particular, if a single buyer is designated which is, or is part of, a vertically integrated power business, the single buyer must operate separately from the distribution and transmission activity, and Chinese walls must be maintained to prevent inappropriate information flows from the generation or distribution activities to the single buyer activity.

## Access

A key feature of the Access Directive is the coexistence of a negotiated access approach, according to which consumers and producers negotiate access to the grid with the operator, and a single-buyer concept, wherein one entity centralizes buying and selling of power. Irrespective of the mode of access, the directive also introduces the concept of "eligible buyer", i.e., a consumer who has the right to access the system directly, through negotiation with a power supplier, or through purchases from a single buyer. Negotiated access involves the conclusion of supply contracts among power producers and, where permitted, power suppliers, on the one hand, and eligible consumers, on the other hand, on the basis of voluntary commercial agreements. To promote transparency and facilitate negotiations, system operators must publish an indicative range of prices for use of the transmission and distribution systems.

In single-buyer systems, Member States designate a legal person to be the single buyer within the territory covered by a system operator. Under a single-buyer regime, non-discriminatory tariffs for the use of transmission and distribution assets must generally be publicly available, and Member States must assure that eligible customers are effectively free to conclude supply contracts up to their own requirements with domestic producers and, where Member States authorize their existence, suppliers operating on the basis of inward transmission of power. Conversely, independent producers must be permitted to negotiate access to the grid for outward supply of power to eligible customers outside the system. Member States may put the single buyer under an obligation to purchase the electricity contracted by eligible customers at a price equal to the sale price offered by the single buyer to eligible customers minus the published price for use of the transmission-distribution system or may take the necessary measures to insure that the above mentioned supply contracts are implemented. The single buyer may refuse access to the system and may also refuse to purchase electricity from eligible customers if the single buyer lacks the necessary transmission or distribution capacity. In case of a refusal, the single buyer must give duly substantiated reasons.

Member States may decide not to apply the rules regarding the tendering, authorizing, negotiated access and single buyer procedures mentioned above if the application of these procedures would obstruct the performance of the obligations imposed on electricity enterprises in the general economic interest, but only insofar as the development of trade would not be affected to such an extent as would be contrary to the interests of the EU.

Member States must take measures to ensure opening of the market, so that the above mentioned contracts can be concluded in a meaningful way. The EU Commission is to monitor the development of negotiated supply and direct contracting by eligible customers in single-buyer contexts, using the EU-wide share of electricity consumed by final customers consuming initially more than 40 GWh per annum, with the threshold to be reduced to 20 GWh on February 19, 2000, and to 9 GWh on February 19, 2003. As of January 1, 2002, the threshold in Portugal has been eliminated and all voltage levels other than low voltage have been liberalized.

The Access Directive requires a determination to be made defining, jurisdiction by jurisdiction, or system by system, the categories of eligible customers entitled to negotiate directly, whether or not via a single buyer. Under the Access Directive, customers with an annual consumption in excess of 100 GWh and distribution companies would always have eligible-consumer rights. Again, the criteria for eligible-consumer status would need to be published on an annual basis, for transparency reasons, subject to supervision by the EU Commission, which may request modification of specifications with a view to ensuring effective opening up of markets. Member States may not prevent contracts for the supply of electricity with an eligible customer of another Member State if the customer is considered eligible in both systems involved. The EU Commission would also have the right to intervene and require, in the interest of the common good, that an eligible customer of one Member State be supplied by a supplier or producer of another Member State, if the former Member State makes a request therefore.

Member States must make it possible for independent producers and autoproducers to have access to the system to supply their own premises and subsidiaries through the interconnected system, and through direct lines, authorization for which must be granted on the basis of objective

and nondiscriminatory criteria. This right to obtain supplies through a direct line will also apply to eligible customers themselves. Similarly, Member States must permit producers located outside the system to tender for supply contracts following calls for tenders within the system for new generating capacity, and to have access to the grid to be able to perform the contract. Each country

must also install an independent dispute settlement authority whereby, in the event of cross-border disputes, the competent authority of the country where the single buyer or system operator refusing access is located.

Member States are required to create appropriate mechanisms to avoid the abuse of dominant position, in particular to the detriment of customers.

An important transitional provision permits the EU Commission to grant relief to Member States that make commitments to operators or applicants, before the entry into force of the Access Directive, in a way that could be inconsistent with the directive. The EU Commission could grant relief, taking into account, among other things, the size of the system concerned, the level of interconnection and the structure of the electricity industry in that country. Any transitional measure would need to be published and of limited duration. Similarly, relief could be granted where the rules of the directive would entail substantial problems for isolated small systems.

Existing Portuguese legislation parallels, to a great extent, the provisions of the Access Directive. As of February 1999, Portugal had implemented the full EU package. In late 2001, the regulator eliminated the consumption threshold and liberalized the market for all voltage levels except low voltage. The opening of the market to the low voltage segment, fully or partially, depends on the adoption by the EU, and the implementation by Portugal, of amendments to the Access Directive now being considered by the EU.

## **Gas**

The European Parliament and Council adopted the Gas Directive 98/30/EC of June 22, 1998, which contains common rules for the natural gas market. The directive entered into force in August 1998 and Member States must implement it by August 10, 2000. The main objectives of this Directive are transparency and non-discrimination.

The main provisions established by the Gas Directive 98/30/EC are as follows:

**Eligibility:** All gas-fired electricity generators (cogeneration and combined cycle), regardless of their annual gas consumption, as well as other final consumers consuming more than 25 million cubic meters of gas per year are eligible. This threshold will be reduced to 15 million cubic meters per year on a consumption site basis five years after the entry into force of the Directive, and to 5 million cubic meters per year on a consumption site basis ten years after the entry into force of the Directive. Member States must ensure they open their gas markets by at least 20% of the total annual gas consumption of the national gas market. This percentage shall increase up to 28% five years after the entry into force of the Directive and to 33% ten years after.

**Right of access to the grid:** Member States may choose between two access procedures: (i) negotiated access, which utilizes voluntary commercial agreements whose certain terms and conditions are published prior to the activity or (ii) regulated access, which functions on the basis of published tariffs and other terms and obligations for use the

grid). Both procedures must operate in a manner that is objective, transparent and non-discriminatory.

Unbundling of accounts: companies acting in the natural gas sector, must separate their accounts for their natural gas transmission, distribution and storage activities. The Directive does not provide for unbundling of activities.

With the evolution of the market, subsequent differences among Member States in implementing of the Directive and the obstacles to reach some of the objectives fixed by the Gas Directive 98/30/EC have justified a proposal to amend the existing directive. This proposal opens the gas market for all non-household consumers by July 2004, and for all consumers by July 2007. It requires legal unbundling of network activities from supply, establishes a regulator in all Member States with well defined functions, requires that network tariffs be published, reinforces public service obligations and introduces measures to increase the security of the supply.

## **BRAZIL**

### **Overview**

The policies for the electricity industry in Brazil are formulated by the Brazilian federal government, based on proposals presented to it by the National Council for Energetic Policy, or the CNPE, which is a body linked to the Brazilian federal government. The CNPE is composed of several ministers, including the Ministers of Mines and Energy, Finance, Environment and Development, as well as the Chief Minister of the Civil Department of the Brazilian federal government and two Brazilian Scientific Scholars. Additionally, the Ministry of Mines and Energy has exclusive authority over the electricity sector through regulatory powers assigned to it. ANEEL is an independent regulatory agency responsible for implementing the Brazilian federal government's policies and directives. It regulates electricity generation, transmission, distribution and trading activities, executes and manages the contracts involved in the provision of such services. ANEEL is also responsible for the regulation of the tariffs to be charged, their review process and adjustment procedures.

### **Legal and regulatory framework**

Beginning in 1995, the Brazilian electricity sector experienced changes in the Brazilian federal government's plans to stimulate investment and increase competition in the sector. Legislation enacted in 1995 and 1996 created a new framework for the granting of concessions in general, and for the power sector in particular.

A landmark law affecting structural changes in the Brazilian electricity sector was enacted on February 13, 1995. Law no. 8,987/1995 established the regulation of concession and permission systems that provide public services. It also established a new economic and financial system for public service tariffs, including those related to the electricity sector. The current system follows the regulatory model usually referred to as performance-based regulation under which: (i) there are periodic setting of tariffs on cost-of-service principles through tariff periodic reviews; (ii) once such tariffs are set they are supposed to remain unchanged for a certain period of time during which they are adjusted yearly for inflation (these adjustments are referred to as Parcel B costs) plus changes in non-manageable costs (these adjustments are referred to as Parcel A costs); and (iii) there are profit incentive mechanisms for increases in operating efficiency by the utility combined with a mechanism to share those efficiency gains with customers, referred to as the X Factor. See Tariffs and charges

Another law passed in February 1995, Law no. 9,074/1995, established rules for the granting and extension of public service concessions and permissions, primarily for entities providing power services. Additionally, Law no. 9,074/1995 introduced stark changes to the Brazilian power industry, including: (i) the creation of the Independent Power Producer, or IPP, which, although a generating agent, is subject to a private and competitive system (in contrast to the public service system applicable to the other agents of the power sector), and could operate based solely on the authorization of the Granting Authority, a process much simpler than that required for concession; (ii) the gradual release of distribution companies from take-or-pay contracts, thus allowing consumers in the competitive market, the so-called free-consumers, to purchase power from IPPs and, from any concessionaire, permissionaire or authorization holder; (iii) the authorization to organize consortia for power generation; (iv) the authorization for the Brazilian federal government to unbundle power companies through corporate reorganization; and (v) the authorization for the Brazilian federal and state governments to carry out privatizations concurrently with the award of new public service concessions or to extend of existing concessions.



IPPs that operate hydroelectric assets also need to seek a concession for the use of a public good, since hydroelectric resources are deemed to be public goods under Brazilian law and, as such, unlike thermal plants, cannot be given as collateral in financial transactions. Self-generators may, upon ANEEL's prior approval, (i) give or exchange energy with other self-generators within a consortium; (ii) sell excess energy to the local distribution concessionaire; and (iii) exchange energy with the local distribution concessionaire to allow for consumption by industrial plants of the self-generators located in another area of generation.

The legal foundation for the current competitive trading model was laid down by Law no. 9,648/1998, which created the wholesale energy market, or MAE, which replaced a system of regulated generation prices and tolling supply contracts. The National Electricity System Operator, or ONS, was created and became responsible for the coordination and control of the operation of the electricity generation and transmission systems in the interconnected

systems. One of the main goals of the ONS is to guarantee that all participants of the electricity sector have access to the Brazilian transmission network on a non-discriminatory basis. Originally, MAE was created as a self-regulatory body. However, in 2001, MAE was restructured and it was turned into a private legal entity that is: (i) subject to ANEEL's authorization, regulation and supervision; (ii) responsible for the operation of the wholesale energy market; and (iii) responsible for ensuring that purchases of energy in the spot market are settled and cleared in an efficient manner.

Mandatory participants of the MAE are (i) generation companies having installed generation capacity of 50 MW or more; (ii) energy retailers, including distribution companies that sold 300 GWh or more during the prior year; and (iii) importers or exporters of energy that have an available capacity of 50 MW or more. In addition, certain other entities that operate in a smaller scale have the option to participate in the MAE. Free consumers are also allowed to participate in the MAE, in the consumption category. Escelsa, Enersul, Bandeirante and CERJ are considered as mandatory consumption participants. Enertrade is also a MAE consumption participant, although not a mandatory one. FAFEN and the entities which compose the Lajeado Consortium are considered as mandatory production participants.

Power traded under the MAE is subject to strictly financial contracts since the physical delivery of power is entrusted to the ONS and conditioned to the system-optimization rules. Energy supply contracts, which must be based on MAE's standard form agreement, must be registered with the MAE. Distributors and energy retailers must evidence, through registration, their compliance with the requirement that 95% of their contractual obligations to final customers be covered by long-term energy supply contracts. Registration of energy contracts with the MAE is also designed to ensure that generation companies do not commit to supplying more than their maximum available capacity as set by ANEEL.

Participants of the MAE are subject to penalties in case of non-compliance with their obligation undertaken with the MAE as well as to the enforcement of financial guarantees which must be posted in order to assure the payment of debts assumed under such transactions.

ANEEL has passed guidelines for the computation of the spot price for energy in the MAE. The spot price is determined by market conditions and by certain public policy and operational considerations, including the optimal use of resources, transmission restrictions, energy deficit costs, self-restraint of customers caused by a high spot price, projected energy requirements and international alternative markets.

Prevailing spot prices vary in each of the four sub-markets within the wholesale energy market. Sub-markets take into account restrictions in transmission capacity. Given the improvements made on the transmission lines during the years 2001 and 2002, the Brazilian federal government determined that the number of sub-markets should be reduced from four to two. Presently, however, a preliminary injunction granted in a class action against such measure prevents both ANEEL and the Brazilian federal government from passing regulation to enact this reduction.

In order to assure that power purchase and sale operations under the MAE were conducted in an orderly fashion and without causing immediate price shock, under Law no. 9648/1998, the full liberalization of negotiations is progressing gradually, and only after a transitional period in which the existing generation and distribution agents execute long-term power purchase and sale agreements called initial contracts. Moreover, the purchase and sale of electric energy is contracted separately from access to the transmission and distribution grids. Similar to existing agreements, initial contracts are primarily take-or-pay commitments that guarantee stable energy prices for distribution companies and a steady stream of income for generation companies. As of 2003, the amounts contracted under the initial contracts should be reduced at a rate of 25% a year until full power purchase and sale are fully released, at the end of 2006.

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Low levels of investment and below average rainfall in 2000 and early 2001, as well as growth in demand for energy, resulted in abnormally low water levels of critical hydroelectric capacity in Brazil's Southeast, Central West and Northeast regions. In May 2001, the Brazilian federal government introduced a power rationing program, which was in effect until January 1, 2002, for the North region and March 1, 2002, for the Southeast, Midwest and Northeast regions.

On October 17, 2001, the Brazilian federal government proclaimed that electric utilities would be reimbursed for expenses associated with payment of bonuses to consumers and other costs related to the rationing program that exceeded the surcharges. Law No. 10,438, of April 26, 2002, provides that electric power distribution companies in Brazil would be compensated for revenue losses caused by the reduction in amounts of energy sold due to the Rationing Program. In order to be entitled to such reimbursement, these companies would have to adhere to the Electric Energy Sector Agreement, which contemplates a number of required actions by each adhering concessionaire.

Law No. 10,438/2002 provides that (i) the Brazilian government's national development bank in charge of privatization, or the BNDES, may lend distribution companies an amount equivalent to up to 90% of lost revenues so that these companies will be able to maintain their account balances as if no rationing program had been in effect; and (ii) compensation may increase for Parcel A costs from January 1, 2001 to October 26, 2001—the date on which the CVA tracking account was established. Parcel A costs are limited by the concession contracts to the cost of purchased power and certain other costs and sectorial charges, for more information, see Tariffs and changes below. Parcel A costs incurred prior to January 1, 2001, are not recoverable.

In addition, Laws nos. 10,438/2002 and 10,604/2002 further provide for the following measures:

**Power purchase restrictions:** a series of restrictions were imposed on the manner by which power not sold through initial contracts may be sold and bought by state-owned generation companies and by distribution companies. Generation companies under Brazilian federal government control shall negotiate at least 50% of the total energy traded by them, including the reduced portion of the initial contracts, in public auctions.

**PROINFA, CDE and Incentives for Alternative Sources of Electric Energy:** The Program for Incentive of Alternative Sources of Electric Energy, or PROINFA, was created to attempt to increase the participation of electric energy generated from wind, biomass and small hydroelectric plants (plants with certain specifications of reservoir, which installed capacity does not exceed 30MW). CDE is a fund whose main objectives are to promote universal electric energy services and development, not only through PROINFA, but also through any form of power generation from wind, biomass, small hydro plants, natural gas and national mineral coal sources. CDE is also meant to fund the distribution companies in the attainment of the universal goals described below. Apart from benefiting from the funds of CDE, the projects falling under PROINFA's requirements as well as all other projects which power is generated from wind, biomass, solar and small hydro plants sources are entitled to a discount, of no less than 50%, on the transportation tariffs, and to the right to trade energy with consumers not yet considered free consumers as per the current laws.

**Universal goals:** ANEEL shall establish universal goals to be periodically reached by concessionaires and permissionaires. These goals are to consist of determining growth areas to be supplied by distribution concessionaires or permissionaires without any burden or costs to consumers.

**Assistance for low income residential consumers:** A new criteria was created to define low income consumers. This criteria significantly increases the number of consumers under this category, thereby increasing the

number of consumers entitled to a lower social tariff than the one applicable to other residential consumers. The Brazilian federal government created a low income subvention funded by dividends due by Eletrobras to the Brazilian federal government in connection with power sales in public auctions and, in case of insufficiency, funds from the RGR were directed to the distribution companies (subject to the fulfillment of criteria set forth in relevant ANEEL Resolutions) to retire debts incurred by them under the RGR financing.

**Tariff Restructuring:** From 2003 on, and with each periodic tariff review, the Brazilian federal government will restructure the tariffs so as to eliminate cross-subsidies and mandate that each class of consumers will pay for only its own relevant costs. As a result, tariff increases brought on by the periodic tariff review will be proportionately higher for large industrial consumers so as to reduce the tariff gap that traditionally has been subsidized by residential consumers.

## Tariffs and charges

The tariffs of Escelsa, Enersul, Bandeirante and CERJ were originally set in the activity arising out of privatization and are subject to the rules regarding tariff adjustments and tariff reviews set forth in applicable laws and relevant concession contracts.

Pursuant to the distribution concession agreements, supply tariffs are composed of two parcels, Parcel A and Parcel B. Parcel A is composed of the following costs and charges: (i) the cost of energy purchased for sale; (ii) the Global Reversion Fund, or RGR, which is controlled by Eletrobras and is designed to provide funds for compensation to concessionaires during the terms of their concession); (iii) quotas for the Fuel Consumption Account, or CCC, which is a contribution created to prorate power production financing by domestic coal fired plants in Brazil among the electricity sector agents; (iv) amounts related to the inspection fee charged by ANEEL; (v) financial consideration for the exploitation of hydro resources for generation purposes; (vi) connection and use of transmission and distribution systems charges, or transportation charges; (vii) charges for system services; and (viii) quotas for the Energetic Development Account, or CDE. Parcel B is measured as the difference between (i) the total revenues of the concessionaires; and (ii) the value of Parcel A, net of the taxes on sales of goods and services, or ICMS.

The distribution concession contracts provide for three types of protection of the concessionaire's payment through tariff: (i) the annual tariff adjustment; (ii) the extraordinary tariff review; and (iii) the periodic tariff review.

The tariff adjustment takes place every 12 months, except in those years in which a periodic tariff review takes place. During the tariff adjustment process, the tariffs charged by the concessionaires are merely updated so as to (i) allow for a pass through of the current costs of the components of Parcel A; (ii) preserve Parcel B against inflation by indexing it to a consumer price index; and (iii) promote the distribution of efficiency gains of the concessionaires to consumers through the use of the X Factor.

An extraordinary tariff review may take place at any time, through formal request submitted by a concessionaire to ANEEL, on the occurrence of the following events: (i) significant changes in costs to the concessionaires; (ii) the creation, termination or change of any tax (excluding income tax) or legal charges, particularly those within Parcel A; or (iii) unilateral modification to the concession agreement.

The Ministry of Economy and Mines and Energy created a tracking account named the Compensation Account for the Variation of the Amounts of Items of Parcel A, or the CVA. Positive or negative variations of certain costs within Parcel A of the distribution concessionaire revenues occurring after the annual tariff adjustment shall be computed in a tracking account. In the subsequent annual tariff adjustment, the outstanding amount of the CVA, added by interest accrued at Brazil's central bank rate, or the SELIC rate, will be offset by the distribution tariff over the next 12 months subsequent to the adjustment. The portion of the CVA not immediately offset also accrues interest at the SELIC rate. Notwithstanding this, on April 7, 2003, the Ministries of Finance and of Mines and Energy issued a joint ordinance postponing tracking account tariff increases for a 1-year period with the intention of avoiding an additional impact on tariffs in the 4 to 7% range. According to this joint ordinance, amounts accumulated on the tracking account that were supposed to pass through from April 8, 2003 to April 7, 2004, will be postponed for one year. This amount, added by the amount to be accumulated in the twelve subsequent months, shall be recovered over a 24 month period rather than the usual 12 month period.

The periodic tariff review normally occurs in intervals varying from three years to seven years. During the periodic tariff review, ANEEL resets the value of the tariffs charged by the concessionaire by taking into consideration the changes of the costs structure and market of

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the concessionaire, the levels of tariffs observed in similar domestic and international companies and certain efficiency and tariff affordability incentives. Accordingly, the periodic tariff review has two stages, the first of which is Tariff Resetting , which is a comparison between the Assessed Revenue and the Required Revenue of the concessionaire. Assessed Revenue is revenue actually obtained by the concessionaire and Required Revenue is the revenue considered necessary, according to ANEEL, for the adequate provision of the distribution service. If Assessed Revenue is higher than Required Revenue, the distribution tariff of the concessionaire will be reduced, otherwise, it will be increased. A tariff resetting index is applied on the very year of the periodic tariff review in lieu of the annual tariff adjustment. The second stage of the periodic tariff review is the calculation of the X Factor. The X Factor is the result of an assessment by the regulator

and the utility of the appropriate sharing of estimated cost reductions that the reviewed concessionaire expects to achieve by the next tariff periodic review. The X Factor is applied to reduce the IGPM in annual tariff adjustments following the tariff periodic review.

Apart from the certain charges included in Parcel A costs that both generation and distribution companies must pay, generation companies are also required to pay the following charges:

UBP (Use of the Public Asset): Article 7 of Law no. 9.648/98 mandates that a PPI that uses hydraulic generation will be awarded a public asset usage concession. If this concession is awarded, the concessionaire must pay 2.5% of its annual income for five years from the date of the execution of the concession agreement. Through December 31, 2002, UPB was paid to ELETROBRÁS. From 2003 and thereafter, UPB is to be paid to the Brazilian National Treasury.

EC (Capacity Charge): T document under which all MAE's participants should adhere approved by Resolution ANEEL no. 18/98, or the market agreement, determines a capacity charge, or EC, to be established and applied on all loads, whether or not contracted out, of traders and free consumers operating directly on MAE. According to ANEEL's Resolutions no. 446, of August 22, 2002 and 237, of May 21, 2003, however, EC shall only be charged as of January 1, 2005.

ONS Contribution: ONS's income is partially comprised of a portion of the charges for use of transmission system, as determined by ANEEL, as well as an amount calculated from the number of votes attributed to each participant under each ONS category.

## **TELECOMMUNICATIONS**

Regulatory measures have been taken to change the telecommunications market in Portugal from a monopoly held by PT to a fully open and competitive market. PT operates under a concession, which had granted it the exclusive right for 30 years from March 20, 1995, renewable thereafter for successive periods of 15 years upon agreement by the government and PT, to provide domestic and international public fixed voice telephone services and leased lines and to install and operate the related telecommunications network in Portugal. However, to implement EU directives relating to an open telecommunications market, the government released the infrastructures that constitute the basic telecommunications network from public domain and sold them to PT, pursuant to the amendment of the concession introduced by Decree-Law 31/2003 of February 17, 2003.

The EU adopted a number of directives relating to the telecommunications market, the latest of which is Directive 2002/77/CE of September 16, 2002, that set forth the parameters for regulating telecommunications sectors in EU member countries which are open to full competition. The Law 91/97 of August 1, 1997, recently amended by Law 29/2002 of December 6, known as the Basic Law of Telecommunications, was adopted in Portugal in anticipation of the full opening of competition in the Portuguese telecommunications market. It revoked the exclusive rights of PT in accordance with EU Law and provided that the Portuguese telecommunications market would be fully opened to competition as of January 1, 2000.



In the last few years there has been a significant increase in pressure by the EU on Portugal to fully promote the implementation of a liberalized market, notably in areas where, although regulation exists, practical barriers have been raised by dominant operators, such as with regard to the ULL.

**Legislative framework**

The Basic Law provides the basic legislative framework and the basis for telecommunications regulation in Portugal. The Portuguese government enacted this law to implement the European Commission's legal framework for the opening of the telecommunications sector in the EU to full competition. The other key elements of the framework of laws and regulations which apply to the telecommunications sector in Portugal are:

regulations, Decree Laws and legislative measures adopted by the government to implement and give effect to the Basic Law;

directives, regulations, and policies of the EU;

legislation establishing and defining the functions of the *ICP-Autoridade Nacional de Comunicações*, or ICP-ANACOM, as the Portuguese telecommunications regulator and the Ministry of Economy, or ME, as the government entity with basic responsibility for telecommunications policy in Portugal; and

ICP-ANACOM determinations issued on the basis of specific powers granted by specific legislation.

The Basic Law covers both public switched fixed line telephone services and related infrastructure and establishes the legislative framework for the transition to a fully competitive telecommunications sector in Portugal. It also requires the Portuguese government to ensure that a basic telecommunications network exists and basic telecommunications services are provided on a universal basis in Portugal. Through Decree Law 381-A/97 of December 30, amended by Decree Law 92/99 of March 23, it was established that entities other than the concessionaire (PT) can provide telecommunications networks and services of public use if they obtain a license from or register with the Portuguese telecommunications regulator, and the services are to be provided in accordance with the terms of specific regulations to be enacted at a later time.

For that purpose, the government enacted Decree Law 290-A/99 of July 30, 1999, amended by Decree Law 249/2001 of September 21, 2001, which approved the regulation for the operation of public telecommunication networks, and Decree Law 290-B/99 of July 30, 1999, amended by Decree Law 133/2002 of May 14, which approved the regulation for the operation of telecommunication services of public use, that implemented, respectively, EU Directive 97/51/CE and EU Directive 98/10/CE.

These regulations specify in general terms the obligations of operators and service providers concerning their users, in particular on issues such as mandatory publicly available information concerning their offers, prior notification in case of suspension or cancellation of offers and contractual content.

In addition, through Decree Law 474/99 of November 8, amended by Law 95/2001 of August 20 and Decree Law 133/2002 of May 14, the government enacted regulation on the operation of the fixed telephone services. This regulation establishes, among other things, the rights of users and subscribers concerning, for example, itemized billing, access to emergency and directory services, public pay phones, communications secrecy, mandatory publicly available information on commercial offers, notification of technical specifications, conditions for refusal, suspension or restriction of the service, contracts (mandatory clauses and approval of adhesion contracts by ICP-ANACOM), invoice details and dispute resolution mechanisms.

The Basic Law imposes on PT, as the operator of the basic telecommunications network, an obligation to permit non-discriminatory access to its network by other network operators and service providers. It also prohibits unfair competitive acts and abuse of a dominant position by a network operator or service provider.

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On April 24, 2002, the EU published EU Directive 21/2002 (framework directive) and three other specific Directives which set forth significant changes to (i) authorizations of electronic communications networks (EU Directive 2002/20); (ii) access to, and interconnection of, electronic communications networks and associated facilities (EU Directive 2002/19); and (iii) universal services and users rights relating electronic communication networks and services (EU Directive 2002/22). EU members will have fifteen months from the publication date to implement such EU Directives through national laws.

### **The Portuguese regulator**

Although the Ministry of Economy retains basic responsibility for telecommunications policy in Portugal, ICP-ANACOM, acting under new statues approved by Decree Law 309/2001 of December 7, 2001, is allowed to act with great autonomy and is entrusted with a wide range of responsibilities regarding the regulation, supervision and representation of the telecommunications sector.

### **Licensing and registration**

The EU Licensing Directive prohibits any limitation on the number of new entrants in telecommunications markets, except as required to ensure an efficient use of radio frequencies. It gives priority to general authorizations as opposed to licensing of particular activities. However, it permits national regulatory authorities to decide in which case licenses should be required for particular activities.

The Portuguese government approved Decree Law 381-A/97 of December 30, amended by Decree Law 92/99 of March 23, which implements the EU Licensing Directive. Licenses are granted for a 15 year period and renewed for periods of 15 years upon request, and separate licenses are required in order to (i) provide public fixed telephone services, (ii) establish and/or provide public telecommunications networks, (iii) establish networks or provide services which require the granting of frequencies, or (iv) conduct operations where the operator is subject to obligations concerning universal service provisions, open network provisions or interconnection duties that derive from the holding of a significant market share.

The application for a license involving the use of specified frequencies for which the full availability procedure does not apply in accordance with the annual plan that is issued by ICP-ANACOM must be preceded by a public tender (which has occurred for mobile services and fixed wireless access systems).

### **Pricing and fees**

Telecommunications operators in Portugal other than PT are free to establish the prices for their services. PT entered into a pricing convention with ICP-ANACOM and the DGCC, the Portuguese commerce and competition agency, which established price caps on PT's prices for fixed telephone services (i.e., installation charges, line rental fees and prices for domestic and international telephone calls), leased lines and telex. Prices must be transparent, cost oriented and non-discriminatory and must be published in the Official Gazette.

Operators and service providers must pay administrative fees to ICP-ANACOM, established by the Ministry of Economy. Operators of telecommunications networks and telephone service providers pay an annual fee of approximately 10,000 per license and 7,500 per registered operator. Fees are also due in respect of registrations and issuing of licenses, changes to registrations and licenses, substitution of registrations or licenses in the event of loss and renewal of licenses. The use of frequencies requires the payment of radioelectric fees which are established and published on the same basis.

### **Interconnection**

Interconnection regulation is specifically addressed by Decree Law 415/98, implementing directive EC/97/33, which contains the rights and obligations of different categories of operators and service providers and grants ICP-ANACOM a wide range of powers to intervene in dispute resolution or by its own initiative and to fix ex-ante conditions, in particular where operators with significant market power are involved.

That Decree Law imposes on these entities specific obligations concerning the cost orientation principles for their interconnection tariffs and the publication of Reference Interconnection Offers which are subject to specified minimum elements defined by ICP-ANACOM. ICP-ANACOM annually fixes the interconnection tariffs and the Reference Interconnection Offers, which, among other things, establishes a general obligation for voile telephone operators to provide carrier pre-selection and number portability facilities. By decisions of ICP-ANACOM and the Portuguese government, carrier pre-selection was implemented on July 1, 2000, and number portability was implemented as of June 30, 2001.

**National telecommunication strategy**

According to the Portuguese Plans approved by the Portuguese Parliament for the four year period 2003/2006, it is intended to improve the telecommunication sector's technological progress and to promote an independent regulator furnishing it with means to prevent all obstacles to a fully open and competitive market.

## **Internet**

At present, there is limited Portuguese and EU legislation specifically covering the provision of Internet services, although there are laws and regulations relating to certain specific aspects of Internet activities, including the use of domain names, digital signatures, electronic invoices and data protection. In addition, the EU adopted what is known as the E-Commerce Directive, which sets out basic principles for regulating electronic activities in the EU. There are also a number of pending legislative and regulatory proposals in Portugal and in the EU.

Decree Law 381-A/97 of December 30, 1997, establishes the registration procedure followed by operators that must register the domain names they intend to use in their Internet activities. According to a decision by ICP-ANACOM, Internet Service Providers, or ISPs, can determine fees charged to their customers and pay a fixed charge to PT.

Internet advertising activities are subject to the relevant restrictions of the Portuguese Advertising Code and to Portuguese legislation applicable to home advertising. In addition, sales through the Internet can be considered a form of retail sales and subject to Decree Law 143/2001 of April 26, 2001, pursuant to which a consumer has the right to cancel a contract within 14 business days to 3 months, depending on the extent to which the seller has complied with the information requirements established by this decree law.

On June 8, 2000, in order to ensure the free circulation of electronically provided services, including commerce between Member States, the EU adopted the E-Commerce Directive. This Directive sets out two main principles: services electronically provided by a ISP established within a Member State are required to comply with the legal requirements of such Member State (principle of country of origin); and any Member State may not, as a rule, restrict the electronic services provided from another Member State (principle of mutual recognition). The implementation of this Directive in Portugal is pending.

On December 21, 1998, the EU approved a plan to promote safer use of the Internet by combating illegal and harmful content on global networks. While some member countries have adopted the Action Plan, to date Portugal has not.

It is also possible that cookies, or pieces of electronic information used to track demographic information and to target advertising, may become subject to increased levels of legislation limiting or prohibiting their use.

In addition, because of the global nature of the Internet, our Internet activities may be deemed subject to the laws or regulations of other countries.

## **Item 5. *Operating and Financial Review and Prospects***

*The following discussion should be read in conjunction with our consolidated financial statements and other financial data, including the related notes, found elsewhere in this annual report.*

**OVERVIEW**

Our principal business is the generation and distribution of electricity in Portugal. The primary factors affecting our operating performance are:

the level of demand for electricity in Portugal;

the tariffs that we are permitted to charge for electricity, which are governed by regulation; and

our level of operating costs, which consist primarily of depreciation and amortization, fuel costs and costs of purchased electricity, and wages and salaries.

The level of demand for electricity in Portugal is directly related to the general level of economic activity in the country. During the last decade, Portugal has experienced a stronger rate of economic growth than many other EU Member States. From 1992 through 2002, Portugal's real gross domestic product grew at an average annual rate of 2.6%, as compared with an average of 2.1% for all EU Member States. Portugal, like other European countries, was affected by recession from 1992 through 1994. Since 1996, however, the Portuguese economy has recovered and growth in Portugal's gross domestic product has exceeded the EU average. The structure of the economy has been undergoing significant changes, as higher value-added sectors, such as manufacturing and services, have gained in relative importance compared to lower value-added sectors, such as agriculture.

From the 1990s, the policy of successive governments has been to remove barriers to trade, privatize state-owned companies and liberalize key economic sectors, such as telecommunications, transportation and energy and power. Prior to 1988, we had a nearly complete monopoly of the electricity generation, transmission and distribution business in Portugal. Since 1988, however, competition has increased in the generation business and is expected to continue to do so during the next few years as the EU competition policy is implemented. In 1999, the regulator implemented measures to encourage competition in the distribution of electricity in Portugal. To learn more about these measures, you should read Item 4. Information on the Company Portugal Competition.

In late 2000, the Portuguese government purchased a 70% interest in REN from us in connection with its October 2000 offering of our ordinary shares. The requirements for this transaction were established by decree law. The decree law concerning the purchase of REN's share capital by the government requires that the majority of REN's share capital must be held by the Portuguese government. According to the decree law, the decision of the government was motivated by its wish to retain ownership in and management control of REN, which would otherwise have been reduced as a result of the October 2000 offering. The decision was based on REN's strategic national importance and is a part of the government's reorganization of the Public Electricity System in accordance with the European trend towards greater liberalization and aimed at creating a single European electricity market. The decree law separates the company managing the national grid from generation and distribution companies, which the government in the decree law stated is the most suitable model of operation and would bring greater transparency and competition to the electricity sector. In connection with the government's purchase, in November 2000, we received an extraordinary dividend distribution from REN in the amount of approximately 392.6 million, all of REN's debt to us was repaid in an amount equal to approximately 106.2 million and the government paid us an aggregate consideration of approximately 477.4 million for a 70% interest in REN. The decree law permits us to purchase the sites of the power plants used in the Binding Sector in the event REN chooses not to use such sites and plants at the conclusion of the applicable contract for the expansion of the Binding Sector, thereby permitting us to continue to operate the plant in the Non-Binding Sector. The decree law also provides that, in the event we sell our remaining shares in REN, the government will have the first right to acquire these shares. Currently, our interest in REN is accounted for under the equity method of accounting.

The reduction of the Portuguese government's ownership to less than a majority interest in our shares after the October 2000 offering and the reduction of our ownership interest to less than a majority interest in REN's shares triggered provisions in some of our debt agreements that provide specified remedies for creditors. The reduction of the Portuguese government's ownership to less than a majority interest in our shares triggered provisions in two of our domestic bond issues that permitted bondholders to seek our redemption of the bonds. Under one of these bond issues, a provision was triggered giving bondholders the right to call a meeting of bondholders for the purpose of proposing modifications to the terms of the bond. A meeting was called and, because we did not accept the modifications proposed, bondholders had the right to, within 30 days, require redemption of their bonds. As a result, we were required to redeem 125,000,000 of this 150,000,000 issue at par on July 18, 2001. With respect to the other domestic bond issue, a provision was triggered giving bondholders the right to redeem their bonds at any time, and as of June 3, 2002 we had redeemed 212,979,736 of this 250,000,000 issue at par. We have effectively refinanced the portion of our debt represented by these domestic bonds by issuing a bond in March 2001 under our MTN program, as discussed below in Liquidity and Capital Resources. In 2000, our MTN program was amended to prevent the REN transaction from triggering any remedies for bondholders of the 1,000,000,000 issue maturing in 2009. As a result of this amendment, the annual interest rate of this issue increased from 6.00% to 6.40%. We obtained or reached agreement on amendments to or waivers of applicable provisions in all of our other debt agreements. Management believes that we have available resources that are more than adequate to make these redemptions and increased interest payments. See Liquidity and Capital Resources below.





Until the end of 1998, tariffs were fixed annually by convention, negotiated between us and DGCC. Tariffs were based on total estimated costs for the relevant year assuming average hydrological conditions. These tariffs were not specifically linked to an inflation-indexed formula. From 1995 through 1997, tariffs decreased in nominal terms by 2.8% and in real terms, adjusted for inflation, by 7.8%. On September 15, 1998, the new tariff regime, which became effective from 1999 onward was adopted by the regulator and on December 4, 1998, the regulator announced a new policy for the years 1999, 2000 and 2001. Under this regime, tariffs are set by the regulator pursuant to a periodic registration of regulatory parameters. In 1999, high, medium and low voltage tariffs declined in real terms by 12.8%, 12.8% and 7.5%, respectively, from 1998 levels. For 2000, in nominal terms, tariffs for all voltage levels declined by 0.6% from the 1999 levels. For 2001, in nominal terms, tariffs for all voltage levels increased, on average, by 1.2% from the 2001 levels. In November 2001, the regulator published the regulatory framework for the 2002-2004 regulatory period. For 2002, in nominal terms, tariffs increased across all voltage levels by an average of 2.2% from the 2001 levels. In real terms, adjusted for inflation, both high and medium voltage tariffs have declined by an average of 6.0% over the period 1998 to 2003. The tariffs for low voltage customers have also declined by an average of approximately 3.3% over the same period. For 2003, in nominal terms, tariffs increased across all voltage levels by an average of 2.8% from the 2002 levels. To learn more about these tariffs, you should read [Item 4. Information on the Company Portugal Tariffs](#) and [Regulation Portugal](#).

Our operating income and net income in 2002 decreased by 3.7% and 25.6%, respectively, from 2001. In 2001, operating income and net income decreased by 7.0% and 17.9%, respectively, from 2000.

The decrease in 2002 operating income is partially due to the effects of lower electricity distribution tariffs in Portugal which affected the profitability of EDPD, following the start of the 2002-2004 tariff period, and the combination of lower consumption in areas served by Bandeirante, Escelsa and Enersul, following the rationing enforced by the Brazilian government, and a severe devaluation of the real against the euro. A devaluation in the real negatively affects our consolidated results as the results of our Brazilian companies are translated into euros in our consolidated results. The decrease in operating income in 2001 is partially due to the sale of REN in 2000, as REN was no longer fully consolidated in 2001 and we were no longer able to benefit from its positive operating results in our consolidated accounts.

The decrease in 2002 net income was influenced by the decrease in operating income as explained above and to a great extent due to the one-time write-off of our investment in ONI Way in connection with the divestment of ONI's UMTS business. In 2001, the decrease in net income is partially due to the sale of REN in 2000, as a result of which we had extraordinary one-time gains in that year.

Looking forward, we do not expect one-time items to materially affect our results in 2003. In addition, in 2003 we will not have the capital expenditures previously required for ONI's development of a UMTS network. Finally, although we will continue to experience lower tariffs in our distribution business, we are optimistic that the regulator may allow us to include certain significant restructuring costs of such business in our regulatory cost base.

Our costs are influenced by inflationary trends, fluctuations in fuel costs and hydrological conditions. In years with less favorable hydrological conditions, or drier conditions, use of thermal power can increase significantly, causing our spending on fuel to increase substantially. In years with more favorable hydrological conditions, or wetter conditions, the opposite result occurs. To smooth the impact on earnings and customer prices, the hydro account was established. The hydro account is discussed below in [2001 compared with 2000 Hydrological correction](#) and in [notes 3\(l\) and 18 to the consolidated financial statements](#).

Our income statement is prepared on the total-cost basis typically used by major Portuguese companies. Costs related to our personnel and materials incurred for assets under construction that are capitalized as part of fixed assets and will be amortized in future periods are classified in the income statement as expenses, and a corresponding amount is credited to [Own work capitalized](#).

**CRITICAL ACCOUNTING POLICIES**

Our reported financial condition and results of operations are sensitive to accounting methods, assumptions and estimates that underline the preparation of our consolidated financial statements. Our critical accounting policies,

the judgments and other uncertainties affecting application of those policies and the sensitivity of reported results to changes in conditions and assumptions are factors to be considered in reviewing our consolidated financial statements and the discussions below in Results of Operations.

The preparation of our consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, related disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions.

We believe that the following policies, certain of which require assumptions and estimates, have a particularly important impact on the preparation of the consolidated financial statements.

#### **Fixed Assets**

Fixed assets are presented at historical cost except for items acquired before 1992, at revalued amounts. Historical costs include, except for assets constructed prior to 1995, finance charges and foreign exchange differences. They also include direct internal costs and general and administrative overheads.

PPAs exist between us and REN, as the sole buyer for the Binding Sector, for the majority of the generation assets economic lives. As permitted under Portuguese GAAP these assets are classified as assets in our financial statements. Additionally, REN has recorded the minimum contracted payments made to producers in the Binding Sector in connection with PPAs as an expense of the respective periods. In accordance with U.S. GAAP, these PPAs between REN and CPPE are accounted for as capital lease receivables for CPPE and capital lease obligations for REN. Prior to July 1, 2000, the effects of the PPAs between the two related companies were eliminated in consolidation.

The carrying value of all generation and distribution assets have been approved by the regulator for the purposes of accepting amortization as part of the new tariffs.

Depreciation is calculated on the straight-line basis at specific rates accepted by the tax authorities for us or for general purposes business, which reflect the economic useful lives of each category of fixed assets.

Payments received from customers and subsidies granted for the construction of fixed assets are presented as deferred revenue and amortized to income over a period equivalent to that of the related items.

Tangible and intangible fixed assets, net of relevant deferred revenue, are reviewed for impairment if events or changes in circumstances indicate that the carrying amount may not be recoverable. Goodwill is reviewed for impairment at the end of the first complete financial year

after the relevant acquisition, and thereafter if events or changes in circumstances indicate that the carrying amount may not be recoverable. When conducting a review for impairment consideration is taken of the regulated and contractual aspects of our operations.

Uncertainties exist when assessing the recoverability of the carrying amounts of the tangible and intangible fixed assets. The assessment is made based on the best information available regarding the anticipated continuity of the concession or other contractual arrangements in place.

### **Investments**

Investments included interests in associated companies that are accounted for under the equity method and other investments, including strategic investments, which have been considered non trading and marked to market.

The most significant uncertainty relating to the valuation of these investments is dependence on the continuation of those strategic alliances, which has been assessed using the best information available.

### **Employee retirement benefits**

We have a commitment to complement retirement and survivors' pensions of the employees subject to the ACT (collective labor agreement) to the extent that these are not covered by the Portuguese government's social security plans. Those employees have the option of taking early retirement, subject to certain conditions relating to pre-defined age and length of service requirements being met. Retired employees retain the right to medical assistance based upon similar conditions as those pertaining to employees still on the active payroll. The entitlement to these benefits is usually based on the employee remaining in service up to retirement age. The expected costs of these benefits are accrued over the period of employment, using valuations performed by independent qualified actuaries. The assets of these plans are held in separate trustee-administered funds. The pension plans are generally funded by payments from the EDP Group companies, taking into account the recommendations of the independent qualified actuaries.

There are numerous uncertainties inherent in estimating employee retirement benefits and assumptions that are valid at the time of estimation may change significantly when new information becomes available. Fluctuations in the rates and other assumptions used for the actuarial valuations may, ultimately, result in actuarial gains or losses that, in accordance with the relevant accounting criteria, will be recognized in the financial statements.

### **Deferred income taxes**

Deferred income taxes, recoverable and payable, have been included in our balance sheet as deferred tax assets and liabilities for the expected future tax consequences attributable to differences between the financial statement carrying amount of assets and liabilities and their tax bases.

There are certain uncertainties inherent in estimating deferred income taxes, namely that of the relevant companies of the EDP Group obtaining taxable profit in the periods in which such differences revert in the income statement.

### **Revenue recognition**

#### *General*

Revenues from electricity sales are recognized when earned. Billings for electricity are made on a monthly basis throughout the month. Monthly billings are based on actual meter readings or an estimated consumption based on the historical data of each consumer. Unbilled revenues from the billing cycle date to the end of the month are accrued based on the average recent consumption.

In Portugal, the tariffs of electrical energy supplied to clients in the Binding Sector are determined by the regulator. Tariffs for clients outside the Binding Sector are negotiated and contracted on an individual basis. Tariffs in the electricity distribution business are subject to a price cap mechanism. These earnings are subject to a gross profit restriction and after being subject to confirmation or approval by the regulator are to be

adjusted in future periods. We estimate amounts that are subject to future tariff revenue or adjustments and defer the recognition of the revenues until future periods. These amounts are recorded as accrued expense in the accompanying balance sheet.

*Hydrological correction account*

The hydrological correction account constitutes a legally mandated mechanism for compensating the variable costs of electric-power generation. In years with unfavorable hydrological conditions, thermal generation increases and, consequently, expenditures on fuel and electricity imports increase substantially. In years with abundant rainfall, the opposite occurs. We cannot modify the tariffs we charge to take into account the changes in variable costs incurred as a result of hydrological conditions. In this context and with a view to avoiding major distortions in operating results, due to favorable or unfavorable hydrological conditions, the hydrological correction account is adjusted upwards or downwards based upon average hydrological conditions. Estimation of future hydrological conditions is based on the best information currently available. Changes in such estimates will result in changes to the hydrological correction account in future financial periods.

The annual changes in the hydrological correction account consist of the following:

The difference between the economic costs of generating electricity and the economic reference costs (prior to June 2000 this difference was charged to the income statement) is charged to REN for inclusion in the Binding Sector costs.

A financial charge associated with the hydrological correction account's accumulated balance.

An adjustment, which may be either an income or an expense item, corresponding to the amount necessary to make the expected balance, in a time scale of 10 years, equal to an adequate reference level.

The amount of the accumulated balance and the movements during the year are approved by the Portuguese government on an annual basis. Under U.S. GAAP, the effect of future changes in hydrological conditions is viewed as a general business risk and the resulting adjustments are therefore reversed.

#### **Deferred income taxes**

Deferred income taxes, recoverable and payable, have been included in our consolidated financial statements under Other assets and Deferred revenue and other liabilities, in respect to differences in value of assets and liabilities for accounting and taxes basis.

There are certain uncertainties inherent in estimating deferred income taxes namely that of the relevant companies of the EDP Group obtaining taxable profit in the periods in which such differences revert in the income statement.

### **RESULTS OF OPERATIONS**

Beginning in January 2001, we consolidated the results of Bandeirante with our results. In 2002, following the conclusion of our acquisition of a 40% stake in Hidrocantábrico, we proportionally consolidated the results of Hidrocantábrico from June through December. On October 10, 2002, we gained control over Brazilian distribution companies Escelsa and Enersul. As a result, we consolidated the results of Escelsa and Enersul from October through December 2002. EDP currently controls 54.74% of Escelsa and 35.69% of Enersul. In December 2002, we decided to discontinue ONI Way's UMTS operations, which was reflected by a write-off of ONI Way and the subsequent increase in Other non-operating expenses (income) due to the creation of a non-recurring provision of 280.9 million. The following table sets forth our results of operations for 2000, 2001 and 2002 as a percentage of total revenues. For more information concerning our revenues, see our consolidated financial statements.



Year ended December 31,

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|  | <b>2000</b> | <b>2001</b> | <b>2002</b> |
|--|-------------|-------------|-------------|
| Total revenues                               | 100%        | 100%        | 100%        |
| Raw materials and consumables                | 45.0        | 54.5        | 57.7        |
| Personnel costs                              | 11.4        | 10.5        | 9.8         |
| Depreciation and amortization                | 16.0        | 11.8        | 11.6        |
| Other external supplies and services         | 9.6         | 11.5        | 10.6        |
| Own work capitalized                         | (6.0)       | (4.1)       | (3.8)       |
| Concession and power-generation rental costs | 3.4         | 2.6         | 2.5         |
| Provisions                                   | 2.7         | 2.1         | 1.6         |
| Hydrological correction                      | (0.9)       | 0.0         | 0.0         |
| Other operating expenses (income), net       | (0.1)       | (0.8)       | (0.1)       |
| Total operating costs and expenses           | 81.2        | 88.1        | 89.8        |
| Operating income                             | 18.8        | 11.9        | 10.2        |
| Net interest expense                         | 4.5         | 3.6         | 3.5         |
| Other non-operating expenses (income), net   | (7.5)       | (2.2)       | 2.2         |
| Income before taxes                          | 21.8        | 10.5        | 4.5         |
| Consolidated net income                      | 14.3        | 8.0         | 5.2         |

**2002 COMPARED WITH 2001****Revenues**

Our total revenues in 2002 increased by 13% to 6,386.6 million from 5,650.4 million in 2001, due primarily to the consolidation of Hidroantábrico, Escelsa and Enersul for the first time in 2002. Electricity sales represented approximately 92.0% of our total revenues in 2002 compared with 92.1% of total revenues in 2001. Our electricity sales in 2002 increased by 13.0% to 5,876.2 million from 5,201.3 million in 2001. Electricity sales volume grew in 2002 by 1.3% to 35,973 GWh from 35,505 GWh in 2001, primarily due to increased low voltage consumption.

Beginning with the new tariff regime that became effective in 1999, tariffs are fixed by the regulator in advance of each year based in part on estimated data for variables such as demand and cost. If there are differences between the estimated data and the actual data during a period, an adjustment will be made to the tariff in a subsequent period to account for these differences. Our revenues include tariff adjustments that we calculate to estimate the portion of our revenues from electricity sales that should be deferred to a subsequent period to take account of data that the regulator will consider in setting tariffs. If actual costs and demand deviate from the estimated data, the revenues REN receives from electricity sales to EDPD will vary from the revenues allowable under the tariff regime. In the event actual revenues exceed the revenue level allowable, such as due to higher than estimated demand, REN is obligated, two years later, to compensate the Public Electricity System for the excess. This compensation takes the form of a reduction in the amounts charged by REN to distributors such as EDPD in the Public Electricity System. By contrast, if REN's actual revenues are less than the revenue level allowable, such as due to higher than estimated costs, REN will, two years later, be able to recover the shortfall through an increase in the amounts charged by REN to distributors such as EDPD in the Public Electricity System. Any reduction or increase received by or charged to EDPD is fully passed through to the customer tariffs in the Binding Sector. There is also a tariff adjustment in respect of 1999, 2000 and 2001 reflecting the profit sharing mechanism in distribution relating to EDPD's selling activity, which is reflected in the customer tariffs two years later. For the 2002-2004 regulatory period the profit sharing mechanism was eliminated. None of the accounting entries associated with tariff adjustments have an impact on our cash flow. For more information on the tariff adjustments, you should read note 3 to the consolidated financial statements.

In 2002, the aggregate tariff adjustment was 70.5 million. This figure includes an adjustment of 50 million relating to the application of the new tariff regulation in 2002 and an adjustment of 20.5 million relating to the 2000 tariff adjustment reposition. In 2001, the aggregate tariff adjustment was 42.2 million. This figure includes an adjustment of 35.5 million relating to the sharing of EDPD's 1999 profit that is reflected in 2001 tariffs, and an adjustment of 6.7 million relating to a partial recovery of EDPD's 2001 profit as actual revenues were below those estimated in the fixing of 2001 tariffs.

Our other sales activities, including sales of steam, ash, information technology products, telecommunications equipment, fixed property and sundry materials, generated revenues of 112.0 million in 2002 compared with 98.0 million in 2001, due primarily to an increased contribution of revenues from IT products, which benefited from the continued involvement of the Edinfor Group companies in the development and installation of SAP-related projects. Our revenues from services in 2002 increased to 398.4 million from 351.1 million in 2001. Activities generating these revenues include electricity-related services, services related to information technology systems, telecommunications, engineering, laboratory services, training, medical assistance, consulting, multi-utility services and other services. The primary reason for the increase in revenues from services in 2002 was the increased contribution of our telecommunication subsidiaries due to a significant growth of both voice and data services that benefited from the gradual liberalization of short-distance calls (local traffic) in Portugal and from a significant growth in ISP traffic, respectively.

**Operating costs and expenses**

Our total operating costs and expenses amounted to 5,737.9 million in 2002 compared with 4,976.8 million in 2001 due primarily to the consolidation of Hidrocantábrico, Escelsa and Enersul for the first time in 2002. As a percentage of revenues, total operating costs and expenses increased to 89.8% in 2002 from 88.1% in 2001 due primarily to the increased costs of purchased electricity and fuel.

*Raw Materials and Consumables.* The major components of our raw materials and consumables are the costs of purchased electricity, fuel costs and costs of other materials. Our raw materials and consumables costs in 2002 increased by 19.8% to 3,687.1 million from 3,078.9 million in 2001, due primarily to increased costs of purchased electricity.

Our costs of purchased electricity include purchases from REN as well as purchases from private generators and small independent producers. These costs in 2002 increased 19.1% to 3,005.4 million from 2,524.3 million in 2001 due to the initial consolidation of Hidrocantábrico, Escelsa and Enersul, a growth in consumption and an increase of the tariff charged on power purchased from REN. For more information on these purchases of electricity, you should read Item 4. Information on the Company Portugal Electricity System Overview The Independent Electricity System and Competition.

Our fuel costs in 2002 increased by 23.3% to 468.0 million from 379.6 million in 2001, reflecting, on the one hand, the general rise in fuel prices, the effects of which were felt to a lesser extent in 2001, and on the other hand, higher fuel utilization associated with a greater use of thermal generation in what was a dry year. Consequently, there was an increase in fuel-oil (which is more expensive than coal) in the fuel consumption mix. See Hydrological correction below for a discussion of accounting for the impact on fuel costs of the variability of hydrological conditions.

The major components of our costs for other materials are the costs of cables, meters, transformers and other goods for resale. These costs increased in 2002 to 127.8 million from 114.2 million in 2001. A majority of these costs are credited to Own work capitalized and the remainder is applied to maintenance of the transmission and distribution networks. See Own work capitalized.

Raw materials and consumables also include other, which increased in 2002 to 85.9 million from 60.8 million in 2001, partially reflecting the initial consolidation of Hidrocantábrico and, to a lesser extent, Escelsa and Enersul.

*Personnel costs.* Personnel costs, which consist mainly of wages and salaries and social security and pension fund contributions, increased 5.5% in 2002 to 624.8 million from 592.0 million in 2001. This increase was primarily due to the inclusion of seven months of Hidrocantábrico's personnel costs.

*Depreciation and amortization.* Depreciation and amortization in 2002 increased to 739.5 million from 664.7 million in 2001.

*Other external supplies and services.* These costs consist of supplies and services provided to us by external suppliers, and include external maintenance and repairs, specialized services, communication, rents, insurance and other services. External maintenance and repairs consists of work on our power plants, substations and transmission and distribution networks that we subcontracted to others. Other specialized services involve technical services such as auditing, legal, consulting, and revenue collection. Communication services include telecommunications, postal, delivery and courier services. The cost of these external supplies and services in 2002 increased by 3.7% to 675.1 million from 651.2 million in 2001, due primarily to the inclusion of seven months of Hidrocantábrico's other external supplies and

services. This increase would have been higher if not for the positive results of the cost cutting program implemented at the beginning of 2002.

*Own work capitalized.* Own work capitalized consists of amounts that correspond to costs related to our costs of personnel and materials and other external supplies and services incurred for projects under construction that are capitalized and will be amortized in future periods. These amounts generally consist of consumption of materials, direct internal costs, general administrative overheads and finance charges. Own work capitalized in 2002 increased to 241.8 million from 232.5 million in 2001. A table setting forth the components of Own work capitalized for the past three years is provided in note 24 to the consolidated financial statements.

*Concession and power-generation rental costs.* These costs, which consist mainly of rent paid to municipalities for concessions to distribute low-voltage electricity, increased in 2002 to 158.2 million from 149.1 million in

2001. The amount of rent payable to municipalities for concessions is established by government regulation and is based on the amount of low-voltage electricity consumed in the respective municipal areas each year.

*Hydrological correction.* The hydro account is an accounting mechanism we established pursuant to Portuguese law. The purpose of this account is to smooth the short-term effect on our earnings and customer prices that results from changes in hydrological conditions. In years with favorable hydrological conditions, there is an increase in hydroelectric generation and a decrease in variable costs of thermal generation. Conversely, in years with unfavorable hydrological conditions there is a decrease in hydroelectric generation and our expenditures on fuel and electricity imports increase substantially and the variable costs of thermal generation increase accordingly. We cannot modify the tariff we charge to take into account the changes in variable costs incurred due to hydrological conditions. In order to reduce major distortions in operating results due to changing hydrological conditions, the hydro account is reinforced in years of favorable hydrological conditions with a corresponding operating charge in the income statement, thereby eliminating the overstatement of its net income. In years of less favorable hydrological conditions we use the hydro account (with a corresponding credit to operating income) so as to reduce the negative impact on our net income arising from the increased expenditures on fuel and electricity imports. These upward or downward adjustments to the hydro account are made based upon the economic reference cost calculated on the basis of an average hydrological year.

Prior to REN's sale, all of the movements relating to the hydro account were considered as being of a non-cash nature on the grounds that they were made (in accounting terms) in our consolidated financial statements as an expense recorded to the hydro account in favorable hydrological years and as an income recorded to the hydro account in less favorable hydrological years. Following the sale of REN, cash movements now take place between us and REN for reinforcing or drawing against the hydro account which, after REN's separation, is still carried on our balance sheet. In 2002 the hydro account was decreased by 63.4 million, which decrease includes 76.1 million charged by REN. In 2001 the hydro account increased by 22 million. This difference was primarily a result of 2002 having been a dry year (hydro coefficient of 0.76), while 2001 was a wet year with a (hydro coefficient of 1.19). To learn more about the effect of hydrological conditions on us, you should read Item 4. Information on the Company Portugal Generation.

The Portuguese government determines the level of reference of the hydro account based upon the least favorable period of hydrological conditions during the previous 30 years. In doing so, the government determines an amount expected to be adequate to withstand unfavorable hydrological conditions that may occur in the future. The government has determined that the hydro account shall not exceed the level of reference. The level of reference of the hydro account was 387.5 million for 2002, 2001 and 2000. In 2002, the hydro account did not exceed the reference level, hence we did not record the excess in non-operating income in 2002. In 2001, the hydro account exceeded the reference level, causing a surplus of 47.5 million that was recorded by us as non-operating income in 2001.

We record as an expense each year deemed interest credited to the hydro account corresponding to the average interest rate paid on our euro-denominated borrowings for the applicable year. The method of accounting for this deemed interest did not change with the sale of REN. For more information on the hydro account, you should read notes 3 and 18 to our consolidated financial statements.

*Other operating expenses, net.* These expenses include provision charges, taxes other than income taxes and other operating income (net). These expenses increased in 2002 to 95.0 million from 73.5 million in 2001, primarily due to a decrease in supplementary gains. Supplementary gains consist of reimbursements received for out-of-pocket

expenses incurred and charged to third parties related to information technology and telecommunications services. For more information on these expenses, you should read notes 3n., 25 and 26 to the consolidated financial statements.

We systematically record the provision for doubtful accounts receivable from third parties and municipalities based on the age of the receivables and our collection history. We do not record a provision with respect to accounts receivable from other public entities since historically we have not experienced a problem in collecting these receivables. Accounts receivable are written off when a customer is declared bankrupt by a court of law because we receive the tax benefit of the write-off only when the customer is actually declared bankrupt. Consequently, we have



a significant amount of accounts receivable that are fully provided for but have not been written-off. For more information on this provision, you should read note 33 to the consolidated financial statements.

Until the end of 1999, increases in provisions for doubtful accounts were reflected in our consolidated statements of income in the line item Provisions and were included in the determination of operating income while decreases were included in the line item Other non-operating expenses (income), net below the operating income. Beginning in 2000, adjustments are made to the line item Provisions in the balance sheet. The net effect in the income statement relating to doubtful accounts in 2002 amounted to a gain of 4.9 million compared to a loss of 20.5 million in 2001 due to the recovery of doubtful in 2002. These line items are discussed below and in notes 7, 25 and 29 to the consolidated financial statements.

### **Operating income**

As a result of the factors discussed above, our operating income in 2002 decreased by 3.7% to 648.7 million from 673.5 million in 2001. In our core electricity business in Portugal our operating income in 2002 decreased 9.0% from 706.2 million in 2001.

### **Other expenses (income)**

We recorded total other expenses in 2002 of 361.8 million compared with total other expenses of 79.3 million in 2001, due to increased debt and related increased debt costs, and an increase in net losses from affiliates and associated companies, partly offset by a net foreign currency exchange gain.

*Net interest and related expense.* Our net interest expense consists of interest and related expenses and interest and related income. Our net interest expense increased in 2002 to 222.8 million from 205.3 million in 2001 (but decreased as a percentage of our total revenues to 3.5% in 2002 from 3.6% in 2001). This increase was primarily due to a net expense related to interest in 2002 of 283.1 million compared with 214.7 million in 2001, due primarily to an increase in our average debt level that was partially offset by the lower interest rates.

*Other non-operating expenses (income), net.* We had other non-operating expenses in 2002 of 138.9 million compared with other non-operating income of 126.0 million in 2001 primarily due to a 222.8 million net loss in 2002 related to net provisions movements. In 2001, we recorded non-operating income of 47.5 million related to the hydrological correction mechanism.

We recorded an income item in 2002 of 71.8 million, compared to 63.9 million in 2001, for the portion of depreciation due primarily to new electricity connections made in prior years that were financed largely with customer payments. We record the amount of these payments initially as deferred income and as the assets are depreciated over 30 years, a portion of the amount is taken into income and offset by a corresponding charge.

We recorded a net loss in 2002 of 222.8 million related to net provisions movements compared with a net loss of 41.1 million recorded in 2001. The net loss recorded in 2002 reflects the write off of ONI Way, following the discontinuation of the UMTS project that ONI Way was developing. For more information on net movement of provisions you should read note 25 to the consolidated financial statements.

As the primary supplier of low voltage electricity in Portugal, we have in the past been obliged to provide electricity to municipalities for street lighting and other public buildings even in situations where the recipient municipalities were not paying their bills on a timely basis. Although we have not encountered significant collection problems in recent years, prior to 1988 collection problems were encountered with certain municipalities and we still have on our books receivables from municipalities related to electricity and other services provided prior to 1988. These receivables consist of amounts receivable from a small number of municipalities that have not signed a concession agreement with us and with which a payment plan has not been agreed and amounts receivable from municipalities that have signed a concession agreement and have agreed to a deferred payment plan.

### Provision for income taxes

Our provision for income taxes is determined on the basis of the estimated taxable income for the period. Income taxes provided for in 2002 were 171.7 million compared with 203.0 million in 2001. The reference income tax rate in Portugal was 30% in 2002, compared with 32% and 32% in 2001 and 2000, respectively. In addition, a municipal surcharge of up to 10% of the base rate is typically levied by the municipality in which income is earned. Our effective tax rate is different from the reference income tax in Portugal each year due to permanent differences arising from the amortization of the goodwill/concession rights that are not deductible for income tax purposes. Our effective tax rate was 59.9% in 2002 compared with 34.2% in 2001, primarily due to the fact that the negative impact of the ONI Way write-off following the discontinuation of its UMTS operations was not tax deductible.

### Net income

As a result of the factors discussed above, our consolidated net income for 2002 decreased 25.6% to 335.2 million from 450.8 million in 2001.

## 2001 COMPARED WITH 2000

### Revenues

Our total revenues in 2001 increased by 46.9% to 5,650.4 million from 3,846.5 million in 2000. Electricity sales represented approximately 92.1% of our total revenues in 2001 compared with 95.6% of total revenues in 2000. Our electricity sales in 2001 increased by 41.5% to 5,201.3 million from 3,675.9 million in 2000. In 2001, Bandeirante's revenues were consolidated on our income statement for the first time; without giving effect to Bandeirante, our total revenues in 2001 would have been 4,510.8. Electricity sales volume grew in 2001 by 4.2% to 35,505 GWh from 34,090 GWh in 2000, primarily due to increased low voltage consumption. Due to changes in REN's consolidation method following our sale of 70% of REN, electricity sales in 2000 reflect electricity sales made during the second half of 2000 by our production subsidiaries to REN of 599.1 million. If we do not take into account this effect, our electricity sales in 2000 would have been 3,071.9 million. Electricity sales in 2001 reflect electricity sales to REN for the full year of 1,214.1 million.

In 2001, the aggregate tariff adjustment was 42.2 million. This figure includes an adjustment of 35.5 million relating to EDPD's 1999 profit sharing mechanism and an adjustment of 6.7 million relating to a partial recovery of EDPD's 2001 profit sharing mechanism. In 2000, the aggregate tariff adjustment was (9.1) million. This figure includes a tariff adjustment of 46.9 million related to REN, an adjustment of (35.5) million related to EDPD's 1999 profit sharing mechanism (partially recovered in 2001) and an adjustment of (20.5) million related to EDPD's estimated 2000 profit sharing mechanism. The 46.9 million tariff adjustment relates to the difference between REN's actual cost of acquiring electricity in the first half of 2000 and the estimated cost assumed by the regulator for purposes of fixing transmission/distribution tariffs for 2001. Due to the effect of higher fuel prices in 2000, the estimated generating costs taken into account by the regulator in 1999, when establishing tariffs to be applied in 2000, was below that of the actual costs borne by REN on energy acquired from producers. According to the Tariff Regulation drawn up by the regulator, REN is entitled to recover this negative difference (shortfall) after two years, that is, in the tariffs for 2002. This figure also includes our estimate of remuneration to REN through June 30, 2000 for the power plant sites it owns.

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During the 1999-2001 regulatory period the supply activity of our distribution business was subject to a profit sharing mechanism whenever EDPD's profits increase more than 2% from the previous year. Under this mechanism, a prescribed percentage of the profits over and above a defined limit must be returned to customers in the form of lower tariffs two years after their occurrence. In 1998, the regulator established the tariffs for 1999 based on a consumption growth rate of 4.8%. At the end of 1999 it was established that actual growth was 1.1% above the regulator's projection, or 5.9%. This enabled EDPD to improve its profit margin on the supply activity, thereby triggering the profit sharing mechanism to be reflected in the 2001 tariffs. As part of the tariff review process that fixed the tariffs implemented in 2001, the regulator defined the amount EDPD had to return in the 2001 tariff to be (35.5) million as a result of the application of the profit sharing mechanism to 1999. This amount, already taken into consideration in the 1.2% increase in average tariffs fixed for 2001, was therefore recouped by EDPD during

the course of the 2001 through the tariffs it charged customers in the Binding Sector. In the 2000 tariff adjustment, and based on the formula used for 1999, EDPD estimated that the profit sharing mechanism relating to its supply activity (and later to be reflected in the tariff for 2002), would amount to (20.5) million, due to a higher growth in 2000 consumption than the 4.5% estimate made by the regulator in 1999 when fixing the tariff to be applied in 2000. Because the formula for profit sharing was only applied for the first time at the end of 2000, we confirmed the appropriate tariff adjustment for 1999 at that time and made tariff adjustments for 1999 and 2000 in our 2000 revenues. For the 2002-2004 regulatory period, the profit sharing mechanism was eliminated.

Our other sales activities, including sales of steam, ash, information technology products, telecommunications equipment, fixed property and sundry materials, generated revenues of 98.0 million in 2001 compared with 60.9 million in 2000, due primarily to the increased contribution of telecommunications that reflects both the consolidation for the first time in 2001 of Comunitel which we acquired in June 2001, and the impact of the liberalization of local telephone service that occurred in January 2001. Revenues from other sales also reflect the consolidation of CASE for the first time in 2001, in which we acquired a 60% stake in December 2000.

Our revenues from services in 2001 increased to 351.1 million from 109.7 million in 2000. The primary reason for the increase in revenues from services in 2001 was the contribution of our telecommunications subsidiaries sales that increased to 151.8 million in 2001 from 32 million in 2000, mainly due to the consolidation of Comunitel and to the positive impact of the liberalization of local telephone service. Revenues from services also reflect sales from activities performed for third parties by our consulting and information technology systems subsidiaries, which combined increased to 129.6 million in 2001 from 27.9 million in 2000, primarily due to the consolidation of CASE.

### **Operating costs and expenses**

Our total operating costs and expenses amounted to 4,976.8 million in 2001 compared with 3,122.1 million in 2000. As a percentage of revenues, total operating costs and expenses increased to 88.1% in 2001 from 81.2% in 2000 due primarily to a decrease of approximately 3% in the access tariffs for the use of the distribution network, the increased costs of purchased electricity and fuel, the removal of REN's operating margin in 2001 and an increase in costs relating to ONI operations.

*Raw Materials and Consumables.* Our raw materials and consumables costs in 2001 increased by 77.9% to 3,078.9 million from 1,730.7 million in 2000, due primarily to increased costs of purchased electricity.

Our costs in 2001 increased by 97.4% to 2,524.3 million from 1,278.6 million in 2000, due primarily to the costs of electricity purchases made for the full year 2001 by EDPD from REN but only during the second half of 2000 (1,258.2 million), as a consequence of the change in the consolidation method following the sale of REN in 2000. Our costs of purchased electricity also increased due to a growth in consumption of 5.0% and to the increase of the tariff charged on power purchased from REN. REN has power purchase agreements with the Tejo Energia plant at Pego and the Turbogás plant at Tapada do Outeiro ending in November 2021 and March 2023, respectively. REN must make specified monthly payments for the capacity of these plants, regardless of whether REN takes delivery of power or not. REN is also required to buy energy, as it is made available to it, from small hydroelectric producers, producers using other renewable energy sources and certain other cogenerators and autoproducers. For more information on these purchases of electricity, you should read Item 4. Information on the Company Portugal Electricity System Overview The Independent Electricity System and Competition.

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Our fuel costs in 2001 increased by 22.9% to 379.6 million from 308.9 million in 2000, due primarily to higher prices for fuel indexed to the barrel price of crude oil. This price escalation, which occurred in the early 2001, led to a significant increase in the average production cost of thermal energy. The increase in fuel prices, together with greater fuel consumption in the fourth quarter of 2001 as a result of higher thermal generation due to less favorable hydrological conditions, led to the increase in fuel costs. In addition, the Soporgen power plant operated for all of 2001, during which there was increased consumption of natural gas, compared to operation only during the second half of 2000. See

Hydrological correction below for a discussion of accounting for the impact on fuel costs of the variability of hydrological conditions.

Our costs for other materials increased in 2001 to 114.2 million from 103.0 million in 2000. A majority of these costs are credited to Own work capitalized and the remainder is applied to maintenance of the transmission and distribution networks. See Own work capitalized.

Raw materials and consumables also include other, which increased in 2001 to 60.8 million from 40.3 million in 2000, partially reflecting the consolidation of our information technology subsidiary CASE and our telecommunications subsidiary for the Spanish market, Comunitel.

*Personnel costs.* Personnel costs, increased 34.7% in 2001 to 592.0 million from 439.3 million in 2000. This increase was primarily due to the changes to the collective employment agreement and to a 4% general salary increase in 2001, as well as the consolidation of new subsidiaries such as CASE, Comunitel and Bandeirante and the exclusion of REN.

*Depreciation and amortization.* Depreciation and amortization in 2001 increased to 664.7 million from 613.6 million in 2000.

*Other external supplies and services.* The cost of external supplies and services in 2001 increased by 76.7% to 651.2 million from 368.5 million in 2000 due primarily to increased use of outsourcing, higher expenditure on repairs and maintenance works, costs associated with product marketing for ONI and interconnections and circuits rented from PT. The first time consolidation of Comunitel and CASE also contributed to the increase in other external supplies and services. This was, however, partially offset by the sale of REN.

*Own work capitalized.* Own work capitalized in 2001 increased to 232.5 million from 229.1 million in 2000. A table setting forth the components of Own work capitalized for the past three years is provided in note 24 to the consolidated financial statements.

*Concession and power-generation rental costs.* These costs, that consist mainly of rent paid to municipalities for concessions to distribute low-voltage electricity, increased in 2001 to 149.1 million from 132.6 million in 2000. The amount of rent payable to municipalities for concessions is established by government regulation and is based on the amount of low-voltage electricity consumed in the respective municipal areas each year.

*Hydrological correction.* In 2001 the hydro account was increased by 22.0 million, which increase includes 48.9 million charged to REN compared with 11.2 million charged to REN in 2000. This difference was primarily a result of favorable hydrological conditions relative to 2000. To learn more about the effect of hydrological conditions on us, you should read Item 4. Information on the Company Portugal Generation Hydroelectric plants. The level of reference of the hydro account was 387.5 million for 2001, 2000 and 1999. In 2001, the hydro account exceeded the reference level, causing a surplus of 47.5 million that was recorded by us as non-operating income in 2001. No such item was recorded in 2000.

*Other operating expenses, net.* These expenses decreased in 2001 to 73.5 million from 101.8 million in 2000, primarily due to an increase in supplementary gains from 8 million in 2000 to 40 million in 2001. Supplementary gains consist of reimbursements received for out-of-pocket expenses incurred and charged to third parties related to information technology and telecommunications services. For more information on these expenses, you should read notes 3n., 25 and 26 to the consolidated financial statements.

Until the end of 1999, increases in provisions for doubtful accounts were reflected in our consolidated statements of income in the line item Provisions and were included in the determination of operating income while decreases were included in the line item Other non-operating expenses (income), net below the operating income. Beginning in 2000, adjustments are made to the line item Provisions in the balance sheet. The net effect in the income statement relating to doubtful accounts in 2001 amounted to a loss of 20.5 million compared to an income of 7.4 million in 2000. These line items are discussed below and in notes 7, 25 and 29 to the consolidated financial statements.



### Operating income

As a result of the factors discussed above, primarily the change in REN's consolidation method following the sale, in June 2000, of part of the equity interest in REN and the increased costs of purchased electricity, as well as increased other external supplies and services, our operating income in 2001 decreased by 7% to 673.5 million from 724.4 million in 2000. In our core electricity business in Portugal (adjusted for the sale of REN), our operating income in 2001 decreased 2.5% from 724.1 million in 2000.

### Other expenses (income)

We recorded total other expenses in 2001 of 79.3 million compared with total other income in 2000 of 114.0 million, due to an increase in net interest expense and a decrease in other non-operating income.

*Net interest and related expense.* Our net interest expense consists of interest and related expenses and interest and related income. Our net interest expense increased in 2001 to 205.3 million from 174.8 million in 2000 (but decreased as a percentage of our total revenues to 3.6% in 2001 from 4.5% in 2000). This included a net expense related to interest in 2001 of 214.7 million compared with 183.1 million in 2000, due primarily to an increase in our average debt level and higher interest rates. The higher average debt level was a result of both higher borrowings in order to finance new investments and the consolidation of Bandeirante and ONI debt. The increase in our net interest expense was also the combined result of the following factors:

we recorded income from late payment charges to low voltage clients and public lighting of 2.1 million in 2001 compared with 21.2 million in 2000;

we recorded a net foreign currency exchange loss of 1.3 million in 2001 compared to 1.9 million on certain non-euro debt in 2000 primarily due to factors relating to the Brazilian real and our Brazilian operations;

we recorded an overall net income from affiliates and associated companies in 2001 of 11.6 million compared with an overall net income in 2000 of 41.8 million due primarily to: (a) Iven's contribution of a 13.5 million loss in 2001 mainly resulting from the adverse effect of an energy-rationing program implemented by the Brazilian government and (b) the full consolidation of Bandeirante in 2001, which resulted in Bandeirante's contribution (15 million in 2000) no longer being included in this line item;

we recorded income from investments in 2001 of 16.8 million compared with income in 2000 of 23.1 million due primarily to dividends received from our holdings in Iberdrola and GALP Energia; and

we recorded a financial gain of 88.5 million in 2001 related to the repayment of Bandeirante U.S. dollar-denominated debt using Brady Bonds issued by the Brazilian government. This financial gain is equivalent to the difference between the face value of the outstanding U.S. dollar-denominated debt of Bandeirante that was repaid and the market price of the Brady Bonds which were bought at a significant discount to par value. No such item was recorded in 2000.

*Other non-operating expenses (income), net.* We had other non-operating income in 2001 of 126.0 million compared with 288.8 million in 2000. In 2000, non-operating income included a gain of 197.4 million resulting from the disposal of a 27.5% shareholding in ONI to BCP for 205.8 million. In 2001, we recorded non-operating income of 47.5 million related to the hydrological correction mechanism.

We also recorded an income item in 2001 of 63.9 million, compared to 61.1 million in 2000, for the portion of depreciation due primarily to new electricity connections made in prior years that were financed largely with customer payments.

We recorded a net loss in 2001 of 41.1 million related to net provisions movements compared with a net benefit of 8.2 million recorded in 2000. For more information on net movement of provisions you should read note 25 to the consolidated financial statements.

The increase in provisions for doubtful accounts related to long-term receivables from municipalities in 2001 amounted to 1.2 million compared to a decrease in provisions of 13.8 million in 2000. This change reflects an increase in receivables due from the Valongo municipality that have been provisioned as doubtful.

#### **Provision for income taxes**

Our provision for income taxes is determined on the basis of the estimated taxable income for the period. Income taxes provided for in 2001 were 203.0 million compared with 312.6 million in 2000. The reference income tax rate in Portugal was 32% in 2001, compared with 32% and 34% in 2000 and 1999, respectively. In addition, a municipal surcharge of up to 10% of the base rate is typically levied by the municipality in which income is earned. Our effective tax rate is different from the reference income tax in Portugal each year due to permanent differences arising from the amortization of the goodwill/concession rights that are not deductible for income tax purposes. Our effective tax rate was 34.2% in 2001 compared with 37.3% in 2000 primarily due to the favorable impact of taxes paid in excess for our 2000 taxes that were later deducted from our 2001 taxes.

#### **Net income**

As a result of the factors discussed above, our consolidated net income for 2001 decreased 17.9% to 450.8 million from 549.0 million in 2000.

### **LIQUIDITY AND CAPITAL RESOURCES**

We manage and control our funding and treasury activities centrally at the holding company level except with respect to ONI and our businesses in Spain and Brazil. At the holding company level the account balances of our subsidiaries are netted in holding company accounts and centralized payments are made for the entire EDP Group. In Portugal, there are no legal or economic restrictions on the ability of our subsidiaries to transfer funds to the holding company. Our subsidiaries in Portugal do not enter into their own financing arrangements except for our cogeneration subsidiary, EDP Cogeração, which finances its own projects, and ONI.

Our primary source of liquidity is cash generated from operations. Net cash provided from operating activities was 897.7 million in 2002, compared with 1,221.2 million in 2001 and 1,122.0 million in 2000.

Total cash and equivalents, net of bank overdrafts, at December 31, 2002 were an overdraft position of 407.3 million compared with an overdraft position of 468.5 million at December 31, 2001 and an overdraft position of 340.9 million at December 31, 2000. Cash and cash equivalents are held in euros.

Net cash used in investing activities was 1,141.4 million in 2002, compared with 1,243.0 million in 2001 and 914.1 million in 2000, representing a 8.2% decrease in 2002, a 36% increase in 2001 and a 29% decrease in 2000. The decrease in 2002 compared with 2001 reflects the fact that although investment in the acquisition of subsidiaries (mainly Hidrocontábrico) was higher than in the previous year, this was offset to a greater extent by the proceeds from divestments and income from investments and dividends. The increase in 2001 compared with 2000 reflects the fact that although the level of financial investments was lower than in previous years, it was not offset to the same extent as in 2000 by the proceeds from divestitures. Net cash from financing activities was 297.2 million in 2002 compared with net cash used in financing activities of 96.1 million in 2001 and net cash used in financing activities of 482.4 million in 2000. Net cash from financing activities in 2002 was due to the issuance of new medium and long-term debt during 2002. Net cash used in financing activities in 2000 was due primarily to the repayment of short and medium-term debt in an amount larger than cash used in 2001 used for the repayment of long-term debt.

As of December 31, 2002 we had available short-term credit facilities of 152.1 million in euros at rates based on the euro interbank offered rate, or Euribor, to be negotiated at the time of utilization. In addition, we also have a revolving credit facility of 600.0 million, negotiated in 1999 for a five year period, which permits drawdowns for

terms of one, two, three or six months at an agreed margin over the euro interbank offered rate, or Euribor. In addition, in March 2003 we negotiated a credit line facility in the amount of 700.0 million to replace the 750.0 million facility that expired in March 2003 and is to be used primarily as a back-up facility for our euro commercial paper program of 1,000,000,000, signed in April 2001. This credit line permits drawing of one, two, three and six months at an agreed margin over the euro interbank offered rate, or Euribor and expires in March 2006. Management believes that the combination of these negotiated credit lines and the commercial paper program provide an adequate source of liquidity for our operations. Our credit facility agreements do not impose financial ratio requirements and events of default clauses are not based on credit rating, so that their availability is not impacted by downgrades or declines in financial ratios or other measures of financial performance.

Our consolidated indebtedness, including bonds, long-term bank loans, commercial paper and bank overdrafts, was 7,994.1 million at December 31, 2002 compared with 5,799.1 million at December 31, 2001 and 4,912.4 million at December 31, 2000. The increased in consolidated indebtedness in 2002 was primarily due to indebtedness incurred to acquire a 40% stake in Hidrocantábrico, a 10% stake in Turbogás and notes issued by Escelsa in a total face amount of \$354.4 million. In addition, consolidated indebtedness increased in 2002 due to the consolidation of indebtedness of Hidrocantábrico, Escelsa and Enersul. In July 2002, we updated our 5,000,000,000 MTN program and issued under it a GBP 200,000,000 maturing in August 2017 and a 500,000,000 bond maturing in March 2008. The proceeds of these issuances were used to refinance debt maturing during 2002 as well as to refinance short-term debt incurred during the year to cover our funding requirements due to our investment activities. With respect to the management of our debt portfolio, our hedging strategies have been limited to the debt held at the holding company level (including EDP B.V.), and not at the level of any of our subsidiaries. As of December 31, 2002, this debt amounted to 5,926.8 million, corresponding to 74% of our total debt. Our debt management guidelines continue to be focused on controlling financial costs and reducing our exposure to foreign exchange risk.

At December 31, 2002, the weighted average interest rate of our indebtedness at the holding company level (including EDP B.V.) was 3.67%, compared with 3.7% at December 31, 2001. At December 31, 2002, all holding company level debt was denominated in euros, and we therefore do not have currency exchange rate risk relating to this debt. At December 31, 2002, approximately 72.7% of our total long term indebtedness at the holding company level carried a floating rate, the weighted average interest rate of which was 3.47%. At December 31, 2001, approximately 68.9% of our total long term indebtedness carried a floating rate, the weighted average interest rate of which was 3.58%.

Our contractual obligations and commercial commitments consist primarily of credit facilities, as described above. The following table provides details regarding EDP's contractual and commercial obligations subsequent to December 31, 2002:

**Payments Due and Amount of Commitment by Expiration Period  
(EUR millions)**

|                                    | Total          | December 31,<br>2003 | December 31,<br>2004 | December 31,<br>2005 | December 31,<br>2006 | December 31,<br>2007 | Thereafter     |
|------------------------------------|----------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------|
| Long-term debt                     | 6,107.1        | 0                    | 614.3                | 544.7                | 902.0                | 718.0                | 3,328.0        |
| Short-term debt                    | 1,887.0        | 1,887.0              | 0                    | 0                    | 0                    | 0                    | 0              |
| Total contractual cash obligations | 7,994.1        | 1,887.0              | 614.3                | 544.7                | 902.0                | 718.0                | 3,328.0        |
| Guarantees                         | 409.0          | 141.7                | 0                    | 0                    | 0                    | 0                    | 267.3          |
| Lines of credit                    | 0              | 0                    | 0                    | 0                    | 0                    | 0                    | 0              |
| Total commercial commitments       | 0              | 0                    | 0                    | 0                    | 0                    | 0                    | 267.3          |
| <b>TOTAL</b>                       | <b>8,403.1</b> | <b>2,028.7</b>       | <b>614.3</b>         | <b>544.7</b>         | <b>902.0</b>         | <b>718.0</b>         | <b>3,595.3</b> |

We believe that cash generated from operations and existing credit facilities are sufficient to meet present working capital needs. We currently expect that our planned capital expenditures and investments will be financed

from internally generated funds, existing credit facilities and customer contributions, which may be complemented with medium- or long-term debt financing and equity financing as additional capital expenditure requirements develop. For more information on our planned capital expenditures you should read Item 4. Information on the Company History and Business Overview Group capital expenditures and investments.

### **PENSIONS AND BENEFITS**

We maintain a defined benefit pension plan for all our active and retired employees included in the Collective Labor Agreement, or the A.C.T., for Portuguese group companies created in 1994 with the restructuring of EDP. Pension benefits are based on the employees' years of service and the compensation level at the end of their employment period, less Portuguese social security benefits. The normal retirement age is 65. However, employees at least 60 years of age with 36 years of service, or employees of any age with 40 years of service, may elect early retirement. Employees electing early retirement are entitled to full pension benefits that are calculated on the same basis as that for employees retiring at the normal retirement age. Our policy has been to make contributions to the plan based on the availability of funds while making the minimum annual contributions required by applicable regulations. Some companies not a part of the A.C.T, such as the Brazilian and Spanish companies, also have complementary social benefits to their own social security systems, either as a defined benefit plan (Bandeirante, for example) or a defined contribution plan (Escelsa and Hidrocantábrico, for example).

We also provide comprehensive medical coverage, in addition to that provided by the Portuguese national health system, for retired employees, including those who have taken early retirement, and their dependents. Additionally, we provide a death benefit to retirees' survivors. We administer the program internally and assume the full cost of funding the program net of employee contributions, amounting to approximately 10% of the total medical expenses covered.

At December 31, 2002, our accrued pension and medical benefit liabilities were 608.2 million compared with 683.9 million at December 31, 2001 and 624.1 million at December 31, 2000. The provisions for medical benefits and pensions in 2002 were 396.7 million and 211.5 million, respectively, compared with 377.9 million and 305.9 million, respectively, in 2001 and 358.5 million and 265.6 million, respectively, in 2000. We expect to fund pension fund liabilities from our internal resources.

### **INFLATION**

Inflation in Portugal, as measured by changes in the Portuguese CPI, averaged 3.6%, 4.4% and 2.9% in 2002, 2001 and 2000, respectively. During the period from 1992 through 2002, changes in the Portuguese CPI averaged 4.3% per annum, ranging from a high of 11.1% in 1992 to a low of 2.2% in 1997.

To reflect the impact of inflation, Portuguese GAAP and regulations permit companies to revalue their fixed assets. Accordingly, we revalued our assets in 1992 based on an assessment of the remaining useful life and modern equivalent asset value of the assets at December 31, 1992. In accordance with Portuguese GAAP, depreciation of fixed assets is computed on the revalued amounts, with depreciation in respect of the original acquisition cost and 60% of the revaluation increment being deductible for corporate income tax purposes. Under U.S. GAAP, fixed assets may not be stated at more than their historical acquisition cost.

**PORTUGUESE GAAP COMPARED WITH U.S. GAAP**

Our financial statements have been prepared in accordance with Portuguese GAAP which vary in certain significant respects from U.S. GAAP. The principal differences between Portuguese GAAP and U.S. GAAP as they relate to us concern:

the revaluation of fixed assets, as discussed above under Inflation ;

the capitalization of overheads and foreign exchange differences in connection with the construction of fixed assets;



the capitalization of research and development costs, advertising costs, maintenance and repair, and reorganization costs;

the hydrological correction account;

the deferral of certain costs, profit distributions to management and employees and employee termination benefits;

the accounting for employee retirement benefits;

the reversal of allowances for certain doubtful accounts;

the capital treatment of contracts for the purchase of capacity and electricity;

the accounting for investments, including REN;

the accounting for the sale proceeds from the disposal of REN;

the accounting for joint returns, namely Hidrocantábrico;

the accounting for derivative instruments; and

income taxes.

We include in the cost of assets constructed for our own use a portion of our general and administrative overhead. Assets constructed prior to 1995 also include the net foreign exchange differences, both gains and losses, that resulted from loans denominated in non-escudo currencies contracted to fund the capital expenditures. Under U.S. GAAP, these amounts are included in income in the period incurred.

We capitalize and amortize research and development costs, advertising costs, major maintenance and repair costs, and reorganization costs. Under U.S. GAAP, these amounts are included as expenses in the period incurred.

As required by government regulation, we record a provision in the hydrological correction account to smooth the effect on our earnings that results from changes in hydrological conditions. Under U.S. GAAP, the effect of future changes in hydrological conditions would be viewed as a general business risk and accrual would not be permitted.

As part of our profit sharing plan, we customarily distribute a portion of net income to management and employees. Under Portuguese GAAP, this distribution is reflected in the period in which formal shareholder approval is obtained and is recorded as a reduction of retained earnings or other reserves. U.S. GAAP requires that these distributions be recorded as compensation expense in the period they are earned.

During 1999, we recorded a provision for costs to be incurred in the future in connection with planned employee terminations. This provision would not be recorded under U.S. GAAP since, as of December 31, 1999, the details of the termination benefits arrangement had not been communicated to the employees and other conditions required by U.S. GAAP had not been met. Under U.S. GAAP these costs are expensed as incurred. During 2000, a portion of the provision was utilized and the remaining was released to income under Portuguese GAAP.

We reached agreements with several municipalities on the terms for the future settlement of various old accounts receivable which under Portuguese GAAP and U.S. GAAP were fully provided in the past. We reversed a portion of the allowance for doubtful accounts related to these old accounts receivable in 1999 and 2000, but not in 2001. Under U.S. GAAP, the benefit from the recovery of these accounts receivable may only be recorded when the amounts are actually received.

We constructed and sold the Pego and Tapada de Outeiro power plants in 1993 and 1998, respectively. Before 1999, at the time of the sales, REN signed PPAs with the producers in the Binding Sector by which the capacity and electricity of the plants were fully contracted to the Binding Sector represented by REN. Under the PPAs, REN is required to make specified minimum payments whether or not it is able to take delivery of the electricity. As permitted under Portuguese GAAP, REN recorded the sales of the power plants and REN has recorded the minimum contracted payments as an expense of the respective periods. U.S. GAAP would require the sales to be treated as sale lease-back transactions and the power purchase agreements to be recorded as capital leases. Prior to the sale of REN to the Portuguese government, the contracts with Tejo Energia and Turbogás were recorded in this manner. Currently, the most relevant PPAs are those that REN has entered into with CPPE power plants.

Under Portuguese GAAP, we carry investments in publicly traded equity securities, other than those of subsidiaries and those that are accounted for under the equity method, at market. Changes in the carrying value other than those resulting from permanent impairment are reflected in equity. Under U.S. GAAP, these securities would be stated at fair value and the changes therein, net of income taxes, would be recorded in a separate component of shareholders' equity and included in the determination of comprehensive income. Our investment in REN and equity in earnings of REN are affected by certain accounting differences between U.S. GAAP and Portuguese GAAP. The differences affecting our investment in REN and equity in earnings of REN include: revaluation of fixed assets, overheads capitalized, deferred costs, employee termination benefits, distribution to management and employees, power purchase agreements and deferred income taxes.

Under Portuguese GAAP, since the sale proceeds from the disposal of our 70% interest in REN were equal to the net book value of the interest sold, no gain or loss was recorded on the transaction. Under U.S. GAAP, the net book value of the interest sold would be reduced as a result of the accounting differences between Portuguese GAAP and U.S. GAAP; therefore, the proceeds received from the disposal of REN would exceed the net book value of the interest disposed, resulting in a gain on disposal and the remaining investment in REN would be reduced accordingly. The gain on the disposal, in the amount of 342,045,810, and the related deferred tax in the amount of 120,400,126, would be charged directly to shareholders' equity (with a net effect of 221,645,684).

Our 40% holdings in the voting rights of Hidrocantábrico plus the existing shareholders' agreement allowed the impairment to be consolidated on a proportionate basis under Portuguese GAAP. Under U.S. GAAP this investment would be accounted for under the equity method. Hidrocantábrico's shareholders' equity and net income have been adjusted to U.S. GAAP before applying the equity method to EDP's accounts.

Under Portuguese GAAP, derivative financial instruments are not recognized in the financial statements. Under U.S. GAAP, derivative financial instruments would be recognized in the balance sheet at market value. For instruments that do not qualify for hedge accounting under FAS 133, as implemented on January 1, 2001, the movements in the market value are included in our net income. Upon adoption of FAS 133 on January 1, 2001, no transition adjustment was recorded as all derivatives existing at that date were previously recorded at fair market value in the balance sheet for U.S. GAAP. The derivative financial instruments held by us at December 31, 2000, 2001 and 2002 were not designated hedges and thus movements in their fair value would be recognized in net income.

Under Portuguese GAAP, prior to 1999, it was acceptable to recognize income tax expense based upon the estimated current income tax liability on the current year's earnings. When income and expense recognition for income tax purposes does not occur in the same period as income and expense recognition for financial reporting purposes, the resulting temporary difference is not considered in the computation of the income tax expense for the period. Under U.S. GAAP, income taxes are provided using the liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences attributable to differences between the financial statement carrying amount of assets and liabilities and their tax bases. A valuation allowance is provided based on the expected realization of these deferred tax assets.

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In 1999, we implemented International Accounting Standard 12 (Revised), *Income Taxes*, which requires income taxes to be provided for using the liability method and is substantially consistent with the method under U.S. GAAP.

Our net income in 2002 under U.S. GAAP amounted to 299.9 million and 519.2 million in 2001 compared with 335.2 million in 2002 and 450.8 million in 2001, respectively, under Portuguese GAAP. Our shareholders

equity under U.S. GAAP was 3,886.3 million at December 31, 2002 and 4,441.4 million at December 31, 2001, compared with 5,494.2 million and 6,096.8 million, respectively, under Portuguese GAAP.

See note 33 to our audited consolidated financial statements for the significant adjustments to net income and shareholders' equity that would have been required if U.S. GAAP rather than Portuguese GAAP had been applied in the financial statements.

### IMPACT OF RECENTLY ISSUED U.S. ACCOUNTING STANDARDS

In July 2001, the FASB issued FAS 143, *Accounting for Obligations Associated with the Retirement of Long-Lived Assets*. FAS 143 will be effective for the year ended December 31, 2003. FAS 143 provides the accounting requirements for retirement obligations associated with tangible long-lived assets. FAS 143 requires that the obligation associated with the retirement of the tangible long-lived assets be capitalized into the asset cost at the time of initial recognition. The liability is then discounted to its fair value at the time of recognition using the guidance provided by FAS 143. We are currently evaluating the overall impact of FAS 143 on its results of operations and financial position under U.S. GAAP.

In July 2002, the FASB issued FAS 146, *Accounting for Costs Associated with Exit or Disposal Activities*. This standard addresses financial accounting and reporting for costs associated with exit or disposal activities and nullifies EITF 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*. The statement requires companies to recognize costs associated with certain exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. FAS 146 will be applied by us prospectively to applicable exit or disposal activities initiated after December 31, 2002. The adoption of FAS 146 is not expected to have a material effect on the results of operations and our financial position under U.S. GAAP.

In December 2002, the FASB issued FAS 148, *Accounting for Stock-Based Compensation-Transition and Disclosure*, which amends FAS 123 *Accounting for Stock-Based Compensation*. FAS 148 provides alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, FAS 148 amends the disclosure requirements of FAS 123 to require prominent disclosures about the method of accounting for stock-based employee compensation and the effect of the method used on reported results of operations. FAS 148 is effective for fiscal years ending after December 15, 2002. We adopted FAS 148 effective for the year ended December 31, 2002, and has elected to continue to account for its stock-based compensation in accordance with the provisions of Accounting Principles Board Opinion (APB) No. 25, *Accounting for Stock Issued to Employees*. Under APB 25, compensation expense is recognized over the vesting period based on the excess of the fair market value over the exercise price on the grant date.

In April 2003, the FASB issued FAS 149 *Amendment of Statement 133 on Derivative Instruments and Hedging Activities*. FAS 149 clarifies the circumstances in which a contract with an initial net investment meets the characteristic of a derivative and when a derivative contains a financing component. In addition, the statement amends the definition of an underlying to conform to language used in FIN 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*, and certain other existing pronouncements. The statement is effective prospectively for contracts entered into or modified, and for hedging relationships designated, after June 30, 2003. We are currently analyzing the impact of FAS 149 on its results of operations and financial position under U.S. GAAP.

In May 2003, the FASB issued FAS 150, *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*. FAS 150 is effective prospectively for financial instruments entered into or modified after May 31, 2003, and otherwise is effective at the

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beginning of the first interim period beginning after June 15, 2003. FAS 150 requires that certain financial instruments, previously accounted for as equity, be classified as liabilities. This statement shall be implemented by reporting the cumulative effect of a change in an accounting principle for financial instruments created before the issuance date of the Statement and still existing at the beginning of the interim period of adoption. We are currently analyzing the impact of FAS 150 on its results of operations and financial position under U.S. GAAP.

In November 2002, the FASB issued FASB Interpretation No. 45 (FIN 45), *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees Of Indebtedness Of Others, an Interpretation of FASB Statements No. 5, 57, and 107 and Rescission of FASB Interpretation No. 34*. FIN 45 relates to the accounting for and disclosure of guarantees and addresses (1) an obligation to stand ready to perform over the term of the guarantee in the event that the specified triggering events or conditions occur and (2) a contingent obligation to make future payments if those triggering events or conditions occur. The Interpretation requires that upon issuance of a guarantee, the entity (i.e., the guarantor) must recognize a liability for the fair value of the obligation it assumes under that guarantee. The initial recognition and initial measurement provisions should be applied only on a prospective basis to guarantees issued or modified after December 31, 2002.

In January 2003, the FASB issued FASB Interpretation No. 46, (FIN 46), *Consolidation of Variable Interest Entities*. Under FIN 46, certain entities labelled Variable Interest Entities (VIE), must be consolidated by the primary beneficiary of the entity. The primary beneficiary is generally defined as the party exposed to the majority of the risks and rewards arising from the VIE. For VIEs in which we hold a significant variable interest that is not a majority interest, certain disclosures are required. Full implementation of this interpretation to pre-existing entities is required from July 1, 2003; and application to our new involvement with any VIEs from February 1, 2003.

## **Item 6. Directors, Senior Management and Employees**

### **BOARD OF DIRECTORS**

Our board of directors manages our affairs and monitors the daily operation of our activities in accordance with Portuguese law and our Articles of Association. Executive officers are in charge of our various administrative departments and report directly to our board of directors. Our operating companies are each managed by their respective boards of directors who report ultimately to our board of directors.

Under Portuguese law, the board of directors has the power to perform any and all acts necessary or desirable for the furtherance of our purposes, with the exception of any acts that under Portuguese law or our Articles of Association are subject to the express approval of shareholders at a general meeting. Pursuant our Articles of Association the shareholders may by general meeting appoint a board composed of an uneven number of members with a minimum of 5 and a maximum of 15 members. One of the directors can be elected separately by 10% of the shareholders that voted against the list of proposed directors by, in the same shareholders meeting, voting for a new director that automatically substitutes the last person on the list of proposed directors. Currently, the board of directors consists of a Chairman and twelve other directors elected by a simple majority of the votes cast at a general meeting.

Pursuant to our Articles of Association, which provide that the board of directors may delegate day-to-day management responsibilities to an Executive Committee composed of an uneven number of directors, the board of directors has appointed an Executive Committee and established the following guidelines for the Executive Committee:

to globally define our policies on our different areas of activity, the coordination of activities among EDP Group companies, and the management of our holdings;

to submit to the board of directors for a decision only those matters that Executive Committee finds to be of suitable importance;

to not:

appoint new directors,

convene general meetings of shareholders,

approve our annual report and accounts in order to submit them to a general meeting of shareholders,



approve plans and annual or multi-year budgets nor monitor their execution,

approve our quarterly accounts,

move our principal office, or

prepare plans for a merger, spin-off, transformation or sale our group companies; and

to hold meetings, as convened by its chairman usually once a week, at which non-Executive Committee members may be present.

The current Executive Committee was appointed in May 2003, although its composition may change in order to fill vacancies, and is currently composed of the following five directors: Mr. João Talone, our Chief Executive Officer, Mr. Rui Miguel Horta e Costa, Mr. Arnaldo Pedro Figueiroa Navarro Machado, Mr. Jorge Manuel Oliveira Godinho and Mr. Pedro Manuel Bastos Mendes Resende.

The board of directors has the exclusive authority to represent us in transactions with third parties, but may delegate these powers. The board of directors has no power to amend or repeal the Articles of Association, which may only be amended or repealed by the shareholders in a general meeting by a resolution adopted by two-thirds of the votes cast, representing, on a first call, a quorum of at least one-third of our share capital, as set forth in Portuguese law.

The term of office of the board of directors is three calendar years, renewable, with the year of election or appointment being considered as a full calendar year. Directors may be removed at any time, with or without cause, by the general meeting of shareholders. Vacancies that occur on the board of directors may be filled by the board, with the term of the new director being coterminous with that of the substituted director. Directors filling board vacancies pursuant to designation by the board of directors must be submitted for ratification at the first general meeting of shareholders subsequent to the substitution. Our directors do not have service contracts with us or our subsidiaries that provide for benefits upon termination of employment. The board of directors must convene once a month, and a majority of directors must be present to constitute a quorum. A director may be represented at a meeting only by another director by proxy given in writing for the meeting in question, and no more than one director can be represented by proxy at a particular meeting. Directors have equal voting rights, and all resolutions of the board of directors are adopted by a majority of the votes cast. The Chairman has the deciding vote in the event of a tie.

Pursuant to our Articles of Association, the shareholders at a general meeting appoint the Remuneration Committee, which is a committee of shareholders that determines the compensation of directors and directors' benefits.

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Under Portuguese law, a director must act diligently and with due care, always seeking to promote the company's interest while taking due account of the interests of shareholders and employees. A director will be liable to the company, the company's shareholders and third parties for any damages caused by a breach of these duties.

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The members of our board of directors, their principal past affiliations, information on their business experience and principal business activities outside of us and selected other information are set forth below:

| Name  | Age | Position                | Year originally elected |
|---|-----|-------------------------|-------------------------|
| Mr. Francisco de la Fuente Sánchez          | 61  | Chairman                | 2000                    |
| Mr João Ramalho Talone                      | 51  | Chief Executive Officer | 2003                    |
| Mr António de Almeida                       | 66  | Director                | 2003                    |
| Mr Jorge Manuel Oliveira Godinho            | 50  | Director                | 2003                    |
| Mr. Rui Miguel Horta e Costa                | 42  | Director                | 2000                    |
| Mr. José Manuel Gonçalves de Moraes Cabral  | 56  | Director                | 2003                    |
| Mr. Arnaldo Pedro Figueirôa Navarro Machado | 57  | Director                | 2002                    |
| Mr. Dr. António José Fernandes de Sousa     | 48  | Director                | 2001                    |
| Mr José Manuel Trindade Neves Adelino       | 49  | Director                | 2003                    |
| Mr. Luis Filipe Rolim de Azevedo Coutinho   | 42  | Director                | 2003                    |
| Mr Paulo de Azevedo Pereira da Silva        | 42  | Director                | 2003                    |
| Mr. Pedro Manuel Bastos Mendes Rezende      | 42  | Director                | 2003                    |
| Mr. Vitor Angelo Mendes da Costa Martins    | 56  | Director                | 2003                    |

*Mr. Francisco de la Fuente Sánchez* is Chairman of our board of directors and has been on our board of directors since January 1997. In addition, Mr. Francisco Sánchez is Chairman of the board of directors of ONI SGPS, member of the board of Hidrocantábriico and member of the Superior Council of Banco Comercial Português. Mr. Francisco Sánchez served as Chairman and CEO of EDP SA between 2000 and 2003, Chairman of EDP Produção and EDP Distribuição between 2002 and 2003, and Chairman of EDP Energia and EDP Valor between 2001 and 2003. From 1997 to 1998, Mr. Francisco Sánchez was a member of the board of directors of EN, CENEL, LTE and SLE and between 1998 and 2001, he was Chairman of CERJ and EDP - Cogeração, Vice-Chairman of Bandeirante, and a member of the board of directors of EDP Internacional. Mr. Francisco Sánchez also served as member of the boards of directors of LTE and Hidrotejo from 1994 to 1996. He was General Manager of one of our distribution divisions from 1990 to 1994 and Central Commercial Manager of EDP from 1988 to 1989. He was assistant to our board of directors from 1987 to 1988. Mr. Francisco Sánchez holds a degree in electrotechnical engineering from Instituto Superior Técnico de Lisboa.

*Mr João Ramalho Talone* was appointed as Chief Executive Officer (CEO) of EDP Electricidade de Portugal, SA on the May 22, 2003. In addition Mr. Talone is Chairman of the board of directors of EDP Produção and EDP Distribuição and a member of the board of directors of ONI SGPS and Hidrocantábriico. Between January and April 2003, by appointment of the Portuguese government, Mr. Talone was responsible for conducting a study on the restructuring of the Portuguese Energy Sector. Between December 2002 and January 2003, he headed the project to terminate IPE Instituto de Participações do Estado, a state owned company holding the Republic of Portugal's interests in several of its subsidiaries. Up to the end of January 2002, Mr. Talone served as Chairman and CEO of the Executive Board of Directors of Eureko (appointed in September 1999), member of the Board of Directors of BCP - Banco Comercial Português, S.A. (appointed in 1991) and Chairman of Seguros & Pensões (appointed in 1995). Mr. Talone joined the BCP Group as General Manager in April 1988 and was appointed as Chairman of its insurance arm in July 1988. In July 1991 he was elected to the Board of BCP-Investimentos. Mr. Talone is currently Vice-chairman of the

Portuguese Insurance Association (APS) and Member of the Board of Directors of Association de Génève (International exclusive insurance Forum) where he is an elected member since June 1995. Mr. Talone holds a degree in civil engineering from Instituto Superior Técnico de Lisboa, and an MBA from Universidade Nova de Lisboa in association with the Wharton School of Pennsylvania.

*Mr António de Almeida* was appointed to our board of directors in May 2003. He is also a member of the Board of the ERDB since 1998. Mr. Antonio de Almeida was Chairman at EDP between 1996 and 1998. Until 1992, he served as Chairman of Lusoleasing and União de Bancos Portugueses, S.A, Director of the Commercial Bank of Malawi, the Bank of Lisbon and South Africa, Ltd. and Senior Adviser of the Bank of Portugal. Between 1983 and 1985, and between 1978 and 1980, he served as Treasury Secretary in the Portuguese government. Mr. António de Almeida also served as Governor of the Bank of Angola from 1974 to 1978. Mr. António de Almeida has a degree in Economy from Oporto University.

*Mr Jorge Manuel Oliveira Godinho* was appointed to our board of directors in May 2003. From March 2001 to May 2003, Mr. Godinho was President of the Executive Committee at Edinfor-Sistemas Informáticos, SA, and Chairman at Ace-Holding, SGPS, SA. Between 1998 and 2000 he was Adviser of the Board of Electricidade de Portugal, SA, Executive Member of the Board of OPTEP and Vice-Chairman of the Board of Optimus. Between 1991 and 1998, Mr. Godinho was Chairman of the Board of Portucel SGPS, Portucel Industrial and Portucel Florestal. From 1985 to 1990, he served as Secretary of State for Fisheries. Prior to these assignments, Mr. Godinho was the Chairman of the Board at Docapesca and Member of the Steering Committee at Instituto de Gestão Financeira da Segurança Social. He started his career in 1976 at CPE, one of the companies that later merged to form EDP. From 1976 to 1980, he was responsible for the newly created department dedicated to the environment affairs and to monitor the impact of thermal power plants. Mr. Godinho also had responsibilities in several other institutions, such as the Sino-Portuguese Chamber of Commerce (Chairman), the Competitiveness Forum, the National Council of Science Research, the Portuguese Industrial Association (Vice-Chairman), EFACEC- Capital SGPS, SA (Member of the Board), and FIEP-Fundo para a Internacionalização das Empresas Portuguesas (Member of the Board). He still is Member of the Advisory Board of Nova Forum, the School for Executives of UNL-Universidade Nova de Lisboa. He was born in 1952 and holds a degree in engineering from Instituto Superior Técnico (1975) and a MBA from Universidade Nova de Lisboa (1984).

*Mr. Rui Miguel Horta e Costa* was appointed to our board of directors in May 2000 and re-elected in May 2003. Mr. Horta e Costa is also a member of the board of directors of Hidrocantábrico, GALP, EDP Distribuição, EDP Produção and ONI. He served as Executive Director of UBS Warburg in London from 1995 to 2000, and before that, from 1990 to 1995, he was a member of the board of directors of Grupo Jorge de Mello. Mr. Horta e Costa was Resident Vice-President of Citibank Portugal from 1989 to 1990, and from 1987 to 1989 he served in the positions of Director of Banco Finantia and assistant of the board of directors for the same bank. From 1986 to 1987, he was Account Manager for MDM - Sociedade de Investimentos. Mr. Horta e Costa holds an economics degree from Universidade Católica Portuguesa as well as an MBA in management from the University of Minnesota.

*Mr. José Manuel Gonçalves de Morais Cabral* was appointed to our board of directors in May 2003. He is also Director of Soponata, S.A., Soimper, S.A., Efacec Capital, S.G.P.S., S.A. and José de Mello Participações II, S.G.P.S., S.A., and Senior Manager of José de Mello Serviços, Lda.. From 1995 to 1999, he served as Director and CEO of Lisnave, S.A.. Previously, he was Director of I.P.E., S.A. between 1992 and 1994, and Director of Celbi, S.A. between 1993 and 1995. From 1989 to 1992, he served as Chairman of Air Atlantis, S.A., and between 1970 and 1989, he was Controller and CFO of METAL Portuguesa, S.A.. Mr. Morais Cabral holds a degree in Economics from I.S.C.E.F., Lisbon.

*Mr. Arnaldo Pedro Figueirôa Navarro Machado* was appointed to the board of directors in May 2002 and he is presently the Chief Executive Officer of EDP Distribuição - Energia. Mr. Navarro Machado served as Chief Executive Officer of Sociedade Central de Cervejas from 2000 to 2002. He acted as member of the board of directors of HLC - Engenharia de Gestão e Projectos, S.A. between 1998 and 2000. In the EDP Group he has served as Vice-Chairman of the board of directors of EDP, S.A. from 1992 to 1998, Chairman of the board of directors of MRH - Mudança e Recursos Humanos, S.A. in 1997 and 1998, member and Chairman of the board of directors of INTERNEL - Electricidade de Portugal Internacional, S.A. from 1992 to 1998 and of CPPE, S.A. between 1994 and 1997, member of the board of directors of CERJ from 1996 to 1998, of INVESTCO - Veículo de Investimento de Empreendimento and of

Hidroelétrica do Lajeado in Brazil during 1998, of OPTEP from 1997 to 1998, of Turbogás from 1995 to 1998 and of EDP, S.A. in 1991 and 1992. Prior to this, he has served as Member of the Management Council of Sociedade Central de Cervejas from 1988 to 1991, as Chairman of the board of directors of Sociedade da Água de Luso, S.A. during January 1990 and as member of the board of directors of Setenave from 1984 to 1988. Mr. Navarro Machado holds a degree in Naval Engineering from the University of the Stracholyde, Glasgow.

*Mr. António José Fernandes de Sousa* was appointed to our board of directors in August 2001. He is presently Chairman of Caixa Geral de Depósitos. From 1994 to 2000, Mr. António de Sousa was Governor of Banco de Portugal and before that, from 1991 to 1994, he was Secretary of State of Finance and Secretary of State of External Trade. He was Chairman of the Executive Committee of Tottagespar, SGPS and Chairman of the board of directors of SULPEDIP. Between 1989 and 1991, Mr. António de Sousa also served as Consultant for the Ministry of Industry and Energy and was a member of the board of directors of Banco Totta & Açores, S.A. He served as the government as Secretary of State of Industry, from 1987 and 1988. In 1986 he became member of the board of

directors of IPE - Investimentos e Participações do Estado, S.A. He acted as Corporate Consultant in the United States of America, from 1979 to 1981. Mr. António de Sousa holds a degree in Administration and Management of Corporation from Universidade Católica Portuguesa and a PhD in Management of Corporations, area of Strategic Planning, from Wharton School of University of Pennsylvania.

*Mr. José Manuel Trindade Neves Adelino* was appointed to our board of directors in May 2003. He is also a Member of the Global Advisory Board of SONAE SGPS, of the Management Committee of the Fundo de Garantia de Depósitos, of the Strategic Board of Portugal Telecom, of the Advisory Board of Confederação da Indústria Portuguesa, of the National Education Committee and of the Euronext Lisbon Index Committee, as well as full Professor of Economics at Universidade Nova de Lisboa, a position that he has held since 1995. Mr. Neves Adelino was a non-executive member of the board of Banco Português do Atlântico and served as Senior Adviser at several companies. Mr. Neves Adelino holds a degree in Finance from Universidade Técnica de Lisboa and a graduate degree (Business Administration - DBA), from the Kent State University, USA.

*Mr. Luis Filipe Rolim de Azevedo Coutinho* was appointed to our board of directors in May 2003. He is also Senior Adviser of the Holding of Grupo Abrantina, Member of the Board of several companies of that Group, CFO of Valora Serviços de Apoio à Emissão Monetária, S.A., as well as Professor in Economics at Universidade Nova de Lisboa. Between 1984 and 2002, he served as Senior Advisor at José Bento Pedroso & Filhos, Lda., I.P.E., Grupo V.I/B.T.A., Grupo Abrantina, Bank of Portugal, Lisbon Municipality, Calouste Gulbenkian Foundation Portuguese and Finance Secretary of State. He holds a degree in Management from Universidade Católica Portuguesa and a Master Business Administration from Universidade Nova de Lisboa.

*Mr. Paulo de Azevedo Pereira da Silva* was appointed to our board of directors in May 2003. He is also General Manager of BCP Banco Comercial Português, S.A., Director of LEASEFACTOR S.G.P.S., Chairman of the Board of Directors of BCP LEASING and Director of CREDIBANCO Banco de Crédito Pessoal. Mr. Paulo Azevedo holds a degree in Economics from the Faculdade de Economia do Porto.

*Mr. Pedro Manuel Bastos Mendes Rezende* was appointed to our board of directors in May 2003. Serving as a member of the board of directors of EDP Electricidade de Portugal and he is also serving as President of the Executive Committee of EDP Produção and its subsidiaries and as a board member of EDP Energia, EDP Distribuição and Hidrocantábrico. Since 1990, Mr. Pedro Bastos Rezende has been a member of The Boston Consulting Group where he served in the Madrid office until 1995 and in Lisbon office thereon. He was elected Partner and Director in May 1997, co-leading the Lisbon office since then. He was also the local leader of the Energy Practice Area. Prior to this he was Head of the Testing Department for VALEO Clutch Division in Spain from 1985 to 1989. Mr. Pedro Bastos Rezende holds a degree in Industrial Mechanical Engineering from ICAI Madrid, Spain and a MBA from Insead Fontainebleau, France.

*Mr. Vítor Ângelo Mendes da Costa Martins* was appointed to our board of directors in May 2003. Mr. Vítor Martins is also Senior Adviser of CITIGROUP, a position that he holds since 1997, as well as a Member of the Management

Committee of the IEEI - Instituto de Estudos Estratégicos Internacionais, Member of the Strategic Board of the Notre Europe Jacques Delors Association and Member of the Advisory Board of the Forum de Administradores de Empresas. From 1999 to 2002, he was Chairman of Jazztel Portugal, and between 1996 and 2002, he was a Member of the Advisory Committee of Public Markets of the European Committee. Previously, he served as Secretary of State for Europeans Affairs, from 1985 to 1995. In our Company, he was Chairman of the audit Committee from 1982 to 1985. Mr. Vítor Martins holds a degree in Management from ISEG, Lisbon.



## SENIOR MANAGEMENT

We have fourteen Executive Officers who are in charge of various business and administrative departments at the holding company level of EDP and report directly to the board of directors. Selected information is set forth below for the executive officers in charge of a principal business function.

| Name                                   | Age | Year of Appointment | Position   |
|--|-----|---------------------|--|
| (Vacancy)                              |     |                     | General Secretary  |
| Mr. António José Marrachinho Soares    | 42  | 1998                | Alternate General Secretary  |
| Mr. António Manuel Neves de Carvalho   | 53  | 2000                | Head of Environmental Department                                   |
| Mr. António Pacheco de Castro          | 44  | 1994                | Head of Strategic Planning   |
| Mr. António Pedro Alfaia de Carvalho   | 57  | 1998                | Head of Legal Affairs  |
| Mr. Bernardo Sá Braamcamp Sottomayor   | 30  | 2000                | Head of Mergers and Acquisitions Department                        |
| Mr. Manuel Antunes Rodrigues da Costa  | 55  | 2002                | Head of Accounting Consolidation and Management Control Department |
| Mr. Eugénio André Purificação Carvalho | 49  | 2001                | Head of Human Resources  |
| Mr. Horácio Manuel Piriquito Casimiro  | 42  | 2003                | Head of Public Relations Department                                |
| Mr. José Avelino Abreu Aguiar          | 55  | 2000                | Head of Information Technology                                     |
| Mrs. Magda Abdool Magid Vakil          | 40  | 1998                | Head of Financing Department                                       |
| Mrs. Maria Joana Mano Pinto Simões     | 42  | 2000                | Head of Regulation and Tariffs Department                          |
| Mr. Pedro Manuel Carreto Pires João    | 33  | 2000                | Head of Investor Relations   |
| Mr. Vitor Manuel Silva Leitão          | 49  | 2000                | Head of Internal Audit Department                                  |
| Mr. Stephan Godinho Lopes Morais       | 29  | 2003                | Chief of Staff, Cabinet of the CEO                                 |

*Mr. António José Marrachinho Soares* has been our alternate company secretary since April 1998. Between 1994 and 2000, Mr. Soares was assistant to the board of directors and the head of the secretariat of the board. He holds a law degree from Faculdade de Direito de Lisboa and post-graduate degree in securities law. Mr. Soares also holds a post-graduate degree in public regulation from Universidade de Coimbra CEDIPRE, Centro de Estudos de Direito Público e Regulação.

*Mr. António Manuel Neves de Carvalho* was appointed head of environmental department in September 2000. He also served as REN's director responsible for the systems and equipment department from 1994 to 2000 and as an assistant executive officer in the systems department from 1991 to 1994. Mr. de Carvalho holds a degree in telecommunications and electronics engineering from Instituto Superior Técnico de Lisboa.

*Mr. António Pacheco de Castro* was appointed General Director in June 2003. He has served as head of strategic planning since September 2000. Between 1997 and 2000 Mr. Castro served as the executive officer responsible for our investor relations department. Mr. Castro also served as an assistant director of our strategic planning department from 1995 to 1997. He holds a management degree from Lisbon's Instituto Superior de Economia and a MBA from the

same university.

*Mr. António Pedro Alfaia de Carvalho* was appointed head of our legal affairs department in May 1998. He was a legal counsellor in this department since 1979. Mr. de Carvalho also served as our company secretary between July 1997 and July 2000. He holds a law degree from Faculdade de Direito de Lisboa.

*Mr. Bernardo Sá Braamcamp Sottomayor* was appointed head of our mergers and acquisitions department in June 2000. He served as an associate director of corporate finance at UBS Warburg in London between 1997 and 2000 and as a research analyst at Caixagest in Lisbon from 1995 to 1997. Mr. Sottomayor holds an economics degree from Universidade Nova de Lisboa.

*Manuel Antunes Rodrigues da Costa* was appointed Head of Accounting Consolidation and Management Control Department in October 2002. Served as Deputy Head of Corporate Planning Department between 1989 and 1997, Adviser to the Board of Directors of EDP in 1999 and to the Board of Directors of EDP Distribution in 2002. From 1997 to 1999 served as Head of Tariffs and Prices in the Portuguese Electricity Regulatory Authority (ERSE).

He also served as Advisor to the Portuguese Minister of Economy from 2000 to 2002. He holds a degree in telecommunications and electronics engineering from Instituto Superior Técnico and a master degree in economics from Universidade Nova de Lisboa.

*Mr. Eugénio André Purificação Carvalho* was appointed head of our human resources department in July 2001. He was also head of CPPE's human resources department between 1998 and 2001. Mr. Carvalho served as assistant executive officer of REN's commercial department between 1993 and 1998, and he also served as an electrical engineer in power control systems since his EDP admission in 1979 to 1993. He holds a degree in telecommunications and electronics engineering from Instituto Superior Técnico de Lisboa, and a post graduated degree in Industrial Management from Lisbon's Instituto Superior de Ciências do Trabalho e da Empresa.

*Mr. Horácio Manuel Piriquito Casimiro* was appointed head of our public relations department in May 2003. He served as head of corporate communication at Galp Energia SGPS between 2001 and 2003. From 1997 to 2001 he was a member of the board of five companies in the Media Capital Group. From 1995 to 2001 he held the senior management position at three publications ( *Semanário Económico* , *Valor* and *Fortunas & Negócios* ). From 1996 to 2000, he was a member of the board of *Radio Commercial* and *Radio Nostalgia*. From 1990 to 1991 he was the assistant to the Minister of Finance and the Minister of Agriculture. Mr. Piriquito holds a management degree from Universidade Livre de Lisboa.

*Mr. José Avelino Abreu Aguiar* was appointed our head of information technology in July 2000. He has also served as an executive officer at Edinfor since 1991. Mr. Aguiar holds a degree in electrotechnical engineering from Faculdade de Engenharia at Oporto University.

*Mrs. Magda Abdool Magid Vakil* was appointed head of our financing department in July 1998. Between 1994 and 1997, Mrs. Vakil served as a loan officer in the European Investment Bank in Luxembourg and between 1988 and 1994 as a senior manager of corporate banking in the Royal Bank of Canada in London. She holds a degree in economics from the University of Kent, Canterbury.

*Mrs. Maria Joana Mano Pinto Simões* was appointed head of our regulation and tariffs department in July 2000. She also served as an assistant director of our strategic planning department from 1998 to 2000. Mrs. Simões holds a degree in electrotechnical engineering from Instituto Superior Técnico de Lisboa and an MBA from Universidade Nova de Lisboa.

*Mr. Pedro Manuel Carreto Pires João* was appointed our head of investor relations in June 2000. From 1999 to 2000, he served as an equity sales manager at BCP in Oporto. He also served as an associate director at Banco Bozano Simonsen in London between 1997 and 1999 and as an equity research associate at Goldman Sachs International in London between 1996 and 1997. Mr. Pires holds a management degree from Lisbon's Instituto Superior de Gestão and

an MBA from the London Business School.

*Mr. Vitor Manuel Silva Leitão* is currently the head of our internal audit department and was the head of our information technology department between 1995 and 2000. Mr. Leitão was also an assistant director of the accounting department from 1990 to 1995. He holds a degree in mechanical and production engineering from Instituto Superior Técnico de Lisboa and an MBA from Lisbon's Universidade Nova.

*Mr. Stephan Godinho Lopes Morais* was appointed Chief of Staff for the CEO in May 2003. Between 1996 and 1999 he was a Consultant with Halcrow Management Sciences - London, working on utility privatizations for the World Bank and governments in Africa, Asia and Latin America. In 1999 and 2000 he was a Senior Consultant with Arthur Andersen Business Consulting in London, working on the Energy and Utilities team within the Strategy, Finance and Economics Division. During 2002 and 2003 he was a Consultant for the Portuguese government for the Restructuring of the State Holding Company - IPE, and for the Reorganisation of the National Energy Sector. He holds a degree in Civil Engineering from Instituto Superior Técnico, Lisbon and an MBA from the Harvard Business School.

**COMPENSATION OF DIRECTORS AND SENIOR MANAGEMENT**

Aggregate compensation paid in 2002 by us to our directors and executive officers was approximately 2.8 million and 9.0 million, respectively.

**SHARE OWNERSHIP**

As of December 31, 2002, the directors and executive officers listed in Item 6 as a group owned less than 1% of our outstanding ordinary shares (not including ordinary shares held by any entity with which any of the directors or executive officers are affiliated).

| <b>Members of the Board of Directors</b>    | <b>Number of Shares</b> |
|---|-------------------------|
| Mr. Francisco de la Fuente Sánchez          | 10,373                  |
| Mr. João Ramalho Talone                     | 1,905                   |
| Mr. Arnaldo Pedro Figueirôa Navarro Machado | 9,680                   |
| Mr. Jorge Manuel Oliveira Godinho           | 30,393                  |
| Mr. Pedro Manuel Bastos Mendes Rezende      | 0                       |
| Mr. Rui Miguel de Oliveira Horta e Costa    | 3,762                   |
| Mr. António de Almeida                      | 4,265                   |
| Mr. António José Fernandes de Sousa         | 1,865                   |
| Mr. José Manuel Gonçalves de Morais Cabral  | 715                     |
| Mr. José Manuel Trindade Neves Adelino      | 895                     |
| Mr. Luís Filipe Rolim de Azevedo Coutinho   | 0                       |
| Mr. Paulo Azevedo Pereira da Silva          | 5,986                   |
| Mr. Vítor Ângelo Mendes da Costa Martins    | 767                     |

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Number of Shares reflects aggregate shares held by Directors and the Directors' family members.

On July 24, 2002, we acquired 343,621 treasury shares to grant as annual performance bonuses to our management team.

The directors and executive officers listed in Item 6 have also been granted an aggregate of 2,286,250 stock options under our stock option plans. We have adopted two stock options plans:

A plan for members of the board of directors, initially comprising a total of 1,750,000 ordinary shares which were increased to 2,450,000 ordinary shares at the general shareholders meeting on May 10, 2000. This plan is managed by disinterested persons who are not employees of EDP or its subsidiaries.

A plan for members of the boards of directors of our operating companies and senior officers of EDP and its subsidiaries comprising a total of 16,250,000 ordinary shares. Awards of options under this plan are determined in the sole discretion of the board of directors of EDP.

Under both plans, the exercise price of each option equals the market price of our stock on the date of grant and an option's maximum term is 5 years. A summary of the status of our two fixed stock option plans as of December 31, 2001 and 2002, and changes during the years then ended on those dates is presented below:

|                                      | Shares available<br>for grant under<br>1999 option<br>plans | Option<br>activity | Weighted<br>average<br>exercise<br>price |
|--------------------------------------|---|--------------------|--|
| Balance December 31, 2000            | 16,413,750  |                    |  |
| Increase to the 1999 Option Plans(1) |   |                    |  |
| Options forfeited(2)                 |   |                    |  |
| Options granted                      |   |                    |  |
| Balance December 31, 2001            | 16,413,750  | 2,286,250          |  |
| Increase to the 1999 Option Plans(1) |   |                    |  |
| Options forfeited                    |   |                    |  |
| Options granted(3)                   |   |                    |  |
| Balance December 31, 2002            | 16,413,750  | 2,286,250          |  |

(1) At the general shareholders meeting held on May 10, 2000, an increase in the number of options available under the 1999 options plans was approved to adjust the plans for an increase in the number of directors from 5 to 7.

(2) Of 2,400,000 options granted in 1999, only 2,286,250 were accepted by directors and Executive Officers.

(3) The number of options to be granted for 2003 has not yet been determined.

The following table summarizes information about stock options outstanding and exercisable as of December 31, 2002.

| Options outstanding | Weighted average exercise price | Weighted average remaining contractual life | Options exercisable |
|---------------------|---------------------------------|---|---------------------|
| 2,286,250           | 3.43                            | 3 years                                     | 0                   |

#### EMPLOYEES

As of December 31, 2002, we had 12,833 employees in active service, of which approximately 522 held senior managerial positions. In recent years, we have pursued a policy in our core electricity business of staff reductions and workforce rationalization, which has resulted in a steady reduction in permanent staff levels. We expect to add employees as we develop our telecommunications business. The table below shows our employment levels at the dates indicated.

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|                     | December 31, |        |        |        |        |
|---------------------|--------------|--------|--------|--------|--------|
|                     | 1998         | 1999   | 2000   | 2001   | 2002   |
| Permanent staff     | 13,829       | 13,550 | 12,864 | 11,709 | 12,445 |
| Fixed-term contract | 103          | 333    | 402    | 362    | 388    |
| Total               | 13,932       | 13,883 | 13,266 | 12,071 | 12,833 |

At December 31, 2002, there were 7,048 employees engaged in distribution, 2,159 employees engaged in generation, 218 holding staff positions and 3,408 classified as others. We experienced 6.1% absenteeism in 2002 compared with 6.2% absenteeism in 2001 and 5.9% absenteeism in 2000.

Approximately 67% of our employees are members of a union. Our non-management employees are represented by more than 30 unions, of which six represent the majority of employees. Most of the unions are members of one of the two principal confederations in Portugal: CGTP-Intersindical and UGT. The unions assume responsibility for annually negotiating salary levels, negotiating the collective bargaining agreements and ensuring that the collective bargaining agreements are correctly applied. In May 2000, we reached agreement with all of the unions representing our employees on a new collective bargaining agreement which provides for, among other things, higher entry level compensation across professional categories and greater opportunities for seniority-related



compensation increases within individual professional categories. A related agreement provides for a 4.0% salary increase for 2001 and a 3,475% increase for 2002. Future increases will be negotiated on an annual basis.

From 1988 through 2002, we have experienced eight strikes, four of which lasted only 24 hours, and two of which lasted 48 hours. Six of the seven strikes concerned salary negotiations, our privatization or our restructuring. In 2000, there were two strikes. These strikes, which concerned the professional categories of EDPD dispatch and damage repair employees, involved a total of 229 workers and 2,258 hours of strike time. In 2001, there was one strike concerning employee's rights, salaries and the maintenance of the public social security system. The strike involved a total of 35 workers and 140 hours of strike time. In 2002, there were 3 strikes, concerning employee's rights, salary negotiations, the maintenance of the National Wealth Service and the Public Social Security system, protests against new labor laws approval and against installation closing. One of these strikes was a national strike and in all there were 2,639 workers involved and 25,530 hours of strike time.

### EMPLOYEE BENEFITS

Our employees are entitled to participate in a profit sharing program. In 2002, approximately 20.7 million was distributed to 100% of our labor force as profit sharing. We maintain a pension plan for all employees of the companies that have subscribed to the Collective Labor Agreement. This pension plan is supplemental to the pension provided to retirees by the Portuguese social security system. As of December 31, 2002, the underlying pension fund totaled 727.6 million, the pension expense in 2002 was 48.6 million. For further information about our pension and benefit plans, see Item 5. Operating and Financial Review and Prospects Pensions and benefits and notes 3(e), 16 and 25 to our consolidated financial statements. Our directors and senior officers are also eligible for stock option plans, described in Share Ownership.

Our employees are eligible to participate in a complementary health plan that supplements benefits from the National Health Service. Currently, the health plan covers approximately 100% of our people among the existing labor force, retired people, pensioners and relatives. In addition, employees receive personal accident insurance which covers death and invalidity, as well as a death subsidy complement.

### Item 7. *Major Shareholders and Related Party Transactions*

#### MAJOR SHAREHOLDERS

The Portuguese government, directly or through PARPUBLICA Participações Publicas, S.G.P.S., S.A., (formally known as PARTEST) a corporation wholly-owned by the Portuguese government, which was formed in 1991 for the purposes of holding the Republic's interest in a number of enterprises in various industries, at December 31, 2002, owned approximately 26.1% of our outstanding ordinary shares. Through Caixa Geral de Depósitos, a state-owned bank, the Portuguese government owns an additional 4.75% of our ordinary shares. The Portuguese government's ownership of EDP ordinary shares declined from approximately 70% in 1997 to the current level in connection with the offering of our ordinary shares in successive stages of our privatization

The following table sets forth information concerning the ownership of our ordinary shares as of December 31, 2002, by the Portuguese government and by our officers and directors as a group (not including ordinary shares held by any entity with which any such officers or directors are affiliated). We are not aware of any other shareholder owning more than 5.0% of our ordinary shares.

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| <b>Name of owner</b>                            | <b>Number of Ordinary<br/>Shares owned</b> | <b>Percentage of Outstanding<br/>Ordinary Shares</b> |
|---|--|--|
| Republic of Portugal                            | 783,074,076                                | 26.1%  |
| Banco Comercial Português                       | 151,635,713                                | 5.1%   |
| All directors and executive officers as a group | Approximately 15,000                       | <1%  |

The Portuguese government has special rights that all other holders of our ordinary shares do not have. To learn more about the special rights of the Portuguese government you should read Item 10. Additional Information

Articles of Association Limitations on the purchase and transfer of ordinary shares; special rights of the Portuguese government.

In addition to the shareholders listed above and Caixa Geral de Depósitos, which owns 142,516,830, or approximately 4.75%, of our ordinary shares, other significant EDP shareholders include Iberdrola, which in May 2002 announced that it had acquired additional ordinary shares and currently owns 149,966,455, or approximately 5%, of our ordinary shares and Brisa, which indirectly owns 60,002,297, or approximately 2%, of our ordinary shares.

As of June 30, 2003, approximately 1.4% of the ordinary shares were represented by ADSs that were held by three holders of record, including The Depository Trust Company. The number of ADSs outstanding was 4,124,317 at December 31, 2002.

#### **RELATED PARTY TRANSACTIONS**

Mr. Jardim Gonçalves, a director of EDP until May 2003, is presently the Chairman of BCP's board of directors. In March 2000, we and BCP entered into a strategic alliance, pursuant to which Mr. Gonçalves was elected to our board of directors as a non-executive director, we have acquired 4.25% of BCP's outstanding shares and BCP has acquired approximately 5% of our outstanding shares. In March 2003, we subscribed to a share capital increase of BCP, bringing our stake to 4.36%.

Prof. António José Fernandes de Sousa, a director of EDP, is presently the Chairman of Caixa Geral de Depósitos' board of directors. Caixa Geral de Depósitos owns 4.75% of our ordinary shares.

On May 9, 2001, we entered into an agreement for a strategic alliance in the telecommunications sector with BCP, Galp and Brisa. Brisa became a shareholder of ONI in exchange for its 100% stake in Brisa, which owned 4% of ONI Way. As a result of the agreement, EDP holds 56% of the share capital of ONI and Brisa holds 17%, while BCP and Galp hold the remaining 22.8% and 4.2%, respectively. Within the context of the strategic alliance, Brisa proposed two members of ONI's board of directors and they were subsequently elected by the shareholders of ONI.

#### **INTERESTS OF EXPERTS AND COUNSEL**

Not applicable.

#### **Item 8. *Financial Information***

#### **CONSOLIDATED STATEMENTS**

Please refer to Item 18. Financial Statements and pages F-1 through F-60 of this annual report.

## **OTHER FINANCIAL INFORMATION**

### **Legal Proceedings**

We experience a number of claims and legal and arbitral proceedings incidental to the normal conduct of our business. Management does not believe that liabilities related to such claims and proceedings are likely to be, individually or in the aggregate, material to our consolidated financial condition.

**Dividends and Dividend Policy**

We have declared dividends each year since 1991, when we became a corporation. The following table shows our dividends per share based on 3,000,000,000 ordinary shares outstanding in the years indicated:

|   | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|------|------|------|------|------|
| Dividends per ordinary share (in euro)(1)         | 0.13 | 0.14 | 0.14 | 0.11 | 0.09 |
| Dividends per ordinary share (in U.S. Dollars)(2) | 0.14 | 0.13 | 0.12 | 0.10 | 0.11 |

(1) *For 1998, 1999 and 2000, escudos are translated into euro at the fixed rate of exchange established at the commencement of the third stage of European Monetary Union on January 1, 1999 by the European Council of Ministers between the euro and escudo of PTE 200.482 = 1.00.*

(2) *Translated at the prevailing rate of exchange at the date of payment, which for 2002 was \$ 1.171 = 1.00.*

The payment and amount of dividends are subject to the recommendation of our board of directors and the consent by our shareholders at a general meeting. It is the current intention of the board of directors, subject to our financial condition, to continue its policy of proposing an annual dividend of at least 68% of Distributable Net Income, as defined below. The Portuguese government has indicated its approval of this policy and that it will not exercise its voting rights in opposition to those dividends, subject to our financial condition. Under Portuguese law, our Distributable Net Income is defined as our net income, calculated in accordance with Portuguese GAAP, after covering losses for previous periods and allocation of 5% to a legal reserve until it reaches 20% of the aggregate nominal value of its share capital. At least 50% of our Distributable Net Income must be distributed to shareholders in the form of a dividend, unless a resolution is passed by the shareholders. In order to raise the dividend above a 50% payout ratio, a simple majority of votes of shareholders present is required; in order to lower the dividend below a 50% payout ratio, a majority of votes corresponding to 75% of our share capital is required. The board of directors, with prior approval of our Audit Board, may, in specified circumstances, authorize the payment of interim dividends, although management expects to only pay a single dividend on an annual basis.

Pursuant to Portuguese law, dividends are paid to shareholders of record as of the date established for payment. These payments are effected by means of Portugal's book-entry clearance and settlement system.

All dividends are paid in euro following the full implementation of the EMU. Dividends received by a holder of ordinary shares or ADSs will, under current law and practice, be subject to taxation. The effective rate of Portuguese withholding tax has changed periodically in recent years and may change again in the future. For more information regarding taxation of dividends, you should read Item 10. Additional Information Portuguese Taxation. Dividends received by holders of ADSs will be paid in U.S. dollars, net of conversion expenses of the depositary.

**SIGNIFICANT CHANGES**

No significant change in our financial condition has occurred since the date of our consolidated financial statements included in this annual report.

*Item 9. The Offer and Listing*

**TRADING MARKETS**

In Portugal, our ordinary shares trade on the *Mercado de Cotações Oficiais* of the Euronext Lisbon Stock Exchange. In the United States, our ordinary shares trade in the form of ADSs represented by ADRs issued by Citibank, N.A., as depositary. Our ADSs are listed on the New York Stock Exchange and our ordinary shares are listed on the Euronext Lisbon Stock Exchange. Our ordinary shares are also quoted on SEAQ International.

**MARKET PRICE INFORMATION**

The tables below set forth, for the periods indicated, the reported high and low sales prices of our ADSs on the New York Stock Exchange and of our ordinary shares, based on the 3,000,000,000 ordinary shares outstanding after

giving effect to the 5 for 1 stock split approved at our May 12, 2000 general meeting, on the Euronext Lisbon Stock Exchange:

|                 | Per ADS   |       | Per Ordinary Share |      |
|-----------------|-----------|-------|--------------------|------|
|                 | High      | Low   | High               | Low  |
|                 | (Dollars) |       | (Euro)             |      |
| <b>2000</b>     |           |       |                    |      |
| First Quarter   | 39.50     | 31.50 | 4.15               | 3.20 |
| Second Quarter  | 37.38     | 33.38 | 3.94               | 3.62 |
| Third Quarter   | 34.81     | 31.25 | 3.87               | 3.30 |
| Fourth Quarter  | 33.88     | 26.06 | 3.67               | 3.15 |
| Full Year       | 39.50     | 26.06 | 4.15               | 3.15 |
| <b>2001</b>     |           |       |                    |      |
| First Quarter   | 34.00     | 26.50 | 3.60               | 3.00 |
| Second Quarter  | 28.70     | 23.30 | 3.25               | 2.72 |
| Third Quarter   | 27.10     | 22.90 | 3.04               | 2.50 |
| Fourth Quarter  | 26.50     | 21.05 | 2.93               | 2.32 |
| Full Year       | 34.00     | 21.05 | 3.60               | 2.32 |
| <b>2002</b>     |           |       |                    |      |
| First Quarter   | 22.19     | 19.30 | 2.50               | 2.18 |
| Second Quarter  | 21.73     | 19.45 | 2.45               | 1.92 |
| Third Quarter   | 19.75     | 14.78 | 1.99               | 1.47 |
| Fourth Quarter  | 17.25     | 14.70 | 1.72               | 1.49 |
| Full Year       | 22.19     | 14.70 | 2.50               | 1.47 |
| <b>Month of</b> |           |       |                    |      |
| December 2002   | 17.17     | 15.45 | 1.71               | 1.53 |
| January 2003    | 18.50     | 16.10 | 1.69               | 1.47 |
| February 2003   | 16.95     | 15.10 | 1.59               | 1.39 |
| March 2003      | 17.50     | 15.10 | 1.61               | 1.38 |
| April 2003      | 19.18     | 17.32 | 1.75               | 1.57 |
| May 2003        | 21.60     | 17.95 | 1.84               | 1.62 |

#### THE PORTUGUESE SECURITIES MARKET

The Portuguese equity market, which had experienced significant increases in liquidity and trading volumes until 2001, registered a slowdown in 2002, consistent with the worldwide economic situation. Since November 1997, Portugal's status in the Morgan Stanley Capital International, or MSCI, indices changed from emerging market to developed market. In particular, Portugal joined the MSCI Europe and World indices and left the MSCI Emerging Market index.

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The integration of the former Lisbon and Oporto Stock Exchange in Euronext, N.V. (under the name Euronext Lisbon Stock Exchange) on January 30, 2002, has allowed the Euronext Lisbon Stock Exchange to participate in a wider European capital market, which also includes Euronext Paris Stock Exchange, Euronext Amsterdam Stock Exchange and Euronext Brussels Stock Exchange. This integration process is intended to create a European common capital market, in order to allow investors to have access to a single equity and derivatives trading platform, common netting, clearing and settlement services and harmonized market rules and procedures.

As of December 31, 2002, the market capitalization of equity securities listed on the Euronext Lisbon Stock Exchange was 72,998 million compared with 96,640 million as of December 31, 2001, representing 51.6% and 61.9%, respectively, of the total market capitalization of Portuguese listed securities. As of December 31, 2002, 171 Portuguese companies' financial assets were listed on the Euronext Lisbon Stock Exchange of which 58 were in the form of equity securities, 98 in the form of bonds, 5 in the form of warrants and 10 in the form of listed funds and certificates. On the basis of euro value, the ten most actively traded equity securities in ordinary sessions of the Euronext Lisbon Stock Exchange in 2002 represented approximately 93.0% of total trading volume of equity



securities on the Euronext Lisbon Stock Exchange compared with 86.7% in 2001. Turnover of equity securities was 21,688 million in 2002 compared with 30,692 million in 2001.

In 2002, our ordinary shares represented approximately 11.5% of total trading volume of equity securities on the Euronext Lisbon Stock Exchange. As of March 31, 2003, our ordinary shares accounted for 9.3% of total market turnover since January 1, 2003. As of May 22, 2003, our ordinary shares weighted 9.29% in the PSI General Index, 15.51% in the PSI 20 Index and 0.48% in the Euronext 100 Index, each as defined below.

The official market for equity securities of the Euronext Lisbon Stock Exchange, or the Official Market, created in July 1991, is the market on which most significant Portuguese equity and derivative securities are listed. The Official Market index, or the PSI General Index, published since February 1991, is a weighted average price of all shares listed on the Official Market, other than preferred shares without voting rights. The exact number of companies in the PSI General Index's portfolio may change each day as a result of new admissions, exclusions, suspensions and the absence of quotations. This index essentially reflects the Official Market's global profitability.

The Euronext Lisbon Stock Exchange calculates an index called the PSI 20, which includes the 20 largest and most actively traded stocks listed on the Official Market. This index was created for the purpose of acting as the Portuguese stock market benchmark and as an underlying reference for futures and options contracts. Market operators also use the PSI 20 as an underlying index for structured financial products whose performance depends on the performance of the Portuguese stock market. The methodology for the composition and calculation of this index was changed in May 2001 and was implemented on October 1, 2001. The weight of the index components, which before this revision was based on the 20 companies with the largest market capitalization listed in the Official Market, now also takes in consideration the free float of these companies and introduces a maximum limit of 20% of the weight that a given company can have in the index.

Pursuant to the integration of the Portuguese stock market with Euronext, some Portuguese listed companies are now also included in Euronext indices. We, along with six other Portuguese companies, are included in Euronext 100 Index, which is a market capitalization weighted price index constituted by the 100 largest and most actively traded stocks on Euronext Stock Exchanges. Each stock participating in Euronext 100 Index must experience turnover of over 20% of its issued shares over the course of a rolling one-year analysis period.

The Euronext Lisbon Stock Exchange is supervised by the Ministry of Finance and the Portuguese Securities Exchange Commission, or CMVM, and operated by Euronext Lisboa Sociedade Gestora de Mercados Regulamentados, S.A., or the Euronext Lisbon SGMR.

## **Trading**

Since March 1, 1999, all the shares currently listed on the Official Market of the Euronext Lisbon Stock Exchange are traded through a continuous trading system, which is designated to provide automatic execution and trading through LIST, a computerized trading system. The principal feature of the continuous trading system is the computerized matching of buy and sell orders based, first, on matching sales price and, second, on the time of entry of the order. Each order is executed as soon as a matching order is entered, but can be modified or revoked up to its execution. Between 7:30 a.m. and 8:00 a.m. on each trading day, from Monday to Friday excluding public holidays, the daily opening market clearing price is established for each security on the continuous trading system based on the bids and offers outstanding. During the last 5 minutes of this pre-opening period it is possible to immediately present purchase and sale orders, which may not, however, be modified or revoked. On any trading day, the opening price may not change more than 15% from a reference price, which is the closing price of the last

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session or the price resulting from an automatic roll-call held during the session in order to reset the reference price. Computer-matched trading then proceeds on the continuous trading system from 8:00 a.m. until 4:30 p.m.

An automatic trading procedure by roll-call auction will be used if there is an interruption in the continuous trading system. In trading through a roll-call auction, all the orders to buy or sell the same security are processed together. Each roll-call auction originates one single price for the security and is followed by the matching of trades according to the priority of each of the orders, which is established according to the respective prices. Sell orders below and buy orders above the auction price will not be matched.

At present there are no official market makers or independent specialists in the continuous trading system and therefore orders to buy or sell shares in excess of corresponding orders to sell or buy shares will not be executed.

According to the Cod.VM, which entered into force on March 1, 2000, transactions on the Euronext Lisbon Stock Exchange may only be performed by its members. There are two categories of members of the Euronext Lisbon Stock Exchange: negotiator members and clearance members. Negotiator members may perform stock exchange transactions but are not allowed to execute their clearance and are therefore required to enter into an agreement with one or more clearance members for clearance of the operations they negotiate. Only financial institutions authorized to buy and sell securities for their own accounts, such as banks and dealers, may become clearance members. Clearance members can clear stock exchange transactions and negotiate transactions.

Any trading of stocks listed on the continuous trading system that takes place off-the-market must be cleared through financial institutions and physically settled through the Central de Valores Mobiliários (CVM), where those stocks are registered or deposited. Stock prices are quoted in euro per share.

#### **Portuguese transaction costs**

Currently, the framework applicable to Portuguese fees, taxes and other charges applicable to the transfer of ordinary shares is governed by Regulation 1303/2001 of November 22, 2001, as amended by Regulation 323/2002 of March 27, 2002, both issued by the Finance Ministry, and by Regulation 2-C/2000, as amended, issued by Euronext Lisbon SGMR. Accordingly, the transfer of ordinary shares on the Euronext Lisbon Stock Exchange is generally subject to a negotiable brokerage fee or bank commission, a negotiable bank settlement fee and a stock exchange fee amounting to 0.015% due from both the seller and the purchaser. Likewise, transfers of ordinary shares listed on the Euronext Lisbon Stock Exchange over the counter are subject to a fee of 0.05%.

A stamp tax of 4.0% is payable on brokerage fees, bank settlement fees and bank commissions, but not on Euronext Lisbon Stock Exchange fees.

Under current laws and practice, no Portuguese transfer fees, taxes or other charges are levied on the transfer of ADSs, other than the deposit or the withdrawal of ordinary shares, unless the transfer is made through a financial intermediary domiciled or established in Portugal. If the transfer is made through a financial intermediary domiciled or established in Portugal, the transfer may be regarded as a transfer of ordinary shares over the counter with the consequences stated above.

The status of Portuguese law with respect to transfer fees, taxes and other charges applicable to deposits and withdrawals of ordinary shares for ADSs is uncertain. Under current law and practice, a negotiable bank settlement fee and a stamp tax of 4.0% of this fee may apply to deposits and withdrawals of ordinary shares. However, Portuguese brokerage fees, bank commissions and stock exchange fees will not be levied on a deposit of ordinary shares in exchange for ADSs or a withdrawal of ordinary shares in exchange for the cancellation of ADSs, unless the deposit or withdrawal is made through a financial intermediary domiciled or established in Portugal. If a deposit or withdrawal of ordinary shares is made through such a financial intermediary, the deposit or withdrawal may be regarded as a transfer of ordinary shares over the counter with the consequences stated above. Current practice with respect to the applicability of Portuguese transfer fees, taxes or other charges to deposits and withdrawals of ordinary shares is subject to change.

**Clearance and settlement**

All securities traded on the Euronext Lisbon Stock Exchange, either in certificated form or in book-entry form, must be deposited or registered in the CVM. The CVM provides a system for the registration and control of securities, including custody of certificated securities and registration of book-entry securities. The CVM is managed by Interbolsa Sociedade Gestora de Sistemas de Liquidação e de Sistemas Centralizados de Valores Mobiliários, S.A., or Interbolsa, a company wholly-owned by Euronext Lisbon SGMR that also manages the Clearing and Settlement System for stock exchange transactions.

The Clearing and Settlement System is currently the most widely used clearing and settlement system in Portugal. Under this system, the member of the stock exchange inputs trade information on LIST, the nation-wide computerized trading system. The clearance member, which also has to be a participant of the Clearance and Settlement System, accepts the trade, at the latest, one day after the date of the trade, becoming the legal counterparty to the transaction until it settles. At the end of the second day after the trade, the electronic book-entry for the transfer of the securities takes place in the books of the CVM. This physical settlement is provisional until the financial settlement takes place on the morning of the third day after the trade. The net amount due to or from each participant's account with the Central Bank is posted to the closing balance of the previous day.

Our ordinary shares have been accepted for trading on Euroclear and Clearstream and settle and trade with Euroclear and Clearstream in accordance with standard settlement procedures for internal clearances and with external counterparties through the CVM. Our ordinary shares are subject to such rules and regulations as Euroclear and Clearstream may from time to time determine.

Under Portuguese law, the acquisition of shares through a stock exchange transaction allows the owner to immediately sell those shares in the same market, without awaiting the physical and financial settlement of the transaction. However, the clearance member related to that transaction is the first responsible for its physical settlement. In case of default in the physical settlement, Interbolsa must immediately initiate the substitution procedures necessary for good settlement of the transaction. These procedures involve an automatic lending and borrowing system, or if there are no securities available, an automatic buy-in system, in relation to the short positions on the closing date.

To hold our ordinary shares directly in book-entry form through the facilities of the CVM, an entity that is a non-resident of Portugal must, prior to the execution of the transaction, open a special share portfolio account with a financial intermediary located in Portugal and duly licensed to act as a financial intermediary pursuant to applicable legislation. The investor may then buy and sell listed securities with some restrictions and repatriate the proceeds. Persons who hold ordinary shares through Euroclear and Clearstream will not be required to open a special share portfolio account with a financial intermediary located in Portugal in order to hold the ordinary shares.

#### **TRADING BY US IN OUR SECURITIES**

Except in specified circumstances, under Portuguese law companies may not, at any time, hold more than 10% of their own share capital and may purchase or otherwise trade in their own equity securities only with shareholder authorization. Under our Articles of Association, the shareholders may, at a general meeting, grant us the authority to purchase our own shares.

At our general meeting held on May 22, 2003, the shareholders renewed the authorization for our board of directors and the management bodies of our subsidiaries to purchase our shares under the following conditions: (1) the number of shares to be acquired cannot exceed 10% of our share capital limit that already includes any shares to be acquired under the stock options plans; (2) the acquisition can only be done within the regulated markets where we are listed; and (3) the acquisition price shall have as maximum and minimum limits 115% and 85%, respectively, of the weighted average of the closing quotations of our shares in the last ten sessions of the Euronext Lisbon Stock Exchange preceding the date of the acquisition.

The shareholders also renewed the authorization for our board of directors and the management bodies of our subsidiaries to sell our shares under the following conditions: (1) the number of sales and shares to be sold will be defined by our board of directors and by the management bodies of our subsidiaries, which shall include any shares to be granted under the stock options plans; (2) the sale of shares can only be done

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within the regulated markets where we are listed, without prejudice of obligations to be satisfied within the stock options plans whose creation has been duly approved by the general meeting; and (3) the sale price cannot be lower than 90% of the weighted average of the closing quotations of our shares in the last ten sessions of the Euronext Lisbon Stock Exchange preceding the date of the sale, except if the sale is executed to fulfill the stock options plans whose creation has been duly approved by the general meeting.

This general meeting resolution has renewed the authorization for our board of directors to purchase and sell our own shares for an additional period of 18 months, which had already been granted in previous identical resolutions passed at the general meetings held in 1999, 2000, 2001 and 2002.

As of June 12, 2003, we held 19,563,317 of our own ordinary shares, 1,750,000 of which we purchased in 1999, 650,000 of which we purchased in 2000, 9,326,209 of which we purchased in 2001, 5,702,717 of which we purchased in 2002 and 2,134,391 of which we purchased in 2003. Ordinary shares held by us will be deemed to be outstanding under Portuguese law but not entitled to any dividends, voting rights or preemptive rights except the right to receive ordinary shares upon increases of share capital by incorporation of reserves.

***PLAN OF DISTRIBUTION***

Not applicable.

***SELLING SHAREHOLDERS***



Not applicable.

*DILUTION*

Not applicable.

*EXPENSES OF THE ISSUE*

Not applicable.

**Item 10.**      *Additional Information*

***SHARE CAPITAL***

Not applicable.

*ARTICLES OF ASSOCIATION*

The following is a summary of both the rights of our shareholders and certain provisions of our Articles of Association. Rights of our shareholders are set out in our Articles of Association or are provided for by applicable Portuguese law. Because it is a summary, it does not contain all the information that may be important to you. For more complete information you should read our Articles of Association. Directions on how to obtain a complete copy of our Articles of Association are provided under Documents on Display below.

## **General**

We are registered at the Lisbon Commercial Registry Office under number 1805. Under Article 3 of our Articles of Association, we have as our company purpose the promotion, involvement and management, in a direct or indirect manner, of capital projects and activities in the electrical sector, both at the Portuguese national and international level, with the aim of enhancing and streamlining the performance of the universe of companies comprising the EDP Group. We may also acquire participating interests as a limited liability member in companies having corporate missions that differ from our own, even if such companies are regulated by special laws, or participate in complementary company groupings, European economic interest groupings, consortia or in any other type of association, temporary or permanent.

### Transactions with directors

According to the Portuguese Companies Law, contracts between us or our affiliates, on one hand, and our directors or any person acting on behalf of them, on the other hand, must be previously authorized by our board of directors, without the interested director's vote, and approved by our Registered Chartered Accountant ( *Fiscal Único* ). Companies may not grant loans or extend any kind of credit to its directors, make payments on their behalf, guarantee their obligations or pay their remuneration more than one month in advance. Under Article 26 of our Articles of Association, our directors need not be shareholders of us. For more information on our board of directors, you should read Item 6. Directors, Senior Management and Employees Board of Directors.

### Voting rights

Pursuant to our Articles of Association, any holder of 100 or more ordinary shares registered in its name at least 15 days in advance of any meeting of shareholders is entitled to attend the meeting and to have one vote for every 100 ordinary shares owned. Shareholders must provide us, up to eight days prior to the date of the meeting, with a certificate from a financial intermediary confirming that the shareholder held the ordinary shares on the date 15 days prior to the meeting and that the ordinary shares have been blocked from that date up to the date of the meeting. According to the Portuguese Company Law, those shareholders holding fewer than 100 ordinary shares may aggregate their interests with other shareholders of ordinary shares, which themselves may own more or less than 100 ordinary shares, and permit one of them, or another holder entitled to attend the meeting, to attend and vote on their behalf at the meeting.

Under Portuguese law, holders of ordinary shares entitled to vote may be represented by proxy at a meeting of shareholders. The proxy must be filed with us by the date of the scheduled meeting of shareholders. Proxies must be in hand signed and are only valid for a single meeting.

The voting rights exercised by a single shareholder, other than the Portuguese government or an equivalent entity, are limited to a maximum of 5% of our share capital. No single shareholder can exercise voting rights, in its name or on behalf of other shareholders, representing more than 5% of our share capital. For purposes of computing the percentage of the share capital held by a single shareholder, the votes corresponding to the following shares are aggregated:

the number of shares held by the shareholder;

the number of shares held by any other entity controlled directly or indirectly by the shareholder;

the number of shares held by other persons or entities in their own name or in the name of another for the benefit of the shareholder;

the number of shares held by an entity belonging to the same corporate group as the shareholder entity;

the number of shares held by third parties with whom the shareholder has an option or any other right to buy our shares;

the number of shares held by third parties with whom the shareholder has entered into a shareholder agreement related to a joint exercise of voting rights; and

the number of shares held by any person as security where the person is entitled to exercise the voting rights corresponding to our shares.

Holders of ADSs are treated as holders of the ordinary shares represented by the ADSs for purposes of determining the applicability of the 5% limitation on voting rights. Voting instructions of an individual ADS holder are not entitled to be carried out by us as votes of ordinary shares to the extent that those votes, together with any votes cast by the ADS holder as a holder of ordinary shares, exceed 5% of our share capital.

Under Portuguese law, a company may not vote its own shares that it holds, nor may any subsidiary that holds stock of its parent vote the treasury stock, and a company's treasury stock will not be counted towards a quorum or for purposes of determining a requisite percentage of votes cast. In accordance with Portuguese law, our shareholder must approve the acquisition by us of our own shares. The acquisition by us of our own shares must be approved by our shareholders in accordance with Portuguese law. Under Portuguese law, a Portuguese company may not, except under specified limited circumstances, purchase more than 10% of its nominal share capital as treasury stock.

Under the Portuguese Companies Law and our Articles of Association, we can create shares with special rights (e.g., priority rights over a company's profits) with the approval of two-thirds of the votes cast at a general meeting of shareholders.

### **Shareholders meetings**

A general meeting of shareholders must be held annually within the first five months of the year following the close of the year for which the general meeting is convened. Other general meetings of shareholders are convened by the president of the general meeting whenever deemed appropriate or suitable and requested by the board of directors, the Registered Chartered Accountant or the holders of at least 5% of our total share capital. Notices of shareholders' meetings must be given by an announcement published in the *Diário da República*, the Portuguese Official Gazette, and in a national newspaper with general circulation in Lisbon and Oporto, at least 30 days before the scheduled date of the meeting. Under the Portuguese Companies Law and our Articles of Association, the general meeting is constituted by the presence, in person or by proxy, of shareholders. There is no quorum requirement unless the meeting is called to vote on the extraordinary matters referred to below. In general, resolutions can be approved by a simple majority of votes cast. However, there are special quorum and majority requirements in cases where the general meeting is called to vote on extraordinary matters, which are amending our Articles of Association, approving a merger, break-up or transformation or dissolution of us, increasing our share capital and waiving pre-emptive rights. In these cases, the presence on a first call, in person or by proxy, of shareholders representing at least one-third of our share capital is required. There is no quorum requirement on a second call. Resolutions on these foregoing matters must be approved by at least two-thirds of the votes cast unless, on a second call, there are present, in person or by proxy, shareholders representing at least 50% of our share capital, in which case a simple majority of votes cast is required. However, there is a special majority requirement in the case of the election of our board of directors. If a group of minority shareholders holding at least 10% of the voting rights votes against the resolution providing for the election of the members of the board of directors, those minority shareholders have the right to elect one director.

All resolutions adopted at a general meeting of shareholders are binding upon all shareholders.

### **Proxy requirements**

In the event that any person requests a proxy from more than five shareholders, whether for that person or others, those proxies may be used for only one specified general meeting and a proxy will be considered revoked if the shareholder granting the proxy attends the meeting. A proxy request must contain at least the following information:

the date, time, place and agenda for the meeting for which the proxy is requested;



identification of relevant documents that may be reviewed by shareholders;

the identity of the person or persons who will act as the shareholder's proxy holder;

a statement as to how the proxy holder will vote the related shares in the absence of instructions from the shareholder; and

a statement that, in the event of circumstances unforeseen at the time the request was sent, the proxy holder will vote according to his or her evaluation of the shareholder's best interests.

Furthermore, pursuant to the Cod.VM, it is also required, in order for a person to represent more than five shareholders, that the proxy includes a description of the voting rights of the proxy holder and the voting instructions to the proxy holder.

If a shareholder provides voting instructions with respect to a proxy request, the proxy holder must vote the related shares in accordance with those instructions except in the event of unforeseen circumstances as indicated above, in which case the proxy holder must inform the shareholder of how he or she has voted and the reasons for the vote. If a person requesting a proxy does not agree with the voting instructions received from the shareholder, he or she must reject the proxy and immediately inform the shareholder of the rejection.

Any person that has requested proxies is required to send, at that person's expense, to shareholders for whom that person was the proxy holder, a copy of the minutes of the related general meeting.

### **Voting by correspondence**

According to our by-laws and the Cod.VM, our shareholders may vote by correspondence. Under the Cod.VM, public notices concerning shareholders' meetings must indicate the possibility of voting by correspondence and must specify the procedures to follow in order to vote by correspondence, including a mailing address and deadline for receipt of the votes. We are obligated to verify the authenticity of each vote and ensure its confidentiality. According to our Articles of Association, shareholders may cast their vote by correspondence for each item on the agenda, provided that they send a registered letter with recorded delivery addressed to the chairman of the general meeting at our registered office in Portugal, signed in accordance with the signature on their identity card, at least eight days prior to the general meeting, enclosing a legible photocopy of the identity card of the person signing the letter.

### **Dividends and distributions**

Under Portuguese law, we are required to establish and maintain a legal reserve equal to 20% of the aggregate nominal value of our share capital and, if necessary to maintain this legal reserve, to contribute a minimum of 5% of our annual net income to the legal reserve. The legal reserve is distributable only upon our liquidation but it can be used to cover losses and be incorporated as our share capital. Currently, our total legal reserve is 244 million, which is in compliance with Portuguese law. Net income in each fiscal year, as increased or decreased by any profit or loss carried forward from prior years, less any contribution to the legal reserve, is available for distribution to shareholders as dividends, subject to the requirements of Portuguese law and our Articles of Association. The payment and amount of dividends are subject to the recommendation of our board of directors and the decision by our shareholders at a general meeting.

If we have earned distributable profits since the end of the preceding fiscal year, as shown on an interim income statement certified by our auditors, our board of directors has the authority, with the prior approval of the audit board and subject to Portuguese law and regulations, without the approval of shareholders, to distribute interim dividends to the extent of these distributable profits.

Under Portuguese law, dividends are generally distributed to shareholders *pro rata* according to their respective holdings of shares. The payment of the dividend is due within 30 days of the date of the general meeting approving the dividend. The board of directors determines the actual dividend payment date within that period. You should read "Portuguese Taxation" below to learn about taxes on dividends we pay. According to

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Decree Law 187-70 of April 30, 1970, dividend entitlement lapses in favor of the Republic of Portugal if not claimed by the shareholder within five years.

In the event that we are liquidated, our assets remaining after payment of our debts, liquidation expenses and all of our remaining obligations will be distributed first to repay in full the nominal value of our ordinary shares. Thereafter, any surplus will be distributed *pro rata* among the holders of ordinary shares based on the nominal value of their holdings.

### **Pre-emptive rights**

Shareholders have a preferential, rateable right to subscribe for any new issue of ordinary shares for cash, except if a special resolution at the general meeting duly limits or waives these rights in furtherance of our best interests. These rights are separately transferable and may be traded on the Euronext Lisbon Stock Exchange, where our ordinary shares are listed, during the period when the rights may be exercised.

Unless they agree otherwise, holders of convertible bonds generally are granted rights equal to those of shareholders to subscribe for new issues of ordinary shares and subsequent issues of convertible bonds. Shareholders have a pre-emptive right to subscribe for convertible bonds unless the right is waived by special resolution at a general meeting.

Portuguese law, except as mentioned above, requires a Portuguese company to grant preemptive rights to all of its existing shareholders to purchase a sufficient number of shares to maintain their existing percentage of ownership of the company whenever the company issues new shares for cash. Under this requirement, any preemptive rights in connection with any future issuance of ordinary shares for cash will be offered by us to the depositary as the registered owner of the ordinary shares underlying the ADSs. However, under current U.S. law, U.S. holders of ADSs or ordinary shares would not be entitled to exercise their preemptive rights unless a registration statement under the Securities Act is effective with respect to these rights and ordinary shares or an exemption from these registration requirements is available. We intend to evaluate at the time of any preemptive rights offering the costs and potential liabilities associated with a registration statement, as well as the indirect benefits to us of enabling U.S. holders of ADSs and ordinary shares to exercise preemptive rights and any other factors we consider appropriate at the time, and then to make a decision as to whether to file a registration statement.

No assurance can be given that a registration statement would be filed. If no registration statement is filed and no exemption from the registration requirements under the Securities Act is available, the depositary is required, pursuant to the terms of the depositary agreement between it, us and the owners and holders from time to time of ADSs, to sell U.S. holders' preemptive rights and distribute the proceeds if a premium can be recognized over the cost of any sale.

### **Book-entry registration of ordinary shares**

Our Articles of Association require that each ordinary share be indivisible and in uncertificated, book-entry and registered form. In the case of joint or co-ownership of ordinary shares, a common representative must be designated by the joint or co-owners of those ordinary shares through whom all rights associated with the ordinary shares must be exercised. The ordinary shares must be registered in accounts opened with commercial banks or authorized dealers located in Portugal and authorized by the CMVM to act as custodians of securities. The banks are also obligated to be members of the CVM, through which all ordinary shares must be transferred.

### **Shareholders' reporting obligations**

Under Article 13 of our Articles of Association, those shareholders who become the holders of a participating interest equal to or in excess of 5% of our voting rights or share capital pursuant to the rule contained in former Article 346 of the Portuguese Securities and Capital Markets Code, which corresponds to Article 20 of the current Cod.VM, must communicate this fact to our board of directors within five business days

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following the date on which the 5% shareholding was acquired, and are barred from exercising voting rights until such time as they make this communication. For purposes of this provision, the shareholders are required to furnish to our board of directors, in writing and in a complete, objective, clear and accurate manner, and to the satisfaction of our board of directors, all the information that our board of directors requests from them. Under Article 7 of our Articles of Association, a shareholder must notify our board of directors of any shareholders' agreement into which the shareholder has entered into relating to our ordinary shares. This information must be supplied within 30 days following the execution of the shareholders' agreement in question. Under the Cod.VM, notification of these shareholders' agreements must also be given to the CMVM within three days after execution.

Also, under the Cod.VM, any person or persons acting in concert, including companies and their affiliates, making a purchase or sale of our ordinary shares that results in that person either owning or ceasing to own specific threshold percentages, i.e., 2%, 5%, 10%, 20%, 33%, 50%, 66% and 90%, of our voting rights must, within three business days, notify us, the Euronext Lisbon Stock Exchange and the CMVM. Upon receiving this notification, we must publish it in the Euronext Lisbon Stock Exchange bulletin and in a major daily newspaper.

#### **Portuguese reporting and disclosure requirements**

Under Portuguese law we are required to publish, among others:

annual reports of operations and financial statements that include, among others:

a management report;

an audited financial statement;

a report on corporate governance practices with information regarding the following matters:

measures for and level of compliance with the CMVM recommendation on corporate governance;

organizational structure of the departments involved in the entrepreneurial decision process;

number of members of the board of directors with specific distinction between executive and non-executive members and the tasks performed by each member;

remuneration of the members of the board of directors in the aggregate, with separation of the amount received by executive and non-executive members and the fixed and variable amount of such total remuneration;

description of the evolution of our shares quotation;

description of our dividends policy;

description of the main characteristics of our stock option plans;

description of the new technologies used for disclosure of financial data and other data for the preparation of the annual general shareholders meeting; and

indication of the department for assistance to investors;

a report on the exercise of voting rights and on proxy requirements; and

a report on corporate rules, namely regarding to internal procedures applicable to conduct of business, management and control of activity risk;

semi-annual reports that include financial statements, material information on our activities and performance and factors that may potentially influence future performance;

quarterly reports that include material information on our activities;

specified information concerning the acquisition or sale by us of our ordinary shares;

non-public information that investors would consider relevant to an evaluation of us or the price of our ordinary shares; and

specified information concerning outstanding bonds and changes in the composition of our board of directors, our Registered Chartered Accountant and the board of our general meeting.

**Limitations on the purchase and transfer of ordinary shares; special rights of the Portuguese government**

Individual buying and selling decisions regarding our ordinary shares are not subject to consent from us or any Portuguese authority except for purchases by a person that owns or will own upon completion of the purchase more than 10% of our share capital. Under Portuguese law, no person may acquire more than 10% of our ordinary shares without the prior approval of the Portuguese Ministry of Finance. If a person attempts to acquire more than 10% of our share capital without this authorization, no additional ordinary shares may be registered in the name of that person by us, the CVM or any Portuguese financial intermediary. Holders of ADSs are treated as holders of the ordinary shares represented by the ADSs for purposes of the applicability of these provisions. However, on June 4, 2002, the Court of Justice of the European Community announced a judgment that the Republic of Portugal, by approving and maintaining in force Decree Law no. 380/93 (which establishes this 10% limit), did not comply with obligations arising from the EU Treaty. Accordingly, the Portuguese government must amend or revoke Decree Law no. 380/93.

In connection with its offering of our ordinary shares in October 2000 and pursuant to Article 13 of the Privatization Decree Law, special rights were granted to the Portuguese government. The Portuguese government has these rights so long as it is a shareholder of us. These rights provide that, without the favorable vote of the Portuguese government, no resolution can be adopted at our general meeting of shareholders relating to:

amendments to our Articles of Association, including share capital increases, mergers, spin-offs or dissolution;

authorization for us to enter into group/partnership or subordination agreements; or

wivers of, or limitations on, our shareholders' pre-emptive rights to subscribe to share capital increases.

The Privatization Decree Law also entitles the Portuguese government to appoint one member of our board of directors whenever it votes against the list of directors presented for election at our general meeting of shareholders.

**Liability in respect of subsidiaries**



Under Portuguese law, a company that wholly owns a subsidiary is ultimately liable for the debts of that subsidiary.

**Dissolution and liquidation rights**

Except as otherwise permitted by Portuguese law, we may be dissolved and liquidated by a resolution approved at a general meeting by the vote of at least two-thirds of the votes cast, subject to the requirements applicable to the adoption of amendments to the Articles of Association as described above. In this case, our board of directors will adopt and implement a plan for dissolution and liquidation, unless decided otherwise by our shareholders. The shareholders acting at the general meeting approving the proposal would retain full authority to direct the liquidation, including replacing liquidators, approving liquidation accounts and granting release to the liquidators. Any shareholder, the Portuguese government or a creditor of us may also resort to judicial dissolution in specific cases as provided for in the Portuguese law. Upon our liquidation, each shareholder is entitled to receive its *pro rata* share of any assets remaining after the payment of our debts and taxes and expenses of the liquidation.

## MATERIAL CONTRACTS

Our power plants in the Binding Sector are subject to binding licenses issued by DGE and such plants enter into PPAs with REN, as described in Item 4. Information on the Company Portugal Electricity System Overview The Public Electricity System or Binding Sector. In the Non-Binding Sector, EDP Energia enters into contracts with Qualifying Consumers, as described in Item 4. Information on the Company Portugal Electricity System Overview The Non-Binding Sector.

In July 2002, we updated our 5,000,000,000 MTN program. Our MTN program provides for the periodic issuance, by us and our wholly owned finance subsidiary EDP Finance B.V., of debt instruments on terms and conditions determined at the time the instruments are issued.

In 2001 we issued a 1,000,000,000 bond under the MTN program maturing in 2011. This 1,000,000,000 bond issue pays a fixed interest rate of 5.875%.

In 2002 we issued two bonds under the MTN program: the first was a GBP 200,000,000 bond issued in August maturing in August 2017 with a 6.625% annual coupon and the second was a 500,000,000 bond issued in December maturing in March 2008 with a 5% annual coupon.

In April 2001, we established an 1,000,000,000 commercial paper programme that provides for the periodic issuance of notes by us and EDP Finance, B.V. The notes can have maturities of not less than 1 day and not more than 364 days and an interest rate determined at the time of issuance.

For more information on these programs and our other borrowings, you should read Item 5. Operating and Financial Review and Prospects Liquidity and Capital Resources.

## EXCHANGE CONTROLS

### Exchange controls

Portugal does not impose exchange controls on transfers of currency abroad.

A non-resident of Portugal who wishes to invest in ordinary shares (but not ADSs) must open a special share portfolio account with a commercial bank located in Portugal and duly licensed to act as securities custodian pursuant to applicable legislation prior to the execution of the transaction. The investor may then buy and sell quoted securities with some restrictions and repatriate the proceeds.

Dividends may be freely transferred to a foreign country. See [Taxation](#) below for a summary of certain Portuguese tax consequences to holders of ordinary shares and ADSs, including the payment of dividends thereon and the realization of capital gains with respect thereto.

There are also limitations on voting that apply to our ordinary shares and our ADSs.

#### **Exchange rate policy**

The value of the euro with respect to non-euro currencies, including the U.S. dollar, is affected by European Central Bank exchange rate policy. As of March 31, 2002, the following twelve Member States are participating in the third stage of the EMU: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. These Member States are referred to as the participating Member States. Since January 1, 1999 the value of the national currency of a participating Member State in the national currency of another country, whether a participating Member State or not, may be determined only through the bilateral conversion method, i.e., by converting the first currency into euro and then converting this euro equivalent into the second currency. Pursuant to the third stage of EMU, the participating Member States have adopted a single currency, which is designated the euro and have transferred authority for conducting monetary policy to the

European Central Bank. The value of the euro as against the currencies of each of the participating Member States was irrevocably fixed. The conversion rate between the euro and the escudo was fixed at PTE 200.482 per euro.

## PORTUGUESE TAXATION

### General

The following is a summary of the principal Portuguese tax considerations that are likely to be material to the purchase, ownership and disposition of ordinary shares or ADSs if a holder is a non-resident of Portugal for Portuguese tax purposes, does not hold 10% or more of any class of our stock and does not hold our ordinary shares or ADSs through a permanent establishment in Portugal.

Resident holders for purposes of Portuguese taxation include collective entities having their registered office or effective place of management in Portugal and individuals having remained in Portuguese territory more than 183 days in any given calendar year or having the use of a dwelling in Portuguese territory at the end of any given calendar year which may imply their intention of using it as their habitual residence.

A non-resident holder may be broadly defined as any collective entity or individual not satisfying the above criteria. However, non-resident holders having a permanent establishment or a fixed installation in Portugal to which Portuguese-source income may be attributed will be taxed on such income under rules applicable to resident holders.

This summary does not purport to be a comprehensive description of all of the tax considerations that may be relevant to non-resident holders, and does not address tax rules applicable to special classes of holders.

Furthermore, this summary is based on the tax laws of Portugal in effect on the date of this annual report, including the Convention between the United States of America and the Portuguese Republic for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income, together with the related Protocol are referred to in this annual report as the Treaty, and is subject to changes to those laws and practices or the Treaty subsequent to that date, which changes could be made on a retroactive basis.

Prospective purchasers should consult their own advisers as to the tax consequences of the acquisition, ownership and disposition of ordinary shares or ADSs in light of their particular circumstances, including the effect of any other national laws.

For purposes of the Treaty and for Portuguese tax purposes, a U.S. person holding ADSs will be treated as a beneficial owner of our ordinary shares represented by such ADSs.

**Dividends**

The general rate of withholding tax on dividends in Portugal is currently 25% for non-residents. However, until five years after the date upon which EDP's privatization is completed, only 50% of dividends received, net of other benefits, from shares acquired during the privatization process are required to be included in income.

Dividends, whether from shares acquired during the privatization process or otherwise, are also subject to an additional 5% withholding tax in the form of a substitute gift and inheritance tax, unless the holder of such shares is a Portuguese holding company. The Portuguese government has presented a draft Bill whereby the substitute gift and inheritance tax will be abolished. Currently, this proposal is under discussion.

Under the Treaty, the rate of withholding tax on dividends distributed to U.S. residents eligible for Treaty benefits will not exceed 15% and the rate of withholding with respect to the substitute gift and inheritance tax on dividends distributed to those persons will not exceed 5%. Since Portuguese effective rates are at or below the Treaty rates, according to the Portuguese Tax Authority, at the present time it is not necessary for U.S. residents to claim treaty benefits with respect to dividends paid on ordinary shares or ADSs.

*Pro rata* distributions of ordinary shares or rights to subscribe for ordinary shares are not treated as dividends for Portuguese tax purposes, and, therefore, are not subject to Portuguese withholding tax or the Portuguese substitute gift and inheritance tax. The Portuguese tax consequences of *pro rata* distributions of ordinary shares or rights to subscribe for ordinary shares may be subject to change.

### **Capital gains**

Capital gains realized by non-resident individuals on the transfer of ordinary shares or ADSs are subject to tax at the rate of 10% or, if the ordinary shares or ADSs were held for more than 12 months, are not taxed. Notwithstanding this, non-resident corporate holders and non-resident individual holders of ordinary shares and ADSs are not subject to tax on capital gains in Portugal if the following three conditions are met:

no more than 25% of the non-resident is owned, directly or indirectly, by resident entities;

the non-resident entity does not have as its place of residence a state or jurisdiction identified in a list of tax havens published by the Portuguese Ministry of Finance; and

the capital gains do not arise from the transfer for consideration of shares or other participations in companies resident in Portugal whose assets primarily (more than 50%) comprise immovable property located in Portugal or in companies resident in Portugal that control such companies.

Under the Treaty, capital gains derived from the sale or other disposition of ordinary shares, including deposits of ordinary shares in exchange for ADSs, by an individual holder who is eligible for Treaty benefits will not be subject to Portuguese capital gains tax, regardless of the length of time our ordinary shares are held.

### **Gift and inheritance taxes**

Transfers by a non-resident of ordinary shares or ADSs by gift or at death will not be subject to Portuguese gift or inheritance taxes. The Portuguese government has presented a draft Bill whereby the substitute gift and inheritance tax will be abolished. Currently, this proposal is under discussion.

### **Portuguese transaction costs**

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The transfer of ordinary shares on the Euronext Lisbon Stock Exchange is generally subject to a negotiable brokerage fee or bank commission, a negotiable bank settlement fee and a stock exchange fee amounting to 0.015% due from both the seller and the purchaser. Likewise, transfers of ordinary shares listed on the Euronext Lisbon Stock Exchange over the counter are subject to a fee of 0.05%.

A stamp tax of 4.0% is payable on brokerage fees, bank settlement fees and bank commissions, but not on Euronext Lisbon Stock Exchange fees.

Under current laws and practice, no Portuguese transfer fees, taxes or other charges are levied on the transfer of ADSs, other than the deposit or the withdrawal of ordinary shares, unless the transfer is made through a financial intermediary domiciled or established in Portugal. If the transfer is made through a financial intermediary domiciled or established in Portugal, the transfer may be regarded as a transfer of ordinary shares over the counter with the consequences stated above.

The status of Portuguese law with respect to transfer fees, taxes and other charges applicable to deposits and withdrawals of ordinary shares for ADSs is uncertain. Under current law and practice, a negotiable bank settlement fee and a stamp tax of 4.0% of the fee may apply to deposits and withdrawals of ordinary shares. However, Portuguese brokerage fees, bank commissions and stock exchange fees will not be levied on a deposit of ordinary shares in exchange for ADSs or a withdrawal of ordinary shares in exchange for the cancellation of ADSs, unless the deposit or withdrawal is made through a financial intermediary domiciled or established in Portugal. If a deposit or withdrawal of ordinary shares is made through a financial intermediary, the deposit or withdrawal may be regarded as a transfer of ordinary shares over the counter with the consequences stated above. Current practice with

respect to the applicability of Portuguese transfer fees, taxes or other charges to deposits and withdrawals of ordinary shares is subject to change.

## UNITED STATES TAXATION

### General

The following is a summary of material U.S. federal income tax considerations that are likely to be relevant to the purchase, ownership and disposition of ordinary shares or ADSs by a holder that is a citizen or resident of the United States or a U.S. corporation or that otherwise will be subject to U.S. federal income tax on a net income basis with respect to our ordinary shares or ADSs, or a U.S. Holder. This summary does not purport to be a comprehensive description of all of the tax considerations that may be relevant to a decision to purchase our ordinary shares or ADSs by any particular purchaser, including tax considerations that arise from rules of general application to all purchasers or to certain classes of investors or that are generally assumed to be known by purchasers. Thus, for example, this summary deals only with holders that purchase and hold ordinary shares or ADSs as capital assets, and does not address the tax treatment of holders that may be subject to special tax rules, such as banks, insurance companies, securities dealers, traders in securities that elect to mark to market, tax exempt entities, persons that hold ordinary shares or ADSs as a position in a straddle for tax purposes, persons who hold 10% or more of any class of our stock and persons whose functional currency is not the U.S. dollar. The summary is based on the tax laws of the United States in effect on the date of this annual report, which are subject to change. Prospective purchasers should consult their own advisers as to the tax consequences of the purchase, ownership and disposition of ordinary shares or ADSs in light of their particular circumstances, including the effect of any state, local or other national laws.

In general, for U.S. federal income tax purposes, holders of ADSs will be treated as the beneficial owners of our ordinary shares represented by those ADSs.

### Dividends

The gross amount of any dividends received with respect to our ordinary shares or ADSs, including amounts withheld in respect of Portuguese withholding tax, generally will be subject to U.S. federal income taxation as foreign-source dividend income, and will not be eligible for the dividends received deduction allowed to corporations. Dividends paid in euros will be includible in your income in a U.S. dollar amount calculated by reference to the exchange rate in effect on the date of receipt or, in the case of ordinary shares held in ADS form, by the Depositary. If dividends paid in euros are converted into U.S. dollars on the date of receipt, you generally should not be required to recognize foreign currency gain or loss in respect of the dividend income. Subject to certain exceptions for short-term and hedged positions, the U.S. dollar amount of dividends received by an individual in respect of our shares or ADSs after December 31, 2002, and before January 1, 2009, is subject to taxation at a maximum rate of 15%. You should consult your own tax adviser regarding the availability of the reduced dividend tax rate in the light of your own particular circumstances.

Portuguese withholding taxes, including the 5% tax that is denominated as a substitute inheritance and gift tax, should be treated as foreign income taxes that, subject to generally applicable limitations under U.S. tax law, are eligible for credit against your U.S. federal income tax liability or, at your election, may be deducted in computing taxable income. Foreign tax credits will not be allowed for withholding taxes imposed in respect of certain short-term or hedged positions in securities or in respect of arrangements in which the expected economic profit, after non-U.S. taxes, is insubstantial.



Distributions of additional shares with respect to ordinary shares or ADSs that are made as part of a *pro rata* distribution to all of our shareholders generally will not be subject to U.S. federal income tax.

**Capital gains**

Upon a sale or other disposition of ordinary shares or ADSs, a U.S. Holder will recognize gain or loss for United States federal income tax purposes in an amount equal to the difference between the U.S. dollar value of the

amount realized and the U.S. Holder's tax basis, determined in U.S. dollars, in its ordinary shares or ADSs. Generally, such gain or loss will be capital gain or loss, will be long-term capital gain or loss if the U.S. Holder's holding period for such ordinary shares or ADSs exceeds one year and any gain will be income from sources within the United States for foreign tax credit limitation purposes. Long-term capital gain realized by a U.S. Holder an individual generally is subject to a maximum rate of 20% in respect of property held for more than one year. The net amount of long-term capital gain recognized by an individual holder after May 5, 2003, and before January 1, 2009, generally is subject to taxation at a maximum rate of 15%. The net long-term capital gain recognized by an individual holder before May 6, 2003 generally is subject to taxation at a maximum rate of 20%.

As discussed in Portuguese Taxation Capital gains, above, if the Treaty does not apply, individual holders may be subject to Portuguese capital gains tax on gains realized on the sale or other disposition of ordinary shares. In the event that such a capital gains tax is imposed, U.S. Holders that do not receive significant foreign source income from other sources may not be able to derive effective U.S. foreign tax credit benefits in respect of the Portuguese capital gains tax. Deposits and withdrawals of ordinary shares in exchange for ADSs will not result in the realization of gain or loss for U.S. federal income tax purposes.

#### **U.S. information reporting and backup withholding**

Dividends and payments of the proceeds of a sale of ordinary shares or ADSs, paid to U.S. Holders within the United States or through certain U.S.-related financial intermediaries are subject to information reporting and may be subject to backup withholding unless the U.S. Holders is a corporation or other exempt recipient or provides a taxpayer identification number and certifies that no loss of exemption from backup withholding has occurred. Holders that are not U.S. persons generally are not subject to information reporting or backup withholding. However, a non-U.S. person may be required to provide a certification to establish its non-U.S. status in connection with payments received within the United States or through certain U.S.-related financial intermediaries.

#### **DIVIDENDS AND PAYING AGENTS**

Not applicable.

#### **STATEMENT BY EXPERTS**

Not applicable.

#### **DOCUMENTS ON DISPLAY**

Copies of our Articles of Association and by-laws may be examined at our principal place of business at Praça Marquês de Pombal, 12 1250-162 Lisbon, Portugal.

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We also file reports, including annual reports on Form 20-F, periodic reports on Form 6-K and other information with the Securities and Exchange Commission, or the SEC, pursuant to the rules and regulations of the SEC that apply to foreign private issuers. You may read any materials publicly filed with the SEC at the SEC's public reference room at the following location:

Public Reference Room  
450 Fifth Street, N.W.  
Room 1024  
Washington, D.C. 20549

Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. The SEC filings are also available to the public from commercial document retrieval services.

As of November 2002 we file electronically with the SEC. Documents we have filed as of November 2002, are available on the website maintained by the SEC.

Our ADRs are listed on the New York Stock Exchange, or NYSE. Reports and other information concerning us are available for inspection at the offices of the NYSE, 20 Broad Street, New York, New York 10005.

## SUBSIDIARY INFORMATION

Not applicable.

### Item 11. *Quantitative and Qualitative Disclosures About Market Risk*

#### General

We are exposed to market risks, including foreign currency, commodity price and interest rate risk. We use financial derivative instruments to manage our exposure to interest rate fluctuations. Management's guidelines with respect to the use of financial derivative instruments are that we do not engage in speculative derivative transactions and that all derivative transactions are solely for hedging purposes and must relate to a specific underlying asset, for example, cash flows of the derivative transaction must match those of the underlying asset being hedged. The negotiation of financial derivative transactions follows our internal procedures set by management, which require that for each transaction our financial department must submit to the Executive Committee of the Board of Directors for its approval a description of the hedging strategy that defines the objective of the hedge, the specific asset being hedged and the parameters of the proposed transaction. Following this approval, it is the responsibility of our financial department to negotiate with the counterparty and consummate the transaction, which is then ratified by the Executive Committee of the Board of Directors.

The counterparties to our financial derivative transactions are major financial institutions and these transactions expose us to market and credit risk and, occasionally, may be concentrated with certain counterparties. Management believes the credit risk and interest rate risk arising from non-performance by the counterparties is not significant, based on the investment grade rating of the counterparties. We do not require collateral or other security to support the financial instruments with credit risk.

#### Interest rate risk

Management is aware of our exposure to market risks arising from our outstanding debt and derivative instruments. Our market risks result mainly from interest rate fluctuations. We estimate the sensitivity of the fair values of our financial instruments to changes in interest rates. The methods and assumptions used by us to determine fair values are explained in note 31 to the consolidated financial statements.

Interest rate swap agreements are used to manage the proportion of variable rate debt in our debt portfolio and to reduce the level of interest expense. Notional amounts of interest rate swap agreements, including cross-currency interest rate swaps, outstanding as of December 31, 2002, increased to 3,545.6 million from 2,960.4 million at December 31, 2001, primarily due to additional transactions effected to limit the impact of

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increasing interest rates. The swap agreements have remaining maturities between 18 months and 15 years. The fair value of these derivative financial instruments is the amount that would be paid or received upon termination of the agreements based on available market rates. These fair values are estimates that involve uncertainties and cannot be determined with precision. These agreements, if terminated, would result in receivables of 131.2 million at December 31, 2002.

Our main exposure is to euro interest rates. The fair value of all interest rate sensitive financial instruments at the EDP holding company level amounted to a net liability of 6,406.8 million as of December 31, 2002. These include primarily long-term debt, interest rate and cross currency interest rate swaps. At December 31, 2002, in the event of a 10% increase in interest rates for all maturities, this fair value would increase to 6,461.6 million. A 10% decrease would result in a decrease of this fair value to 6,354.9 million.

At December 31, 2001, the fair value of all interest rate sensitive financial instruments amounted to a net liability of 4,977.7 million. At December 31, 2001, in the event of a 10% increase in interest rates for all maturities, this fair value would increase to 5,006.6 million. A 10% decrease would result in a decrease of this fair value to 4,944.9 million.

### **Foreign exchange rate risk**

We are exposed primarily to two types of foreign exchange risk arising from our Brazilian investments: the impact of foreign exchange fluctuations on the value of our equity investment, which does not have an impact on our income statement but is reflected in our balance sheet, and the impact of foreign exchange fluctuations on the non-Brazilian currency denominated debt held by our Brazilian businesses which is reflected in their income statements and, in the case of consolidated subsidiaries, has a corresponding effect on our income statement. Management's policy with respect to the impact on the value our equity investment is not to use financial instruments to hedge against this risk given the long-term nature of these investments and that short-term fluctuations in their value impacting our balance sheet are considered acceptable. With respect to Escelsa, management decided to purchase the U.S. dollar denominated debt of Escelsa through a tender offer of Escelsa Senior Notes maturing in 2007, thus limiting the impact of the devaluation of the Brazilian real against the U.S. dollar on our consolidated profit and loss statements. As a result of the tender offer, we acquired US\$ 357.4 million of these bonds, corresponding to 83% of the total outstanding bonds, at a discount of 25% of their nominal value.

Management is also aware that, although our debt currently does not expose us to material foreign exchange risk, these risks may exist for us in the future if a material portion of our outstanding debt is denominated in a currency other than the euro.

### **Commodity price risk**

Management is aware that we are subject to risks associated with market fluctuations in the cost of fuel. A rise in the market price for fuel has a negative impact on our financial results. Moreover, fuel prices are often quoted in U.S. dollars, subjecting us to the additional risk of a rise in the value of the U.S. dollar against the euro. Despite those risks, we do not hedge against rising fuel costs as we expect to be able to pass through to tariffs the fuel cost incurred.

### **Item 12. *Description of Securities Other Than Equity Securities***

Not applicable.

## GLOSSARY OF TERMS

|                                    |  |
|------------------------------------|--|
| Capacity charge:                   | Refers to the monthly charge payable by REN to the generators in the Binding Sector for each power plant, in respect of each PPA, based on contracted firm capacity, whether or not dispatched, payable by REN to such generators.   |
| CCGT (Combined Cycle Gas Turbine): | A type of generating plant in which turbines, typically fueled by natural gas, are used to drive generators to produce electricity. The exhaust gases are then passed through a boiler to produce steam which in turn drives an additional turbine coupled to a generator. |
| Cogeneration:                      | The simultaneous generation of steam and electricity, typically where the need arises for industrial purposes.   |
| Dry year:                          | A year in which hydrological conditions are unfavorable such that hydroelectric generation in that year is below average (10,600 GWh).   |
| Energy charge:                     | Refers to the variable charge based on actual electricity delivered to the national transmission grid.   |
| Generating unit:                   | An electric generator together with the turbine or other device which drives it.   |
| Gigawatt (GW):                     | 1,000,000,000 watts (1,000 megawatts).   |
| Gigawatt hour (GWh):               | One gigawatt of power supplied or demanded for one hour.   |
| Hydroelectric unit:                | A generating unit which uses water power to drive the electric generator.  |
| Installed capacity:                | The level of electric power which can be delivered from a particular generating unit on a full-load continuous basis to the transmission network under actual conditions.  |
| Kilovolt (kV):                     | 1,000 volts.   |
| Kilovolt ampere (kVA):             | 1,000 volts ampere.  |
| Kilowatt (kW):                     | 1,000 watts.   |
| Kilowatt hour (kWh):               | One kilowatt of power supplied or demanded for one hour.   |
| Megawatt (MW):                     | 1,000,000 watts (1,000 kilowatts).   |
| Megawatt hour (MWh):               | One megawatt of power supplied or demanded for one hour.   |
| Megavolt ampere (MVA):             | 1,000,000 volts ampere.  |
| NO <sub>x</sub> :                  | Oxides of nitrogen.  |
| SO <sub>2</sub> :                  | Sulfur dioxide.  |

Substation:

An assemblage of equipment which switches and/or changes or regulates the voltage of electricity in a transmission and distribution system.



|                      |   |
|----------------------|---|
| Technical cost:      | The cost incurred in making a capital expenditure excluding the cost of financing the expenditure.  |
| Terawatt (TW):       | 1,000,000,000,000 watts (1,000,000 mega watts)  |
| Terawatt hour (TWh): | One terawatt of power supplied or demanded for one hour.  |
| Thermoelectric unit: | A generating unit which uses combustible fuel as the source of energy to drive the electric generator.                                      |
| Volt:                | The basic unit of electric force analogous to water pressure in pounds per square inch.   |
| Volt ampere:         | The basic unit of apparent electrical power.  |
| Watt:                | The basic unit of active electrical power.  |
| Wet year:            | A year in which hydrological conditions are favorable such that hydroelectric generation in that year is greater than average (10,600 GWh). |

**PART II**

**Item 13. *Defaults, Dividend Arrearages and Delinquencies***

Not Applicable.

**Item 14. *Material Modifications to the Rights of Security Holders and Use of Proceeds***

At our General Meeting held on May 12, 2000, our shareholders approved the change of our share nominal value to 1 euro. Our nominal share capital remained 3,000,000,000 euros.

In addition, shareholders approved at this General Meeting a 5-for-1 stock split of our ordinary shares. Consequently the share capital is now represented by 3,000,000,000 shares with a nominal value of 1 euro.

**Item 15. *Controls and Procedures***

Within the 90-day period prior to the filing of this report, an evaluation has been carried out under the supervision and with the participation of our management, including our chief executive officer and chief financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based upon and as part of that evaluation, the chief executive officer and chief financial officer concluded that the disclosure controls and procedures are effective in all material respects to ensure that information required to be disclosed in the reports the company files and submits under the Exchange Act are recorded, processed, summarized and reported as and when required.

In addition, there have been no significant changes in our internal controls or in other factors that could significantly affect these controls subsequent to the date of their evaluation.

Certifications in accordance with section 302 of the Sarbanes-Oxley Act of 2002 can be found on pages 140 and 141 of this Form 20-F.

**Item 16. *[Reserved]***

**PART III**

**Item 17. *Financial Statements***

Our financial statements have been prepared in accordance with Item 18 hereof.

**Item 18. *Financial Statements***

Index to Financial Statements and Schedules

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| <u>Reports of Independent Auditors</u>  | F-1 |
| <u>Consolidated Statements of Income for the years ended<br/>December 31, 2000, 2001, and 2002</u>              | F-2 |
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**Item 19. Exhibits**

Index to Exhibits

- 1.1 Amended and Restated Articles of Association of EDP, together with an English translation thereof (incorporated by reference to our registration statement on Form F-3 (file no. 333-12620) filed on October 20, 2000).
- 2.1 Amended and Restated Articles of Association of EDP (see Exhibit 1.1).
- 2.2 Deposit Agreement dated June 16, 1997 among Citibank, N.A. EDP and the holders from time to time of American Depositary Receipts ( ADR ) (incorporated by reference to our registration statement on Form F-1 (file no. 333-6928) filed on May 16, 1997).
- 2.3 Amendment No. 1 dated September 8, 2000, to the Deposit agreement dated June 16, 1997 among Citibank, N.A., EDP and the holders from time to time of ADRs (incorporated by reference to our registration statement on Form F-3 (file no. 333-12620) filed on October 20, 2000).
- 2.4 Amended form of ADR (included in Exhibit 2.3).
- 2.5 Certain documents relating to EDP Finance B.V. Programme for the Issuance of Debt Instruments (incorporated by reference to our annual report on Form 20-F for the fiscal year ended December 31, 1999).
- 2.6 Certain documents relating to amendment and increase of EDP Finance B.V. Programme for the Issuance of Debt Instruments (incorporated by reference to our annual report on Form 20-F for the fiscal year ended December 31, 2000).
- 2.7 Certain documents relating to EDP Finance B.V. Euro-Commercial Paper Programme (incorporated by reference to our annual report on Form 20-F for the fiscal year ended December 31, 2000).
- 2.8 Other than as provided in Exhibits 2.5 and 2.6, the total amount of long-term debt securities of EDP authorized under any instrument does not exceed ten per cent of the total assets of the Group on a consolidated basis. EDP agrees to provide to the Securities and Exchange Commission, upon request, copies of any instruments that define the rights of holders of long-term debt of EDP that are not filed as exhibits to this annual report.
- 4.1 License for Sines Power Plant, together with English translation thereof (incorporated by reference to our registration as Form F-1 (file no. 333-6928) filed on May 16, 1997).
- 4.2 Power Purchase Agreement, dated December 20, 1994, between REN and TURBOGÁS-Produtora Enérgica, S.A. (incorporated by reference to our registration statement on Form F-1 (file no. 333-6928) filed on June 16, 1997).
- 4.3 Energy Management Agreement, dated December 1993, between REN and Transgás-Sociedade Portuguesa de Gás Natural, S.A. (redacted version; subject to confidential treatment request); incorporated by reference to our registration

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statement on Form F-1 (file no. 333-6928) filed on June 12, 1997).

- 4.4 Supplemental Agreement to the Power Purchase Direct Agreement for the CCGT Power Station at Tapada do Outeiro (incorporated by reference to our annual report on Form 20-F for the fiscal year ended December 31, 1999).
- 8.1 Subsidiaries of EDP.
- 10.1 Certifications pursuant to section 906 of the Sarbanes-Oxley Act 2002 (subsections (a) and (b) of section 1350, Chapter 63 of Title 18, United States Code).

**Signature**

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant certifies that it meets all of the requirements for filing on Form 20-F and has fully caused this Annual Report on Form 20-F to be signed on its behalf by the undersigned, thereunto duly authorized.

EDP Electricidade de Portugal

Date: July 3, 2003

/s/ João Ramalho Talone

João Ramalho Talone  
Chief Executive Officer

Date: July 3, 2003

/s/ Rui Miguel Horta e Costa

Rui Miguel Horta e Costa  
Chief Financial Officer

**CERTIFICATIONS**

I, João Ramalho Talone, certify that:

1. I have reviewed this annual report on Form 20-F of EDP Electricidade de Portugal, S.A.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:
  - a. designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b. evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the Evaluation Date); and
  - c. presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a. all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's

auditors any material weaknesses in internal controls; and

b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: July 3, 2003

/s/ João Ramalho Talone

João Ramalho Talone  
Chief Executive Officer



I, Rui Miguel Horta e Costa, certify that:

1. I have reviewed this annual report on Form 20-F of EDP Electricidade de Portugal, S.A.;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:

a. designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

b. evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the Evaluation Date); and

c. presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):

a. all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: July 3, 2003

/s/ Rui Miguel Horta e Costa

Rui Miguel Horta e Costa  
Chief Financial Officer

**PricewaterhouseCoopers**

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To the Board of Directors of

EDP - Electricidade de Portugal, S.A.

**Report of Independent Accountants**

In our opinion, the accompanying consolidated balance sheet and the related consolidated statements of income, shareholders' equity and cash flows present fairly, in all material respects, the financial position of EDP - Electricidade de Portugal, S.A. and its subsidiaries at December 31, 2002 and December 31, 2001, and the results of their operations and their cash flows for the years ended December 31, 2002, 2001 and 2000, in conformity with accounting principles generally accepted in Portugal. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards in the United States and in Portugal, which require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

Additionally, as discussed in Notes 2 and 33 to the consolidated financial statements, the Company changed its method of accounting for non-trading investments in 2002.

Accounting principles generally accepted in Portugal vary in certain significant respects from accounting principles generally accepted in the United States of America. The application of the latter would have affected the determination of consolidated net income for each of the three years in the period ended December 31, 2002 and the determination of consolidated shareholders' equity at December 31, 2002 and 2001 to the extent summarized in Note 33 to the consolidated financial statements.

/s/ PricewaterhouseCoopers

Lisbon, Portugal

May 8, 2003, except for the contents of Note 34,

as to which the date is July 2, 2003.

PricewaterhouseCoopers - Auditores e Consultores, Lda.

Sede: Avenida da Liberdade 245 8º A, 1269 - 034 Lisboa

Contribuinte n.º. 504193279 Capital social Euros 750.000

Matriculada na Conservatória do Registo Comercial sob o n.º. 7297

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**EDP ELECTRICIDADE DE PORTUGAL, S.A. AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF INCOME  
FOR THE YEARS ENDED DECEMBER 31, 2000, 2001 AND 2002**

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(Amounts stated in euros EUR and U.S. dollars US\$)

|  | Notes | 2000<br>EUR   | 2001<br>EUR   | 2002<br>EUR   | 2002<br>US \$ |
|--|-------|---------------|---------------|---------------|---------------|
| Revenues                                     | 20    | 3,846,493,261 | 5,650,374,089 | 6,386,558,435 | 7,418,626,278 |
| Operating costs and expenses:                |       |               |               |               |               |
| Raw materials and consumables                | 21    | 1,730,722,574 | 3,078,864,247 | 3,687,097,277 | 4,282,932,197 |
| Personnel costs                              | 22    | 439,313,006   | 591,973,489   | 624,772,247   | 725,735,442   |
| Depreciation and amortization                |       | 613,600,697   | 664,691,413   | 739,540,618   | 859,050,382   |
| Other external suppliers and services        | 23    | 368,544,069   | 651,230,186   | 675,069,959   | 784,161,264   |
| Own work capitalized                         | 24    | (229,071,807) | (232,518,745) | (241,769,257) | (280,839,169) |
| Concession and power-generation rental costs | 30    | 132,636,656   | 149,114,156   | 158,176,302   | 183,737,592   |
| Provisions                                   | 25    | 105,090,647   | 115,986,158   | 100,645,395   | 116,909,691   |
| Taxes other than income taxes                |       | 9,133,084     | 13,747,620    | 16,634,503    | 19,322,639    |
| Hydrological correction                      | 18    | (35,408,665)  |               |               |               |
| Other operating income, net                  | 26    | (12,431,929)  | (56,246,884)  | (22,312,195)  | (25,917,846)  |
| Total operating costs and expenses           |       | 3,122,128,322 | 4,976,841,640 | 5,737,854,849 | 6,665,092,192 |
| Operating income                             |       | 724,364,939   | 673,532,449   | 648,703,586   | 753,534,086   |
| Other Expenses (Income):                     |       |               |               |               |               |
| Interest and related expenses                | 27    | 291,704,935   | 456,754,831   | 604,564,061   | 702,261,613   |
| Interest and related income                  | 28    | (116,876,667) | (251,421,544) | (381,720,639) | (443,406,694) |
| Other non-operating expenses (income), net   | 29    | (288,792,516) | (125,989,416) | 138,938,784   | 161,391,292   |
| Total other expenses                         |       | (113,964,248) | 79,343,871    | 361,782,206   | 420,246,211   |
| Income before income taxes                   | 32    | 838,329,187   | 594,188,578   | 286,921,380   | 333,287,875   |
| Provision for income taxes                   |       | (312,641,275) | (202,952,586) | (171,739,322) | (199,492,396) |
| Net income before minority interest          |       | 525,687,912   | 391,235,992   | 115,182,058   | 133,795,479   |
| Minority interest                            |       | 23,285,856    | 59,558,724    | 220,033,768   | 255,591,224   |
| Net income for the year                      |       | 548,973,768   | 450,794,716   | 335,215,826   | 389,386,703   |
| Basic and diluted net income per share       |       | 0.19          | 0.15          | 0.11          | 0.13          |

The accompanying notes are an integral part of the consolidated financial statements

## EDP ELECTRICIDADE DE PORTUGAL, S.A. AND SUBSIDIARIES

## CONSOLIDATED BALANCE SHEETS AS OF DECEMBER 31, 2001 AND 2002

(Amounts stated in euros EUR and U.S. dollars US\$)

|   | Notes | 2001<br>EUR    | 2002<br>EUR    | 2002<br>US\$   |
|---|-------|----------------|----------------|----------------|
| <b>Assets</b>   |       |                |                |                |
| Current Assets:                                       |       |                |                |                |
| Cash and cash equivalents                             |       | 34,385,781     | 213,972,719    | 248,550,710    |
| Accounts receivable trade, net                        | 4     | 936,556,798    | 970,859,602    | 1,127,750,514  |
| Accounts receivable other, net                        | 5     | 446,451,644    | 740,543,008    | 860,214,758    |
| Inventories   | 6     | 109,036,539    | 150,305,029    | 174,594,322    |
| Prepaid expenses and other current assets             |       | 3,657,770      | 1,771,704      | 2,058,012      |
| Total current assets                                  |       | 1,530,088,532  | 2,077,452,062  | 2,413,168,316  |
| Long-term receivables, net                            | 7     | 102,851,979    | 260,583,901    | 302,694,259    |
| Investments, net                                      | 8     | 3,023,556,627  | 1,965,984,154  | 2,283,687,193  |
| Fixed assets, net                                     | 9     | 9,843,777,976  | 11,204,237,202 | 13,014,841,934 |
| Other assets, net                                     | 10    | 1,732,867,673  | 2,616,932,462  | 3,039,828,749  |
| Total assets  |       | 16,233,142,787 | 18,125,189,781 | 21,054,220,451 |
| <b>Liabilities and shareholders equity</b>            |       |                |                |                |
| Current liabilities:                                  |       |                |                |                |
| Short term debt and current portion of long term debt | 15    | 1,744,344,470  | 1,887,033,693  | 2,191,978,338  |
| Accounts payable trade                                | 11    | 755,352,361    | 1,018,570,449  | 1,183,171,434  |
| Accounts payable other                                | 12    | 104,935,924    | 173,676,538    | 201,742,667    |
| Accrued expenses                                      | 13    | 213,255,577    | 294,498,579    | 342,089,549    |
| Taxes payable   | 14    | 196,685,584    | 49,752,219     | 57,792,178     |
| Deferred revenue                                      | 17    | 15,761,196     | 94,854,620     | 110,183,127    |
| Total current liabilities                             |       | 3,030,335,112  | 3,518,386,098  | 4,086,957,293  |
| Long term debt  | 15    | 4,054,779,321  | 6,107,041,911  | 7,093,939,884  |
| Accrued pension and post retirement liabilities       | 16    | 683,888,000    | 608,256,000    | 706,550,170    |
| Deferred revenue and other liabilities                | 17    | 1,739,159,274  | 2,008,013,259  | 2,332,508,202  |
| Hydrological correction account                       | 18    | 387,506,424    | 324,111,266    | 376,487,647    |
| Total liabilities                                     |       | 9,895,668,131  | 12,565,808,534 | 14,596,443,196 |
| Minority interest                                     |       | 240,716,932    | 65,199,165     | 75,735,350     |
| Shareholders equity:                                  | 19    |                |                |                |
| Share capital   |       | 3,000,000,000  | 3,000,000,000  | 3,484,800,000  |
| Own shares  |       | (33,095,202)   | (43,493,459)   | (50,522,002)   |
| Fair value and other valuation reserves               |       | 2,035,508,786  | 671,538,267    | 780,058,851    |
| Legal reserve   |       | 221,187,438    | 243,727,440    | 283,113,794    |

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|  |                |                |                |
|--|----------------|----------------|----------------|
| Other reserves                             | 78,732,984     | 78,732,984     | 91,456,234     |
| Retained earnings                          | 343,629,002    | 1,208,461,024  | 1,403,748,325  |
| Net income for the year                    | 450,794,716    | 335,215,826    | 389,386,703    |
| Shareholders' equity                       | 6,096,757,724  | 5,494,182,082  | 6,382,041,905  |
| Total liabilities and shareholders' equity | 16,233,142,787 | 18,125,189,781 | 21,054,220,451 |

The accompanying notes are an integral part of the consolidated financial statements

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## EDP ELECTRICIDADE DE PORTUGAL, S.A. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS EQUITY  
FOR THE YEARS ENDED DECEMBER 31, 2000, 2001 AND 2002

(Amounts stated in euros EUR)

|  | Share<br>Capital | Own<br>shares | Fair value<br>and<br>other<br>valuation<br>reserves | Legal<br>reserve | Other<br>reserves | Retained<br>earnings | Net<br>Income | Total         |
|--|------------------|---------------|---|------------------|-------------------|----------------------|---------------|---------------|
| Balances at January 1, 2000                | 3,000,000,000    | (5,851,737)   | 2,052,453,581                                       | 168,041,770      | 66,263,041        | 265,040,252          | 513,936,039   | 6,059,882,946 |
| Dividend distribution (Eur 0.7 per share)  |                  |               |   |                  |                   | 0                    | (418,990,234) | (418,990,234) |
| Net income distribution to management      |                  |               |   |                  |                   | (613,457)            | (457,896)     | (1,071,353)   |
| Net income distribution to employees       |                  |               |   |                  |                   | (17,274,538)         |               | (17,274,538)  |
| Transfer to reserves                       |                  |               | 27,794,401  | 25,696,820       |                   | 40,996,688           | (94,487,909)  |               |
| Other                                      |                  | (2,186,735)   | 53,152,094  |                  | 12,469,943        | (30,226,099)         |               | 33,209,203    |
| Net income for the year                    |                  |               |   |                  |                   |                      | 548,973,768   | 548,973,768   |
| Balances at December 31, 2000              | 3,000,000,000    | (8,038,472)   | 2,133,400,076                                       |                  | 78,732,984        | 257,922,846          | 548,973,768   | 6,204,729,792 |
| Dividend distribution (Eur 0.14 per share) |                  |               |   |                  |                   |                      | (418,990,234) | (418,990,234) |
| Net income distribution to management      |                  |               |   |                  |                   |                      | (640,556)     | (640,556)     |
| Net income distribution to employees       |                  |               |   |                  |                   |                      |               |               |
| Transfer to reserves                       |                  |               | 10  | 27,448,848       |                   | 101,894,120          | (129,342,978) |               |
| Other                                      |                  | (25,056,730)  | (97,891,300)  |                  |                   | (16,187,964)         |               | (139,135,994) |
| Net income for the year                    |                  |               |   |                  |                   |                      | 450,794,716   | 450,794,716   |
| Balances at December 31, 2001              | 3,000,000,000    | (33,095,202)  | 2,035,508,786                                       | 221,187,438      | 78,732,984        | 343,629,002          | 450,794,716   | 6,096,757,724 |
| Dividend distribution (Eur 0.11 per share) |                  |               |   |                  |                   |                      | (339,000,000) | (339,000,000) |
| Net income distribution to employees       |                  |               |   |                  |                   |                      | (22,072,804)  | (22,072,804)  |
| Transfer to reserves                       |                  |               | (796,280,367)                                       | 22,540,002       |                   | 863,462,277          | (89,721,912)  |               |
| Other                                      |                  | (10,398,257)  | (567,690,152)                                       |                  |                   | 1,369,745            |               | (576,718,664) |
| Net income for the year                    |                  |               |   |                  |                   |                      | 335,215,826   | 335,215,826   |
| Balances at December 31, 2002              | 3,000,000,000    | (43,493,459)  | 671,538,267   | 243,727,440      | 78,732,984        | 1,208,461,024        | 335,215,826   | 5,494,182,082 |

The accompanying notes are an integral part of the consolidated financial statements

## EDP ELECTRICIDADE DE PORTUGAL, S.A. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED

DECEMBER 31, 2000, 2001 AND 2002

(Amounts stated in euros EUR and U.S. dollars US\$)

|  | 2000<br>EUR   | 2001<br>EUR   | 2002<br>EUR   | 2002<br>US\$  |
|--|---------------|---------------|---------------|---------------|
| <b>Cash Flow from Operating Activities</b>                                       |               |               |               |               |
| Net income for the year  | 548,973,768   | 450,794,716   | 335,215,826   | 389,386,703   |
| Adjustments to reconcile net income to net cash provide by operating activities: |               |               |               |               |
| Depreciation and amortization  | 613,600,697   | 664,691,413   | 739,540,618   | 859,050,382   |
| Provisions   | 98,764,971    | 213,174,294   | 101,216,854   | 117,573,498   |
| Hydrological correction account  | (35,408,665)  | (47,465,630)  |               |               |
| Losses (Gains) on disposal of fixed assets and investments                       | (205,472,087) | (25,046,127)  | (11,932,584)  | (13,860,890)  |
| Interest and related income  | (80,677,168)  | (103,367,942) | (256,951,359) | (298,474,699) |
| Interest and related expenses  | 282,327,321   | 448,911,468   | 598,335,487   | 695,026,502   |
| Other, net   | (203,887,880) | (422,371,620) | (347,858,425) | (404,072,346) |
| Changes in operating assets and liabilities:                                     |               |               |               |               |
| Accounts receivable-trade  | 46,114,978    | (302,086,262) | 4,176,322     | 4,851,216     |
| Accounts receivable-other  | (30,069,502)  | (52,031,231)  | (131,684,695) | (152,964,942) |
| Inventories  | (9,085,185)   | 7,114,511     | (17,550,361)  | (20,386,499)  |
| Prepaid expenses and other assets  | 168,194,342   | 174,376,375   | (216,953,545) | (252,013,238) |
| Long term receivables  | 121,348,390   | 3,092,627     | 3,081,747     | 3,579,757     |
| Accounts payable-trade   | 24,333,850    | 135,617,491   | 109,251,482   | 126,906,521   |
| Accounts payable-other   | (144,701,873) | 35,791,596    | (111,488,059) | (129,504,529) |
| Accrued expenses   | (1,495,227)   | 18,866,753    | 60,071,054    | 69,778,536    |
| Taxes payable  | (28,675,467)  | 143,417,927   | (56,381,989)  | (65,493,318)  |
| Deferred revenue and other liabilities   | 18,135,718    | (108,086,400) | 121,516,578   | 141,153,657   |
| Customer deposits  | (41,607,641)  | 3,185,189     | (1,862,463)   | (2,163,437)   |
| Distribution to employees and management   | (18,759,788)  | (17,405,403)  | (22,072,804)  | (22,072,804)  |
| Net cash provided by operating activities  | 1,121,953,552 | 1,221,173,745 | 897,669,684   | 1,042,733,105 |
| <b>Cash Flows From Investing Activities</b>                                      |               |               |               |               |
| Cash receipts resulting from:  |               |               |               |               |
| Investments and long-term receivables  | 337,373,520   | 175,839,494   | 193,377,110   | 224,626,851   |
| Fixed assets   | 4,647,115     | 5,710,242     | 77,603,250    | 90,143,935    |
| Fixed assets subsidies   | 980,861       | 132,106,172   | 56,447,773    | 65,569,733    |
| Interest   | 5,333,736     |               | 4,083,485     | 4,743,376     |
| Dividends  | 23,076,645    | 16,831,123    | 40,041,771    | 46,512,521    |

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|   |               |                 |                 |                 |
|---|---------------|-----------------|-----------------|-----------------|
| Disposal of subsidiaries                    | 477,294,720   |                 | 315,000,000     | 365,904,000     |
|   | 848,706,597   | 330,487,031     | 686,553,389     | 797,500,416     |
| Payments resulting from:                    |               |                 |                 |                 |
| Investments and long-term receivables       | 889,880,892   | 734,090,747     | 55,510,845      | 64,481,398      |
| Fixed assets                                | 545,621,637   | 709,201,206     | 931,346,485     | 1,081,852,077   |
| Other assets                                | 156,387,766   | 130,178,571     | 42,980,565      | 49,926,224      |
| Acquisition of subsidiaries                 | 170,932,687   |                 | 798,123,792     | 927,100,597     |
|   | 1,762,822,982 | 1,573,470,524   | 1,827,961,687   | 2,123,360,296   |
| Net cash flows used in investing activities | (914,116,385) | (1,242,983,493) | (1,141,408,298) | (1,325,859,880) |

The accompanying notes are an integral part of the consolidated financial statements

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## EDP ELECTRICIDADE DE PORTUGAL, S.A. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED

DECEMBER 31, 2000, 2001 AND 2002

(Amounts stated in euros EUR and U.S. dollars US\$)

|   | 2000<br>EUR     | 2001<br>EUR     | 2002<br>EUR     | 2002<br>US\$    |
|---|-----------------|-----------------|-----------------|-----------------|
| <b>Cash Flows From Financing Activities</b>                 |                 |                 |                 |                 |
| Cash receipts resulting from:                               |                 |                 |                 |                 |
| Debt  | 4,060,982,198   | 4,639,262,230   | 12,905,665,780  | 14,991,221,370  |
| Payments resulting from:                                    |                 |                 |                 |                 |
| Debt  | 3,992,235,867   | 4,040,265,379   | 11,884,707,994  | 13,805,276,806  |
| Interest  | 130,745,409     | 254,104,230     | 375,733,979     | 436,452,590     |
| Dividends   | 418,261,709     | 415,921,535     | 337,674,939     | 392,243,209     |
| Acquisition of own shares                                   | 2,186,740       | 25,056,730      | 10,398,257      | 12,078,615      |
|   | 4,543,429,724   | 4,735,347,874   | 12,608,515,169  | 14,646,051,220  |
| Net cash flows used in financing activities                 | (482,447,526)   | (96,085,644)    | 297,150,611     | 345,170,150     |
| Net increase in cash and equivalents                        | (274,610,359)   | (117,895,393)   | 53,411,997      | 62,043,375      |
| Effect of exchange rate changes on cash and equivalents     | 11,921          | (9,681,089)     | 7,857,315       | (9,127,056)     |
| Cash and equivalents at the beginning of the year           | (66,352,246)    | (340,950,684)   | (468,527,165)   | (544,241,155)   |
| Cash and equivalents at the end of the year                 | (340,950,684)   | (468,527,165)   | (407,257,853)   | (491,324,836)   |
| <b>Cash and equivalents consist of:</b>                     |                 |                 |                 |                 |
| Cash and cash equivalents                                   | 57,690,611      | 34,385,781      | 213,972,719     | 248,550,710     |
| Bank overdrafts   | (398,641,295)   | (502,912,946)   | (621,230,572)   | (721,621,432)   |
|   | (340,950,684)   | (468,527,165)   | (407,257,853)   | (473,070,722)   |
| <b>Non-Cash Investing Activities:</b>                       |                 |                 |                 |                 |
| Fixed assets received from customers                        | 52,787,876      | 69,533,098      | 54,095,191      | 62,836,974      |
| <b>Cash Flows From Operating Activities - Direct method</b> |                 |                 |                 |                 |
| Receipts from clients                                       | 3,833,890,798   | 5,350,306,083   | 6,215,764,280   | 7,220,231,788   |
| Payments to suppliers                                       | (1,836,131,767) | (3,336,852,476) | (4,085,818,487) | (4,746,086,754) |
| Payments to employees                                       | (455,244,566)   | (632,240,550)   | (685,791,498)   | (796,615,404)   |
| Payments of concession rents                                | (132,636,656)   | (149,114,156)   | (158,176,302)   | (183,737,592)   |
| Payments relating to income taxes                           | (391,881,007)   | (111,607,279)   | (277,444,222)   | (322,279,208)   |
| Other receipts relating to operating activities             | 347,470,691     | 380,109,307     | 327,966,277     | 380,965,627     |

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|   |               |               |               |               |
|---|---------------|---------------|---------------|---------------|
| Other payments relating to operating activities | (243,513,941) | (279,427,184) | (438,830,364) | (509,745,352) |
| Cash flows provided from operating activities   | 1,121,953,552 | 1,221,173,745 | 897,669,684   | 1,042,733,105 |

The accompanying notes are an integral part of the consolidated financial statements

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**EDP Electricidade de Portugal, S.A. and Subsidiaries**

**1. ORGANIZATION AND BUSINESS**

**a) Introduction to business and activities**

The parent company, EDP Electricidade de Portugal, S.A., ( EDP or the Company ), was formed in 1976 as a result of the nationalization by the government of Portugal (the Government ) and consequent merger of the main companies of the electricity sector in mainland Portugal.

In 1994, as determined by Decree Law 7/91 and 131/94 the Company was restructured as a Group by splitting it into new companies wholly owned, directly or indirectly, by EDP.

The activities of the Group are now centered in the generation, distribution and sales of electricity, distribution and sales of gas, telecommunications, information technologies, as well as other complementary and the related areas such as water, engineering, laboratory research, professional training, and real estate management.

The shares of EDP are listed on Lisbon Euronext and NYSE New York Stock Exchange. They also form an active part in the future contracts market of the Lisbon Euronext.

**b) Electricity sector in the Iberian Peninsula**

In Portugal the National Electricity System (SEN) is based on the co-existence of a Public Service Electricity System (SEP) with an Independent Electricity System (SEI). SEI is composed of the Non-Binding Electricity System (SENV) and the Producers in Special Regime (PRE). The SEP is made up of the National Transmission Grid (RNT), operated by REN (under a concession contract which granted SEP management to REN), the Binding Producers (connected to the RNT under long-term contracts providing for exclusive to REN supply), and the Binding Distributors who undertake to supply power to their customers in accordance with the tariffs and conditions laid down by the Electricity Sector's Regulator (ERSE), in terms of applicable legislation and the Binding customers. The SENV is essentially composed of Non-binding Producers and Non-binding Customers, who are entitled to use the SEP's networks and for which they pay regulated tariffs. Through its subsidiaries, the EDP Group plays a fundamental role within the entire SEN. The Group occupies a prominent position at the heart of the SEP, while the Group's generating companies operate in the SEI.

In Spain, EDP owns 40% of Hidrocantábrico, in which EDP also has operational management. Hidrocantábrico is the parent-company of a Spanish Group that has operations in the electric sector (generation, transmission and distribution), gas (distribution) and telecommunications. The objective of the investment in Hidrocantábrico is to integrate and consolidate EDP's position in the Iberian electricity market.

**c) Electricity sector in Brazil**

In Brazil, EDP establishes and operates, generation, transmission and distribution of electricity. With regards to distribution, EDP owns 96.5% of Bandeirante and controls 99.97% of the share capital of IVEN, which in turn controls ESCELSA and ENERSUL. With regards to generation, EDP owns investments in Lageado hydroelectric plant (27.65%) and Fafen thermoelectric plant (79.6%). In a joint venture with Grupo Rede do Brasil, EDP won two concessions for the construction of two new hydroelectric plants (Peixe Angical and Couto Magalhães). EDP participates also in the electricity trading market through its 100% owned subsidiary Enertrade.

**d) Telecommunications**

EDP owns 56.025% of the share capital of ONI, S.G.P.S. The other shareholders are BCP - Banco Comercial Português, S.A. (a bank), Galp Energia, S.G.P.S., S.A. (a Portuguese oil company) and Brisa - Auto-estradas de Portugal, S.A (a Portuguese motorway operator). ONI operates fixed network voice, data, fiber rental and the Internet in the Portuguese and Spanish markets.

**e) Information Technology**

EDP owns 100% of Edinfor, which in turn owns 60% of ACE. Both are active in consulting, systems integration, project and applications outsourcing and IT infrastructures.

**f) Owners**

In December 31, 2002 EDP's shareholders are as follows (by percentage of ownership):

|  | %             |
|--|---------------|
| Portuguese government  | 18.96         |
| Parública (100% Portuguese State owned)                      | 7.14          |
| Caixa Geral de Depósitos, S.A. (100% Portuguese State owned) | 4.75          |
| Banco Comercial Português, S.A.                              | 5.06          |
| Iberdrola  | 5.00          |
| Brisa Autoestradas de Portugal, S.A.                         | 2.00          |
| Other shareholders   | 56.51         |
| EDP Own shares   | 0.58          |
| <b>Total</b>   | <b>100.00</b> |

**g) Tariffs**

According to the Portuguese law, ERSE - Entidade Reguladora dos Serviços Energéticos (the Portuguese regulator), issues and supervises the application of regulations, and sets the tariffs in the binding sector - Public Service Electricity System (SEP). In Brazil the same functions are established by the local regulator Aneel, Agência Nacional de Energia Elétrica. In Spain the government determines the tariffs.

**h) Concession regime for the distribution of low-voltage electric power**

According to Portuguese law, the concession right for the distribution of low-voltage electric power belongs to the municipalities. EDP is authorized to develop low-voltage distribution through concession contracts with municipalities by paying a rent, however EDP is almost exclusively responsible for Portugal's local electricity distribution.



**i) Public domain assets**

In Portugal certain of the assets necessary to the generation and distribution of electricity in the binding sector belong to the Portuguese government. However, EDP has the authority to operate and manage these assets in the binding sector only, and never for any other purposes. In Brazil the assets used in the binding distribution business also cannot be sold, given, rented, or used as a warrant, without the authorization of the regulator. The Brazilian regulator has specified that the assets may be sold, but the income must be used in the development of the concession.

**2. BASIS OF PRESENTATION**

The Consolidated Financial Statements have been prepared from the accounting records of EDP and its subsidiary companies listed below. The Consolidated Financial Statements are presented in accordance with generally accepted accounting principles in Portugal ( Portuguese GAAP ), except for the implementation of a new criteria for the valuation of investments in other companies which are now mark-to-market, and the reclassification of realized amount of the revaluation reserve to retained earnings, these accounting principles have been consistently applied. The Portuguese GAAP differs in certain significant respects from generally accepted accounting principles in the United States of America ( U.S. GAAP ). A description of these differences and their effects on consolidated net income and shareholders equity are set forth in Note 33. The financial statements also include certain

reclassifications and additional disclosures in order to conform more closely to the form and content of financial statements required by the Securities and Exchange Commission of the United States of America.

The preparation of the financial statements in conformity with Portuguese GAAP, together with the reconciliation to U.S. GAAP, requires management to make estimates and assumptions that affect the amounts reported in the financial statements and the accompanying notes. Some of the more significant estimates and assumptions relate to the hydrological correction account, depreciation and impairment of long lived assets, provision for employee retirement benefits and deferred taxes. Actual results could differ from those estimates.

The Company consolidates all subsidiary companies in which it holds direct or indirect voting rights of more than 50 percent except for insignificant subsidiaries which are accounted for under the equity method. Subsidiary companies in which the company holds more than 20% and has a shareholder agreement for joint management are consolidated by the proportional rate consolidation method. All significant intercompany accounts and transactions have been eliminated in the Consolidated Financial Statements.

The companies whose financial statements are consolidated with the Company's financial statements, together with the percentage of direct and indirect ownership interests, are as follows:

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|   | Percentage of ownership |        |        |
|---|-------------------------|--------|--------|
|   | 2000                    | 2001   | 2002   |
| EDP Gestão da Produção de Energia, S.A.   |                         | 100.00 | 100.00 |
| CPPE-Comp. Portuguesa de Produção de Electricidade, S.A.  | 100.00                  | 100.00 | 100.00 |
| HDN-Energia do Norte, S.A   | 100.00                  | 100.00 | 100.00 |
| HIDROCENEL-Energia do Centro, S.A   | 100.00                  | 100.00 | 100.00 |
| EDP ENERGIA, S.A. (ex-HIDROTEJO Hidroeléctrica do Tejo, S.A)  | 100.00                  | 100.00 | 100.00 |
| HIDRORUMO-Projecto e Gestão, S.A.   | 100.00                  | 100.00 | 100.00 |
| EDP Produção EM Engenharia e Manutenção, S.A. (ex Proet Estudos e Tecnologias)                          | 100.00                  | 100.00 | 100.00 |
| LABELEEC-Estudos, Des. e Actividades Laboratoriais, S.A.  | 100.00                  | 100.00 | 100.00 |
| ENERNOVA-Novas Energias, S.A.   | 100.00                  | 100.00 | 100.00 |
| EDP COGERAÇÃO Produção de Electricidade e Calor, S.A  | 100.00                  | 100.00 | 100.00 |
| ENERFIN Sociedade de Eficiência Energética, S.A. (ex ECONOLER Sociedade de Eficiência Energética, S.A.) | 74.88                   | 74.88  | 74.88  |
| O&M Serviços Operação e Manutenção Industrial, SA (ex-SEFLOR)   | 60.00                   | 60.00  | 60.00  |
| TER Termoeléctrica do Ribatejo, S.A.  | 100.00                  | 100.00 | 100.00 |
| SOPORGEN  | 82.00                   | 82.00  | 82.00  |
| HIDROBASTOS   | 60.00                   | 60.00  | 60.00  |
| ENERGIN Azóia   | 65.00                   | 60.00  | 65.00  |
| HidrOem Gestão, Operação e Manut. de Centrais Eléctricas, S.A   |                         | 100.00 | 100.00 |
| TERGEN Operação e Manut. de Centrais Termoeléctricas, S.A   |                         | 79.99  | 79.99  |
| EDP Produção Bioeléctrica,S.A.  |                         |        | 100.00 |
| Enerpro-Serviços de Produção e Engenharia, LDA  |                         |        | 100.00 |
| EDP Distribuição, S.A.  | 100.00                  | 100.00 | 100.00 |
| EDP Serviços de Gestão de Frotas e Instalações e Logística, S.A.  | 100.00                  | 100.00 | 100.00 |
| EDP ÁGUAS Gestão de Águas e Saneamento, S.A.  | 100.00                  | 100.00 | 100.00 |
| EDIPOMBAL Imobiliária, S.A.   | 100.00                  | 100.00 | 100.00 |
| MRH-Mudança e Recursos Humanos, S.A.  | 100.00                  | 100.00 | 100.00 |
| SÃVIDA-Medicina Apoiada, S.A  | 100.00                  | 100.00 | 100.00 |
| EDALPRO-Imobiliária, Lda  | 100.00                  | 100.00 | 100.00 |
| Electricidade de Portugal Internacional, S.G.P.S., S.A (ex-EDP Internacional, S.A.)                     | 100.00                  | 100.00 | 100.00 |
| EDP Imobiliária, SA.  | 100.00                  | 100.00 | 100.00 |
| VALORÁGUA Água e Saneamento de Portugal, SA   | 50.00                   | 100.00 | 100.00 |
| Internal Serviços de Consultadoria Internacional, S.A.  | 100.00                  | 100.00 | 100.00 |
| Central-e Informação e Comércio Informático, S.A.   |                         | 52.00  | 52.00  |
| EDP Participações, S.G.P.S., S.A.   |                         | 100.00 | 100.00 |
| SCS Serviços Complementares de Saúde, S.A.  |                         | 100.00 | 100.00 |
| EDP Valor Gestão Integrada de Serviços, S.A.  |                         |        | 100.00 |
| EDP Estudos e Consultoria, SA   |                         |        | 100.00 |
| EDP Serviner Serviços de Energia, S.A.  |                         |        | 100.00 |
| EDP Finance BV  |                         |        | 100.00 |
| EDP Irlanda   |                         |        | 100.00 |



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|  | Percentage of ownership |        |        |
|--|-------------------------|--------|--------|
|  | 2000                    | 2001   | 2002   |
| Balwerk, Lda   |                         | 100.00 | 100.00 |
| EDP Brasil, S.A.   | 100.00                  | 100.00 | 100.00 |
| ENERTRADE Comercializadora de Energia, S.A.                    | 100.00                  | 100.00 | 100.00 |
| EBE Empresa Bandeirante de Energia (original)*                 | 53.96                   |        |        |
| EBE Empresa Bandeirante de Energia (post-split)                |                         | 96.48  | 96.50  |
| EDP Lajeado Energia, S.A.                                      | 100.00                  | 100.00 | 100.00 |
| Energest, S.A. (ex-ENERGEN)                                    | 100.00                  | 100.00 | 100.00 |
| ENERCORP (ex-EDP Brasil, Serviços Corporativos, Lda)           | 100.00                  | 100.00 | 100.00 |
| ENERPAULO - Energia Paulista, Lda                              | 100.00                  | 100.00 |        |
| EDP 2000 - Participações, Lda                                  |                         |        | 100.00 |
| EDP Investimentos, Ltda  |                         |        | 100.00 |
| Aphelion Investment Corporation                                |                         |        | 100.00 |
| Enerpeixe, SA  |                         |        | 94.80  |
| Enercuto, SA   |                         |        | 99.90  |
| FAFEN Energia, S.A.  |                         | 80.00  | 76.60  |
| INVESTCO   |                         | 10.49  | 14.36  |
| ONI Operadora Nacional de Interactivos, S.G.P.S., S.A.         | 67.50                   | 56.03  | 56.03  |
| ONITELECOM-Infocomunicações, SA                                | 67.50                   | 56.03  | 56.03  |
| ONI Grandes Redes Infocomunicações, S.A.                       | 67.50                   | 56.03  | 56.03  |
| ONI SOLUTIONS (ex-COMNEXO, SA).                                | 67.50                   | 56.03  | 56.03  |
| OPTEP S.G.P.S., S.A.   | 100.00                  | 100.00 |        |
| 093X Telecomunicações Celulares, S.A.                          | 100.00                  | 100.00 |        |
| ONI ONE Infocomunicações, S.A.                                 | 67.50                   | 56.03  | 56.03  |
| ONI WAY Infocomunicações, S.A.                                 | 37.13                   | 38.10  | 39.09  |
| ONI WEB Infocomunicações, S.A.                                 | 67.50                   | 56.03  | 56.03  |
| ONI Açores Infocomunicações, S.A.                              | 40.50                   | 33.62  | 33.62  |
| ONI Madeira Infocomunicações, S.A.                             | 47.50                   | 39.22  | 39.22  |
| Shopping Direct Comércio Electrónico, S.A.                     | 67.50                   | 56.03  | 56.03  |
| Actien Metropolitana, S.L.U.                                   |                         | 56.03  |        |
| Autor Tecnologias Multimédia, Lda.                             |                         | 56.03  | 56.03  |
| Brisatel Telecomunicações, S.A.                                |                         | 56.03  | 56.03  |
| Intercom Internet (Ex-CD Rapid)                                |                         | 42.81  | 55.99  |
| Cidade Digital Prod. Divulgação Conteúdos Informáticos, S.A.   |                         | 33.62  |        |
| Comunitel Global, S.A.   |                         | 55.52  | 55.99  |
| FCTE Forum do Comércio, Trans. Eléct. E Serviços Empr. S.A.    |                         | 44.82  | 44.82  |
| Fonocom, S.A.  |                         | 42.81  | 55.99  |
| Germinus Solutions, S.A.                                       |                         | 44.55  | 45.86  |
| Germinus XXI, S.A.   |                         | 44.55  | 44.77  |
| Grapes España  |                         | 56.03  |        |
| Oni Multimédia Serviços Interactivos, S.A.                     |                         | 56.03  | 56.03  |
| ONI Plataformas Infocomunicações, S.A.                         |                         | 56.03  | 56.03  |
| ONI Sistemas de Informação-infocomunicações, SA.               |                         | 56.03  | 56.03  |
| Ruído Visual Telecomunicações Interactivas, S.A.               |                         | 53.23  |        |
| Tecnipublicaciones España, S.L.                                |                         | 29.84  | 29.95  |
| Tecnipublicaciones en Red, Tecnívia, S.L. (Ex- Tecnívia, S.A.) |                         | 34.25  | 34.39  |

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|  |        |        |        |
|--|--------|--------|--------|
| TLD Integral, S.L.U.                                       |        | 56.03  | 56.03  |
| Smartlogik Iberia, SL                                      |        |        | 44.77  |
| EDINFOR-Sistemas Informáticos, S.A                         | 100.00 | 100.00 | 100.00 |
| COPIDATA Industrial Gráfica e Equipamentos, SA             | 99.12  | 99.12  | 99.32  |
| COPIDATA Formulários e Sistemas para a Informática, LDA.   | 99.00  | 99.00  | 99.40  |
| ESCRITOMÁQUINA, Racionalização e Segurança, LDA.           | 99.47  | 99.47  | 99,59  |
| Edinfor Soluções Informáticas, Lda (Ex-EDINFOR BRASIL)     | 100.00 | 100.00 | 100.00 |
| ACESI Sistemas de Informação, Ltda (Ex-Edinfor Mocambique) | 100.00 | 100.00 | 61.97  |

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|   | Percentage of ownership |        |        |
|---|-------------------------|--------|--------|
|   | 2000                    | 2001   | 2002   |
| MECARESOPRE   | 80.00                   | 80.00  | 80.00  |
| U Call Atendimento a clientes e Telemarketing, S.A.                             |                         | 73.62  | 73.62  |
| ACE BI-Soluções para Gestão de Clientes e Apoio à Decisão, SA                   |                         | 60.00  | 60.00  |
| ACEBNET BUSINESS NETWORKING Sistemas de Informação para Negócio Electrónico, SA |                         | 60.00  | 60.00  |
| ACE QS Qualidade em Sistemas de Informação, SA                                  |                         | 60.00  | 60.00  |
| ACE, Holding, SGPS, SA  |                         | 60.00  | 60.00  |
| ACE Sistemas Comerciais Informáticos, S.A.                                      |                         | 60.00  | 60.00  |
| ACE Globa - Serviços de Gestão, S.A. (ex ACE Source, S.A.)                      |                         | 60.00  | 60.00  |
| CASE Concep. e Arquit. de Sol. Informáticas Estruturadas, S.A.                  |                         | 60.00  | 60.00  |
| CASE Edinfor ACE  |                         | 60.00  | 60.00  |
| CASE Edinfor II, Sistemas de Informação, S.A.                                   |                         | 60.00  | 60.00  |
| ACE Sistemas de Informação, Ltda (ex-Casinform Acessoria, Lda.)                 |                         | 59.62  | 60.00  |
| Casinform Participações   |                         | 60.00  |        |
| Consulteam Consultoria de Gestão e Informática,S.A.                             |                         | 60.00  | 60.00  |
| InoveCase Sol. Empres. em Tec. de Inf. e Comunicação, S.A.                      |                         | 48.00  |        |
| Inforsys  |                         | 59.16  |        |
| Inovis Sistemas de Informação, S.A.   |                         | 60.00  | 60.00  |
| Integer Informática de Telecomunicações e Gestão, S.A.                          |                         | 60.00  | 60.00  |
| Onsource Soluções Informáticas, S.A.  |                         | 60.00  | 60.00  |
| Central Biz Soluções de Sistemas e Tec. de Informação, S.A.                     |                         | 30.60  | 30.60  |
| IT-Log, Logística e Gestão de Tecnologias de Informação, S.A.                   |                         | 100.00 | 100.00 |
| IT-GEO, Tecnologias e Informação Georeferenciadas, S.A.                         |                         |        | 100.00 |
| No Limits Consulting Serviços em Sistemas de Informação, S.A.                   |                         | 42.00  | 42.00  |
| Primitiva Artesanato e Turismo, S.A.  |                         | 60.00  | 60.00  |
| Psi Doc Prod. de Sist. de Informação e Tratamento de Doc., S.A.                 |                         | 48.00  | 55.60  |
| Sigmaplano - Consuloria em Sist. para o Apoio à Decisão , S.A.                  |                         | 39.00  | 39.00  |
| S-Tecno, Serviços em Tecnologias de Informação, SA                              |                         | 60.00  | 60.00  |
| S-Tecno Brasil, Lda.  |                         | 60.00  | 60.00  |
| Necton Gestão e Informática, S.A.   |                         |        | 48.00  |
| Case Internacional Consultoria, Gestão e Marketing, Lda                         |                         |        | 60.00  |
| ACE Consulting Consult., Projectos e Tec. de Informação, Ltda.                  |                         |        | 73.33  |
| Onalp Soluções Informáticas em Suporte à Decisão, Lda.                          |                         |        | 39.00  |
| ACE Plus, Soluções Informáticas, S.A.   |                         |        | 48.00  |
| ACE Healthcare Sistemas de Informação p/ apoio à Saúde, S.A.                    |                         |        | 30.60  |
| EDP Chile   |                         | 100.00 |        |
| Adygesinval   |                         | 50.00  |        |
| Hidroeléctrica Del Cantábrico, SA**   |                         |        | 40.00  |
| AFFINIS-Serviços de Assistência e Manutenção Global, SA***                      |                         |        | 45.00  |
| ESCELSA Espírito Santo Centrais Eléctricas, S.A.                                | 38.22                   | 38.22  | 52.25  |
| ENERSUL Empresa Energética de Mato Grosso do Sul, S.A.                          | 24.92                   | 24.92  | 34.06  |
| IVEN, S.A.  | 73.12                   | 73.12  | 99.97  |
| Calibre   |                         |        | 100.00 |
| 135 Participações , S.A.  |                         |        | 100.00 |
| Magistra Participações, S.A.  |                         |        | 52.25  |

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\* During the year 2000, EBE has been consolidated on a proportionate consolidation basis.

\*\* Since June 2002, Hidroeléctrica Del Cantábrico is consolidated on a proportionate consolidation basis.

\*\*\* Since December 2002, Affinis is consolidated on a proportionate consolidation basis.

The Company has accounted for its investments in affiliates (companies in which it holds, directly or indirectly, less than 50% but more than 20% of the voting rights) by the equity method as follows:

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|  | Percentage of ownership |       |       |
|--|-------------------------|-------|-------|
|  | 2000                    | 2001  | 2002  |
| REN Rede Eléctrica Nacional, SA. **  | 30.00                   | 30.00 | 30.00 |
| EDEL-Empresa Editorial Electrotécnica, Lda.  | 47.77                   | 47.77 | 47.77 |
| PORTSINES-Terminal Multipurpose de Sines, S.A.                                       | 39.60                   | 39.60 | 39.60 |
| TANQUIPOR-Movimentação e Armazenagem de Líquidos, S.A                                | 28.89                   | 28.89 | 28.89 |
| Bioellectrica  |                         |       | 24.00 |
| BIZFIRST   |                         |       | 21.00 |
| Campos Envelopagem   |                         |       | 30.00 |
| Carriço Cogeração  |                         |       | 35.00 |
| ACE-Sofgal, Servicios de Software de Galicia, SA                                     |                         |       | 30.00 |
| CBE-Centro de Biomassa para a Energia  |                         |       | 24.70 |
| Ecogen-Serviços de Energia Descentralizada, SA                                       |                         |       | 34.99 |
| SHIPEC-South China Inter.P.Eng.  |                         |       | 24.00 |
| Geoterceira  |                         |       | 49.90 |
| CEM Companhia de Electricidade de Macau, SA. (via EDP Investimento, Lda and SOGESTE) | 21.95                   | 21.78 | 21.78 |
| Energia RE, S.A.   | 99.99                   | 99.99 | 99.99 |
| EDP Investimentos, Lda (ex-SPE Macau)  | 99.00                   | 99.00 | 99.00 |
| CERJ Comp. De Electricidade do Estado do Rio de Janeiro                              | 21.08                   |       |       |
| REDAL, SA  | 29.00                   |       |       |
| EEGSA Empresa de Electricidade da Guatemala, SA. (via                                |                         |       |       |
| DECA Distribucion Electrica Centroamericana, SA)                                     | 21.00                   |       |       |

\*\* Until June 30, 2000, REN was a 100% consolidated entity of EDP. Effective July 1, 2000, EDP sold 70% of its ownership in REN to the Portuguese government. No gain or loss on the transaction occurred, as the transaction was effected under terms required to be applied in circumstances of the discontinuation of a concession contract.

Investments in other companies in which the Company's investment is equal to or greater than 10% but have neither been eliminated in the Consolidated Financial Statements nor accounted for by the equity method, consist of the following:

|   | Percentage of ownership |             |             |
|---|-------------------------|-------------|-------------|
|   | 2000                    | 2001        | 2002        |
| VALORSUL, S.A.  | 11.00                   | 11.00       | 11.00       |
| TEJO ENERGIA, S.A.  | 10.00                   | 10.00       | 10.00       |
| TURBOGÁS, S.A.  | 10.00                   | 10.00       | 20.00       |
| GALP ENERGIA  |                         | 14.27       | 14.27       |
| EDA-Eléctrica dos Açores                                  | 10.00                   | 10.00       | 10.00       |
| OPTIMUS   | 25.00                   |             |             |
| CCE Centro para a Conservação de Energia                  | 10.00                   |             |             |
| IMOTRON Edifícios Inteligentes, SA                        | 15.00                   | 15.00       |             |
| EID Emp. de Investigação e Desenvol. de Electrónica, S.A. | 11.43                   | 11.43       |             |
| Carrying value of these investments                       | 78,633,652              | 331,393,170 | 359,134,919 |

Investments in companies in which the Company's investment is less than 20% or are held exclusively for disposition, including these above, are accounted for at cost less any provision for other than temporary impairment.

**Changes in subsidiaries during 2002**

On May 15, the block of shareholders took control in Hidroantábrico (Spain), and as from June 1, it has been consolidated under proportional method (40%).

In October EDP gained control over the voting rights in ESCELSA and ENERSUL (Brazilian companies) since then they have been fully consolidated.

In October EDP, S.G.P.S., S.A. bought 45% of Affinis, and entered into a shareholders agreement which provided for joint management since Affinis has been consolidated under the proportional consolidation method.

On March 22, EDP sold OPTEP, a wholly owned subsidiary holding 25% of Optimus through OPTEP's wholly owned subsidiary 093X.

In December, EDP Chile was sold.

**Significant changes resulting from entry to/exit from the Group**

|                           | <b>Hidrocontábrico<br/>(40%)</b> | <b>ESCELSA</b> | <b>ENERSUL</b> | <b>OPTEP</b> |
|---------------------------|----------------------------------|----------------|----------------|--------------|
| <b>Assets</b>             |                                  |                |                |              |
| Intangible assets         | 7,234,000                        | 8,240,032      |                | (2,510,247)  |
| Tangible assets           | 695,743,200                      | 195,300,916    | 171,073,545    | (50,118)     |
| Investments               | 90,917,200                       | 201,203,927    | 2,508,890      | (94,415,175) |
| Stocks                    | 24,009,600                       | 975,485        | 633,082        |              |
| Long-term receivables     | 8,965,200                        | 77,051,724     | 51,216,595     |              |
| Short-term receivables    | 161,852,800                      | 125,967,942    | 32,260,776     | (11,777)     |
| Cash and cash equivalents | 6,633,600                        | 82,865,032     | 3,008,890      | (493,708)    |
| Prepaid expenses          | 8,607,200                        | 74,150,700     |                | (752)        |
| Total Assets              | 1,003,962,800                    | 765,755,758    | 298,600,485    | (97,481,777) |
| <b>Liabilities</b>        |                                  |                |                |              |
| Provisions                | 26,192,000                       | 44,841,325     | 10,422,953     |              |
| Long-term debt            | 89,407,200                       | 498,761,584    | 120,095,097    |              |
| Short-term debt           | 444,256,000                      | 135,115,302    | 71,113,685     | (31,895,601) |
| Deferred revenue          | 41,228,400                       | 2,058,728      |                | (2,610,071)  |
| Total Liabilities         | 601,083,600                      | 680,776,939    | 201,631,735    | (34,505,672) |

|                              | <b>Hidrocontábrico<br/>(40%)</b> | <b>ESCELSA</b> | <b>ENERSUL</b> |
|------------------------------|----------------------------------|----------------|----------------|
| Electricity sales            | 51,358,000                       | 68,035,794     | 32,779,504     |
| Other income                 | (939,600)                        | 42,934,653     | 3,266,986      |
| Total income                 | 50,418,400                       | 110,970,447    | 36,046,490     |
| Operating costs and expenses | (29,784,000)                     | (42,659,465)   | (18,795,735)   |
| Other expenses               | (15,378,800)                     | (27,873,307)   | (30,682,921)   |
| Total expenses               | (45,162,800)                     | (70,532,772)   | (49,478,656)   |

|  |             |            |              |
|--|-------------|------------|--------------|
| Income before taxes and minority interests | 5,255,600   | 40,437,675 | (13,432,166) |
| Income tax                                 | (2,080,000) | 768,206    |              |
| Minority interests                         | 132,000     | 18,221,240 | (8,650,315)  |

|                        |           |            |             |
|------------------------|-----------|------------|-------------|
| Net income of the year | 3,307,600 | 22,984,640 | (4,781,851) |
|------------------------|-----------|------------|-------------|

### 3. SIGNIFICANT ACCOUNTING POLICIES

#### a) Inventories

Inventories are stated at the lower of cost or market value. Cost is determined on the weighted average cost method.

#### b) Intangible assets

Intangible assets, stated within Other assets in the accompanying balance sheets, include cost less amortization and include organization expenses (mainly the reorganization and incorporation costs of companies), research and development expenditures and concession rights, trademarks and similar assets.

Intangible assets, except concession rights which are amortized over their life, are amortized over a period of three years.

c) **Fixed assets**

(i) Fixed assets belonging to the Group

Fixed assets, except those existing at the date of the restructuring in 1994, which are stated at the amounts resulting from the valuation performed in 1992, are stated at the respective cost of acquisition or construction, net of accumulated depreciations. Construction costs include financial costs and direct overhead capitalized during the construction phase. Financial costs through 1995 included exchange differences.

During 1999, the Regulator in the Portuguese electricity market approved the carrying value of all generation and distribution fixed assets for remuneration under the new tariff regime. The annual depreciation expense for these fixed assets has been approved as a recoverable cost in accordance with the new tariff regime on an annual basis.

Depreciation is calculated on the straight-line basis using the following rates, which are estimated to depreciate assets during their economic lives.

|                                    | Years |
|------------------------------------|-------|
| Buildings and related improvements | 8-50  |
| Plant, machinery and equipment:    |       |
| Hydroelectric generation           | 32-60 |
| Thermoelectric generation          | 25-30 |
| Transmission                       | 30    |
| Distribution                       | 10-30 |
| Other plant and equipment          | 5-10  |
| Vehicles and transport equipment   | 4-25  |
| Administrative equipment           | 4-10  |
| Foreign-exchange differences       | 10-60 |
| Other fixed assets                 | 10-25 |

Payments received from customers and subsidies granted for the construction of the Group's fixed assets are presented as deferred revenue on the balance sheet and amortized to income on the same basis and rate of the related fixed assets. This amortization is included in Other non-operating expenses (income) (Note 29).

(ii) Fixed assets held under concessions by EDP Distribuição

Generally, the concession of low-voltage electricity distribution does not involve the sale of the ceding municipalities' own fixed assets, which continue to remain their property despite the deployment thereof in the Group's operations for the duration of the concession period. Pursuant to this arrangement, fixed assets held under concession are recognized and reflected in the Group's consolidated balance sheet, with a corresponding amount being included as a long-term liability.

The concession-held fixed assets, and the related liability, are stated at the amounts resulting from the valuation carried out during the 1992, net of accumulated depreciation.

Concession-held fixed assets are depreciated on the same basis and at the same rates as those applied to the Group's own assets, with the respective charge being offset in Other non-operating expenses (income) in the statement of operations (Note 29) by the reduction of an equal amount of the related long-term liability to the municipalities (included in Other liabilities - Note 18).

Current maintenance and repairs expenditures on fixed assets, both belonging to the Group or held under concession, are expensed in the year in which they are incurred. Expenditures relating to major repairs and improvements are treated as deferred costs.

**d) Deferred costs**

Deferred costs stated within Other assets in the accompanying balance sheet, include amounts incurred in connection with the issuance of long-term debt and major repairs and improvements to fixed assets. Debt issuance costs are amortized over the term of the bonds or long-term debt. Costs for major repairs and improvements are amortized over a maximum of six years.

**e) Pensions, early retirements and medical benefits**

The Company and some of its subsidiaries have a commitment to complement retirement and survivors' pensions to the extent that these are not covered by the Government's social security plan. Employees may apply for early retirement, subject to certain conditions relating to applicable regulations namely pre-defined age and length of service requirements, being met.

Pension costs for defined benefit plans are recorded using the projected unit credit method. Under this method, the cost of providing pensions is charged to the income statement so as to spread the regular cost over the service lives of employees in accordance with the advice of qualified actuaries who carry out a full valuation of the plans every year. The pension obligation is measured as the present value of the estimated future cash outflows using interest rates of government securities that have terms to maturity approximating the terms of the related liability.

Pension costs for defined contribution plans are expensed to income as incurred.

Wherever post-retirement medical assistance is also provided to retirees, the entitlement to these benefits is usually based on the employee remaining in service up to retirement age. The expected costs of these benefits are accrued over the period of employment, using an accounting method similar to that for defined benefit pension plans. Independent qualified actuaries perform valuations of these obligations.

The assets of these plans are held in separate trustee-administered funds. The pension plans are generally funded by payments from the relevant Group companies, taking into account the recommendations of the independent qualified actuaries.

**f) Accrued vacation pay and bonuses**

At the end of the month the Company and some of its subsidiaries provides for bonuses earned but not yet paid and vacation pay earned but not yet taken.

**g) Own work capitalized**

Following specific criteria, costs incurred by the Group in the construction of fixed assets (namely materials and personnel costs), are capitalized as part of their costs.

**h) Statements of cash flows**

The statements of cash flows are prepared using the direct and indirect methods.

Cash and cash equivalents presented on the balance sheets represent highly liquid investments purchased with original maturities of three months or less. Cash and equivalents in the statements of cash flows include cash and cash equivalents, net of bank overdrafts.

**i) Provision for income taxes**

Income tax obligations currently payable are determined with reference to net results after adjustments have been made to comply with the tax code in the relevant jurisdiction. Temporary differences between the



book and tax basis for assets and liabilities in the balance sheet are considered in computing the income tax charge for the year.

**j) Foreign currency translation**

The euro is the Company's reporting currency. Prior to January 1, 2001, the Company's reporting currency was Portuguese escudos. For convenience and to facilitate a comparison, these consolidated financial statements have been restated from escudos to euros at the fixed rate of exchange as of January 1, 1999 of PTE 200.482 = 1.00. Where escudo-denominated amounts for periods prior to January 1, 2001 have been rounded, the restated euro amounts have been calculated by converting the rounded escudo-denominated amounts into euros.

The Company and its subsidiaries maintain their accounting records and financial statements in their respective functional currencies. Certain of the Company's receivables and liabilities are denominated in different currencies, and exchange rate fluctuations will therefore affect the Company's results of operations.

Transactions denominated in different currencies are recorded in the functional currency using the exchange rate in effect at the date of the transactions. Assets and liabilities denominated in different currencies are translated into the functional currency using the exchange rates in effect at the balance sheet date. Foreign exchange gains and losses, except those capitalized to fixed assets prior to 1995, are included in income.

Subsidiaries financial statements maintained in non-euro currencies are converted to euros using the year-end exchange rate for assets and liabilities and the average exchange rate for income statement items. Conversion exchange differences are charged to equity.

The translation of the euro amounts into U.S. dollars is disclosed in the accompanying financial statements solely for the convenience of the readers and has been made at the rate of US\$ 1.1616 to Euro 1.00, the exchange rate at June 20, 2003. No representation is made that the escudo amounts could have been, or could be, converted into U.S. dollars at that or any other rate.

**k) Derivative financial instruments**

The Company uses interest rate swap agreements to manage the interest rate characteristics of its outstanding debt to a more desirable fixed or variable rate basis. EDP may also enter into non-euro currency swap agreements and non-euro currency forward exchange agreements to minimize the risk of exchange rate fluctuations associated with non-euro denominated debt. Each interest rate and non-euro currency swap agreement relates to a specific debt.

Interest rate differentials to be paid or received as a result of interest rate swap agreements are accrued and recognized as an adjustment of interest expense related to the designated debt. Gains and losses on non-euro currency swap agreements and forward foreign currency exchange agreements are recognized over their duration and offset the effect of exchange rate fluctuations on the translation of the related debt. The fair values of interest rate, non-euro currency swap agreements and forward foreign currency exchange agreements are not recognized in the

financial statements.

**l) Revenue and expense recognition**

(i) General

Revenues from electricity sales are recognized when earned. Billings for electricity are made on a monthly basis throughout the month. Monthly billings are based on actual meter readings or an estimated consumption based on the historical data of each consumer. Unbilled revenues from the billing cycle date to the end of the month are accrued based on the average recent consumption.

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In Portugal, tariffs of electrical energy supplied to clients in the Binding Sector are determined by the Regulator (ERSE). Tariffs for clients outside the Binding Sector are negotiated and contracted on individual basis. Tariffs in the electricity distribution business are subject to price cap mechanism. Thus, earnings are subject to gross profit restriction and after being subject to confirmation or approval by the regulators, are to be adjusted in future periods. We estimate amounts that are subject to future tariff adjustments and defer or accrue the recognition of the revenues of future periods. These amounts are stated as accrued revenues or expenses in the accompanying balance sheet.

Expenses are recorded on the accrual basis.

(ii) Hydrological correction account

The hydrological correction account constitutes a legally mandated mechanism for compensating the variable costs of electric-power generation. In low rainfall years, the thermoelectric generating system is over-utilized and consequently, expenditure on fuel and electricity imports increases substantially. In years with abundant rainfall the opposite occurs. Tariffs can not be modified to take into account the changes in variable costs incurred resulting from hydrological conditions. In this context and with a view to avoiding major distortions in operating results due to favorable or unfavorable hydrological conditions, the hydrological correction account is adjusted upwards or downwards based upon average hydrological conditions.

The annual changes in the hydrological correction account consist of the following:

The difference between the economic costs of generating electric energy and the economic reference costs is charged to REN for inclusion in the Binding Sector costs (prior to June 2000 this difference was charged to the income statement);

a financial charge associated with the hydrological correction account's accumulated balance;

an adjustment, which may be either an income or an expense item, corresponding to the amount necessary to make the expected balance, in a time scale of 10 years, equal to an adequate reference level.

The amount of the accumulated balance and the movements during the year are approved by the Government on an annual basis.

**m) Investments**

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Investments in affiliated companies in which EDP's interest is equal or higher than 20% but less than 50%, are recorded at cost and accounted for under the equity method. This method requires that acquisition costs are allocated to the fair values of identifiable net assets being any residual amount accounted for as acquisition goodwill. This acquisition goodwill consists normally of concession rights, which are amortized over the concession periods. Further EDP's interest in the profit or loss is included in Interest and related income/expenses in the Statement of income.

Investment properties, except for those acquired before 1992 which are stated at the amounts resulted from the revaluation made then, are recorded and stated at cost. These investments are amortized over the economic life of the related buildings.

Investments in other companies that are not trading investments are recorded at cost and stated at market value, and the difference to the acquisition cost is included in the Fair value and other valuation reserve in the Shareholder's equity.

Where an indication of impairment exists, any existing valuation reserve is reversed and the resulting carrying amount of the investment is provided for and the related provision included in Interest and related expenses in the Statement of income.

Other investments, including investments in other companies that are trading investments, are stated at fair value and the difference to the acquisition cost is included in Interest and related income/expense in the Statement of income.

**n) Provision for doubtful accounts**

A provision for doubtful accounts is established based on historical collection experience and evaluation of the current status of existing receivable balances. The provision for doubtful accounts receivable from third parties and municipalities is systematically recorded based on the age of the receivables and EDP's collection history. EDP does not record a provision with respect to accounts receivable from other public entities since historically it has not experienced a problem in collecting such receivables. Accounts receivable are written-off when a customer is declared bankrupt by a court of law since a write-off prior to the customer's bankruptcy would result in the loss or delay of the tax benefit until the customer is eventually declared bankrupt.

**o) Own shares**

The Company periodically acquires its own shares mainly to satisfy obligations in connection with Company stock option plans. Shares acquired are recorded at acquisition cost.

**4. ACCOUNTS RECEIVABLE - TRADE**

|                                 | 2001         | 2002          |
|---------------------------------|--------------|---------------|
| Public entities:                |              |               |
| Municipalities                  | 39,127,627   | 49,517,884    |
| Provision for doubtful accounts | (31,824,763) | (40,870,233)  |
|                                 | 7,302,864    | 8,647,651     |
| Other public entities           | 54,746,953   | 62,004,418    |
|                                 | 62,049,817   | 70,652,069    |
| Third parties:                  |              |               |
| Current accounts receivable     | 733,917,515  | 793,979,774   |
| Doubtful accounts receivable    | 95,489,751   | 109,993,078   |
|                                 | 829,407,167  | 903,972,852   |
| Provision for doubtful accounts | (95,489,751) | (109,993,078) |
|                                 | 733,917,416  | 793,979,774   |
| Unbilled revenues               | 140,589,565  | 106,227,759   |
| Total                           | 936,556,798  | 970,859,602   |

**5. ACCOUNTS RECEIVABLE, OTHER**

|   | 2001        | 2002         |
|---|-------------|--------------|
| Employees   | 15,888,993  | 20,339,128   |
| Debtor balances   | 104,215,092 | 163,041,219  |
| Deposits  | 1,117,144   | 13,878,058   |
| Value added tax and other taxes                           | 59,736,296  | 146,642,697  |
| Loans to related companies (Note 7)                       | 106,324,523 | 34,791,816   |
| Minority shareholders                                     | 45,281,167  | 451,125      |
| Credits over concessionaires                              | 33,558,885  | 40,189,116   |
| Advances from the Portuguese government to auto producers | 18,491,295  | 9,523,092    |
| Accrued receivables                                       |             | 159,673,511  |
| Sundry tariff related                                     |             | 83,939,881   |
| Others  | 68,173,849  | 81,974,593   |
|   | 452,787,244 | 754,444,236  |
| Provision for doubtful accounts                           | (6,335,600) | (13,901,228) |
|   | 446,451,644 | 740,543,008  |

Minority shareholders relates mainly to amounts to be paid by entities other than the Group to increase the share capital of ONI Way in 2001.

**6. INVENTORIES**

|  | <b>2001</b> | <b>2002</b> |
|--|-------------|-------------|
| Raw materials and consumable materials | 89,408,542  | 130,031,671 |
| Other                                  | 19,627,997  | 20,273,358  |
|  | 109,036,539 | 150,305,029 |

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**7. LONG-TERM RECEIVABLES**

|                                       | <b>2001</b>   | <b>2002</b>   |
|---------------------------------------|---------------|---------------|
| Loans to related companies            | 15,789,246    | 18,744,336    |
| Municipalities                        | 188,424,928   | 185,343,181   |
| Fixed assets in course of integration | 19,246,239    | 19,246,239    |
| Deposits                              |               | 29,771,013    |
| Tariff adjustment                     |               | 69,581,358    |
| Provision for doubtful accounts       | (120,608,434) | (113,742,973) |
| Other                                 |               | 51,640,747    |
|                                       | 102,851,979   | 260,583,901   |

The receivable from the municipalities relates to electricity and other services provided by EDP prior to 1988. These receivables consist of:

(i) Amounts receivable from a small number of municipalities that have not signed a concession agreement with EDP and with which a payment plan has not been agreed. The net book value of these receivables amounted to EUR 7,859,131 and EUR 6,825,213 as of December 31, 2001 and 2002, respectively. The net amount of such receivables is collateralized by fixed assets previously ceded from the municipalities to EDP. Until a settlement is reached with respect to amounts owed, EDP is not required to return the assets or the benefits derived to the municipalities.

(ii) Receivables from municipalities that have signed a concession agreement with EDP and have agreed to a deferred payment plan. The net amount of such receivables, net of provisions, amounted to EUR 79,203,601 and EUR 84,021,233 as of December 31, 2001 and 2002, respectively.

Loans to related companies consist of the following amounts:

| <b>Associated company</b>     | <b>Currency</b> | <b>2001</b>   | <b>2002</b> |
|-------------------------------|-----------------|---------------|-------------|
| Elcogás(1)                    | EUR             | 7,375,115     | 7,375,119   |
| Turbogás(2)                   | EUR             | 9,219,872     | 8,449,339   |
| REN                           | EUR             | 79,460,618    |             |
| DECA                          | EUR             | 8,469,648     |             |
| EDP guas                      | EUR             | 8,980,588     |             |
| Affinis                       | EUR             |               | 1,993,284   |
| Other                         | EUR             | 8,607,928     | 926,592     |
|                               |                 | 122,113,769   | 18,744,334  |
| Less current portion (Note 5) |                 | (106,324,523) |             |



15,789,246 18,744,334

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Interest rates:

- (1) Euribor 3 months + 0.45%
- (2) Fixed rate 6.5%

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## 8. INVESTMENTS

|                                 | 2001          | 2002          |
|---------------------------------|---------------|---------------|
| Group companies                 | 1,569,529,419 | 742,933,457   |
| Other companies                 | 1,276,625,571 | 1,339,360,990 |
| Other investments               | 181,816,674   | 161,602,936   |
| Provision                       | (6,937,956)   | (278,125,761) |
| Buildings, net of depreciation  | 1,465,154     | 209,948       |
| Capital expenditure in progress | 1,057,766     | 2,584         |
|                                 | 3,023,556,627 | 1,965,984,154 |

Group companies represent investments in affiliated companies, or on non-consolidated subsidiary companies. Other companies consist of equity investments in companies in which the Company's investment is less than 20%, or in affiliated companies not accounted for on an equity method basis. The variation in Group companies is due mainly to the fact that Hidrocantabrico (EUR 278.2 million), EDP 2000 (EUR 25.1 million), EDP Investimentos (EUR 9.2 million), Aphelion Fund (EUR 101.7 million) and Enerpeixe (EUR 11.3 million) are consolidated in 2002. Additionally, EDP disposed of investments in Redal (EUR 11.1 million), OPTEP (EUR 170.1 million) and 093X (EUR 94.4 million). As a result the concession rights relating to IVEN (approximately EUR 582,128 million) were transferred to Other Assets-Goodwill.

The provision in 2002 is mainly to cover the mark-to-market devaluation of other investments listed in the Euronext Lisbon stock exchange, and it was charged directly to Equity.

## 9. FIXED ASSETS

|                                  | Cost or<br>revaluation | 2001<br>Accumulated<br>depreciation | Net book value |
|----------------------------------|------------------------|-------------------------------------|----------------|
| Concession-held fixed assets     | 259,915,573            | 238,981,250                         | 20,934,323     |
| Land                             | 112,614,399            |                                     | 112,614,399    |
| Buildings and improvements       | 325,675,731            | 132,165,297                         | 193,510,434    |
| Plant, machinery and equipment   | 20,237,212,344         | 11,530,462,580                      | 8,706,749,764  |
| Vehicles and transport equipment | 76,056,888             | 45,197,374                          | 30,859,514     |
| Administrative equipment         | 175,954,520            | 111,240,446                         | 64,714,074     |
| Foreign exchange differences     | 67,948,548             | 11,162,997                          | 56,785,551     |
| Capital expenditure in progress  | 640,524,471            |                                     | 640,524,471    |
| Other fixed assets               | 23,430,025             | 6,344,579                           | 17,085,446     |
|                                  | 21,659,416,926         | 11,836,573,273                      | 9,822,843,653  |
|                                  | 21,919,332,499         | 12,075,554,523                      | 9,843,777,976  |

2002

Net book value

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|                                  | <b>Cost or<br/>revaluation</b> | <b>Accumulated<br/>depreciation</b> |                |
|----------------------------------|--------------------------------|-------------------------------------|----------------|
| Concession-held fixed assets     | 259,915,573                    | 243,265,127                         | 16,650,446     |
| Land                             | 122,259,733                    |                                     | 122,259,733    |
| Buildings and improvements       | 336,746,375                    | 143,317,069                         | 193,429,306    |
| Plant, machinery and equipment   | 22,425,168,937                 | 12,826,798,197                      | 9,598,370,740  |
| Vehicles and transport equipment | 73,900,403                     | 46,621,967                          | 27,278,436     |
| Administrative equipment         | 248,633,624                    | 164,011,509                         | 84,622,115     |
| Foreign exchange differences     | 67,850,050                     | 12,449,702                          | 55,400,348     |
| Capital expenditure in progress  | 1,010,734,574                  |                                     | 1,010,734,574  |
| Other fixed assets               | 105,739,993                    | 10,248,489                          | 95,491,504     |
|                                  | 24,391,033,689                 | 13,203,446,933                      | 11,187,586,756 |
|                                  | 24,650,949,262                 | 13,446,712,060                      | 11,204,237,202 |

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The following tables present the approximate effect of the revaluation of the fixed assets:

| <b>Historical cost</b> | <b>2001<br/>Revaluation</b> | <b>Book value</b> |
|------------------------|-----------------------------|-------------------|
|------------------------|-----------------------------|-------------------|

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|                |                |                |                |
|----------------|----------------|----------------|----------------|
| Fixed assets   | 11,466,784,305 | 10,454,013,348 | 21,920,797,653 |
| Depreciation   | 2,953,834,089  | 9,121,720,434  | 12,075,554,523 |
| Net book value | 8,512,950,216  | 1,332,292,914  | 9,845,243,130  |

|                        | <b>2002</b>        |                   |
|------------------------|--------------------|-------------------|
| <b>Historical cost</b> | <b>Revaluation</b> | <b>Book value</b> |

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|                |                |                |                |
|----------------|----------------|----------------|----------------|
| Fixed assets   | 14,197,145,862 | 10,454,013,348 | 24,651,159,210 |
| Depreciation   | 4,124,018,608  | 9,322,693,452  | 13,446,712,060 |
| Net book value | 10,073,127,254 | 1,131,319,896  | 11,204,447,150 |

The net book value is stated in the financial statements under the following headings:

|                      | 2001          | 2002           |
|----------------------|---------------|----------------|
| Fixed assets         | 9,843,777,976 | 11,204,237,202 |
| Investment buildings | 1,465,154     | 209,948        |
|                      | 9,845,243,130 | 11,204,447,150 |

**Assets under public domain**

The Group's fixed assets were constructed or acquired by EDP and its subsidiaries, however, substantially all of the Group's fixed assets are considered to be in the public domain. Therefore, while the administration of such assets is under the control of EDP and its subsidiaries, disposal or use of the fixed assets for other purposes is not permitted.

**10. OTHER ASSETS**

|                                   | Cost          | 2001<br>Accumulated<br>amortization | Net book<br>value |
|-----------------------------------|---------------|-------------------------------------|-------------------|
| Reorganization expenses           | 145,810,212   | 47,648,582                          | 98,161,630        |
| Research and development expenses | 201,735,466   | 13,126,456                          | 188,609,010       |
| Repairs and maintenance           | 28,399,671    | 23,980,645                          | 4,419,026         |
| Bond and issuance costs           | 49,487,089    | 5,321,709                           | 44,165,380        |
| Deferred taxes                    | 406,273,711   |                                     | 406,273,711       |
| Goodwill/concession rights/other  | 928,794,654   | 79,324,303                          | 849,470,351       |
| Tariff adjustments                | 64,847,934    |                                     | 64,847,934        |
| Deferred benefit plan             | 62,329,785    |                                     | 62,329,785        |
| Other                             | 14,590,846    |                                     | 14,590,846        |
|                                   | 1,902,269,368 | 169,401,695                         | 1,732,867,673     |

| <b>Cost</b> | <b>2002<br/>Accumulated<br/>amortization</b> | <b>Net book<br/>value</b> |
|-------------|--|---------------------------|
|-------------|--|---------------------------|

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|                                   |               |             |               |
|-----------------------------------|---------------|-------------|---------------|
| Reorganization expenses           | 93,056,396    | 50,471,231  | 42,585,165    |
| Research and development expenses | 153,663,344   | 35,501,601  | 118,161,743   |
| Repairs and maintenance           | 28,746,156    | 24,595,772  | 4,150,384     |
| Bond and issuance costs           | 44,725,479    | 6,735,817   | 37,989,662    |
| Deferred taxes                    | 545,979,498   |             | 545,979,498   |
| Goodwill/concession rights/other  | 1,880,560,730 | 198,187,828 | 1,682,372,902 |
| Tariff adjustments                | 60,700,162    |             | 60,700,162    |
| Deferred benefit plan             | 62,329,785    |             | 62,329,785    |
| Other                             | 62,663,161    |             | 62,663,161    |
|                                   | 2,932,424,711 | 315,492,249 | 2,616,932,462 |

In 2001 and 2002, the amounts stated as Goodwill/concession rights in the approximate amounts of EUR 359 million and EUR 1,372 million, respectively are concession rights that are amortized according to the life of the concessions (usually spanning 20 to 30 years). The difference from 2001 to 2002 is mainly related to the concession rights of IVEN (EUR 582 million) that were transferred from Investments, and EUR 564 million from Hidrocantabrico.

**11. ACCOUNTS PAYABLE, TRADE**

|                       | 2001        | 2002          |
|-----------------------|-------------|---------------|
| Current suppliers     | 570,563,223 | 787,361,351   |
| Fixed asset suppliers | 183,781,287 | 230,392,523   |
| Other                 | 1,007,851   | 816,575       |
|                       | 755,352,361 | 1,018,570,449 |

Current suppliers include purchased electricity from the sole buyer (REN) in the amount of EUR 206,649,909 and EUR 259,652.660 in 2001 and 2002, respectively.

**12. ACCOUNTS PAYABLE, OTHER**

|  | 2001        | 2002        |
|--|-------------|-------------|
| Concession rents                       | 627,153     | 6,476,726   |
| Minority shareholders                  | 14,851,070  | 2,281,451   |
| Receivables on behalf of third parties | 5,665,389   | 24,242,920  |
| Fair value difference in swap          |             | 11,232,759  |
| Tariff adjustments                     | 23,793,457  | 22,485,183  |
| Fixed assets suppliers                 |             | 31,701,540  |
| Goods receiving note                   | 1,246,943   | 16,181,081  |
| Other accrued expenses                 | 58,751,912  | 59,074,878  |
|  | 104,935,924 | 173,676,538 |

**13. ACCRUED EXPENSES**



|                          | <b>2001</b> | <b>2002</b> |
|--------------------------|-------------|-------------|
| Vacation pay and bonuses | 60,374,362  | 60,031,660  |
| Interest expenses        | 68,754,698  | 169,370,574 |
| Tariff adjustments       | 33,243,639  |             |
| Other accrued expenses   | 50,882,878  | 65,096,345  |
|                          | 213,255,577 | 294,498,579 |

Other accrued expenses are mainly external services suppliers' expenses, for which no supplier invoice has been received or approved. The balance of 2002 includes EUR 38,330,647 related to acquisition of equipment by ONI Way.

**14. TAXES PAYABLE**

|  | 2001        | 2002       |
|--|-------------|------------|
| Income tax, net of payments on account | 136,116,583 | 9,080,777  |
| Payroll income tax withholdings        | 8,790,415   | 8,415,420  |
| Value added tax                        | 22,561,537  | 18,665,294 |
| Social security                        | 10,640,691  | 10,541,670 |
| Other                                  | 18,576,358  | 3,049,058  |
|  | 196,685,584 | 49,752,219 |

**15. SHORT-TERM AND LONG-TERM DEBT**

|                  | December 31, 2001  |                | December 31, 2002  |                |
|------------------|--|----------------|--|----------------|
|                  | Short-term debt<br>and current<br>portion<br>of long-term debt | Long-term debt | Short-term debt<br>and current<br>portion<br>of long-term debt | Long-term debt |
| Bank loans       | 671,046,273  | 1,693,424,791  | 595,923,837  | 2,714,930,641  |
| Commercial paper | 547,000,000  |                | 657,618,000  |                |
| Bank overdrafts  | 502,912,945  |                | 621,230,572  |                |
|                  | 1,720,959,218  | 1,693,424,791  | 1,874,772,409  | 2,714,930,641  |
| Bonds            | 23,385,252   | 2,361,354,530  | 12,261,284   | 3,392,111,270  |
|                  | 1,744,344,470  | 4,054,779,321  | 1,887,033,693  | 6,107,041,911  |

As of December 31, 2002, the scheduled repayments of the long-term portion of the EDP Group's debt was as follows:

|                          |               |
|--------------------------|---------------|
| 2004                     | 614,326,713   |
| 2005                     | 544,675,404   |
| 2006                     | 901,968,601   |
| 2007                     | 718,044,599   |
| 2008 and following years | 3,328,026,594 |
|                          | 6,107,041,911 |

**Domestic bonds**

The domestic bonds were all redenominated into euros and bear variable interest rates. The other main characteristics are as follows:

|                               | <b>22<sup>nd</sup> issue</b>  | <b>23<sup>rd</sup> issue</b>  |
|-------------------------------|---|---|
| <b>AMOUNT OUTSTANDING:</b>    |   |   |
| December 31, 2001             | 41,609,096 Euro   | 10,331,743 Euro   |
| December 31, 2002             | 34,473,888 Euro   | 10,331,743 Euro   |
| <b>ANNUAL INTEREST RATE:</b>  |   |   |
| December 31, 2001             | 3.3125%   | 3.2500%   |
| December 31, 2002             | 2.9375%   | 2.8125%   |
| <b>INTEREST PAYMENT DATES</b> |   |   |
|                               | June 2 and December 2   | June 20 and December 20   |
| <b>REPAYMENT DATES</b>        |   |   |
|                               | Four equal annual installments beginning on June 2, 2003  | Four equal annual installments beginning on December 20, 2008   |
| <b>OTHER CONDITIONS</b>       |   |   |
|                               |   | This issue may be totally or partially repaid in advance on December 20, 2006 at the option of the Company or the Bondholders |
|                               |   |   |
|                               | <b>24<sup>th</sup> issue</b>  | <b>25<sup>th</sup> issue</b>  |
| <b>AMOUNT OUTSTANDING:</b>    |   |   |
| December 31, 2001             | 13,513,272 Euro   | 299,278,738 Euro  |
| December 31, 2002             | 10,134,954 Euro   | 299,278,738 Euro  |
| <b>ANNUAL INTEREST RATE:</b>  |   |   |
| December 31, 2001             | 4.5313%   | 3.5030%   |
| December 31, 2002             | 3.6875%   | 3.1970%   |
| <b>INTEREST PAYMENT DATES</b> |   |   |
|                               | January 5 and July 5  | May 23 and November 23  |
| <b>REPAYMENT DATES</b>        |   |   |
|                               | Four equal annual installments beginning on January 5, 2002   | Six equal semi-annual installments beginning on May 23, 2006  |
| <b>OTHER CONDITIONS</b>       |   |   |
|                               | This issue may be totally or partially repaid in advance on January 5, 2003 at the option of the Company or the Bondholders | This issue may be totally or partially repaid in advance on November 23, 2003 at the option of the Company                    |



*International bond*



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The international bond was issued under a Medium Term Notes program of EUR 5,000,000,000 with a fixed interest rate coupon:

**Euro Bond**

**Euro Bond**

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|                        |                            |                          |
|------------------------|----------------------------|--------------------------|
| Amount outstanding:    | 1,000,000,000 Euro         | 1,000,000,000 Euro       |
| Annual interest rate:  |                            |                          |
| December 31, 2002      | 6.400%                     | 5.875%                   |
| Interest payment dates | October 29                 | March 28                 |
| Repayment dates        | Bullet on October 29, 2009 | Bullet on March 28, 2011 |

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**Euro Bond**

**Euro Bond**

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|                        |                          |                          |
|------------------------|--------------------------|--------------------------|
| Amount outstanding:    | 200,000,000 GBP          | 500,000,000 Euro         |
| Annual interest rate:  |                          |                          |
| December 31, 2002      | 6.625%                   | 5.0%                     |
| Interest payment dates | August 9                 | March 20                 |
| Repayment dates        | Bullet on August 9, 2017 | Bullet on March 20, 2008 |

**Bank loans and short-term debt**

As of December 31, 2001 and December 31, 2002 the Company's short-term and long-term debt, other than the bonds, are denominated in the following currencies, after taking into account the effect of currency swap agreements:

|                             | 2001 |     | 2002                        |     |
|-----------------------------|------|-----|-----------------------------|-----|
| In the currency of the loan |      | EUR | In the currency of the loan | EUR |

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|              |               |               |               |               |
|--------------|---------------|---------------|---------------|---------------|
| U.S. Dollars |               |               | 55,913,983    | 53,222,219    |
| BRL          | 325,197,479   | 158,911,756   | 1,854,914,447 | 499,707,556   |
| Euros        | 3,255,472,253 | 3,255,472,253 | 4,036,773,275 | 4,036,773,275 |
|              |               | 3,414,384,009 |               | 4,589,703,050 |

The following table presents an analysis of total debt by interest rate and takes into account the effect of interest rate and currency swap agreements:

|   | 2001          | 2002          |
|---|---------------|---------------|
| <b>Bonds and long-term debt</b>   |               |               |
| Below 5%  | 3,272,612,178 |               |
| 5% to 7.5%  |               | 1,512,084,219 |
| 7.5% and over   | 59,919,596    | 55,222,219    |
| Variable rates (weighted average rate: 3.6325% at 12/31/01; 3.467% at 12/31/02) | 1,416,679,071 | 5,147,920,594 |
| <b>Short-term debt</b>  |               |               |
| Commercial paper (weighted average rate: 3.41% at 12/31/01; 3.212% at 12/31/02) | 547,000,000   | 657,618,000   |
| Bank overdrafts (4.2325% at 12/31/01; 4.2325% at 12/31/01;)                     | 502,912,946   | 621,230,572   |
|   | 5,799,123,791 | 7,994,075,604 |

Variable interest rates are generally based on EONIA (Euro OverNight Index Average) offered rates. Euro debt is principally based on EURIBOR (Euro Interbank Offered Rate) of three to six months.

As of December 31, 2002 the Company has available long-term credit facilities of EUR 152,133,359 at rates based on EURIBOR to be negotiated at the time of each utilization. In addition, the company has two Revolving Credits Facilities, EUR 600,000,000 and EUR 750,000,000 at rates based on EURIBOR, both totally undrawn.

The Group's debt is unsecured.

The notional amounts of swap agreements outstanding were as follows (in thousands of the respective currency):

|                             | 2001          | 2002          |
|-----------------------------|---------------|---------------|
| <b>Interest rate swaps:</b> |               |               |
| Portuguese escudos          | 2,189,525,045 |               |
| Euros                       | 2,949,579,264 | 3,225,584,558 |
| German marks                | 21,204,000    |               |
| British Pounds              |               | 200,000,000   |

## 16. ACCRUED PENSION AND RETIREMENT LIABILITIES

|                                  | 2001        | 2002        |
|----------------------------------|-------------|-------------|
| Defined benefit pension plan     | 305,949,000 | 211,543,000 |
| Post retirement medical benefits | 377,939,000 | 396,713,000 |
|                                  | 683,888,000 | 608,256,000 |

### *Defined benefit pension plan*

In accordance with the A.C.T. (a Portuguese collective labor agreement for EDP and the Group companies created when the restructuring in 1994) there is a commitment for a defined benefit pension plan for its active and retired employees. Pension benefits are vested at retirement date and are based on the employees' years of service and the compensation level at the end of their employment period, less social security benefits paid by the Portuguese Government. The normal retirement age is 65. However, employees at least 60 years of age and with 36 years of service, or any age with 40 years of service, may elect for early retirement. Employees electing for early retirement are entitled to full pension benefits, which are calculated on the same basis as those of employees retiring at the normal retirement age. Contributions to the plan are generally based on the availability of funds while making the minimum annual contributions required by applicable regulations.

In Bandeirante, there are two defined benefit pension plans:

Plan BD in place until March 31, 1998, is a defined benefit plan giving rights for employees existing at that date. Benefits were determined based on the years of service until that date. The responsibility for the coverage of actuarial shortages of this Plan belongs to the Company.

Plan BD in place after March 31, 1998, is a defined benefit plan giving rights to employees existing on that date or after. Benefits are based on years of service and on 70% of the average monthly salary earned over the last 36 months of work. In case of death or disability caused by

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accident during work, the years of service include all the period of service including the period up to March 31, 1998. The responsibility for coverage of actuarial shortages of this Plan are rests equally with the Company and employees.

The components of net periodic pension cost include the following:

|  | 2001         | 2002         |
|--|--------------|--------------|
| Service cost                             | 14,525,000   | 13,220,000   |
| Interest cost                            | 74,710,000   | 88,826,000   |
| Expected return on plan assets           | (57,532,000) | (56,031,000) |
| Workers contributions                    |              | (706,000)    |
| Amortization of transition obligation    | 5,826,000    | 5,826,000    |
| Amortization of actuarial (gains) losses |              | 11,219,000   |
| Net periodic pension cost                | 37,530,000   | 62,354,000   |

The changes in the funded status of the pension plan is as follows:

| <b>Change in benefit obligation:</b>           | <b>2001</b>   | <b>2002</b>   |
|--|---------------|---------------|
| Benefit obligation at beginning of year        | 1,213,456,000 | 1,354,910,000 |
| Benefit obligation (Bandeirante)               |               | 78,273,000    |
| Service cost                                   | 14,525,000    | 13,220,000    |
| Interest cost                                  | 74,710,000    | 88,826,000    |
| Actuarial losses                               | 175,653,000   | 96,242,000    |
| Estimated benefits paid                        | (123,434,000) | (144,277,000) |
| Currency translation                           |               | (38,461,000)  |
| Benefit obligation at end of year              | 1,354,910,000 | 1,448,733,000 |
| <b>Change in plan assets:</b>                  | <b>2001</b>   | <b>2002</b>   |
| Fair value of plan assets at beginning of year | 801,179,000   | 754,270,000   |
| Fair value of plan assets (Bandeirante)        |               | 27,016,000    |
| Actual return on plan assets                   | 57,531,000    | 56,031,000    |
| Company contributions                          | 31,930,000    | 52,669,000    |
| Workers contributions                          |               | 706,000       |
| Actual benefits paid                           | (54,225,000)  | (53,597,000)  |
| Actuarial gains and losses                     | (82,145,000)  | (72,767,000)  |
| Currency translation                           |               | (14,384,000)  |
| Fair value of plan assets at end of year       | 754,270,000   | 749,945,000   |
| Unfunded pension liability                     | (600,640,000) | (698,788,000) |
| Unrecognized net actuarial losses              | 232,361,000   | 430,741,000   |
| Unrecognized transition obligation             | 62,330,000    | 56,504,000    |
| Accrued benefit liability                      | (305,949,000) | (211,543,000) |

The company recognizes actuarial gains and losses through systematic amortization of any amounts in excess of the higher of 10% of the benefit obligation or of the plan assets.

The main assumptions used in the actuarial study with respect to the pension obligation is as follows:

|  | <b>2001</b> | <b>2002</b> | <b>2002<br/>Bandeirante</b> |
|--|-------------|-------------|-----------------------------|
| Discount rate                                  | 6.5%        | 6.0%        | 10.24%                      |
| Expected rate of return on Pension Fund assets | 7.5%        | 6.5%        | 10.24%                      |
| Rate of future salary increases                | 3.5%        | 3.3%        | 7.12%                       |
| Pension growth rate                            | 3.5%        | 2.25%       | 7.12%                       |
| Social security salary increased value rate    | 2.25%       | 2.0%        | 4.0%                        |
| Mortality table                                | TV 73/77    | TV 73/77    | AT-49(qx)                   |
| Disability table                               | 50% EKV 80  | 50% EKV 80  | Light-average(ix)           |
| Rate of inflation                              | 2.0%        | 2.0%        | 5%                          |

|   |   |   |                |
|---|---|---|----------------|
| Expected percentage of eligible staff electing early retirement | * | * | Not applicable |
|---|---|---|----------------|

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\* During 2001, the assumptions were employees applying for early retirement would be 100% of the eligible population and 90% of the employees with 55 years old or more. In 2002, that employees applying for early retirement would be 100% of the eligible population and 70% of the employees with 55 years old or more. From 2003 and on, it is estimated that 40% of the eligible population, will apply from early retirement.

*Defined contribution pension plan*

Hidroantábrico, Escelsa and Enersul have defined contribution pension plans under which the contributions made by each company calculated in accordance with the respective contracts.

*Post retirement medical benefits*

In accordance with the A.C.T. comprehensive medical coverage is provided in addition to that provided by the Portuguese national health system for retired employees (including those who have taken early retirement) and their dependants. Additionally, a death benefit is also provided to retirees survivors. The company administers the

program internally and assumes the full cost of funding the program net of employee contributions amounting to approximately 10% of the total medical expenses covered.

A summary of the components of the net periodic post retirement benefit cost is presented in the following table:

|   | 2001       | 2002       |
|---|------------|------------|
| Service cost                              | 6,714,000  | 6,540,000  |
| Interest cost                             | 28,781,000 | 30,096,000 |
| Amortization of transition obligation     | 4,873,000  | 4,873,000  |
| Net periodic post-retirement benefit cost | 40,368,000 | 41,509,000 |

The following table sets forth the changes and the funded status of the plan as of December 31, 2001 and December 31, 2002:

| <b>Change in benefit obligation:</b>    | <b>2001</b>   | <b>2002</b>   |
|---|---------------|---------------|
| Benefit obligation at beginning of year | 453,223,000   | 474,371,000   |
| Service cost                            | 6,714,000     | 6,540,000     |
| Interest cost                           | 28,781,000    | 30,096,000    |
| Actuarial losses                        | 6,533,000     | 7,929,000     |
| Benefits paid                           | (20,880,000)  | (22,735,000)  |
| Benefit obligation at end of year       | 474,371,000   | 496,200,000   |
| Plan assets at fair value               |               |               |
| Unfunded status of plan                 | (474,371,000) | (496,200,000) |
| Unrecognized net actuarial losses       | 44,308,000    | 52,237,000    |
| Unrecognized transition obligation      | 52,124,000    | 47,251,000    |
| Accrued benefit cost                    | (377,939,000) | (396,713,000) |

The assumptions used in the actuarial study with respect to the post-retirement benefit obligation, in addition to those described above with respect to pension obligations, were as follows:

|   | 2001 | 2002    |
|---|------|---------|
| Rate of increase in medical costs                               | 5.0% | 4.5%(a) |
| Discount rate   | 6.5% | 6.0%    |
| Mortality table   | (b)  | (b)     |
| Disability table  | (b)  | (b)     |
| Expected percentage of eligible staff electing early retirement | (b)  | (b)     |

(a) 4.5% in the first 10 years and 4.0% in the following years.



(b) According to the pension plan assumptions.

**17. DEFERRED REVENUE AND OTHER LIABILITIES**

|   | 2001          | 2002          |
|---|---------------|---------------|
| Short term                                    |               |               |
| Deferred revenue on the sale of OPTEP         |               | 70,071,524    |
| Other - current                               | 15,761,197    | 24,783,097    |
|   | 15,761,197    | 94,854,621    |
| Long term                                     |               |               |
| Subsidies                                     | 1,325,357,172 | 1,339,085,136 |
| Deferred tax                                  | 182,245,068   | 344,122,334   |
| Customer deposits                             | 43,101,997    | 41,239,534    |
| Concession-held fixed assets                  | 20,934,323    | 16,650,447    |
| State participation in multi purpose projects | 19,739,518    | 19,739,518    |
| Provision for various contingencies           | 147,601,196   | 198,025,678   |
| Other non current                             |               | 49,150,613    |
|   | 1,739,159,274 | 2,008,013,259 |

During the year EDP received subsidies in the amount of EUR 84,497,621 from which EUR 788,973 were received from the European Union.

Customer deposits, in accordance with changes made in Portuguese law, should have been reimbursed during 2000 and 2001 upon certain conditions being met.

The State participation in multi-purpose projects represents amounts received from the Government to compensate the Company for the construction of ancillary portions of the fixed assets that are constructed for the Company but may be also used by the general public (e.g., irrigation near the dams). The costs incurred are included in the Company's fixed assets. The Government contributions were based on estimates of the multi purpose portions of the fixed assets at the time of construction.

## 18. HYDROLOGICAL CORRECTION ACCOUNT

|                             | 2001         | 2002         |
|-----------------------------|--------------|--------------|
| Opening balance             | 365,520,715  | 387,506,424  |
| Differential charged to REN | 48,891,645   | (76,080,021) |
| Interest expense            | 20,559,694   | 12,684,863   |
| Adjustments                 | (47,465,630) |              |
| Closing balance             | 387,506,424  | 324,111,266  |

## 19. SHAREHOLDERS EQUITY

### Share capital

Share capital is fully subscribed and paid and on December 31, 2002 was represented by 3,000,000,000 ordinary shares with a nominal value of 1.00 euro each. A Shareholder is entitled to one vote per 100 Shares owned. However, voting rights exercised by a single shareholder, other than the Republic of Portugal, are limited to a maximum of 5% of EDP's share capital. Under Portuguese law, shareholders have a preferential ratable right to subscribe for any new issue of ordinary shares for cash, except if a special resolution at the general meeting of shareholders waives such rights.

### Legal reserve

The Company's Articles of Association, in accordance with the Portuguese law, require that at least 5% of each year's net income be appropriated to a legal reserve until this reserve equals the legal minimum requirement of 20% of nominal share capital. This reserve is not available for distribution to shareholders but may be capitalized or used to absorb losses.

**Other reserves**

This caption includes amounts recorded prior to 1994, with respect to the allocation of net income for the creation of reserves for investment, the social welfare activities of employees and a debt repayment. These reserves are available for distribution to shareholders.

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*Fair value and other valuation reserves*

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|                      | December 31, 2000 | Increase | Decrease     | December 31, 2001 |
|----------------------|-------------------|----------|--------------|-------------------|
| Currency translation | (30,621,233)      |          | (48,818,755) | (79,439,988)      |
| Revaluation reserves | 2,020,902,540     |          |              | 2,020,902,540     |
| Equity accounting    | (6,478,322)       |          | (30,487,249) | (36,965,571)      |
| Consolidation        | 149,597,091       |          | (18,585,286) | 131,011,805       |
|                      | 2,133,400,076     |          | (97,891,290) | 2,035,508,786     |

|                      | December 31, 2001 | Increase   | Decrease        | December 31, 2002 |
|----------------------|-------------------|------------|-----------------|-------------------|
| Currency translation | (79,439,988)      |            | (300,027,774)   | (379,467,762)     |
| Revaluation reserves | 2,020,902,540     |            | (848,173,899)   | 1,172,728,641     |
| Equity accounting    | (36,965,571)      | 59,086,113 |                 | 22,120,542        |
| Fair value           |                   |            | (268,974,551)   | (268,974,551)     |
| Consolidation        | 131,011,805       | 1,312,172  | (7,192,580)     | 125,131,397       |
|                      | 2,035,508,786     | 60,398,285 | (1,424,368,804) | 671,538,267       |

### Currency translation

Comprised of exchange fluctuations recorded in converting financial statements maintained in non-Euro currencies. The increase in 2001 and 2002 is mainly due to the conversion differences in subsidiaries in Brazil.

### Revaluation reserve

Amounts registered in this heading, which were derived from the net increase in fixed assets through revaluations made in accordance with the defined criteria, are transferred to retained earnings as far as realised through sale, disposition or amortisation of the related items. In general terms, these amounts are not available for distribution as they can only be used to increase share capital or cover up losses incurred up to the end of the period to which the revaluation relates.

### Consolidation reserve

On January 1, 1993, the Company began accounting for investments in subsidiaries and associated companies under the equity method of accounting. The difference between the historical cost of the investments and the Company's share of the net assets of the investees as of January 1, 1993 was recorded within this account.

### Equity accounting reserve

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The company's proportionate interest in the net income of the associated companies are included in the Company's consolidated statement of income. Accordingly, this heading includes the undistributed portion of net income from these investments recognized since January 1, 1993.

### Fair value reserve

Under this heading is recorded the variation between the historical cost of the non-trading investments, net of any provision for impairment, and the market value of these investments. The increase in the fair value reserve is due to the first time adjustment mark-to-market of investments in other companies.

### *Dividends*

According to Portuguese law, the Company's management propose to the Annual General Meeting that at least 50% of EDP's annual net income, after covering losses for previous periods and the required allocation to the legal reserve ( Distributable Net Income ), is to be distributed to shareholders in the form of a dividend, unless a resolution is passed by the shareholders stating otherwise. In order to raise the dividend above that proposed amount,

a simple majority of votes of shareholders is required. In order to lower the dividend below 50% of Distributable Net Income, a majority of votes corresponding to 75% of EDP's share capital is required.

### Retained earnings

The increase in retained earnings in 2002 is mainly due to the first time transfer from the Revaluation reserves of EUR 848,173,899 of amounts already realized by amortization or disposal of the related assets since inception of their revaluation.

## 20. REVENUES AND SEGMENTS

|  | 2000          | 2001          | 2002          |
|--|---------------|---------------|---------------|
| Electricity:                                       |               |               |               |
| Municipalities                                     | 156,056,918   | 158,777,631   | 207,008,241   |
| State and other public entities                    | 99,272,728    | 102,283,043   | 73,916,793    |
| State owned companies                              | 56,944,404    | 60,574,461    | 29,190,634    |
| Individual consumers and non-state owned companies | 2,747,870,347 | 2,975,058,433 | 3,203,291,925 |
| Generation sales to the Binding Sector             | 598,150,018   | 1,214,072,593 | 1,323,893,609 |
| International                                      | 17,573,209    | 690,509,043   | 1,038,857,257 |
|  | 3,675,867,624 | 5,201,275,204 | 5,876,158,459 |
| Other sales  | 60,891,162    | 97,966,533    | 111,981,793   |
| Services   | 109,734,475   | 351,132,352   | 398,418,183   |
|  | 3,846,493,261 | 5,650,374,089 | 6,386,558,435 |

Revenues in the Binding Sector in 2002 increased due to the consolidation of Hidrocantábrico (seven months of sales) by the proportionate consolidation method and Escelsa and Enersul (three months of sales).

All of the Group's customers are subject to the same tariff options. Tariffs are differentiated by voltage level, tariff option and period of consumption.



*Segment profit and segment assets*

The Company's reportable segments are each managed separately. EDP evaluates performance and allocates resources based on operating income. The accounting policies of the reportable segments are the same as those described in the significant accounting policies in note 3. Intersegment sales and transfers are recorded at the same prices as those charged to external customers.

|  | 2000            | 2001          | 2002          |
|--|-----------------|---------------|---------------|
| <b><u>Revenues</u></b>                 |                 |               |               |
| Revenues from external customers:      |                 |               |               |
| Generation                             | 610,536,712     | 1,256,495,041 | 1,428,471,312 |
| Transmission - REN                     | 65,176,779      |               |               |
| Distribution:                          |                 |               |               |
| Portugal                               | 3,025,459,792   | 3,273,424,363 | 3,469,394,033 |
| Spain (a)                              |                 |               | 321,351,274   |
| Brazil                                 |                 | 690,509,043   | 668,595,920   |
|  | 3,025,459,792   | 3,963,933,406 | 4,459,341,227 |
| Telecom:                               |                 |               |               |
| Portugal                               | 16,717,710      | 125,569,484   | 189,630,043   |
| Spain                                  |                 | 61,544,828    | 130,799,313   |
|  | 16,717,710      | 187,114,312   | 320,429,356   |
| IT                                     | 22,245,142      | 150,255,848   | 106,675,465   |
| All other                              | 106,357,127     | 92,575,482    | 71,641,075    |
| Total revenues from external customers | 3,846,493,262   | 5,650,374,089 | 6,386,558,435 |
| Intersegment revenues:                 |                 |               |               |
| Generation                             | 588,826,343     | 58,402,278    | 165,865,597   |
| Transmission - REN                     | 889,409,199     |               |               |
| Distribution:                          |                 |               |               |
| Portugal                               | 8,548,478       | 6,575,664     | 10,301,641    |
| Spain                                  |                 |               |               |
| Brazil                                 |                 |               |               |
|  | 8,548,478       | 6,575,664     | 10,301,641    |
| Telecom:                               |                 |               |               |
| Portugal                               | 9,270,892       | 763,209       | 291,081       |
| Spain                                  |                 | 46,755        |               |
|  | 9,270,892       | 809,964       | 291,081       |
| IT                                     | 71,350,712      | 116,776,822   | 199,445,406   |
| All other                              | 85,219,823      | 67,745,292    | 74,858,037    |
| Total intersegment revenues            | 1,652,625,447   | 250,310,020   | 450,761,762   |
| Total revenue                          | 5,499,118,709   | 5,900,684,109 | 6,837,320,197 |
| Reconciling items:                     |                 |               |               |
| Intersegment revenues                  | (1,652,625,447) | (250,310,020) | (450,761,762) |
| Total consolidated revenues            | 3,846,493,262   | 5,650,374,089 | 6,386,558,435 |

(a) Includes all revenues from all activities of Hidroantábriço.

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|   | 2000          | 2001          | 2002          |
|---|---------------|---------------|---------------|
| <b><u>Depreciation and amortization expense</u></b> |               |               |               |
| Generation  | 222,764,378   | 227,474,081   | 231,611,037   |
| Transmission REN                                    | 33,693,668    |               |               |
| Distribution:                                       |               |               |               |
| Portugal  | 313,955,088   | 324,576,467   | 330,239,155   |
| Spain   |               |               | 27,822,892    |
| Brazil  |               | 35,826,643    | 49,258,997    |
|   | 313,955,088   | 360,403,110   | 407,321,044   |
| Telecom:  |               |               |               |
| Portugal  | 20,672,400    | 41,527,340    | 49,317,953    |
| Spain   |               | 7,343,523     | 17,541,131    |
|   | 20,672,400    | 48,870,863    | 66,859,084    |
| IT  | 9,141,235     | 18,456,115    | 18,896,583    |
| All other   | 13,373,928    | 9,487,244     | 14,852,870    |
| Total depreciation and amortization expense         | 613,600,687   | 664,691,413   | 739,540,618   |
| <b><u>Segment operating profit</u></b>              |               |               |               |
| Generation  | 508,155,490   | 514,952,466   | 546,873,789   |
| Transmission REN                                    | 48,233,757    |               |               |
| Distribution:                                       |               |               |               |
| Portugal  | 215,975,918   | 191,238,927   | 93,916,381    |
| Spain   |               |               | 26,157,567    |
| Brazil  |               | 64,609,292    | 33,930,283    |
|   | 215,975,918   | 255,848,219   | 154,004,230   |
| Telecom:  |               |               |               |
| Portugal  | (80,176,774)  | (100,648,286) | (87,107,331)  |
| Spain   |               | (16,954,540)  | (29,408,930)  |
|   | (80,176,774)  | (117,602,826) | (116,516,261) |
| IT  | (1,829,385)   | 15,575,458    | 35,562,778    |
| All other   | 20,915,463    | (9,016,513)   | 18,586,878    |
| Total segment operating profit                      | 711,274,469   | 659,756,804   | 638,511,414   |
| Reconciling items:                                  |               |               |               |
| Corporate (expenses)/income, net                    | (61,154,528)  | (76,415,578)  | (74,390,476)  |
| Interest and related (expenses)/income, net         | (174,828,269) | (205,333,290) | (222,843,423) |
| Other non-operating (expenses)/income, net          | 288,792,515   | 125,989,419   | (138,938,784) |
| Intersegment income                                 | 74,245,000    | 90,191,223    | 84,582,649    |
| Total consolidated income before income taxes       | 838,329,187   | 594,188,578   | 286,921,380   |

|  | 2000            | 2001            | 2002            |
|--|-----------------|-----------------|-----------------|
| <b><u>Segments assets</u></b>                            |                 |                 |                 |
| Generation   | 4,794,390,678   | 6,559,202,808   | 5,326,246,027   |
| Transmission-REN   |                 |                 |                 |
| Distribution:  |                 |                 |                 |
| Portugal   | 4,871,158,084   | 4,968,090,323   | 5,141,351,276   |
| Spain  |                 |                 | 1,707,908,194   |
| Brazil   | 427,754,123     | 862,531,026     | 1,508,427,171   |
|  | 5,298,912,207   | 5,830,621,349   | 8,357,686,641   |
| Telecom:   |                 |                 |                 |
| Portugal   | 1,032,561,527   | 887,057,380     | 931,529,672     |
| Spain  |                 | 141,446,817     | 228,324,186     |
|  | 1,032,561,527   | 1,028,504,197   | 1,159,853,858   |
| IT   |                 | 256,409,557     | 332,269,766     |
| All other  | 1,206,648,517   | 2,530,949,983   | 2,803,539,778   |
| Total segment assets                                     | 12,332,512,929  | 16,205,687,894  | 17,979,596,070  |
| Reconciling items:                                       |                 |                 |                 |
| Corporate assets   | 5,289,505,502   | 8,337,950,302   | 3,327,510,850   |
| Intersegment accounts receivable                         | (2,735,087,694) | (8,310,495,409) | (3,181,917,139) |
| Total consolidated assets                                | 14,886,930,737  | 16,233,142,787  | 18,125,189,781  |
| <b><u>Expenditures for additions to fixed assets</u></b> |                 |                 |                 |
| Generation   | 69,727,941      | 138,769,068     | 246,866,393     |
| Transmission-REN   | 14,975,783      |                 |                 |
| Distribution:  |                 |                 |                 |
| Portugal   | 297,377,834     | 335,363,007     | 376,318,954     |
| Spain  |                 |                 | 102,355,351     |
| Brazil   |                 | 49,914,902      | 25,382,685      |
|  | 297,377,834     | 385,277,909     | 504,056,990     |
| Telecom:   |                 |                 |                 |
| Portugal   | 71,399,961      | 59,728,760      | 208,037,250     |
| Spain  |                 | 50,436,561      | 20,581,933      |
|  | 71,399,961      | 110,165,321     | 228,619,183     |
| IT   | 29,997,706      | 62,064,070      | 28,199,390      |
| All other  | 85,230,409      | 87,771,406      | 47,911,254      |
| Total expenditures for additions to fixed assets         | 568,709,635     | 784,047,774     | 1,055,653,210   |

## 21. RAW MATERIALS AND CONSUMABLES

|                       | 2000          | 2001          | 2002          |
|-----------------------|---------------|---------------|---------------|
| Electricity purchased | 1,278,626,665 | 2,524,293,349 | 3,005,400,238 |
| Fuel                  | 308,864,467   | 379,585,712   | 467,951,685   |
| Materials             | 102,951,671   | 114,228,360   | 127,804,014   |
| Other                 | 40,279,771    | 60,756,826    | 85,941,340    |

1,730,722,574

3,078,864,247

3,687,097,277

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**22. PERSONNEL COSTS**

|                          | 2000        | 2001        | 2002        |
|--------------------------|-------------|-------------|-------------|
| Salaries                 | 299,930,088 | 402,399,702 | 427,618,996 |
| Social security benefits | 77,373,715  | 92,291,822  | 102,583,488 |
| Insurance                | 3,095,704   | 3,449,013   | 3,002,496   |
| Employee benefits        | 7,334,274   | 6,458,560   | 5,643,812   |
| Pensions                 | 18,974,272  | 37,492,144  | 44,339,970  |
| Other                    | 32,604,962  | 49,882,248  | 41,583,485  |
|                          | 439,313,006 | 591,973,489 | 624,772,247 |

**23. OTHER EXTERNAL SUPPLIES AND SERVICES**

|                                     | 2000        | 2001        | 2002        |
|-------------------------------------|-------------|-------------|-------------|
| Subcontractors                      | 29,185,186  | 113,096,766 | 179,073,612 |
| Maintenance and repairs             | 73,258,038  | 95,042,144  | 100,636,071 |
| Fuel                                | 6,435,675   | 7,142,397   | 7,404,556   |
| Rents                               | 23,284,779  | 40,555,409  | 34,203,728  |
| Communications                      | 22,640,038  | 33,649,646  | 21,957,011  |
| Insurance                           | 10,457,378  | 10,885,734  | 18,386,377  |
| Cleaning services                   | 5,142,561   | 5,311,220   | 5,683,024   |
| Security services                   | 6,277,736   | 7,549,242   | 8,993,371   |
| Collection services                 | 11,710,637  | 11,666,075  | 13,258,016  |
| Specialized and consulting services | 105,298,561 | 231,474,826 | 187,547,761 |
| Medical benefits                    | 8,141,489   | 4,929,125   | 8,461,440   |
| Advertising costs                   | 28,938,902  | 23,556,633  | 20,970,300  |
| Other                               | 37,773,089  | 66,370,969  | 68,494,672  |
|                                     | 368,544,069 | 651,230,186 | 675,069,959 |

The increase in subcontractors relates mainly to the telecom business, which increased during 2001 and 2002.

**24. OWN WORK CAPITALIZED**

|                          | 2000       | 2001       | 2002       |
|--------------------------|------------|------------|------------|
| Consumption of materials | 75,701,963 | 84,020,311 | 70,695,020 |
| Direct internal costs    | 78,642,202 | 60,961,184 | 88,001,703 |
| Overheads                | 46,802,940 | 42,305,120 | 55,721,870 |
| Finance charges          | 8,588,402  | 14,477,544 | 16,035,807 |

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|                            |             |             |             |
|----------------------------|-------------|-------------|-------------|
| Other own work capitalized | 19,336,300  | 30,754,586  | 11,314,857  |
|                            | 229,071,807 | 232,518,745 | 241,769,257 |

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## 25. PROVISIONS

During 2000, the movements in provisions were as follows:

|  | Opening<br>balance | Alteration in<br>Subsidiaries | Increases   | Decreases   | Ending<br>balance |
|--|--------------------|-------------------------------|-------------|-------------|-------------------|
| For doubtful accounts (Notes 4, 5 and 7)           | 267,434,932        | 2,359,065                     | 3,630,610   | 27,264,213  | 246,160,394       |
| For other risks and contingencies:                 |                    |                               |             |             |                   |
| Medical benefits (Note 16)                         | 361,688,331        | (23,588,152)                  | 38,681,777  | 18,325,835  | 358,456,121       |
| Pensions (Note 16)(1)                              | 98,323,041         | 149,774,045                   | 17,512,794  |             | 265,609,880       |
| Various contingencies (Note 18)(1)                 | 232,517,303        | (124,902,265)                 | 48,095,530  | 72,192,611  | 83,517,957        |
| Other  | 12,435             |                               |             | 12,435      |                   |
|  | 692,541,110        | 1,283,628                     | 104,290,101 | 90,530,881  | 707,583,958       |
| For diminution in value of Investments<br>(Note 8) | 698,317            |                               |             |             | 698,317           |
|  | 960,674,359        | 3,642,693                     | 107,920,711 | 117,795,094 | 954,442,669       |

(1) Due to the changes in the actuarial assumptions (see Note 16), EUR 145,260,931 was reclassified from various contingencies to pensions during 2000

During 2001, the movements in provisions were as follows:

|  | Opening<br>balance | Alteration in<br>Subsidiaries | Increases   | Decreases  | Ending<br>balance |
|--|--------------------|-------------------------------|-------------|------------|-------------------|
| For doubtful accounts (Notes 4, 5 and 7)           | 246,160,394        | 933,671                       | 20,464,383  | 13,295,702 | 254,262,746       |
| For other risks and contingencies:                 |                    |                               |             |            |                   |
| Medical benefits (Note 16)                         | 358,456,121        |                               | 32,480,098  | 12,997,219 | 377,939,000       |
| Pensions (Note 16)                                 | 265,609,880        |                               | 67,260,750  | 26,921,630 | 305,949,000       |
| Various contingencies (Note 18)(1)                 | 83,517,957         | 253,033                       | 65,985,633  | 2,155,427  | 147,601,196       |
|  | 707,583,958        | 253,033                       | 165,726,481 | 42,074,276 | 831,489,196       |
| For diminution in value of Investments<br>(Note 8) | 698,317            | 3,125,669                     | 3,113,970   |            | 6,937,956         |
|  | 954,442,669        | 4,312,373                     | 189,304,834 | 55,369,978 | 1,092,689,898     |

(1) In 2001 includes the amount of EUR 45,625,913 from Bandeirante.

During 2002, the movements in provisions were as follows:



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|  | Opening<br>balance | Alteration in<br>Subsidiaries | Increases   | Decreases   | Ending<br>balance |
|--|--------------------|-------------------------------|-------------|-------------|-------------------|
| For doubtful accounts (Notes 4, 5 and 7) | 254,262,746        | 11,997,681                    | 42,668,074  | 30,420,988  | 278,507,513       |
| For other risks and contingencies:       |                    |                               |             |             |                   |
| Medical benefits (Note 16)               | 377,939,000        |                               | 57,614,471  | 38,840,471  | 396,713,000       |
| Pensions (Note 16)                       | 305,949,000        | 3,435,200                     | 14,687,117  | 112,528,317 | 211,543,000       |
| Various contingencies (Note 18)          | 147,601,196        | 77,526,561                    | 3,971,874   | 31,073,954  | 198,025,678       |
|  | 831,489,196        | 80,961,761                    | 76,273,462  | 182,442,742 | 806,281,677       |
| For diminution in value of:              |                    |                               |             |             |                   |
| Investments (Note 8)                     | 6,937,956          |                               | 271,404,748 |             | 278,342,704       |
| Fixed assets                             |                    |                               | 280,935,000 | 280,935,000 |                   |
| Stocks                                   |                    |                               | 1,179,695   |             | 1,179,695         |
|  | 1,092,689,898      | 92,959,441                    | 672,244,036 | 493,798,730 | 1,364,094,646     |

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The net movements in provisions reflected in the income statements are included under the Provisions captions in Other non-operating expenses (income) through the line item Movements in provisions in Note 29, or charged directly to equity, as follows:

|  | 2000         | 2001         | 2002          |
|--|--------------|--------------|---------------|
| <b>Provisions:</b>                                   |              |              |               |
| Doubtful accounts                                    | 3,630,610    | 20,464,383   | 23,192,238    |
| Medical benefits                                     | 38,681,777   | 32,480,098   | 57,614,471    |
| Pensions   | 17,512,794   | 63,041,677   | 14,687,117    |
| Various contingencies                                | 45,265,462   |              | 3,971,874     |
| Stocks   |              |              | 1,179,695     |
| Other  |              | 3,113,970    |               |
|  | 105,090,643  | 119,100,128  | 100,645,395   |
| <b>Movements in provisions (Note 29):</b>            |              |              |               |
| Doubtful accounts                                    | (11,016,381) |              | 19,475,836    |
| Investments  |              |              | 2,213,874     |
| Pensions   |              | (22,702,556) | (74,648,793)  |
| Various contingencies                                | 2,830,070    | 63,830,206   | (5,114,611)   |
| Impairment of fixed assets                           |              |              | 280,935,000   |
|  | (8,186,311)  | 41,127,650   | 222,860,686   |
| Total amounts included in the income statements      | 96,904,332   | 160,227,778  | 323,506,081   |
| <b>Changes in subsidiaries</b>                       | 3,642,691    | 4,312,373    | 92,959,442    |
| <b>Amounts written-off:</b>                          |              |              |               |
| Doubtful debts                                       | (16,247,832) | (13,295,702) | (30,420,988)  |
| Pensions   |              |              | (35,997,181)  |
| Investments  |              |              | (280,935,000) |
| Stocks   | (12,435)     |              |               |
|  | (12,617,576) | (8,983,329)  | (254,393,727) |
| <b>Charged directly to equity:</b>                   |              |              |               |
| Investments (fair value reserve)                     |              |              | 268,974,551   |
| Medical (currency translation reserve)               |              |              | (1,882,343)   |
| Pensions (currency translation reserve)              |              |              | (24,077,000)  |
| Various contingencies (currency translation reserve) |              |              | (25,959,343)  |
|  |              |              | 217,055,865   |
| <b>Payments:</b>                                     |              |              |               |
| Medical  | (18,325,835) | (12,997,220) | (14,763,471)  |
| Various contingencies                                | (72,192,611) |              |               |
|  | (90,518,446) | (12,997,22)  | (14,763,471)  |
| Total net movements in provisions                    | (6,231,690)  | 138,247,229  | 271,404,748   |

**26. OTHER OPERATING INCOME, NET**

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|                                   | 2000       | 2001       | 2002       |
|-----------------------------------|------------|------------|------------|
| Compensation from social security | 3,244,491  | 3,800,660  | 4,007,889  |
| Indemnities                       | 1,950,863  | 2,542,657  |            |
| Memberships                       | (471,913)  | (595,994)  | (627,978)  |
| Operating subsidies               | 601,605    | 1,898,662  | 453,433    |
| Supplementary gains               | 7,894,020  | 39,961,257 | 8,066,939  |
| Other, net                        | (787,137)  | 8,639,642  | 10,411,912 |
|                                   | 12,431,929 | 56,246,884 | 22,312,195 |

Supplementary gains consists of reimbursements received for out-of-pocket expenses incurred and charged to third parties related to ongoing IT services and telecommunication services.

**27. INTEREST AND RELATED EXPENSES**

|   | 2000        | 2001        | 2002        |
|---|-------------|-------------|-------------|
| Interest expense, debt                              | 206,551,007 | 266,577,770 | 329,860,746 |
| Interest expense, hydrological correction           | 15,215,401  | 20,559,696  | 12,684,863  |
| Foreign currency exchange losses                    | 6,548,862   | 63,666,000  | 22,846,399  |
| Net losses from affiliates and associated companies | 51,496      | 13,485,345  | 115,183,866 |
| Concession rights/goodwill amortization             | 49,608,400  | 49,691,342  | 46,473,319  |
| Bank commissions on loans                           | 2,782,166   | 17,317,830  | 4,125,662   |
| Bank services                                       |             | 12,647,315  | 57,025,306  |
| Other   | 10,947,603  | 12,809,532  | 16,363,900  |
|   | 291,704,935 | 456,754,831 | 604,564,061 |

Interest and related expenses include net interest expense (income) with respect to interest rate swaps of EUR 23,521,300 in 2000 and (EUR 23,146,054) in 2001 and (EUR 27,963,505) in 2002.

**28. INTEREST AND RELATED INCOME**

|   | 2000        | 2001        | 2002        |
|---|-------------|-------------|-------------|
| Interest income                                     | 23,497,715  | 51,879,989  | 46,758,028  |
| Foreign currency exchange gains                     | 4,654,752   | 62,321,221  | 90,260,262  |
| Net income from affiliates and associated companies | 64,916,287  | 41,935,974  | 76,491,617  |
| Cash discounts obtained                             | 1,946,514   | 2,212,179   | 2,147,383   |
| Late payment charges                                | 21,173,971  | 2,091,350   | 48,843      |
| Gain on early extinguishment of debt                |             | 88,556,519  | 89,173,897  |
| Other   | 687,428     | 2,424,312   | 76,840,609  |
|   | 116,876,667 | 251,421,544 | 381,720,639 |

The Company recorded a financial gain of EUR 88,556,519 in 2001 related to the early extinguishment of Bandeirante U.S. dollar-denominated debt, and EUR 89,173,897 in 2002 related to the early extinguishment of Escelsa U.S. dollar-denominated debt. This financial gain is equivalent to the difference between the face value of the outstanding U.S. dollar-denominated debt that was repaid and the market price of the bonds which were bought at a significant discount to par value.

**29. OTHER NON-OPERATING EXPENSES (INCOME)**

|                                       | 2000         | 2001         | 2002         |
|---------------------------------------|--------------|--------------|--------------|
| Amortization of fixed asset subsidies | (61,050,099) | (63,887,471) | (71,766,935) |

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|  |               |               |              |
|--|---------------|---------------|--------------|
| Losses (gains) on disposals of fixed assets              | (967,369)     | (4,311,235)   | (3,152,443)  |
| Losses (gains) on disposals of investments               | (204,504,724) | (20,734,889)  | (8,860,588)  |
| Movements in provisions (Note 25)                        | (8,186,311)   | 41,127,650    | 222,860,686  |
| Recovery of depreciation on concession-held fixed assets | (5,049,097)   | (4,881,945)   | (4,283,876)  |
| Write-off of accounts receivables                        | 24,042        |               | 9,084,127    |
| Hydrological correction(1)                               |               | (47,465,630)  |              |
| Reversal of impairment on Oniway                         |               |               | (70,000,000) |
| Extraordinary depreciations                              |               |               | 65,018,562   |
| Additional income tax payment                            |               |               | 19,562,554   |
| Indemnities paid   |               |               | 13,962,554   |
| Other  | (9,058,958)   | (25,835,896)  | (33,485,496) |
|  | (288,792,516) | (125,989,416) | 138,938,784  |

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(1) See Note 3 accounting principles hydrological correction account.

**30. COMMITMENTS AND CONTINGENCIES**

a) The amount of the rent payable to municipalities with respect to the concessions is established by Government regulation and is based on the amount of energy consumed each year and the density of the customer base in the respective municipalities. Concession rent expense amounted to EUR 128,376,952 in 2000, EUR 145,091,446 in 2001 and 154,008,204 in 2002.

b) REN, as concessionaire of the national electric grid has signed a power purchase agreement providing for the availability to REN of all the electricity produced by all EDP plants as well as Tejo Energia's Pego power plant and Turbogás plant Tapada do Outeiro. Under the agreements, REN is required to make specified monthly payments for capacity whether or not it takes delivery, which are fully passed through to the eligible costs for tariffs. The amount of minimum monthly payments is to be adjusted for changes in inflation and interest rates. Total purchases made by REN while part of the Group, from Tejo Energia and Turbogás, including the minimum payments, were EUR 260,059,332 for the six months ended June 30, 2000.

c) REN, as concessionaire of the national electric grid, is required to buy energy, as it is made available to REN, from small hydroelectric producers, other renewable energy source plants, and certain other cogenerators. The price paid by the REN is determined by Government regulation or by the Regulator. Purchases made by REN, while part of the Group, amounted to EUR 64,490,558 for the six months period ended June 30, 2000.

d) The Group has provided guarantees in the amount of EUR 409,000,000 during 2002. These guarantees have been primarily provided to banks in respect of loans obtained by subsidiary which are included in these consolidated financial statements, and to customs authorities.

e) Corporate income tax returns are subject to review and correction by the income tax authorities for a period of six years after the filing of such returns. Accordingly, the last taxation year that can be considered definitively assessed by the income tax authorities is 1996.

f) The Company is involved in legal proceedings arising in the normal course of business. Management believes, based on advice of legal counsel, that the outcome of these proceedings will not have a material adverse effect on the Company's financial statements.

**31. FINANCIAL INSTRUMENTS**

EDP uses financial derivative instruments to manage its exposure to interest rate and foreign currency fluctuations. The counterparts to these agreements are major financial institutions and expose EDP to market and credit risk and, occasionally, may be concentrated with certain counterparts. Management believes the credit risk and interest rate risk arising from non-performance by the counterparties is not significant, based on the investment grade rating of the counterparties. The Company does not require collateral or other security to support the financial instruments with credit risk.

Management is aware of EDP's exposure to market risks arising from its outstanding debt and derivative instruments. Market risks mainly results from interest rate and foreign exchange rate fluctuations. The Company estimates the sensitivity of the fair values of its financial instruments to changes in interest and foreign exchange rates. The methods and assumptions used by the Company to determine fair values are explained below in Fair value of financial instruments .

### **Interest rate risk**

Interest rate swap agreements are used to manage the proportion of variable rate debt in the Company's debt portfolio and to reduce the level of interest expense. Notional amounts of interest rate swap agreements, including cross-currency interest rate swaps, outstanding as of December 31, 2002 totalled EUR 3,545,584,558 compared with EUR 2,960,420,697 at December 31, 2001. The swap agreements have remaining maturities between 18 months and

15 years. The fair value of these derivative financial instruments is the amount that would be paid or received upon termination of the agreements based on available market rates. These agreements, if terminated, would result in receivables of EUR 131,181,260 at December 31, 2002.

#### **Foreign exchange rate risk**

EDP's current exposure to foreign exchange rate risk is limited to certain operating expenses, such as fuel costs, and some international investments since 95% of its debt is currently denominated in euros or swapped to euros. Therefore at December 31, 2000 and 2001, there were no outstanding currency swap agreements, at December 31, 2002 there is a cross currency and interest rate swap of GBP to EUR representing 4% of total debt.

EDP may periodically use non-euro currency forward exchange agreements to reduce its exposure to exchange rate fluctuations associated with liabilities denominated in non-euro currencies. EDP did not hold any outstanding forward contracts at each of the three years ended December 31, 2002.

#### **Other credit risks**

Other financial instruments that potentially subject the Group to concentrations of credit risk consist primarily of cash and cash equivalents, and accounts receivable.

The EDP Group maintains cash and cash equivalents with various financial institutions in Portugal. EDP performs periodic evaluations of the relative credit standing of those financial institutions.

The EDP Group does not consider itself exposed to credit risk with respect to accounts receivable from non-public entities due to the large number of diverse customers (individual consumers, corporations and small businesses) operating in many industries.

The EDP Group, as the sole supplier of low voltage electricity in Portugal, has in the past been obliged to provide electricity for street lighting and public buildings even in situations where the recipient municipalities were not paying their bills on a timely basis. Therefore, the Group is exposed to credit risk with respect to accounts receivable from municipalities. However, in the past, this risk has been reduced through the intervention of the Government in assisting in the resolution of certain disputed amounts. A provision has been established for the portion of receivables that management believes will be uncollectible.

#### **Fair value of financial instruments**



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The estimated fair value of the financial instruments is as follows:

|   | 2001           |               | 2002           |               |
|---|----------------|---------------|----------------|---------------|
|   | Carrying value | Fair value    | Carrying value | Fair value    |
| <b>Assets</b>   |                |               |                |               |
| Cash and cash equivalents                               | 34,385,780     | 34,385,780    | 213,972,719    | 213,972,719   |
| Accounts receivable trade                               | 936,556,798    | 936,556,798   | 970,859,601    | 970,859,601   |
| Accounts receivable other                               | 328,739,084    | 328,739,084   | 573,211,684    | 573,211,684   |
| Investments   | 1,451,504,290  | 1,419,719,402 | 1,895,789,622  | 1,895,789,622 |
| Long-term receivables                                   | 209,176,490    | 209,176,490   | 260,583,901    | 260,583,901   |
| <b>Liabilities</b>                                      |                |               |                |               |
| Short-term debt   | 1,049,912,945  | 1,049,912,945 | 1,887,033,693  | 1,887,033,693 |
| Accounts payable trade                                  | 755,352,361    | 755,352,361   | 1,018,570,449  | 1,018,570,449 |
| Accounts payable other                                  | 104,935,924    | 104,935,924   | 173,676,538    | 173,676,538   |
| Long-term debt (including current portion/net of swaps) | 4,749,210,847  | 4,977,729,514 | 6,107,041,911  | 6,406,804,276 |

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The following methods and assumptions were used by the Company in estimating its fair value disclosures for financial instruments:

For cash and cash equivalents, accounts receivable, short-term debt and accounts payable, the Group considers their carrying value to approximate fair value due to the short-term maturity of these instruments.

The fair value of the investments that are publicly traded is based on the quoted market price. For investments that are not publicly traded, the Group estimates that their carrying value approximates market value.

The fair value of the long-term receivables has been estimated using discounted cash flows.

The fair value of the long-term debt was determined as follows:

Bonds - the quoted market price at December 31 of the respective years.

Bank loans - discounted cash flow analysis, based on the Group's current incremental borrowing rates for similar types of borrowing arrangements.

The fair value of interest rate and currency swap agreements were determined using discounted cash flow analysis based on zero-coupon yield curve rates. Zero coupon rates used to discount cash flows were derived from market rates (mid bid-offer spread) quoted by market dealers.

## 32. INCOME TAXES

Income tax expense may be analyzed as follows:

|                            | 2000         | 2001         | 2002         |
|----------------------------|--------------|--------------|--------------|
| Tax base                   |              |              |              |
| Income before income taxes | 838,329,187  | 594,188,578  | 286,921,381  |
| Permanent differences      | (14,421,140) | 76,299,875   | 302,779,174  |
|                            | 823,908,047  | 670,488,453  | 589,702,555  |
| Normal charge              | 288,366,761  | 234,670,959  | 194,601,843  |
| Adjustments                | 24,274,513   | (31,718,373) | (22,862,521) |
| Income tax expenses        | 312,641,274  | 202,952,586  | 171,739,322  |

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|                       |             |              |             |
|-----------------------|-------------|--------------|-------------|
| Current income taxes  | 310,743,134 | 244,011,679  | 171,167,863 |
| Deferred income taxes | 1,898,141   | (41,059,093) | 571,459     |
| Income tax expense    | 312,641,275 | 202,952,586  | 171,739,322 |

In 2000 and 2001, the reference income tax rate in Portugal was 32.00% and during 2002 the tax decreased to 30.00%. In addition to the base rate, generally a municipal tax of 10.00% is applicable.

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**33. RECONCILIATION TO ACCOUNTING PRINCIPLES GENERALLY ACCEPTED IN THE UNITED STATES OF AMERICA**

The Company's financial statements have been prepared in accordance with Portuguese GAAP which vary in certain significant respects from U.S. GAAP. Differences that have a significant effect on the Company's consolidated results of operations and shareholders' equity are as follows:

*a. Revaluation of fixed assets*

The Group's fixed assets that were acquired prior to 1993 are stated at revalued amounts as permitted under Portuguese GAAP. The revalued fixed assets are being depreciated over their estimated useful lives on their revalued basis. Under U.S. GAAP, fixed assets may not be stated at more than their historical acquisition cost. Accordingly, in the accompanying reconciliation, the increases in shareholders' equity and the related increase in depreciation expense occurring as a result of such revaluations have been reversed for all periods presented. Depreciation for corporate income tax purposes is based on the original acquisition cost and 60% of the additional revaluation increment. Therefore, the adjustments also reflect the remaining deferred tax benefit arising from the revaluation increments. The effect of the revaluation on the gains and losses on disposals is not significant.

*b. Capitalized overhead*

The Company capitalizes a portion of its general and administrative overhead to the cost of its assets under construction. Under U.S. GAAP, such costs are expensed in the period incurred.

*c. Foreign exchange differences*

As permitted under Portuguese GAAP, prior to 1995, the Company capitalized net foreign exchange differences (both gains and losses) that resulted from loans contracted to fund capital expenditures denominated in non-escudo currencies. Under U.S. GAAP, foreign exchange gains and losses may not be capitalized.

*d. Deferred costs*

The Company capitalizes and amortizes research and development expenses, advertising costs, major repairs and maintenance costs, and reorganization costs. Under U.S. GAAP, such amounts are expensed in the period incurred. The Company also defers and amortizes subsidies received with respect to research and development costs (included in deferred revenue in the consolidated balance sheets). Under U.S. GAAP, the benefit of the subsidies would be included in income as the related research and development costs are incurred.

*e. Hydrological correction account*

As required by Government regulation, the Company records a liability-type amount to smooth the effect on its earnings that result from changes in hydrological conditions. Under U.S. GAAP, the effect of future changes in hydrological conditions would be viewed as a general business risk and such a recording would not be permitted. Since July 2000, the movement of gain/losses for hydro conditions are charged to REN and not to the income statements.

The hydrological correction adjustments presented below in the U.S. GAAP net income reconciliation reflect the net change for the year in the Hydrological correction account which consists of the amounts disclosed in Note 18.

*f. Distribution to management and employees*

The Company customarily distributes a portion of its net income to management and employees. The amount of the distribution generally amounts to one month's salary. Under Portuguese GAAP, this distribution is reflected in the period in which formal shareholder approval is obtained and is recorded as a reduction of retained earnings or other

reserves. U.S. GAAP requires that such distributions be recorded as compensation expense in the period to which they relate.

g. *Employee retirement benefits*

The company and some of its subsidiaries have pension obligations, both defined benefit and contribution and also medical benefits for retired employees. Costs for defined contribution are expensed when incurred. Accumulated obligations and annual expenses for medical and defined benefit pension plans are determined on actuarial basis. The company adopted this policy in Portuguese GAAP by implementing IAS 19 in 1999. For US GAAP the company is using SFAS 87 and SFAS 106 as from 1995.

Thus, differences in accounting for these obligations are basically originated from the date of determination of transition obligation (1989 for US GAAP purposes and 1996 for Portuguese GAAP) and the assumptions relating the adherence rate to the early retirement plan for the period 1999-2002, as well as for recognition the additional pension minimum liability.

h. *Employee termination benefits*

During 1997, the Company recorded a provision for future employee termination benefits. This provision was increased during 1998 and 1999. The provision recorded under Portuguese GAAP reflects management's estimate of costs to be incurred in connection with planned employee early retirements or terminations. This provision would not be recorded under U.S. GAAP since, as of December 31, 1998 and 1999, the details of the benefits arrangement had not been communicated to the employees and other conditions required by U.S. GAAP had not been met. During 2000, a portion of the provision was utilized and the remaining was released to income under Portuguese GAAP.

i. *Accounts receivable*

Under Portuguese GAAP a provision for doubtful accounts is established based on historical collection experience and evaluation of the current status of existing receivable balances. However, accounts receivables are only written-off when a customer is declared bankrupt by a court of law. Under U.S. GAAP, the write-off of a receivable would occur when collection is not probable.

In 1998, 1999 and 2000 the Company reached agreements with various municipalities on the terms of the future settlement of various old accounts receivable that under Portuguese GAAP had been fully provided in the past. The reversal of the allowance for doubtful accounts amounted to EUR 10,963,039 in 1999, EUR 13,773,870 in 2000, with no reversal in 2001. During 2000, 2001 and 2002 the Company collected EUR 2,272,583 and EUR 1,156,628 and EUR 3,081,748 related to those agreements. Under U.S. GAAP, the collection of the receivables in question had previously been considered not probable and consequently had been written off. Therefore, under U.S. GAAP the benefit from the recovery of these accounts receivable may only be recorded when the amounts are actually received.

j. *Power purchase agreements*

As permitted under Portuguese GAAP, REN has recorded the minimum contracted payments made to producers of the Binding Sector in connection with the power purchase agreements (Note 30) as an expense of the respective periods. U.S. GAAP would require these agreements to be treated as acquisitions of assets and the assumption of capital lease obligations because the power plants' production are fully dedicated and at the direction of REN and the agreements are for the duration of the estimated useful lives of the power plants.

Prior to July 1, 2000, power purchase agreements held by REN were reflected in the balance sheet amounts on the U.S. GAAP basis presented below by recognition of a fixed asset and a capital lease obligation recorded at the inception of the term of the agreements equal to the present values of the minimum payments required under the agreements, less estimated executory costs. The reconciliation presented below also reflects the allocation of the minimum payments, less the estimated executory costs, between a reduction in the liability and interest expense. In addition, an adjustment has been made for the depreciation expense of the fixed asset.

At the time of the disposal of the Central do Pego to Tejo Energia in 1993, the estimated construction cost of the plant under Portuguese GAAP was equal to the proceeds of disposal. However, the construction costs included capitalized foreign exchange differences and general and administrative costs which under U.S. GAAP would have been expensed as periodic costs prior to the disposal. These capitalized costs would have resulted in a gain on disposal of approximately EUR 48,592,891 which, because of the purchase power agreement, would not have been recognized in 1993. The U.S. GAAP adjustments presented below reflect the reversal of the capitalization of the foreign exchange differences and general and administrative overheads as if they had been expensed prior to 1995.

In accordance with U.S. GAAP power purchase agreements between REN and CPPE were accounted for as capital lease receivables for CPPE and a capital lease obligations for REN. The generation assets related to the power purchase agreements were recorded in REN's accounts. Prior to July 1, 2000, the effects of the power purchase agreements between the two related companies were eliminated in consolidation.

*k. Investments*

Under Portuguese GAAP, investments in publicly traded equity securities, other than those of subsidiaries and those that are accounted for under the equity method, were carried at historical cost until 2001. From January 1, 2002 under Portuguese GAAP these investments are stated at fair value and the changes therein, net of income taxes, are recorded in shareholders' equity, however any permanent loss in the carrying value is recognized in the income statement. No permanent loss in carrying value has been recorded.

Under U.S. GAAP for all years presented, these available for sale securities would be stated at fair value and the changes therein, net of income taxes, would be recorded in a separate component of shareholders' equity and included in the determination of comprehensive income. Any other than temporary impairment would be recognized in the income statement, therefore an amount of EUR 247,751,172 before tax benefit and EUR 165,933,285 net of tax has been reflected in the determination of US GAAP net income.

*l. Equity accounting on investments*

The Company's equity investments and equity in earnings (primarily of REN and Hidrocantabrico) are affected by certain accounting differences between U.S. GAAP and Portuguese GAAP. The differences affecting the Company's investments and equity in earnings include: revaluation of fixed assets, overheads capitalized, deferred costs, employee termination benefits, distribution to management and employees, power purchase agreements and deferred income taxes. These differences are as described in the respective narratives.

*m. Disposal of REN*

Under Portuguese GAAP, since the sale proceeds from the disposal of the Company's 70% interest in REN were equal to the net book value of the interest sold, no gain or loss was recorded on the transaction. Under U.S. GAAP, the net book value of the interest sold was reduced as a result of the accounting differences between Portuguese GAAP and U.S. GAAP; therefore, the proceeds received from the disposal of REN exceeded the net book value of the interest disposed, resulting in a gain on disposal and the remaining investment in REN must be reduced accordingly. The gain on the disposal, in the amount of EUR 342,045,810, and the related deferred tax in the amount of EUR 120,400,126, were



charged directly to shareholders' equity (with a net effect of EUR 221,645,684).

*n. Derivative instruments*

The Company uses derivative instruments in the normal course of business, to offset fluctuations in earnings and cash flows associated with movements in exchange rates, interest rates and commodity prices. Derivative instruments are not generally held by the Company for speculative trading purposes. FAS 133, *Accounting for Derivative Instruments and Hedging Activities*, as amended by FAS 137 and FAS 138, was adopted by the Company with effect from January 1, 2001. FAS 133 establishes accounting and reporting standards for derivative instruments, including certain derivative instruments embedded in other contracts (collectively referred to as derivatives) and for hedging activities. FAS 133 requires that an entity recognize all derivatives as either assets or liabilities in the consolidated balance sheet and measure those instruments at fair value. FAS 133 prescribes requirements for designation and documentation of hedging relationships and ongoing assessments of effectiveness in order to qualify for hedge accounting.

The Company has chosen not to apply the hedge accounting provisions of FAS 133, and accordingly all changes in the fair value of derivative instruments are recorded in the income statement.

The net fair value of derivative instruments at December 31, 2001 was EUR 31,291,546, and at December, 31 2002 was EUR 131,181,260.

Certain contracts that meet the definition of a derivative under FAS 133 may qualify as a normal purchase or a normal sale and be excluded from the scope of FAS 133. Specific criteria must be met in order for a contract that would otherwise be regarded as a derivative to qualify as a normal purchase or a normal sale. The Company has evaluated all of its commodity contracts to determine if they meet the definition of a derivative and qualify as a normal purchase or a normal sale. The Company also evaluates contracts for embedded derivatives, and considers whether any embedded derivatives have to be separated from the underlying contract and accounted for separately in accordance with FAS 133 requirements. Where embedded derivatives have terms that are not clearly and closely related to the terms of the underlying contract in which they are included, they are accounted for separately from the underlying contract as derivatives, with changes in the fair value recorded in earnings, to the extent that the hybrid instrument is not already accounted for at fair value.

*o. Depreciation of goodwill*

From January 1, 2002 U.S. GAAP requires that goodwill, including previously existing goodwill, and intangible assets with indefinite useful lives are not amortized but are tested for impairment annually. Concession rights continue to be amortized, as this is a finite lived intangible asset. In 2002 the goodwill amortization charged to the profit and loss account was adjusted under U.S. GAAP in the amount of EUR 11,895,774.

*p. Equity Method vs Proportionate consolidation*

The investment in Hidroantábrico where EDP owns 40% of its share capital is joint controlled with two other main shareholders with a residual amount of 1.2% of share capital owned by other shareholders. Under Portuguese GAAP associated companies where the parent company exercises significant influence together with other shareholders, even if the parent company's participation is fewer than 50%, are proportionately consolidated. Under U.S. GAAP these investments are accounted for by the equity method.

*q. Tariff adjustments and accounting for rate regulated entities*

Prior to 1999, the selling price of electric energy in Portugal was based upon a negotiated price between the Company and the Government. Tariffs were generally based on operating costs incurred during a year associated with average hydrological conditions. However, there were no specific guidelines in place that ensure that the Group would recover actual cost incurred during this time.

On January 1, 1999, and again on January 1, 2002, a new tariff regime was introduced that established formulae for the calculation of the selling price of electric energy in Portugal. These tariffs at current market conditions allow for the Company to recover actual costs incurred; however, not all of the criteria necessary to adopt the U.S. GAAP accounting for regulated industries exist. Therefore, U.S. GAAP requirements applicable to regulated industries have not been applied.

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On January 1, 2002, the regulator has implemented alternative revenue programs which allow the Company to increase tariffs in future periods to recover allowable revenues. Future tariff increases have been recorded in the current year for Portuguese GAAP and are reversed under US GAAP.

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r. *Amortization of concession rights*

The application of U.S. GAAP on the valuation of the acquisition of associated companies, changed the value assigned to assets and liabilities relating to these companies and the correspondent value of concession rights. The resulting difference between U.S. and Portuguese GAAP relating to the amortization of concession rights was adjusted.

s. *Income taxes*

Until December 31, 1998, as permitted under Portuguese GAAP, income taxes were accounted for in accordance with the taxes payable method based on estimated income taxes currently payable as determined by Government regulations. Under U.S. GAAP and, subsequent to January 1, 1999, under Portuguese GAAP, income taxes are provided using the liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences attributable to differences between the financial statement carrying amount of assets and liabilities and their tax bases. A valuation allowance is provided based on the expected realization of the deferred tax assets. Additionally, any deferred tax effect of other U.S. GAAP adjustment is reflected.

t. *Operating income*

Under U.S. GAAP, except for losses resulting from discontinued operations which would be presented separately, substantially all the amounts in Note 29 would be included in the determination of operating income.

u. *Classification differences*

Under Portuguese GAAP the payment received for the sale of OPTeP is net against the previously held investment and the remainder is deferred revenue. Under U.S. GAAP a sale is not recognized and the payment received is accounted for as debt and the investment held on balance sheet, with the difference as deferred revenue.

v. *Impact of Recently Issued Accounting Standards*

In July 2001, the FASB issued FAS 143, *Accounting for Obligations Associated with the Retirement of Long-Lived Assets*. FAS 143 will be effective for Company for the year ended December 31, 2003. FAS 143 provides the accounting requirements for retirement obligations associated with tangible long-lived assets. FAS 143 requires that the obligation associated with the retirement of the tangible long-lived assets be capitalized into the asset cost at the time of initial recognition. The liability is then discounted to its fair value at the time of recognition using the guidance provided by FAS 143. The Company is currently evaluating the overall impact of FAS 143 on its results of operations and financial position under U.S. GAAP.

In July 2002, the FASB issued FAS 146, *Accounting for Costs Associated with Exit or Disposal Activities*. This standard addresses financial accounting and reporting for costs associated with exit or disposal activities and nullifies EITF 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*. The statement requires companies to recognize costs associated with certain exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. FAS 146 will be applied by the Company prospectively to applicable exit or disposal activities initiated after December 31, 2002. The adoption of FAS 146 is not expected to have a material effect on the results of operations and financial position of the Company under U.S. GAAP.

In December 2002, the FASB issued FAS 148, *Accounting for Stock-Based Compensation-Transition and Disclosure*, which amends FAS 123 *Accounting for Stock-Based Compensation*. FAS 148 provides alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, FAS 148 amends the disclosure requirements of FAS 123 to require prominent disclosures about the method of accounting for stock-based employee compensation and the effect of the method used on reported results of operations. FAS 148 is effective for fiscal years ending after December 15, 2002. The Company adopted FAS 148 effective for the year ended December 31, 2002, and has elected to continue to account for its stock-based compensation in accordance with the provisions of Accounting Principles Board Opinion (APB) No. 25, *Accounting for Stock Issued to Employees*. Under APB 25, compensation expense is recognized over the vesting period based on the excess of the fair market value over the exercise price on the grant date.

In April 2003, the FASB issued FAS 149 *Amendment of Statement 133 on Derivative Instruments and Hedging Activities*. FAS 149 clarifies the circumstances in which a contract with an initial net investment meets the characteristic of a derivative and when a derivative contains a financing component. In addition, the statement amends the definition of an underlying to conform to language used in FIN 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*, and certain

other existing pronouncements. The statement is effective prospectively for contracts entered into or modified, and for hedging relationships designated, after June 30, 2003. The Company is currently analyzing the impact of FAS 149 on its results of operations and financial position under U.S. GAAP.

In May 2003, the FASB issued FAS 150, *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*. FAS 150 is effective prospectively for financial instruments entered into or modified after May 31, 2003, and otherwise is effective at the beginning of the first interim period beginning after June 15, 2003. FAS 150 requires that certain financial instruments, previously accounted for as equity, be classified as liabilities. This statement shall be implemented by reporting the cumulative effect of a change in an accounting principle for financial instruments created before the issuance date of the Statement and still existing at the beginning of the interim period of adoption. The Company is currently analyzing the impact of FAS 150 on its results of operations and financial position under U.S. GAAP.

In November 2002, the FASB issued FASB Interpretation No. 45 (FIN 45), *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees Of Indebtedness Of Others, an Interpretation of FASB Statements No. 5, 57, and 107 and Rescission of FASB Interpretation No. 34*. FIN 45 relates to the accounting for and disclosure of guarantees and addresses (1) an obligation to stand ready to perform over the term of the guarantee in the event that the specified triggering events or conditions occur and (2) a contingent obligation to make future payments if those triggering events or conditions occur. The Interpretation requires that upon issuance of a guarantee, the entity (i.e., the guarantor) must recognize a liability for the fair value of the obligation it assumes under that guarantee. The initial recognition and initial measurement provisions should be applied only on a prospective basis to guarantees issued or modified after December 31, 2002.

In January 2003, the FASB issued FASB Interpretation No. 46, (FIN 46), *Consolidation of Variable Interest Entities*. Under FIN 46, certain entities labelled Variable Interest Entities (VIE), must be consolidated by the primary beneficiary of the entity. The primary beneficiary is generally defined as the party exposed to the majority of the risks and rewards arising from the VIE. For VIE's in which the Company holds a significant variable interest that is not a majority interest, certain disclosures are required. Full implementation of this interpretation to pre-existing entities is required from July 1, 2003; and application to the Company's new involvements with any VIEs from February 1, 2003.

The effects on net income and shareholders' equity is as follows:

**Net income**

|   | 2000<br>EUR   | 2001<br>EUR  | 2002<br>EUR   | 2002<br>US\$  |
|---|---------------|--------------|---------------|---------------|
| Net income as reported under Portuguese GAAP          | 548,973,768   | 450,794,716  | 335,215,826   | 389,386,703   |
| U.S. GAAP adjustments increase (decrease) due to:     |               |              |               |               |
| a. Depreciation of revaluation of fixed assets        | 51,479,739    | 204,503,897  | 200,973,018   | 233,450,258   |
| b. Capitalized overheads                              | (18,964,296)  | (2,283,093)  | (35,649,746)  | (41,410,745)  |
| c. Depreciation of exchange differences               | 19,697,858    | 23,408,147   | 19,297,249    | 22,415,684    |
| d. Deferred costs                                     | 1,792,006     | (89,988,525) | 20,870,096    | 24,242,704    |
| e. Hydrological correction adjustments                | (20,193,269)  | (26,925,936) | 12,684,863    | 14,734,737    |
| f. Distribution to management and employees           | (16,189,608)  | (22,634,052) | (22,988,923)  | (26,703,933)  |
| g. Pension and other post-retirement benefits         | (61,875,879)  | (61,875,879) | (61,875,879)  | (71,875,021)  |
| h. Employee termination benefits                      | (51,895,247)  |              |               |               |
| i. Accounts receivable municipalities                 | (13,773,870)  | 1,156,628    | 3,081,748     | 3,579,758     |
| j. Power purchase agreements prior to REN disposal    | (9,298,875)   |              |               |               |
| j. Power purchase agreements after REN disposal       | (15,000,304)  | (20,124,311) | (15,507,038)  | (18,012,975)  |
| k. Investments  |               |              | (247,751,172) | (287,787,761) |
| l. Equity accounting on investments - REN             | (8,775,321)   | 43,256,395   | (26,282,824)  | (30,530,128)  |
| l. Equity accounting on investments - Hidrocantabrico |               |              | (6,733,751)   | (7,821,925)   |
| n. Derivative instruments                             | (10,993,640)  | 42,285,186   | 99,889,714    | 116,031,892   |
| o. Depreciation of goodwill                           |               |              | 11,895,774    | 13,818,131    |
| q. Tariff adjustments                                 |               |              | (49,996,000)  | (58,075,354)  |
| r. Amortization of concession rights - IVEN           |               |              | (530,896)     | (616,689)     |
| s. Income taxes                                       | 10,048,065    | (22,385,222) | 63,396,151    | 73,640,969    |
| Net adjustments                                       | (143,942,641) | 68,413,235   | (35,227,616)  | (40,920,398)  |
| Net income in accordance with U.S. GAAP               | 405,031,127   | 519,207,951  | 299,988,210   | 348,466,305   |
| Basic and diluted net income per share                | 0.14          | 0.17         | 0.10          | 0.12          |

**Shareholders equity**

|   | 2000<br>EUR     | 2001<br>EUR     | 2002<br>EUR     | 2002<br>US\$    |
|---|-----------------|-----------------|-----------------|-----------------|
| Shareholders equity as reported under Portuguese GAAP | 6,204,729,792   | 6,096,757,724   | 5,494,182,082   | 6,382,041,905   |
| U.S. GAAP adjustments increase (decrease) due to:     |                 |                 |                 |                 |
| a. Revaluation of fixed assets                        | (1,536,796,810) | (1,332,292,913) | (1,131,319,895) | (1,314,141,190) |
| b. Capitalized overheads                              | (649,627,568)   | (651,910,661)   | (687,560,407)   | (798,670,167)   |
| c. Exchange differences capitalized                   | (332,701,330)   | (309,293,183)   | (289,995,934)   | (336,859,277)   |
| d. Deferred costs                                     | (58,514,680)    | (148,503,205)   | (127,633,109)   | (148,258,619)   |
| e. Hydrological correction adjustments                | 318,918,546     | 292,012,610     | 304,697,473     | 353,936,585     |

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|    |  |                 |                 |                 |                 |
|----|--|-----------------|-----------------|-----------------|-----------------|
| f. | Distribution to management and employees           | (16,844,156)    | (22,072,804)    | (22,988,923)    | (26,703,933)    |
| g. | Pension and other post-retirement benefits         | 186,479,749     | 124,603,870     | 62,727,991      | 72,864,834      |
| g. | Additional minimum pension liability               |                 |                 | (216,418,000)   | (251,391,149)   |
| h. | Employee termination benefits                      |                 |                 |                 |                 |
| i. | Accounts receivable municipalities                 | (76,757,115)    | (75,600,487)    | (72,518,739)    | (84,237,767)    |
| j. | Power purchase agreements after REN disposal       | (174,841,437)   | (194,965,748)   | (210,472,786)   | (244,485,188)   |
| k. | Investments  | (12,348,560)    | (31,784,888)    |                 |                 |
| l. | Equity accounting on investments - REN             | (8,775,321)     | 34,481,074      | 8,198,250       | 9,523,087       |
| l. | Equity accounting on investments - Hidrocantabrico |                 |                 | (6,733,751)     | (7,821,925)     |
| m. | Gain on disposal of REN                            | (146,591,061)   | (146,591,061)   | (146,591,061)   | (170,280,176)   |
| n. | Derivative instruments                             | (10,993,640)    | 31,291,546      | 131,181,260     | 152,380,152     |
| o. | Depreciation of goodwill                           |                 |                 | 11,895,774      | 13,818,131      |
| q. | Tariff adjustments                                 |                 |                 | (49,996,000)    | (58,075,354)    |
| r. | Amortization of concession rights - IVEN           |                 |                 | (530,896)       | (616,689)       |
| s. | Deferred income taxes on Portuguese books          | 1,898,140       | (41,059,093)    | 571,460         | 663,808         |
| s. | Income taxes                                       | 795,801,513     | 816,374,123     | 835,571,364     | 970,599,696     |
|    | Net adjustments                                    | (1,721,693,729) | (1,655,310,819) | (1,607,915,929) | (1,867,755,141) |
|    | Shareholders' equity in accordance with U.S. GAAP  | 4,483,036,063   | 4,441,446,905   | 3,886,266,153   | 4,514,286,764   |



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Certain significant captions of the balance sheets as presented on a Portuguese GAAP basis would be as follows after application of U.S. GAAP differences:

**Balance sheets:**

|  | 2001<br>EUR    | 2002<br>EUR    |
|--|----------------|----------------|
| Fixed assets                               | 5,929,423,177  | 6,601,643,551  |
| Total assets                               | 15,455,158,432 | 16,922,181,654 |
| Total current liabilities                  | 3,052,407,916  | 2,550,816,618  |
| Total long-term liabilities                | 7,720,586,680  | 10,419,899,717 |
| Total liabilities                          | 10,772,994,596 | 12,970,716,335 |
| Shareholders' equity:                      |                |                |
| Share capital                              | 2,966,904,798  | 2,956,506,541  |
| Legal reserve                              | 221,187,438    | 243,727,440    |
| Other comprehensive income                 | (123,470,712)  | (559,328,540)  |
| Retained earnings                          | 1,376,825,381  | 1,245,360,713  |
|  | 4,441,446,905  | 3,886,266,153  |
| Total liabilities and shareholders' equity | 15,455,158,432 | 16,922,181,654 |

**Accounts receivable**

The amount of accounts receivable, trade and long-term receivables in accordance with U.S. GAAP are as follows:

|  | 2001<br>EUR   | 2002<br>EUR   |
|--|---------------|---------------|
| <b>Accounts receivable, trade (Note 4)</b>     |               |               |
| Accounts receivables                           | 860,956,311   | 703,299,966   |
| PPA receivables, short-term (less than 1 year) | 104,813,644   | 110,071,912   |
|  | 965,769,955   | 813,371,878   |
| <b>Long-term receivables (Note 7)</b>          |               |               |
| Long-term receivables                          | 102,851,979   | 370,655,813   |
| PPA receivables, long-term (over 1 year)       | 3,422,753,030 | 3,312,680,984 |
|  | 3,525,605,009 | 3,683,336,797 |

**Income taxes**

The components of the income tax provision and deferred income tax assets and liabilities in accordance with U.S. GAAP is as follows:

|          | <b>2000</b>  | <b>2001</b> | <b>2002</b>  |
|----------|--------------|-------------|--------------|
|          | <b>EUR</b>   | <b>EUR</b>  | <b>EUR</b>   |
| Current  | 310,743,134  | 244,011,679 | 171,167,863  |
| Deferred | (10,048,064) | 22,385,222  | (63,396,151) |
|          | 300,695,070  | 266,396,901 | 107,771,712  |

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The reconciliation of the expected income tax provision computed using the Company's Portuguese statutory income tax rate of 32% in 2000 and 2001 and 30% in 2002 to the actual income tax provision is as follows:

|   | 2000<br>EUR  | 2001<br>EUR | 2002<br>EUR  |
|---|--------------|-------------|--------------|
| Net income before income taxes under U.S. GAAP    | 684,338,614  | 684,987,036 | 190,459,507  |
| Expected income tax expense at the statutory rate | 218,988,313  | 219,195,852 | 57,137,852   |
| Municipal income taxes                            | 21,898,834   | 21,919,585  | 5,713,785    |
| Change in tax rate and in estimates               | 53,303,149   |             | (22,862,521) |
| Equity method investments                         | (14,709,427) | (4,090,066) | (25,985,196) |
| Goodwill depreciations                            | 17,462,156   | 30,947,622  | 71,945,266   |
| Other   | 3,752,045    | (1,576,092) | 21,409,180   |
|   | 300,695,070  | 266,396,901 | 107,771,712  |

Components of deferred income tax assets and liabilities:

|   | 2001<br>EUR | 2002<br>EUR   |
|---|-------------|---------------|
| Deferred tax assets:                        |             |               |
| Fixed assets:                               |             |               |
| Revaluation                                 | 281,380,263 | 224,001,339   |
| Overheads capitalized                       | 229,472,553 | 226,894,934   |
| Exchange differences capitalized            | 108,871,200 | 95,698,658    |
| Deferred costs capitalized                  | 52,273,128  | 42,118,926    |
| Pension and other post-retirement benefits  | 196,868,014 | 221,424,717   |
| Power purchase agreements                   | 68,627,943  | 69,456,019    |
| Investments                                 | 11,188,281  | 81,757,887    |
| Provision for various contingencies         | 38,182,576  | 65,348,474    |
| Provision for doubtful accounts             | 2,229,023   | 2,325,797     |
| Tariff adjustments                          | 4,928,442   |               |
| Total deferred tax assets                   | 994,021,423 | 1,029,026,752 |
| Deferred tax liabilities:                   |             |               |
| Hydrological correction account investments | 102,788,439 | 100,550,166   |
| Deferred in associates                      | 59,990,678  | 7,299,779     |
| Shareholder's equity reserve                | 14,868,183  | 11,973,589    |
| Pension minimum liability                   |             | 71,417,939    |
| Tariff adjustments                          |             | 2,213,915     |
| Total deferred tax liabilities              | 177,647,230 | 193,455,388   |
| Total net deferred tax assets               | 816,374,123 | 835,571,364   |

**Pensions**

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The components of the net periodic pension cost under U.S. GAAP include the following:

|                                       | <b>2000</b>  | <b>2001</b>  | <b>2002</b>  |
|---------------------------------------|--------------|--------------|--------------|
|                                       | <b>EUR</b>   | <b>EUR</b>   | <b>EUR</b>   |
| Service cost                          | 10,150,537   | 14,525,000   | 13,222,000   |
| Interest cost                         | 62,289,881   | 74,710,000   | 88,824,000   |
| Expected return on plan assets        | (60,823,416) | (57,531,000) | (56,031,000) |
| Amortization of net actuarial losses  | 61,212,478   | 61,212,478   | 72,431,000   |
| Amortization of transition obligation | 6,130,226    | 6,130,226    | 6,130,226    |
| Net periodic pension cost             | 78,959,706   | 99,046,704   | 124,576,226  |

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The following table sets forth the changes and the funded status of the pension plan under U.S. GAAP:

|  | 2001<br>EUR   | 2002<br>EUR   |
|--|---------------|---------------|
| <b>Change in benefit obligation</b>            |               |               |
| Benefit obligation at beginning of year        | 1,213,456,000 | 1,433,183,000 |
| Benefit obligation (Bandeirante)               |               | 78,273,000    |
| Service cost                                   | 14,525,000    | 13,222,000    |
| Interest cost                                  | 74,710,000    | 88,824,000    |
| Actuarial losses/(gains)                       | 175,653,000   | 96,242,000    |
| Estimated benefits paid                        | (123,434,000) | (144,277,000) |
| Exchange losses/(gains)                        |               | (38,461,000)  |
| Benefit obligation at end of year              | 1,354,910,000 | 1,448,733,000 |
| <b>Change in plan assets</b>                   |               |               |
| Fair value of plan assets at beginning of year | 801,179,000   | 781,286,000   |
| Fair value of plan assets (Bandeirante)        |               | 27,016,000    |
| Actual return of plan assets                   | 57,531,000    | 60,877,000    |
| Actual company contributions                   | 31,930,000    | 52,669,000    |
| Benefits paid                                  | (54,225,000)  | (53,597,000)  |
| Actuarial (losses)/gains                       | (82,145,000)  | (77,613,000)  |
| Exchange losses/(gains)                        |               | (13,677,000)  |
| Fair value of plan assets at end of year       | 754,271,000   | 749,945,000   |
| Funded status of plan (underfunded)            | (600,640,000) | (698,788,000) |
| Unrecognized net actuarial losses/(gains)      | 458,822,100   | 560,246,000   |
| Unrecognized transition obligation             | 29,449,028    | 23,319,000    |
| Prepaid (accrued) benefit cost                 | (112,368,872) | (115,223,000) |
| Additional minimum pension liability           |               | (216,448,000) |
| Prepaid (accrued) benefit cost                 | (112,368,872) | (331,641,000) |

\* Based on the most recent experience, in 2000, 2001 and 2002, it is estimated that employees applying for early retirement will be 30%, 90% and 70%, respectively, of the eligible employees. As from 2003, it is estimated that 40% of eligible employees will apply for early retirement. The Company recognized actuarial gain and losses through systematic amortization of any amounts in excess of 10% of the higher of the benefit obligation or the plan assets.

As of December 31, 2001 and December 31, 2002 plan assets consist of:

|                        | 2001<br>EUR | 2002<br>EUR |
|------------------------|-------------|-------------|
| Portuguese State bonds | 54,735,765  | 51,970,129  |
| Foreign public bonds   | 146,967,671 | 89,097,014  |
| Bonds                  | 225,039,528 | 274,606,217 |
| Investment fund units  | 197,811,216 | 128,891,579 |

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|                                      |             |             |
|--------------------------------------|-------------|-------------|
| Shares                               | 49,029,507  | 24,290,906  |
| Buildings                            | 85,888,788  | 179,516,596 |
| Cash and equivalents                 | 23,926,503  | 19,403,082  |
| Commercial paper                     | 2,443,853   | 2,983,849   |
| Other                                | (2,246,858) | 7,598,684   |
|                                      | 783,595,973 | 778,358,056 |
| Plan assets relating to others (REN) | 29,324,973  | 28,413,056  |
|                                      | 754,271,000 | 749,945,000 |

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The following is a summary of the significant assumptions used in the determination of the pension obligation:

|   | 2000 | 2001 | 2002 |
|---|------|------|------|
| Weighted average discount rate                                  | 6.5% | 6.5% | 6.0% |
| Rate of increase in compensation                                | 3.5% | 3.5% | 3.3% |
| Expected rate of return on plan assets                          | 7.5% | 7.5% | 6.5% |
| Expected percentage of eligible staff electing early retirement | *    | *    | *    |

\* Based on the most recent experience, in 2000, 2001 and 2002, the assumption were that employees applying for early retirement would be 30%, 90% and 70%, respectively, of the eligible employees. As from 2003, it is estimated that 40% of eligible employees will apply for early retirement. The Company recognized actuarial gain and losses through systematic amortization of any amounts in excess of 10% of the higher of the benefit obligation or the plan assets.

#### Other post-retirement benefits

EDP provides comprehensive medical coverage, in addition to that provided by the Portuguese national health system, for retired employees (including those who have taken early retirement) and their dependants. Additionally, the Company provides a death benefit to its retirees survivors. The Company administers the program internally and assumes the full cost of funding the program net of employee contributions amounting to approximately 10% of the total medical expenses covered.

A summary, of the components of the net periodic post-retirement benefit cost under U.S. GAAP is presented in the following table:

|   | 2000<br>EUR | 2001<br>EUR | 2002<br>EUR |
|---|-------------|-------------|-------------|
| Service cost                              | 6,494,349   | 6,714,000   | 6,540,000   |
| Interest cost                             | 26,885,207  | 28,781,000  | 30,095,000  |
| Amortization of transition obligation     | 5,731,188   | 4,873,000   | 4,873,000   |
| Net periodic post-retirement benefit cost | 39,110,744  | 39,368,000  | 41,508,000  |

The following table sets forth the changes and the funded status of the plan under U.S. GAAP as of December 31, 2001 and December 31, 2002:

|   | 2001<br>EUR | 2002<br>EUR |
|---|-------------|-------------|
| <b>Change in benefit obligation</b>     |             |             |
| Benefit obligation at beginning of year | 453,223,000 | 474,371,000 |
| Service cost                            | 6,714,000   | 6,540,000   |

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|   |               |               |
|---|---------------|---------------|
| Interest cost                             | 28,781,000    | 30,095,000    |
| Actuarial losses                          | 6,533,000     | 7,929,000     |
| Benefits paid                             | (20,880,000)  | (22,735,000)  |
| Benefit obligation at end of year         | 474,371,000   | 496,200,000   |
| Unfunded status of plan                   | (474,371,000) | (496,200,000) |
| Unrecognized net actuarial (gains)/losses | 44,308,000    | 52,237,000    |
| Unrecognized transition obligation        | 52,124,000    | 47,251,000    |
| Accrued benefit cost                      | (377,939,000) | (396,713,000) |

The assumed medical cost trend rate used in measuring the accumulated post-retirement benefit obligation as of December 31, 2002 was 4.5%. The health cost trend rate assumption has a significant effect on the amounts reported.

The assumed discount rate and salary growth rate used in determining the accumulated post-retirement benefit obligation was 6% and 3.3%, respectively, as of December 31, 2002 and 6.5% and 3.5%, respectively as of December 31, 2001.

FAS 106 allows recognition of the cumulative effect of the liability in the year of adoption or the amortization of the obligation over a period of up to 20 years. The Company has elected to recognize the initial postretirement benefit obligation of EUR 101,455,492, as of January 1, 1995, over a period of 17.7 years, the average remaining service period of the employee group.



**Research and development expenses**

Research and development expenses under U.S. GAAP amounted to, EUR 13,947,761 in 2000, EUR 76,021,096 in 2001 and EUR 44,180,395 in 2002.

**Comprehensive income**

For purposes of presenting its reconciliation of shareholders' net equity and net income from Portuguese GAAP to U.S. GAAP, in 1998 the Company adopted FAS No. 130, Reporting Comprehensive Income. The Standard requires reporting the components of comprehensive income, the change in equity (net assets) of a business enterprise during a period from transactions and other events and circumstances from non-owner sources, and the components thereof in an entity's financial statements. The non-owner changes in equity that have not been included in income include such accounts such as foreign currency translation adjustments and unrealized gains and losses on available-for-sale securities. The adoption of FAS 130 resulted in revised and additional disclosures for U.S. GAAP reporting purposes, but had no effect on the financial position, results of operations, or liquidity of the Company.

The comprehensive income for each of the three years in the period ended December 31, is as follows:

|  | 2000        | 2001         | 2002          |
|--|-------------|--------------|---------------|
| Net income in accordance with U.S. GAAP                | 405,031,127 | 519,207,951  | 299,988,210   |
| Change in currency translation adjustment              | 14,342,430, | (48,818,755) | (300,027,774) |
| Unrealized gains (losses) on investments               | (2,724,274) | (19,436,328) | (21,223,379)  |
| Tax effect of unrealized gains (losses) on investments | 953,497     | 6,841,587    | 6,791,481     |
| Additional minimum pension liability                   |             |              | (216,418,000) |
| Tax effect on additional minimum liability             |             |              | 71,417,940    |
| Comprehensive income                                   | 417,602,780 | 457,794,455  | (159,471,522) |

**Earnings per ordinary share**

Basic earnings per share is based upon the weighted average number of Ordinary Shares outstanding during the year. Diluted earnings per share is computed on the basis of the weighted average number of Ordinary Shares outstanding during the year plus the effect of Ordinary Shares issuable upon the exercise of employee stock options using the treasury stock method. During 1999, the Company established two employee stock option plans. The shares issued under these plans had no material effect on the weighted average Ordinary Shares outstanding. Ten Ordinary Shares equal one American Depository Share (ADS).

|                            | 2000<br>EUR | 2001<br>EUR | 2002<br>EUR |
|----------------------------|-------------|-------------|-------------|
| Net income Portuguese GAAP | 548,973,768 | 450,794,716 | 335,215,826 |

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|  |                 |               |               |               |
|--|-----------------|---------------|---------------|---------------|
| Net income - U.S. GAAP                       |                 | 405,031,127   | 519,207,951   | 299,988,210   |
| Weighted average Ordinary Shares outstanding |                 | 2,997,600,000 | 2,988,273,791 | 2,982,571,074 |
| Weighted average ADS outstanding             |                 | 299,760,000   | 298,827,379   | 298,257,107   |
| Net income per Ordinary Share:               |                 |               |               |               |
| Basic and diluted                            | Portuguese GAAP | 0.18          | 0.15          | 0.11          |
| Basic and diluted                            | U.S. GAAP       | 0.14          | 0.17          | 0.10          |
| Net income per ADS:                          |                 |               |               |               |
| Basic and diluted                            | Portuguese GAAP | 1.83          | 1.51          | 1.12          |
| Basic and diluted                            | U.S. GAAP       | 1.35          | 1.74          | 1.00          |

**Impairment**

Tangible and intangible fixed assets, net of relevant deferred revenue, are reviewed for impairment if events or changes in circumstances indicate that the carrying amount may not be recoverable. Goodwill is reviewed for impairment at the end of the first complete financial year after the relevant acquisition, and thereafter if events or changes in circumstances indicate that the carrying amount may not be recoverable. Under U.S. GAAP, impairments

are recognized on the basis of undiscounted cash flows, and measured on the basis of discounted cash flows. This has not resulted in a GAAP difference during 2000, 2001 and 2002.

**Concession rights/Goodwill/Other intangible assets**

The amounts stated in the balance sheet are shown in the tables below:

|   | <b>December 31, 2000</b> |                                     |                       |
|---|--------------------------|-------------------------------------|-----------------------|
|   | <b>Cost</b>              | <b>Accumulated<br/>amortization</b> | <b>Net book value</b> |
| Concession rights                         | 380,502,466              | 22,129,487                          | 358,372,979           |
| Goodwill                                  | 170,181,752              | 12,717,316                          | 157,464,436           |
| Other intangibles subject to amortization | 127,232,398              | 2,389,827                           | 124,842,571           |
|   | 677,916,616              | 37,236,630                          | 640,679,986           |

|   | <b>December 31, 2001</b> |                                     |                       |
|---|--------------------------|-------------------------------------|-----------------------|
|   | <b>Cost</b>              | <b>Accumulated<br/>amortization</b> | <b>Net book value</b> |
| Concession rights                         | 420,144,971              | 61,475,414                          | 358,669,557           |
| Goodwill                                  | 371,675,088              | 15,147,144                          | 356,527,944           |
| Other intangibles subject to amortization | 136,974,595              | 2,701,745                           | 134,272,850           |
|   | 928,794,654              | 79,324,303                          | 849,470,351           |

|   | <b>December 31, 2002</b> |                                     |                       |
|---|--------------------------|-------------------------------------|-----------------------|
|   | <b>Cost</b>              | <b>Accumulated<br/>amortization</b> | <b>Net book value</b> |
| Concession rights                         | 1,521,661,011            | 128,197,016                         | 1,393,463,995         |
| Goodwill                                  | 213,545,011              | 14,648,415                          | 198,896,596           |
| Other intangibles subject to amortization | 145,354,708              | 43,446,623                          | 101,908,085           |
|   | 1,880,560,730            | 186,292,054                         | 1,694,268,676         |

The amortization of concession rights, goodwill and other intangible assets, charged in the income statement, are presented below:

|   | <b>For the year ended December 31,</b> |             |             |
|---|--|-------------|-------------|
|   | <b>2000</b>                            | <b>2001</b> | <b>2002</b> |
| Concession rights                         | 11,085,065                             | 12,683,415  | 50,587,699  |
| Goodwill                                  | 10,590,043                             | 16,668,685  |             |
| Other intangibles subject to amortization | 2,186,413                              | 1,439,289   | 3,107,873   |
|   | 23,861,521                             | 30,791,389  | 53,695,772  |



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For concession rights and other intangible assets, subject to amortization under US GAAP, the aggregate amortization expense for the current year and estimated aggregate amortization expense for each of the five succeeding fiscal years are:

| Aggregate Amortization Expense | Euros      |
|--------------------------------|------------|
| 2002                           | 53,695,572 |
| Estimated Amortization Expense |            |
| 2003                           | 48,246,207 |
| 2004                           | 48,065,033 |
| 2005                           | 47,883,859 |
| 2006                           | 47,702,684 |
| 2007                           | 47,702,684 |

The goodwill for each reportable segment is, for each of the years ended December 31:

|                       | 2000        | 2001        | 2002        |
|-----------------------|-------------|-------------|-------------|
| <i>Net book value</i> |             |             |             |
| Telecom               |             |             |             |
| Portugal              | 157,464,436 | 287,479,818 | 114,507,015 |
| IT                    |             | 67,560,187  | 68,015,181  |
| All other             |             | 1,487,939   | 16,374,400  |
|                       | 157,464,436 | 356,527,944 | 198,896,596 |

|                     | 2000       | 2001       | 2002 |
|---------------------|------------|------------|------|
| <i>Amortization</i> |            |            |      |
| Telecom             |            |            |      |
| Portugal            | 10,590,043 | 6,279,385  |      |
| IT                  |            | 10,176,737 |      |
| All other           |            | 212,563    |      |
|                     | 10,590,043 | 16,668,685 |      |

|                                 | Telecom       | IT           | All other  | TOTAL         |
|---------------------------------|---------------|--------------|------------|---------------|
| December 31, 2000               | 157,464,436   |              |            | 157,464,436   |
| Entries/(exits) of subsidiaries | 99,816,881    | 21,428,946   |            | 121,245,827   |
| Additions                       | 36,477,886    | 56,307,978   | 1,700,502  | 94,486,366    |
| Amortization of the period      | (6,279,385)   | (10,176,737) | (212,563)  | (16,668,685)  |
| December 31, 2001               | 287,479,818   | 67,560,187   | 1,487,939  | 356,527,944   |
| Entries/(exits) of subsidiaries |               |              | 14,598,225 | 14,598,225    |
| Additions                       | 2,742,114     | 454,994      | 228,236    | 3,485,344     |
| Disposals                       | (5,533,165)   |              |            | (5,533,165)   |
| Impairment losses               | (170,181,752) |              |            | (170,181,752) |
| December 31, 2002               | 114,507,015   | 68,015,181   | 16,374,400 | 198,896,596   |

The impairment loss in 2002 is due to the discontinuation of the Oniway business. The results of Oniway prior to discontinuation were not material. The loss on discontinuation totalled 444 million, including the impairment to goodwill of 170 million.

From 1 January 2002, goodwill is no longer amortized under US GAAP but reviewed annually for impairment under FAS 142 Goodwill and Other Intangible Assets . Goodwill amortization of EUR 11,895,774 charged against Portuguese GAAP earnings for 2002 is added back in the US GAAP reconciliation.

|  | <b>For the year ended December 31,</b> |             |             |
|--|--|-------------|-------------|
|  | <b>2000</b>                            | <b>2001</b> | <b>2002</b> |
| Reported net income under U.S. GAAP          | 405,031,127                            | 519,207,951 | 299,988,210 |
| Goodwill amortization                        | 10,590,043                             | 16,668,685  |             |
| Adjusted net income                          | 415,621,170                            | 535,876,636 | 299,988,210 |
| <b>Basic and diluted earnings per share:</b> |  |             |             |
| Reported net income                          | 0.14                                   | 0.16        | 0.10        |
| Goodwill amortization                        |  | 0.01        |             |
| Adjusted net income                          | 0.14                                   | 0.17        | 0.10        |

**Equity investments**

EDP's investments in associates accounted for under the equity method are presented on note 2 of these financial statements. The summarized financial information of the most relevant are presented below:

*REN Rede Eléctrica Nacional, S.A.*

|                          | 2002                 | 2001                 | 2000                 |
|--------------------------|----------------------|----------------------|----------------------|
| Fixed assets             | 1,380,796,633        | 1,352,585,000        | 1,351,838,000        |
| Current assets           | 222,322,652          | 223,693,000          | 242,379,000          |
| Non current assets       | 342,901,340          | 406,364,000          | 269,485,000          |
| <b>Total Assets</b>      | <b>1,946,020,625</b> | <b>1,982,642,000</b> | <b>1,863,702,000</b> |
| Loans                    | 326,666,667          | 350,000,000          | 350,000,000          |
| Current liabilities      | 523,442,823          | 579,204,000          | 549,910,000          |
| Non current liabilities  | 308,024,436          | 307,443,000          | 253,893,000          |
| <b>Total Liabilities</b> | <b>1,158,133,926</b> | <b>1,236,647,000</b> | <b>1,153,803,000</b> |
| Equity                   | 787,886,699          | 745,995,000          | 709,899,000          |
| <b>Total Equity</b>      | <b>787,886,699</b>   | <b>745,995,000</b>   | <b>709,899,000</b>   |
| Net Revenue              | 2,302,868,020        | 2,209,104,000        | 2,302,868,000        |
| Operating Costs          | (2,278,753,035)      | (2,126,601,000)      | (2,278,753,000)      |
| Other operating income   | 92,422,685           | 15,682,000           | 92,423,000           |
| Non operating costs      | (27,685,139)         | (34,628,000)         | (27,695,000)         |
| Non operating income     | 7,319,488            | 4,989,000            | 7,319,000            |
| Income tax               | (30,747,247)         | (24,046,000)         | (30,747,000)         |
| Net income               | <b>65,424,772</b>    | <b>44,500,000</b>    | <b>65,415,000</b>    |
| EDP%                     | 30.00%               | 30.00%               | 30.00%               |

70% of REN's share capital was sold to the Portuguese Government in June 30, 2000, as such it was consolidated until that date.



*Hidrocantabrico Hidroeléctrica del Cantábrico, S.A.*

During the five month period ended in May 2002, Hidrocantábrico was accounted under the equity method for Portuguese GAAP. In 2001 a 19% interest of Hidrocantábrico was owned by Adygesinval which was held by EDP and accounted for on a proportional consolidation basis. The summarized financial information of Hidrocantabrico as of and for the 5 months ended May 31, 2002 and the 12 months ended December 31, 2001 is presented below:

|                          | May 2002             | December 2001        |
|--------------------------|----------------------|----------------------|
| Fixed assets             | 3,852,993,200        | 1,922,000,000        |
| Current assets           | 421,455,813          | 425,000,000          |
| Non current assets       | 618,814              | 76,000,000           |
| <b>Total Assets</b>      | <b>4,275,067,827</b> | <b>2,423,000,000</b> |
| Loans                    | 2,041,585,447        | 847,000,000          |
| Current liabilities      | 321,697,706          | 93,000,000           |
| Non current liabilities  | 238,605,450          | 445,000,000          |
| <b>Total Liabilities</b> | <b>2,601,888,603</b> | <b>1,385,000,000</b> |
| Minority interest        | 12,290,390           | 0                    |
| Equity                   | 1,660,888,834        | 1,038,000,000        |
| <b>Total Equity</b>      | <b>1,673,179,224</b> | <b>1,038,000,000</b> |
| Net revenue              | 1,462,082,149        | 1,180,000,000        |
| Operating costs          | (1,316,360,453)      | (1,033,000,000)      |
| Other operating income   | 0                    | 7,000,000            |
| Non operating costs      | (144,474,892)        | (49,000,000)         |
| Non operating Profit     | 21,439,009           | 5,000,000            |
| Income tax               | (10,255,083)         | (37,000,000)         |
| Minority interest        | 2,134,653            | 1,000,000            |
| Net income               | <b>14,565,383</b>    | <b>74,000,000</b>    |
| EDP%                     | 40.00%               | 9.50%(a)             |

(a) After obtaining nearly 100% interest in Hidrocantábrico, Adygesinval was merged into it.

## Guarantees

The Group has provided guarantees in the amount of EUR 409,000,000 during 2002. These guarantees have been primarily provided to banks in respect of loans obtained by subsidiaries, and to customs authorities. Guarantees are for amounts that are already included within these consolidated financial statements. The Company has no guarantees over tangible assets (mortgages). The most significant guarantees are:

| Bank                     | Value      | Events     | Maximum Liability |
|--------------------------|------------|------------|-------------------|
| BNDES / BANCO ITAÚ       | 80,818,966 | bank loans | 80,818,966        |
| INVESTCO, S.A            | 67,349,138 | bank loans | 67,349,138        |
| SPE Macau, BNU, BCM, BCP | 64,250,040 | bank loans | 64,250,040        |
| BPI / CGD                | 35,400,000 | bank loans | 70,000,000        |
| BEI                      | 20,500,000 | bank loans | 20,500,000        |
| BSCH, AS                 | 14,118,973 | bank loans | 14,118,973        |

## Employee stock option plans

The Company has two fixed option plans. Under the 1999 option plan for members of the Board of EDP, the Company may grant options for up to 2,450,000 shares of common stock. Under the 1999 option plan for members of the boards of directors of the EDP's operating companies and senior officers of EDP and its subsidiaries, the Company may grant options for up to 16,120,000 shares of common stock. Under both plans, the exercise price of each option equals the market price of the Company's stock on the date of grant and an option's maximum term is 5 years. Options are granted at the discretion of the Board of EDP and vest over a two year service period.

A summary of the status of the Company's two fixed stock option plans as of December 31, 2001 and 2002, and changes during the years then ended on those dates is presented below:

|                                   | Shares available<br>for grant under<br>1999 option plans | Option<br>activity | Weighted<br>average<br>exercise price |
|-----------------------------------|--|--------------------|---------------------------------------|
| Balance December 31, 2000         | 16,413,750   | 2,286,250          |                                       |
| Options forfeited(1)              |  |                    |                                       |
| Options granted                   |  |                    |                                       |
| Balance December 31, 2001         | 16,413,750   | 2,286,250          |                                       |
| Increase to the 1999 Option Plans |  |                    |                                       |
| Options forfeited                 |  |                    |                                       |
| Options granted(1)                |  |                    |                                       |
| Balance December 31, 2002         | 16,413,750   | 2,286,250          |                                       |

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*At the general shareholders meeting held on May 10, 2000, an increase in the number of options available under the 1999 options plans was approved to adjust the plans for an increase in the number of directors from 5 to 7.*

*Of 2,400,000 options granted in 1999, only 2,286,250 were accepted by directors and executive officers.*

*(1) The number of options to be granted for 2003 has not yet been determined.*

The following table summarizes information about stock options outstanding and exercisable as of December 31, 2002.

| <b>Options outstanding</b> | <b>Weighted average exercise price</b> | <b>Weighted average remaining contractual life</b> | <b>Options exercisable</b> |
|----------------------------|--|--|----------------------------|
| 2,286,250                  | 3.43                                   | 3 years  | 0                          |

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Had the Company elected to recognize compensation expense based upon the fair value at grant date for awards made in 1999, as calculated in accordance with FAS 123, Accounting for Stock Based Compensation, net income and earnings per share would not have been different from that shown for 2001 and 2002, and in 2000 the difference would not have been material.

**34. SUBSEQUENT EVENTS**

On May 29, 2003, the Company declared a dividend of EUR 0.09 per share.

On March 26, 2003, the Company has issued a Bond, through a private placement, in the amount of Euro 150,000,000, maturing on 26th of March of 2013, and with a floating interest rate of Euribor 6 months plus 0.50% per year. The proceeds of this issue have been used to refinance EDP's short-term debt.

On March 24, 2003, the Basque Government has announced the successful completion of Hidrocantábrico's bid on the privatisation of Basque gas company Naturcorp. Subsequent to the incorporation of Gas Asturias into Naturcorp, the resulting entity will be 62% owned by Hidrocantábrico and its combined net asset value will amount to approximately Eur. 814 million. Besides contributing with 100% of Gas Asturias' assets into Naturcorp, Hidrocantábrico will pay a cash consideration of Eur. 227 million for the stake it is acquiring in Naturcorp. The shareholders agreement to be signed with Ente Vasco de la Energía results in Hidrocantábrico having management control of the new company, which will maintain its headquarters in the Basque Country.