

EDP ELECTRICIDADE DE PORTUGAL SA

Form 20-F

June 30, 2004

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As filed with the Securities and Exchange Commission on June 30, 2004

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# SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

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## Form 20-F

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ANNUAL REPORT PURSUANT TO SECTION 13 OF THE

SECURITIES EXCHANGE ACT OF 1934,

for the fiscal year ended December 31, 2003

Commission File Number: 1-14648

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## EDP Electricidade de Portugal, S.A.

(Exact name of registrant as specified in its charter)

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**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)

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

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
<b>Ordinary Shares, with nominal value 1 per share*</b>	<b>New York Stock Exchange</b>
<b>American Depositary Shares (as evidenced by American Depositary Receipts), each representing 10 Ordinary Shares</b>	<b>New York Stock Exchange</b>

\* 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**

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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, 2003, 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 in countries in which we operate;

the effect of, and changes in, macroeconomic, social and political conditions in countries in which we operate;

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;

our success in new businesses, such as gas;

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.



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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 39 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 24, 2004 of \$1.217 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 3.776 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 24, 2004 of 3.103 reais = \$1.00 and then translating U.S. dollars into euros using the rate of exchange between U.S. dollars and euros of \$1.217 = 1.00, which was the applicable Noon Buying Rate on June 24, 2004. 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, all 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. 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.

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**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, 2003 and as of December 31, 1999, 2000, 2001, 2002 and 2003 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 and note 39 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 consolidated financial statements from 1999 through 2003 were audited by PricewaterhouseCoopers, Lda. Fiscal years prior to 1999 were audited by Ernst & Young.

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	Year ended December 31,					
	1999	2000	2001	2002	2003	2003
	Euro	Euro	Euro	Euro	Euro <sup>(1)</sup>	US\$ <sup>(1)</sup>
(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	2,966	3,676	5,201	5,876	6,296	7,663
Other sales <sup>(2)</sup>	38	61	98	112	160	195
Services <sup>(3)</sup>	68	110	351	398	521	634
Total revenues	3,072	3,846	5,650	6,387	6,978	8,492
Raw materials and consumables	901	1,731	3,080	3,687	3,921	4,772
Personnel costs	463	439	592	625	647	787
Depreciation and amortization	616	614	665	740	846	1,029
Supplies and services	287	369	651	675	633	770
Own work capitalized <sup>(4)</sup>	(214)	(229)	(233)	(242)	(236)	(287)
Concession and power-generation rental costs <sup>(5)</sup>	129	133	149	158	176	214
Hydrological correction <sup>(6)</sup>	(60)	(35)	0	0	0	0
Other operating expenses, net	43	102	73	95	86	105
Total operating costs and expenses	2,166	3,122	4,977	5,738	6,072	7,389
Operating income	906	724	674	649	906	1,102
Net interest expense <sup>(7)</sup>	140	175	205	223	359	437
Other non-operating income (expenses), net	56	(289)	(126)	(139)	(14)	(18)
Income before income taxes	822	838	594	287	532	648
Provision for income taxes (net of deferred taxes)	(308)	(313)	(203)	(172)	(196)	(238)
Minority interest	0	23	60	220	44	54
Net income	514	549	451	335	381	464
Net income from operations per ordinary share <sup>(8)</sup>	0.30	0.24	0.22	0.22	0.30	0.37
Net income from operations per ADS	3.02	2.41	2.25	2.16	3.02	3.68
Basic and diluted net income per ordinary share <sup>(8)</sup>	0.17	0.18	0.15	0.11	0.13	0.15
Basic and diluted net income per ADS <sup>(8)</sup>	1.72	1.83	1.50	1.12	1.27	1.55
Dividends per ordinary share <sup>(9)(10)</sup>	0.14	0.14	0.11	0.09	0.09	0.11
Dividends per ADS <sup>(9)(10)</sup>	1.40	1.40	1.13	0.90	0.90	1.10
<b>Amounts in accordance with U.S. GAAP<sup>(12)</sup></b>						
Net income	644	405	519	300	498	606
Basic and diluted net income per ordinary share <sup>(9)</sup>	0.21	0.14	0.17	0.10	0.17	0.20
Basic and diluted net income per ADS <sup>(9)</sup>	2.14	1.35	1.74	1.00	1.67	2.03
<b>Cash flow data:</b>						
<b>Amounts in accordance with Portuguese GAAP</b>						
Net cash from operating activities	985	1,122	1,221	898	1,774	2,158
Net cash used in investing activities	1,294	914	1,243	1,141	529	644
Net cash used in (from) financing activities	(385)	482	96	297	(1,119)	(1,361)

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	Year ended December 31,					
	1999 Euro	2000 Euro	2001 Euro	2002 Euro <sup>(1)</sup>	2003 Euro <sup>(1)</sup>	2003 US\$ <sup>(1)</sup>
(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	16	58	34	214	287	350
Other current assets	707	1,162	1,496	1,863	1,919	2,336
Total current assets	723	1,220	1,530	2,077	2,207	2,685
Fixed assets, net <sup>(11)</sup>	10,477	9,540	9,844	11,204	11,652	14,180
Other assets	2,510	4,128	4,860	4,844	4,792	5,832
Total assets	13,710	14,887	16,233	18,125	18,651	22,698
Short-term debt and current portion of long-term debt	598	1,807	1,744	1,887	1,579	1,922
Other current liabilities	621	890	1,286	1,631	1,711	2,083
Total current liabilities	1,219	2,697	3,030	3,518	3,290	4,004
Long-term debt, less current portion	3,770	3,205	4,055	6,107	5,914	7,197
Hydro account <sup>(13)</sup>	339	366	388	324	0	0
Other long-term liabilities	2,319	2,377	2,423	2,616	3,525	4,290
Total liabilities	7,648	8,645	9,896	12,566	12,729	15,491
Minority interest	2	37	241	65	236	288
Hydro account <sup>(13)</sup>	0	0	0	0	388	472
Shareholders' equity	6,060	6,205	6,097	5,494	5,298	6,448
<b>Amounts in accordance with U.S. GAAP<sup>(12)</sup></b>						
Fixed assets, net <sup>(11)</sup>	8,750	5,316	5,929	6,602	7,172	8,729
Total assets	12,940	14,010	15,455	16,922	17,730	21,577
Total current liabilities	1,238	2,714	3,052	2,551	3,280	3,991
Total long-term liabilities	7,415	6,776	7,721	10,420	10,892	13,255
Total liabilities	8,653	9,489	10,773	12,970	14,172	17,247
Shareholders' equity	4,287	4,483	4,441	3,886	3,497	4,256

<sup>(1)</sup> For 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 2003, euros are translated into U.S. dollars at the rate of exchange of \$1.217 = 1.00, which was the U.S. Federal Reserve Bank of New York noon buying rate on June 24, 2004.

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

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

<sup>(4)</sup> 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.

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

<sup>(6)</sup> 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 electricity 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)". In 2003 and for the following years, net gains and losses arising from the hydrological account are being charged to other non-operating income (expenses). In this respect, in 2003 we booked a 19.4 million income item, or US\$ 23.6 million, under this profit and loss account caption. Additionally, in 2001 we recorded a 47.5 million income item. We did not record such an item in 2002.

<sup>(7)</sup> Includes interest and related expenses and interest and related income. See Item 5. Operating and Financial Review and Prospects 2003 compared with 2002 Other expenses (income).

<sup>(8)</sup> 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

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*earnings per ordinary share multiplied by 10 as each ADS is equivalent to 10 ordinary shares on a post-split basis.*

<sup>(9)</sup> *Based on 3,000,000,000 ordinary shares issued and outstanding.*

<sup>(10)</sup> *Dividends per ordinary share in US\$, translated at the prevailing rate of exchange at the date of payment between the U.S dollar and the escudo for 1999, amount to US\$ 0.13 in 1999, US\$ 0.12 in 2000, US\$ 0.10 in 2001, US\$ 0.11 in 2002 and US\$ 0.11 in 2003 and dividends per ordinary share in euro, translated at the fixed rate of exchange between the euro and the escudo for 1999, amount to 0.14 in 1999, 0.14 in 2000, 0.11 in 2001, 0.09 in 2002 and 0.09 in 2003.*

<sup>(11)</sup> *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.*

<sup>(12)</sup> *U.S. GAAP amounts for 1999, 2000 and 2001 are not comparable to 2002 and 2003 due to the implementation of SFAS 142.*

<sup>(13)</sup> *Commencing with 2003, the hydrological correction account is no longer presented in our consolidated balance sheet as a liability.*

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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<sup>(1)</sup>**

<b>Year ended December 31,</b>	<b>End of Period</b>	<b>Average</b>
1999	1.01	1.06
2000	0.94	0.92
2001	0.89	0.89
2002	1.05	0.95
2003	1.26	1.13

**U.S. dollar per euro<sup>(1)</sup>**

<b>Period</b>	<b>High</b>	<b>Low</b>
2003		
December	1.26	1.20
2004		
January	1.29	1.24

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February	1.28	1.24
March	1.24	1.21
April	1.24	1.18
May	1.23	1.18

<sup>(1)</sup> Euro amounts 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 24, 2004, the exchange rate between the euro and the U.S. dollar was \$1.217 = 1.00.

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**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 and Spanish implementation of EU directives intended to create a competitive electricity market may materially and adversely affect our results of operations and financial condition.

In Portugal, 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.

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. From January 1, 2002 to February 26, 2004, all electricity consumers other than low voltage consumers, which are generally residential and small commercial users, were treated as Qualifying Consumers automatically upon notification to the Portuguese regulatory authority. From February 26, 2004, the eligibility threshold was lowered to extend to special lower voltage consumers. As of the end of February 2004, there were approximately



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50,000 consumers eligible to be Qualifying Consumers, which represented approximately 53% of total demand in mainland Portugal in volume terms.

In Spain, the electricity market has been completely liberalized since January 1, 2003. Accordingly, regardless of the type of consumer, voltage or consumption required, every customer can choose its electricity supplier and how the electricity is supplied. In other words, the consumer can choose between a local distributor paying the regulated tariff fixed by the Spanish government, or enter into a contract with a supplier and pay the price agreed by both parties. Despite the complete liberalization of the Spanish market, the majority of consumers have not changed their supplier. Until now, this liberalization has mainly produced effects among medium- and high-voltage consumers. Although fixed rate tariffs are expected to predominate, at least in the short and medium term, among Spanish electricity consumers, especially low voltage consumers, there could be a more pronounced move to contractually-agreed tariffs in the future and these tariffs could be lower than regulated tariffs.

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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.

During the Figueira da Foz summit of November 8, 2003, the Portuguese and Spanish governments executed a memorandum of understanding that set the timetable for the creation of an Iberian electricity market. On January 20, 2004, the same governments entered into a more detailed agreement known as the international agreement, which was approved by the Portuguese Parliament and ratified by the President of the Republic of Portugal on April 20, 2004. This agreement creates a single Iberian electricity market designated as MIBEL, as part of the process of integration of the electricity markets of both countries. The MIBEL will be limited in the short-term by a lack of high-voltage power lines linking Spain and Portugal, but is expected to be fully operational by 2006.

The scope of increased competition and any adverse effects on our operating results and market share resulting from the full liberalization of the European electricity markets, and in particular the Portuguese and Spanish electricity markets, will depend on a variety of factors that cannot be assessed with precision and that are beyond our control. Accordingly, we cannot anticipate the risks and advantages that may arise from this market liberalization. When further implemented, the organizational model and resulting competition may materially and adversely affect our results of operations and financial condition.

### **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, very high, high and medium voltage tariffs, generally applied to industrial customers, have declined by an average of 3.4% per year over the period 1999 to 2004. The tariffs for low voltage customers have also declined in real terms by an average of approximately 3.1% per year over the same period. For 2004, in nominal terms, tariffs for all voltage levels increased, on average, by 2.1% from the 2003 levels. Although the nominal final tariff charged to consumers increased, on average, across all voltage levels in 2004 by 2.1% from the 2003 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 2004 are lower than in 2003, which could adversely affect our profitability in 2004.

In addition, the Portuguese government has implemented selected measures to encourage the development of various forms of electricity production, including auto production (entities generating electricity for their own use that may sell surplus electricity to the national

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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.

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### **The current and future legislation contemplating the early termination of the PPAs could eventually adversely affect our revenues.**

Following 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 Portuguese government has enacted Decree law no. 185/2003 of August 20, 2003, which contemplates the early termination of the existing power purchase agreements, or PPAs, in accordance with the conditions to be set out in a separate decree law not yet enacted. In addition, EU Directive no. 2003/54/EC of June 26, 2003 designates July 2004 as the final date for implementation of the electricity single buyer system. Although Decree law no. 185/2003 of August 20, 2003 states that operators will be adequately compensated for the loss of the economic benefit of the PPAs, the amount of and the criteria for determining the compensation have not yet been defined and our generation revenues could otherwise be adversely affected if our generation companies do not sufficiently replace electricity purchases on the same terms as previously made by REN-Rede Eléctrica Nacional, S.A. or REN. In addition, our operating margins may be adversely affected by new costs that are currently compensated through PPAs.

### **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 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 operational cash flow is affected by variable hydrological conditions.**

Hydroelectric plants, which are powered by water, account for approximately 54% 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.

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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

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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 and expect to make approximately 40 million of such capital expenditures in 2004. 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% sulfur 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. Under the EU Directive relating to the emission of pollutants from Large Combustion Plants, Portuguese environmental authorities are currently creating a plan, called the National Emissions Reduction Plan, to reduce SO<sub>2</sub> and NO<sub>x</sub> emissions. This plan is expected to be formally approved during the second half of 2004. Additionally, with regard to CO<sub>2</sub> emissions, new proposals defining green house gas emission reduction measures were put forward for public comment in 2003, and are expected to be implemented in Portugal in 2004. Although we expect to be in timely compliance with these new requirements, such requirements could necessitate additional licenses or the acquisition of emission rights and result in higher electricity 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.**

Although we have not recently made significant additional 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:

economic volatility;

exchange rate fluctuations and exchange controls;

strong inflationary pressures;

government involvement in the domestic economy;

political uncertainty; 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.

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Exchange rate instability and, in particular, fluctuations in the value of the Brazilian real against the value of the U.S. dollar may result in uncertainty in the Brazilian economy, which may affect the results of our Brazilian operations. As a result of inflationary pressures, the Brazilian currency has been devalued periodically over the last four decades. Throughout this period, the Brazilian government has implemented various economic plans and utilized a number of exchange rate policies. During 2002, the exchange rate depreciated 52.2% against the U.S. dollar, while during 2003 it appreciated 18.2% against the U.S. dollar. In addition, we are exposed to translation risk when the accounts of our Brazilian businesses, denominated in Brazilian reais, are translated into our consolidated accounts, denominated in euro. We cannot predict movements in Brazil's currency, and, since long-term Brazilian currency hedges are not available, a major devaluation of the real might adversely affect our results of operations.

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### **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 the past, 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 might in the future contribute to, shortages of electricity to meet demand in some regions of Brazil. Additionally, drought conditions in Brazil have limited and might also 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 might also in the future 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 have been and might in the future 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 and 2003 our Brazilian operations could only dispose of surplus electricity at depressed prices.

In 2004, laws regarding the New Model for the Brazilian electric utility sector were approved. As the regulations for the New Model have not yet been implemented, there is a risk that the new regulations may not be favorable for us. In addition, the New Model contemplates significant control by the Brazilian government, creating uncertainty regarding competition and further investments in the private sector.

Tariffs of distribution companies in Brazil currently consist of two components: non-manageable costs and manageable costs. The main purpose of this split is the maintenance of an adjusted tariff for inflation and the sharing of efficiency gains with consumers. The aim of distribution tariffs is to pass non-manageable costs through and to index manageable costs to inflation. Although it is expected that the New Model will maintain the pass-through of non-manageable costs, there might be delays in readjustment of the tariffs in the event of large macro-economic fluctuations (e.g., inflation and exchange rates). There can be no assurance that regulations implementing the New Model will fully mitigate the risk of delayed tariff adjustments.

Due to problems with natural gas supply to the Northeast region of Brazil, the Brazilian regulator decided to reduce the capacity of all thermal plants in that region that can be used for energy trading. It is unlikely that there will be an increase in the natural gas supply in the Northeast in the short term. This constraint represents a risk for all thermal plants in the region, as it reduces the revenue potential of such plants.

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



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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. In 2003, our telecommunications businesses had a loss before taxes of 148.7 million.

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We intend to develop an Iberian gas business as complimentary to and strategically aligned with our electricity business. Please see Item 4. Information on the Company Strategy Iberian energy Developing an Iberian gas business for more information on our gas strategy. Increased involvement in the gas industry will expose us to new risks including demanding governmental and environmental industry regulation and economic risks relating to the fluctuations in the price of energy, currencies and time-lags between purchase and sale prices. There can be no assurance that we will successfully manage the development of our gas business, and a failure to do so could have an adverse effect on the profitability of our consolidated results of operations.

### **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, 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.**

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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. The Portuguese government enacted Decree law no. 49/2004 of March 10, 2004, which revoked the former law requiring approval of the Portuguese Ministry of Finance for a person to be able to acquire more than 10% of our ordinary shares

In connection with the offering by the Portuguese government of our ordinary shares in October 2000, and pursuant to Article 13 of Decree law no. 141/2000 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;

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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 four-phase privatization process that started in 1997, we are approximately 26.1% owned, directly or indirectly, by the Republic of Portugal and an additional 4.84% of our shares are held by Caixa Geral de Depósitos, S.A., a state-owned bank. Other significant shareholders include BCP Banco Comercial Português S.A., or BCP (5.05%), Iberdrola, S.A. (5%) and, indirectly, Brisa Autoestradas de Portugal S.A., or Brisa (2%).

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The following chart shows our current structure and a list of the primary companies and investments within the EDP Group. For a more detailed listing and description, please see [Subsidiaries, Affiliates and Associated Companies](#) and note 9 to our consolidated financial statements.

**Table of Contents****BUSINESS OVERVIEW****Iberian Energy***Electricity*

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 in 2000, 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 creation of EDP Gestão da Produção de Energia, or EDP Produção, a subsidiary that began operations in July 2001 and now holds most 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 2003, 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 2003 operating revenues amounted to 6,977.5 million (US\$ 8,491.6 million), approximately 90% of which represented electricity sales, yielding operating income of 905.7 million (US\$ 1,102.3 million). As of December 31, 2003, our total assets were 18,650.7 million (US\$ 22,697.9 million), and shareholders' equity was 5,298.0 million (US\$ 6,447.7 million).

The following table shows our revenues by activity and geography:

	Year ended December 31,		
	2001	2002	2003
	(millions of EUR)		
Energy <sup>(1)</sup>			
Portugal	4,599	5,001	5,038
Spain	0	324	675
Brazil	691	669	1,008
Telecommunications			
Portugal	126	187	161
Spain	62	134	170
Information Technology	189	224	186
Adjustments <sup>(2)</sup>	(16)	(151)	(261)
<b>Total</b>	<b>5,650</b>	<b>6,387</b>	<b>6,978</b>

<sup>(1)</sup> Consists of electricity in Portugal and Brazil and electricity and gas in Spain.

<sup>(2)</sup> Revenue figures for each year have been adjusted to include revenues from services and to exclude intercompany transactions.

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In Portugal, we create power for consumption in both the Public Electricity System and the Independent Electricity System. In 2003, our generating facilities in Portugal had a total installed capacity of 7,940 MW. In the transmission function, REN operates the national grid for 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 5.7 million customers with 38,916 GWh of electricity in 2003.

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

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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 Asturias and Basque regions in Spain. Beginning in June 2002, we have consolidated on a proportional basis 40% of Hidrocantábrico.

### *Gas*

We also have investments, notably in gas utilities, which we regard as complementary to our core electricity business.

Since July 2000, we have held a 14.27% ownership interest in GALP, SGPS, S.A. or GALP, a holding company with interests in GDP – Gás de Portugal, SGPS, S.A., or GDP, and Transgás – Sociedade Portuguesa de Gás Natural, S.A., or 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 April 2003, the Portuguese government announced recommendations concerning the reorganization of the Portuguese energy sector, in the context of which we may become a major participant in the Iberian combined gas and electricity sector. This announcement included recommendations that Portuguese gas and electricity activities be combined and developed by us in order to strengthen our position in the competitive Iberian market. In connection with the Portuguese energy sector reorganization, in March 2004 we entered into an agreement to purchase, together with Eni, S.p.A., or Eni, and REN, the entire share capital of GDP. The agreement is subject to specified conditions including the approval of the relevant competition authorities. For more information on this transaction, please see Strategy Iberian Energy. In addition, in November 2003 we entered into agreements to purchase interests in Portgás – Sociedade de Distribuição de Gás, S.A., or Portgás, and Setgás – Sociedade de Produção e Distribuição de Gás, S.A., or Setgás, two of the major regional gas distribution companies in Portugal. For more information on these transactions, please see Strategy Iberian energy Developing an Iberian gas business.

Our interests in the gas sector in Spain are held through our 40%-owned subsidiary Hidrocantábrico, which is the controlling shareholder in Naturcorp, the leading gas company in the Basque region of Spain. For more information on our participation in the Spanish gas sector, please see Spain-History and Overview.

### **Telecommunications**

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 focused on two main areas: wireline Portugal and wireline Spain, which areas are discussed in more detail in Telecommunications.

### **Information Technology**



We pursue the information technology business through our wholly owned subsidiary EDINFOR Sistemas Informáticos, S.A., or EDINFOR, which holds a 58% 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**

The following table sets forth our capital expenditures and investments for the years 2001 through 2003, divided into operating investment and financial investment. Operating investment generally refers to the development and acquisition of fixed assets and financial investment generally refers to the acquisition of equity interests in companies.

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	Year ended December 31		
	2001	2002	2003
	(thousands of EUR)		
<b>OPERATING INVESTMENT:</b>			
<b>Energy:</b>			
<b>Portugal:</b>			
Generation:			
Thermal/Hydro	109,646	204,979	213,851
Renewable: wind	6,574	11,397	38,533
Renewable: biomass <sup>(1)</sup>	0	35,205	922
Cogeneration	13,142	9,618	33
Engineering and Operations and Maintenance <sup>(2)</sup>	2,371	15,264	7,809
<b>Total Generation</b>	<b>131,733</b>	<b>276,463</b>	<b>261,147</b>
Distribution: <sup>(3)</sup>			
Investment, net of subsidies	181,938	241,551	263,056
IT Systems (transfer from EDINFOR to EDPD)	0	80,547	11,974
Subsidies in kind (assets)	69,533	54,095	61,039
Subsidies in cash	78,490	56,853	59,714
<b>Total Distribution</b>	<b>329,961</b>	<b>433,046</b>	<b>395,783</b>
Supply <sup>(4)</sup>	980	8,337	6,218
Total technical costs	462,674	717,846	663,148
Financial costs capitalized	15,867	15,361	24,005
<b>Total Portugal</b>	<b>478,541</b>	<b>733,208</b>	<b>687,152</b>
<b>Spain:</b>			
Hidrocantábrico <sup>(5)</sup>	0	84,775	70,528
<b>Total Spain</b>	<b>0</b>	<b>84,775</b>	<b>70,528</b>
<b>Total Energy Portugal and Spain</b>	<b>478,541</b>	<b>817,983</b>	<b>757,680</b>
<b>Brazil:</b>			
Generation	40,836	55,600	58,676
Distribution:			
Bandeirante	47,226	25,413	39,392
Escelsa	0	16,208	18,639
Enersul	0	25,152	16,184
EDP Brazil	1,608	261	415
<b>Total Brazil</b>	<b>89,670</b>	<b>122,634</b>	<b>133,307</b>
<b>Telecommunications<sup>(6)</sup> and Information Technology:</b>			
Telecommunications	239,019	311,962	28,564
Information Technology	70,977	41,833	58,784
<b>Total Telecommunications and Information Technology</b>	<b>309,996</b>	<b>353,795</b>	<b>87,348</b>
<b>Other:</b>			
Other Operating Investment <sup>(7)</sup>	29,530	45,362	24,939
<b>TOTAL OPERATING INVESTMENT</b>	<b>907,737</b>	<b>1,339,773</b>	<b>1,003,274</b>
<b>FINANCIAL INVESTMENT:</b>			
<b>Energy:</b>			
<b>Portugal:</b>			

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Acquisition of additional 10% shareholding in Turbogás	0	20,986	0
<b>Spain:</b>			
Acquisition of Naturcorp by Hidrocantábrico <sup>(8)</sup>	0	0	100,235
Acquisition of Hidrocantábrico by EDP <sup>(9)</sup>	262,388	520,591	0
<b>Brazil:</b>			
Acquisition of share capital of IVEN (Escelsa/Enersul)	209,011	0	0
	<hr/>	<hr/>	<hr/>
Total Energy	471,399	541,577	100,235
<b>Telecommunications:</b>			
Acquisition of Comunitel by ONI	69,554	0	0
	<hr/>	<hr/>	<hr/>
Total Telecommunications	69,554	0	0
<b>Other:</b>			
Subscription to BCP rights issue and capital increase	0	30,636	40,599
Acquisition of Escelsa notes <sup>(10)</sup>	0	379,964	0
Other financial investments	12,328	15,718	40,926
	<hr/>	<hr/>	<hr/>
Total Other	12,328	426,318	81,525
	<hr/>	<hr/>	<hr/>
TOTAL FINANCIAL INVESTMENT	553,281	967,896	181,760
	<hr/>	<hr/>	<hr/>
<b>TOTAL CAPITAL EXPENDITURES AND INVESTMENTS</b>	<b>1,461,018</b>	<b>2,307,669</b>	<b>1,185,034</b>

<sup>(1)</sup> 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 cash flow in 2002.

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- (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) *Distribution includes capital expenditures of EDPD.*
- (4) *Supply comprises the capital expenditures of EDP Energia, our company operating in the liberalized market.*
- (5) *Investments represent 40% of Hidrocontábrico's operational investments.*
- (6) *Investments for telecommunications include primarily infrastructure.*
- (7) *Other Operating 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.*
- (8) *Investment represents 40% of Hidrocontábrico's financial investments in the acquisition of Naturcorp.*
- (9) *Total investment in the acquisition of 40% of Hidrocontábrico amounts to 782.9 million, of which 262.4 million was invested in 2001.*
- (10) *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.*

Total capital expenditures and investments of 1,185.0 million in 2003 represented a 48.6% decrease from total capital expenditures and investments of 2,307.7 million in 2002. This decrease was primarily due to lower financial investments in 2003 compared to 2002. In 2002, we finalized the acquisition of our 40% stake in Hidrocontábrico in the amount of 782.9 million, of which 262.4 million was paid in 2001 and 520.6 million in 2002. In addition, in 2002 we also acquired part of Escelsa's notes issued in U.S. dollars for the total amount of 380 million. Having reduced the exchange rate risk relating to U.S. dollar debt of our Brazilian subsidiaries, we did not enter into any further debt acquisition programs in 2003. The decrease in total capital expenditures and investments from 2002 to 2003 was also due to a lower level of operational investments in 2003. In Portugal, we made lower operating investments in our distribution business in 2003, reflecting the internal transfer from EDINFOR to EDPD of a commercial and administrative IT system in 2002, and overall investments in generation were lower as a result of the internal transfer in 2002, from EDP to EDP Produção Bioelétrica, of the investment made in 1999 related to the Mortágua biomass power plant, which does not represent a cash outflow, but was included in our 2002 capital expenditures and investments. Additionally, we had lower expenditures in telecommunications in 2003, as a result of the divestment of our UMTS business.

We expect total operational investments in 2004 to be approximately 1,200 million, concentrated mainly in generation and distribution.

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,		
	2001	2002	2003
	(thousands of EUR)		
Total Capital Expenditures and Investments:	1,461,018	2,307,669	1,185,034
Internal Transfers:			
IT Systems (from EDINFOR to EDPD)		(80,547)	(11,974)
Mortágua Biomass Power Plant (from EDP, S.A. to EDP Produção Bioelétrica)		(35,180)	
Divestments:			
ESSEL	(77,800)		
Redal		(26,905)	
Optep (Optimus)		(315,000)	
Iberdrola			(400,102)
Total Internal Transfers and Divestments	(77,800)	(457,632)	(412,076)
Adjusted Total Capital Expenditures and Investments	1,383,218	1,850,037	772,958

In recent years, a significant part of our capital expenditures on electricity projects in mainland Portugal has been in distribution. Since EDPD is required 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 required to meet government standards for meter control, which requires us to make further investments in new meters. Our investment in distribution in Portugal in 2003 totaled 395.8 million compared with 433.0 million in 2002 and 330.0 million in 2001, 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

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recurring capital expenditures in our core electricity business, capital expenditures in distribution declined between 1998 and 2000 due to lower costs in materials and services and a reduced allocation of these costs to capital expenditures. Between 2000 and 2003, EDPD's capital expenditures increased due to higher investments in the distribution network pursuant to our public commitment to improve the quality of service by reducing the equivalent interruption time in the distribution of electricity. In 2002, the increase in EDPD capital expenditures also 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. In 2003, EDPD capital expenditures also included 12.0 million related to the transfer of this IT system. As such, this transfer did not affect our cash flow in 2002 and 2003.

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 2003 was approximately 121 million compared with approximately 111 million in 2002.

During 2003, we invested 261.1 million in generation in Portugal, compared with 276.5 million in 2002 and 131.7 million in 2001. The higher capital expenditures in 2003 and 2002 compared to 2001 were primarily a result of expenses incurred due to the start of construction of the first two 392 MW units of the TER CCGT plant and of the two 94 MW units of the Venda Nova hydroelectric plant. We expect a similar level of operational investment in generation in Portugal in 2004.

In Portugal, we expect to focus future distribution capital expenditures on connecting new clients and improving the quality of the electricity service through a more efficient network. We expect to concentrate future generation capital expenditures 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 700 million annually in the aggregate in our core electricity generation and distribution businesses in Portugal during this period.

In Spain, apart from the capital expenditure of 250.6 million (100% of Hidrocantábrico's investment) for the acquisition of Hidrocantábrico's 62% stake in Naturcorp, we incurred additional capital expenditures of 176.3 million (100% of Hidrocantábrico's investment) during 2003 on generation, electricity distribution and on special regime generation projects. Hidrocantábrico's 2003 operational investments decreased compared to 2002, due to lower investments in generation and electricity distribution activities. Investments in generation decreased due to the completion of the Castejón CCGT plant in September 2002. As for electricity distribution activity, fewer investments were made in expansion outside Asturias (northern region of Spain). Investment in special regime generation increased in 2003 with the construction of the P.E. del Cantábrico (65 MW), the P.E. Arlanzón (34 MW) and the P.E. Albacete (124 MW) wind farms.

In line with our strategic objectives of building our fixed line 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. With respect to investments in Brazil, we currently expect to fund any future capital expenditures with cash flow generated by local operations and or by reais-denominated debt.

We made capital expenditures related to environmental matters in 2003 and 2002 of approximately 15 million. We expect these capital expenditures to amount to approximately 40 million in 2004, of which 20 million will be related to new investments in emissions abatement equipment in the Sines power plant, in order to adapt the facility to the new environmental regulations relating to SO<sub>2</sub> and NO<sub>x</sub> emissions.

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Over the next three years, we expect to incur capital expenditures of approximately 3.25 billion, more than 75% of which will be dedicated to the expansion of electricity generation facilities in Portugal and Spain, including renewable energy facilities, and the improvement of the quality of our electricity distribution network in Portugal.

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We believe that cash generated from operations and existing credit facilities is 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 and financial investment 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**

Apart from Spain, 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. In 2003 and in 2004 to date, 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. We have also reorganized our shareholding in CEM Companhia de Electricidade de Macau, or CEM. As a result, China Power International Holding, a Chinese electricity company, has acquired a 6% interest in CEM and our stake in CEM has decreased slightly, from 21.78% to 21.19%. For more information on CEM and this transaction, please see Other Investments and International Activities.

## **STRATEGY**

Our principal strategic objective is the creation of shareholder value through the achievement of sustained real earnings growth and our primary strategic focus is on energy activities in the Iberian Peninsula. Accordingly, we have redefined our concept of our domestic market to include the Iberian Peninsula and are positioning ourselves for the Iberian electricity market that will develop in the future. In this context, we acquired operating control of Hidrocantábrico in 2001, the fourth largest electricity operator in Spain, which, in turn, acquired Naturcorp, the second largest gas operator in Spain, in 2003.

While expanding into the Spanish gas and electricity sectors, we are also strengthening our core electricity business in Portugal. During recent years, we have been making considerable efforts to optimize and restructure our Portuguese generation and distribution activities in preparation for the full liberalization of electricity supply in Portugal and the expected integration of the Portuguese and Spanish electricity markets. In connection with these efforts, we are taking steps to improve the quality of service through cost-conscious investment in technical and commercial infrastructure, particularly in the areas of electricity distribution and sales, and further restructure our human resources, primarily in our distribution business. In this regard, we have had and continue to have programs in place that are aimed at reducing our headcount and we intend to expand our sales and customer service human resource capabilities. We are also increasing our electricity generation capacity through modernization of existing facilities and selective development of new facilities, in each case mindful of environmental requirements and concerns.

Outside of our Iberian energy activities, we have also sought to focus on our core business through divestiture of non-strategic financial investments, as demonstrated by our sale in 2003 of our 3% stake in the Spanish electricity company Iberdrola, and to selectively pursue other business activities that are complementary to our energy activities. These other business activities include selectively pursuing international opportunities in electricity, developing our telecommunications business in Portugal and Spain, and restructuring our information technology business.

## **IBERIAN ENERGY**



Our primary strategic focus is the Iberian energy market. We are the leading electricity company in Portugal. We also intend to develop activities in the Portuguese gas sector by translating our financial investment in GALP into a controlling stake in GDP. In Spain, we exercise operating control over Hidroantábrico and maintain a successful partnership with Hidroantábrico's other shareholders: Energie-Baden-Württemberg AG, or En BW, a German utility company, and Cajastur - Caja de Ahorros de Asturias, a Spanish savings bank, or Cajastur. Hidroantábrico acquired a 62% stake of Naturcorp in March 2003 and currently has a 56.8% stake in Naturcorp after Gas Natural exchanged its 50% interest in Gas de Euskadi, a subsidiary of Naturcorp, for a direct interest in Naturcorp.

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In the Iberian energy market our strategic objectives are:

preserving the value of our Portuguese electricity business in light of the liberalization of the Portuguese electricity market and the creation of an integrated Iberian market;

growing our electricity Iberian platform through Hidrocantábrico; and

developing an Iberian gas business by leveraging our existing assets.

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

In our Portuguese electricity business, we face increasing competition arising from the liberalization of the electricity market in Portugal, in the Iberian Peninsula and throughout the EU. In July 2004, the entire Portuguese electricity market is expected to be liberalized, meaning that all customers will be free to choose their electricity supplier. Competition in electricity supply will also increase as the newly created Iberian electricity market comes into operation. Additionally, we face increasing pressure on the operating margins of our electricity distribution business in Portugal due to regulation of electricity tariffs in the Public Electricity System.

In response to these challenges, we plan to:

continue efforts to enhance earnings and 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 the Iberian electricity market; and

continue our program to increase the efficiency of our Portuguese 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 benefit, or will benefit, from competitive alternatives in the Non-Binding Sector (where we are present through our subsidiary EDP Energia);

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 most of our generation companies in EDP Produção;

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continue to centralize and improve the efficiency of our administrative activities, such as accounting, and procurement, with the aim of achieving cost savings in supplies of goods and services and personnel reduction, to which end we created EDP Valor, a company that integrates some of our service companies by consolidating resources and centralizing purchasing activities;

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

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

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

In light of the intended integration of the Spanish and Portuguese electricity sectors, we have expanded the definition of our domestic market to embrace the entire Iberian Peninsula. Following our 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 the European Union.

To grow our Iberian electricity platform, 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 by capitalizing on the fully liberalized electricity market in Spain;

take advantage of a combined electricity and gas service offering in Spain through the activities of both Hidrocantábrico and Naturcorp and in Portugal through the activities of EDP and GDP; and

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

### **Developing an Iberian gas business**

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 country requires new capacity to be gradually added and CCGT plants, fired by gas, are considered to be an advantageous option to meet the Iberian electricity system expansion requirements because of their lower investment costs required per MW, greater efficiency, lower operating and maintenance costs and lower emission levels compared to other thermal generation plants. 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. 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.

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

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to increase the competitiveness and efficiency of our gas-fired power plants. By being involved in both gas distribution and electricity generation we expect to be able to mitigate the risk presented by variable gas prices while increasing the flexibility of gas sourcing and placing; and

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.

In April 2003, the Portuguese government announced recommendations concerning the reorganization of the energy sector, as a result of which we have the opportunity to become a major participant in the Iberian combined electricity and gas sector. According to the government's recommendations, gas and electricity in Portugal should be combined and developed by us in order to take advantage of the synergies and flexibility that will result from integrated management of these activities.

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In the context of the reorganization of the Portuguese energy sector, in March 2004 we entered into an agreement to purchase, together with Eni and REN, the entire share capital of GDP, which operates in the Portuguese gas sector and owns assets for the transport and distribution of gas. The completion of the agreement and related transactions is subject to specified conditions, including approval of the relevant competition authorities. Pursuant to this agreement, initially we, Eni and REN will hold 33.34%, 33.33% and 33.33%, respectively, of GDP's share capital, although REN will only participate in GDP on a temporary basis. The agreement provides that the cost of the stake of each buyer will be 400 million. In connection with the purchase agreement, we also entered into a shareholders' agreement with Eni and REN that provides rules for the temporary governance of GDP (until the exit of REN) and the mechanism by which REN will exchange its stake in GDP for GDP's high pressure gas network assets. Following the exit of REN, we and Eni will own 51% and 49% of GDP, respectively. Accordingly, we also entered into a shareholders' agreement with Eni that will govern the management of GDP following the exit of REN and includes the terms of collaboration between Eni and us and the exit clauses in the case of a deadlock event that cannot be resolved. In the case of a deadlock, we will have a call option over Eni's stake in GDP. If we do not exercise this call option within the time specified in the agreement, Eni will have a call option over our stake in GDP. As we intend to leverage our stake in GALP to acquire our position in GDP and focus on the gas business rather than oil-related activities, we also agreed with Parpública - Participações Públicas, S.G.P.S., S.A., or Parpública, on a mechanism for us to exit the share capital of GALP. Pursuant to this agreement, Parpública has a call option to acquire our 14.27% stake in GALP for 456.7 million and we have a put option to sell our stake in GALP to Parpública on the same terms. Parpública's call option may be exercised from March 31, 2004 until one year after acquisition of the GDP shares by EDP, Eni and REN. Our put option may be exercised during the 3-month period after the expiration of the period for the exercise of Parpública's call option.

We have also entered into agreements to acquire stakes in the two main Portuguese regional gas distribution companies: Portgás and Setgás. Portgás has the concession to distribute gas in the districts of Porto, Braga and Viana do Castelo. We have entered into a call option agreement with GALP, GDP and GDP Distribuição, SGPS, S.A. to acquire a 46.265% shareholding in Portgás. We may exercise this option for 18 months from November 2003 by paying 86,400,000, subject to adjustments for variations in share capital and shareholder loans. At the same time, we entered into a call option agreement with CGD to acquire all of the shares of NQF - Projectos de Telecomunicações e Energia, S.A., or NQF, which owns 12.9% of Portgás. Under the same agreement, we have granted to CGD a put option pursuant to which CGD may sell the NQF shares to us. The put option may be exercised at any time between June 15, 2004 and September 15, 2004 at an agreed price of 64,942,880.57. NQF also owns 10.1% of Setgás, which has the concession to distribute gas in the district of Setubal. Completion of the transactions involving Portgás and Setgás are subject, among other things, to approval by competition authorities, for which application has been made.

Our current interest in the gas sector in Spain consists of our 40% holding in Hidrocantábrico, which controls Naturcorp, with more than 500,000 customers and approximately 10% of Spain's regulated revenues for gas distribution, or 8% of GWh of gas distributed. For more information on our participation in the Spanish gas sector, please see Spain - History and Overview.

**INTERNATIONAL ACTIVITIES**

Although our core business has historically been electricity in Portugal, it has evolved to include the Iberian energy 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. During the first half of 2003, we reassessed our Brazil strategy and are undertaking the following initiatives with the goal of rationalizing our Brazilian operations by making them more self-sustaining and independently managed:

corporate restructuring: integration of all activities in Brazil under our subsidiary, EDP Brazil, which will consolidate not only financial results but also planning and strategic control;

capital restructuring: assessment of the capital structure of EDP Brazil and its subsidiaries;



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corporate governance: harmonization and alignment of the corporate governance structures and procedures of EDP Brazil's subsidiaries, with a view toward improving the efficiency and transparency of governance and the decision-making process;

strategic positioning: introduction of the necessary adjustments to our existing investments with the aim at obtaining greater added value for shareholders and the establishment of strategic platforms for the development of future businesses; and

generation of synergies: ensuring that EDP Brazil is worth more than the sum of its parts, thus providing adequate remuneration of capital employed, through initiatives such as the re-launch of an efficiency program and analysis of the feasibility of shared services.

We regularly review our international investments and may change their focus over time consistent with our strategic objectives. In this regard, we continuously monitor our investment portfolio in order to capitalize on our ability to efficiently manage 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](#).

## **TELECOMMUNICATIONS**

Our telecommunications activities are conducted through ONI, our telecommunications subsidiary comprised of various business units. ONI is a fixed line telecommunications operator primarily focused on corporate clients and provides voice and data services in Portugal and Spain.

We plan to build on our existing operations in order to achieve a competitive role in the corporate fixed line telecommunications sector in Portugal and Spain, which we regard as attractive markets of suitable size and 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 operations as a platform 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:

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

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

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, please see [Telecommunications](#).

## **INFORMATION TECHNOLOGY**



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We are involved in the information technology market mainly through EDINFOR. During the second half of 2003, and following a decision to allow participation of a strategic partner in EDINFOR's share capital, we have been implementing several initiatives that will facilitate the success of a future partnership. Such initiatives include the improvement of the relationship with the EDP Group, the increase of sales outside the EDP Group and the winding up and/or merger of 17 companies of the EDINFOR group. In 2004, we hope to find a strategic partner for EDINFOR that will bring to EDINFOR technological expertise. In any partnership eventually entered into, we would seek to ensure that our core information technology systems continue to be run by EDINFOR. With such a partnership in place, we expect to be better able to focus on our core business, while maintaining the availability and security of key systems, and enhancing EDINFOR's growth potential.

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**DEVELOPING OF COMPLEMENTARY BUSINESS ACTIVITIES/OTHER UTILITIES**

Consistent with our 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.

The acquisition of an interest in Affinis has provided 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.

**THE IBERIAN ELECTRICITY MARKET**

In November 2001, 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 Portuguese and Spanish consumers better access to domestic and foreign electricity networks and give Iberian electricity operators the freedom to contract with consumers and to engage in distribution activities in a common Iberian electricity pool. The Iberian Electricity Market, or MIBEL, was expected to come into force by January 2003, but has been delayed due to a change in the Portuguese government and the need for harmonization of the Spanish tariff structure. A revised timeframe was agreed to in November 2003 and further implementation details were agreed to in January 2004. For more information on MIBEL, see [Regulation Iberian Electricity Market](#).

**PORTUGAL**

**ELECTRICITY SYSTEM OVERVIEW**

**Portuguese Electricity System**

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.*

<sup>(1)</sup> *We own 10% of Tejo Energia and 20% of Turbogás.*

<sup>(2)</sup> *Began operations in early 1998.*

<sup>(3)</sup> *As of April 2004, none existed.*

<sup>(4)</sup> *At the end of January 2004, approximately 21,300 potential **Qualifying Consumers**, or **Eligible Consumers**, existed, of which 2,714 had become **Qualifying Consumers** and 2,028 were already in the **Non-Binding Sector**. Prior to February 2004, all consumers except low-voltage consumers were **Eligible Consumers**. Decree law no. 36/2004 of February 26, 2004 provides for the decrease of the eligibility threshold in mainland Portugal to include special low voltage consumers, which are those with subscribed demands above 41.4 KW and voltage levels below 1kV. In March 2004, the regulator published the regulations necessary to allow special low voltage consumers to change their supplier. We expect that in July 2004 all low voltage consumers will become eligible consumers. However, the rules and procedures necessary to the implementation have not yet been created.*

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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 are the Non-Binding Sector and other independent producers (including auto producers). 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 February 26, 2004, Eligible Consumers, i.e., all consumers other than low voltage consumers that are not special low voltage consumers, automatically became 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 the binding generation in 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 Geologia e Energia*, or DGGE, which has succeeded the *Direcção Geral de Energia* (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 DGGE 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, and CPPE's CCGT plant in Ribatejo. 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 2003, the total number of Eligible Consumers in Portugal represented approximately 45% of total demand in mainland Portugal in volume terms. During 2003, 1,430 Eligible Consumers exercised their right to become Qualifying Consumers, of which 1,054 entered into contracts with EDP Energia and 376 entered into contracts with producers in the Spanish market. Of the 1,919 existing Qualifying Consumers at the end of 2003, 1,404 are customers of EDP Energia, representing approximately 7% of the electricity sold by us and 3% of our revenues in 2003. As of December 31,

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2003, approximately 21,300 Eligible Consumers existed and 1,919 of these had opted to become Qualifying Consumers. By July 2004, all consumers are expected to be Eligible Consumers. We expect an increasing but limited impact on our revenues due to the progressive decrease in the eligibility threshold. Two of the three tariff components relating to distribution, representing approximately 90% of tariff revenue in 2003, are payable to EDPD by Eligible Consumers electing to become Qualifying Consumers. In addition, EDP Energia has the opportunity to gain Qualifying Consumers as its customers, in which case the third distribution tariff component would be payable to EDP Energia.

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 auto producers (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 1999 through 2003, the total electricity supplied by EDPD (in both the Binding and Non-Binding Electricity Sectors) experienced an average growth rate of 4.7% per annum. In 2002, there was a reduction in the annual growth rate to 2.4% due to a slowdown in the economy. In 2003, the annual growth rate increased to 3.7%.

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 1999 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 3.7% per year in 2004, 2005 and 2006. Residential consumption is assumed to increase each year over the same period by an average of 4.5%, services by an average of 2.8%, and industrial by an average of 2.9%.

Peak demand as a percentage of the total installed capacity, which is the sum of the total installed capacity of the Public Electricity System, or PES, and the total installed capacity of the Non-Binding System, has remained fairly constant in recent years, except in 2003 when it increased slightly due to an extremely cold winter and a decrease in installed capacity in the PES following the decommissioning of the Alto Mira power plant (132 MW). Our available capacity as a percentage of the total installed capacity has maintained a value of approximately 78% from 1999 through 2003. The ratio of peak demand to EDP's average available capacity indicates that EDP alone did not have sufficient available capacity to cover the total peak demand in 2001, 2002 and 2003. To address this, in early 2004, the first 392 MW unit of the TER CCGT plant began

operation. The second unit is expected to begin operation in October 2004, and the third in 2006. We are also building new hydroelectric generation capacity.

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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. Peak demand includes demand satisfied by generation from Other Independent Producers.

	As of December 31,				
	1999	2000	2001	2002	2003
	(in MW, except percentages)				
Installed capacity of the PES <sup>(1)</sup>	8,804	8,758	8,758	8,758	8,626
Installed capacity of the NBES <sup>(2)</sup>	255	255	255	255	647
<b>Total installed capacity (PES plus NBES)</b>	<b>9,059</b>	<b>9,013</b>	<b>9,013</b>	<b>9,013</b>	<b>9,273</b>
Peak demand (PES plus NBES)	6,522	6,890	7,466	7,394	8,046
Peak demand as a percentage of the total installed capacity (PES plus NBES)	72.0%	76.4%	82.8%	82.0%	86.8%
<b>EDP:</b>					
EDP's average available capacity (PES)	6,808	6,765	6,801	6,841	6,695
EDP's average available capacity (NBES <sup>(3)</sup> )	196	215	247	226	228
EDP's available capacity as a percentage of the total installed capacity (PES plus NBES)	77.3%	77.4%	78.2%	78.4%	74.7%
Peak demand as a percentage of EDP's average available capacity (PES plus NBES)	93.1%	98.7%	105.9%	104.6%	116.2%

<sup>(1)</sup> Public Electricity System.

<sup>(2)</sup> Non-binding Electricity System, which consists of generation in the Independent Electricity System other than the other independent producers. 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. Installed capacity of the Non-binding Electricity System in 2003 includes the first 392 MW unit of TER that was in testing at the end of the year.

<sup>(3)</sup> Provisional values from 1999 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. Auto producers 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**



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As of December 31, 2003, 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 7,939 MW (including one 392 MW unit of the new TER CCGT plant, which was in service by the end of 2003 for testing purposes and began commercial operations in early 2004), 7,052 MW of which was in the Public Electricity System and 888 MW of which was in the Independent Electricity System, and approximately 53% of which was represented by hydroelectric facilities, 28% by fuel oil/natural gas facilities, 15% by coal-fired facilities, 2% 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.

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Our installed capacity in the Public Electricity System of 7,052 MW represents approximately 82% of the total installed capacity in the Public Electricity System. The total installed capacity of the Public Electricity System decreased from 1999 to 2000 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. In 2003, another small decrease resulted from the decommissioning of the 132 MW Alto de Mira plant. Our smaller hydroelectric plants, wind generating facilities and cogeneration and biomass plants are part of the Independent Electricity System.

Since its creation in 1994, CPPE has operated all of our conventional thermal plants and approximately 92.6% of our hydroelectric plants. On March 29, 2001, we announced the incorporation of EDP Produção, a subsidiary that began operations in July 2001 and now operates most of our Portuguese energy production-related units, including CPPE, as part of measures we are implementing to boost efficiency. In 2003, CPPE accounted for approximately 96.3% of our electricity generation in Portugal. During the second half of 2003, we reorganized our generation business in preparation for the liberalization of the Iberian electricity market, which is expected to start operations during 2004. We are in the process of consolidating a number of generation companies formerly held by EDP Produção, which operate in the Independent Electricity System, into CPPE as part of the reorganization of our generation business.

EDP Energia was created to supply electricity to Qualifying Consumers and to conduct energy trading activities. The energy trading activities were subsequently transferred to EDP Produção.

EDP Produção also holds a variety of engineering and operations and maintenance, or O&M, companies, including EDP Produção EM Engenharia e Manutenção, S.A., a company which undertakes hydroelectric and thermal engineering projects and studies, project management, engineering and consulting.

Enernova (wind energy) and EDP Bioeléctrica (biomass plants) are now held directly by EDP outside of EDP Produção. Since 1996, Enernova has increased by six times its installed generation capacity, from 10 MW to 65 MW. New projects are in progress, some of which are under construction and others are in licensing development, which will add installed capacity of 280 MW by 2006, and 300 MW by 2008.

The following map sets forth the CPPE power plants in the Binding Sector as of December 31, 2003.

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**CPPE POWER PLANTS**

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The generation capacity of CPPE plants in the Binding Sector is bound to the Public Electricity System under PPAs between CPPE 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 cost through a variable revenue component (energy charge) that is invoiced monthly to REN. Pursuant to the Portuguese government's policy for the reorganization of the energy sector, the PPAs are expected to be terminated as a step in the creation of an Iberian electricity market. For more information, please see Regulation Portugal.

The following table sets forth our total installed capacity by type of facility at year-end for the years 1999 through 2003.

Type of facility	As of December 31,				
	1999	2000	2001	2002	2003
	(MW)				
Hydroelectric:					
CPPE plants	3,903	3,903	3,903	3,903	3,903
Independent System hydroelectric plants	309	309	309	309	311
Total hydroelectric	4,212	4,212	4,212	4,212	4,214
Thermal <sup>(1)</sup>	3,327	3,281	3,281	3,281	3,149
Wind	20	30	41	41	65
Biomass	9	9	9	9	9
Cogeneration	0	67	67	111	111
CCGT <sup>(2)</sup>	0	0	0	0	392
<b>Total</b>	<b>7,568</b>	<b>7,599</b>	<b>7,610</b>	<b>7,654</b>	<b>7,939</b>

<sup>(1)</sup> On June 30, 2003, the PPA of the Alto de Mira plant expired and the plant was decommissioned.

<sup>(2)</sup> New plant, in testing at the end of 2003.

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 less than 7 TWh in a dry year. Between 1993 and 2003, our actual hydroelectric production has ranged from a low of 6.9 TWh in 1999, a very dry year, to a high of 14.9 TWh in 2003, a record wet year.

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The following table summarizes our electricity production, excluding losses at our plants and our own consumption, by type of generating facility from 1999 through 2003, and also sets forth our hydroelectric capability factor for the same period.

Type of facility	Year ended December 31,				
	1999	2000	2001	2002	2003
	(in GWh, except hydroelectric capability factor)				
Hydroelectric:					
CPPE plants <sup>(1)</sup>	6,457	10,229	12,607	6,764	13,964
Independent System hydroelectric plants	447	624	790	573	901
<b>Total hydroelectric</b>	<b>6,904</b>	<b>10,853</b>	<b>13,397</b>	<b>7,336</b>	<b>14,865</b>
Thermal:					
Coal	9,319	9,091	8,677	9,532	9,473
Fuel oil and natural gas	7,596	4,631	5,583	7,848	3,120
Gas oil	2	38	50	13	26
Coal and fuel oil <sup>(2)</sup>	85	11	30	44	(1)
Cogeneration	0	134	423	590	679
CCGT <sup>(3)</sup>					203
<b>Total thermal</b>	<b>17,002</b>	<b>13,905</b>	<b>14,763</b>	<b>18,027</b>	<b>13,500</b>
Wind	53	70	90	113	128
Biomass	2	5	18	37	38
<b>Total</b>	<b>23,961</b>	<b>24,833</b>	<b>28,269</b>	<b>25,513</b>	<b>28,532</b>
Hydroelectric capability factor <sup>(4)</sup>	0.68	1.08	1.19	0.75	1.33

<sup>(1)</sup> Includes the following amounts of our own consumption for hydroelectric pumping, 491 GWh in 1999, 558 GWh in 2000, 485 GWh in 2001, 670 GWh in 2002 and 485 GWh in 2003.

<sup>(2)</sup> Since the beginning of 1998, our existing plant at Tapada do Outeiro uses only fuel oil. Production in 2003 reflects the fact that our plant at Tapada do Outeiro generated an amount of electricity that was less than the plant's own consumption.

<sup>(3)</sup> One unit of this plant was in testing at the end of 2003.

<sup>(4)</sup> 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 remained stable from 1999 (93.0%) through 2003 (92.7%) for thermal plants, and increased slightly from 95.1% to 96.8% for hydroelectric plants during the same period. Forced outage is unplanned availability at a power plant caused by trips, critical repairs or other unexpected occurrences. Non-availability results from planned maintenance and forced outages. CPPE is reducing planned maintenance outages through more efficient maintenance techniques. 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 1999 through 2003, forced outages of CPPE's thermal plants has ranged between 2.1% and 2.8%. During the same period, forced outages of CPPE's hydroelectric plants ranged between 0.4% and 1.0%. In 2003, forced outages of CPPE's thermal plants was 2.1% and hydroelectric plants was 0.44%.

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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. The table below indicates for each type of CPPE generating facility the average capacity utilization and average availability factor indicators, comparable with other European utilities, each calculated in accordance with our computational method, for the indicated years:

Type of facility	Average capacity utilization <sup>(1)</sup> Year ended December 31,					Average availability factor Year ended December 31,				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
Hydroelectric	18.9%	29.8%	36.9%	19.8%	40.8%	95.1%	95.0%	94.8%	95.9%	96.8%
Thermal:										
Coal <sup>(2)</sup>	89.3%	86.8%	83.1%	91.3%	90.7%	90.5%	89.2%	90.5%	94.0%	94.2%
Fuel oil and natural gas	50.6%	30.8%	37.2%	52.3%	20.8%	93.2%	94.6%	96.6%	93.7%	90.8%
Coal and fuel oil <sup>(3)</sup>	10.3%	2.8%	7.2%	10.8%	0.0%	98.6%	99.6%	98.9%	98.2%	94.9%
Gas oil <sup>(4)</sup>	0.1%	1.3%	1.7%	0.4%	1.2%	99.6%	99.4%	98.4%	99.1%	98.0%
Total weighted average thermal <sup>(5)</sup>	58.3%	47.8%	49.9%	60.7%	44.8%	93.0%	93.2%	94.6%	94.4%	92.7%

<sup>(1)</sup> The average capacity utilization is defined as actual production as a percentage of theoretical maximum production.

<sup>(2)</sup> The average availability of the coal plants in 1999 was affected by the installation of low NO<sub>x</sub> burners in each unit of the Sines plant, one per year, which required production from each unit to stop temporarily.

<sup>(3)</sup> None, primarily due to minimal generation at our Tapada do Outeiro plant as a result of a wet year in 2003 and the fact that this is a peak load power plant.

<sup>(4)</sup> Increase in average capacity utilization was due to the need to use the fuel stock of the Alto de Mira power plant in the context of its decommissioning in 2003.

<sup>(5)</sup> Weighted average is based on total installed capacity of the thermal system.

During the period from 1999 through 2003, CPPE has had operating and maintenance costs, excluding fuel and depreciation costs, 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 2004. However, we expect that during 2004 most of the PPAs may terminate, according to a decree law expected to be enacted, and compensation mechanisms for these terminations will be defined with the goal of maintaining the economic value of the terminated PPAs. On June 30, 2003, the PPA of our 132 MW Alto de Mira plant terminated on the scheduled expiration date. For more information on PPA terminations, please see Regulation Portugal.

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

**Hydroelectric plants**

As of December 31, 2003, we operated 25 hydroelectric generating facilities in the Binding System, with 63 total units and an aggregate installed capacity of 3,903 MW.

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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, 2003, 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 (MW)	River reservoir plant type	Year entered into service	Year of last major refurbishment
<b>CPPE Plants:</b>				
Alto Lindoso	630.0	Reservoir	1992	
Miranda	369.0	Run of river	1960/95	1970
Aguieira	336.0	Reservoir	1981	
Valeira	240.0	Run of river	1976	
Bemposta	240.0	Run of river	1964	1969
Pocinho	186.0	Run of river	1983	
Picote	195.0	Run of river	1958	1969
Carrapatelo	201.0	Run of river	1971	
Régua	180.0	Run of river	1973	
Torrão	140.0	Reservoir	1988	
Castelo de Bode <sup>(1)</sup>	159.0	Reservoir	1951	2003
Vilarinho Furnas	125.0	Reservoir	1972/87	
Vila Nova (Venda Nova/Paradela)	144.0	Reservoir	1951/56	1994
Fratel	132.0	Run of river	1974	1997
Crestuma-Lever	117.0	Run of river	1985	
Cabril	108.0	Reservoir	1954	1986
Alto Rabagão	68.0	Reservoir	1964	
Tabuaço	58.0	Reservoir	1965	
Cançada	62.0	Reservoir	1954	1979
Bouçã	44.0	Reservoir	1955	1988
Salamonde	42.0	Reservoir	1953	1989
Pracana	41.0	Reservoir	1950/93	1993
Caldeirão	40.0	Reservoir	1994	
Touvedo	22.0	Reservoir	1993	
Raiva	24.0	Reservoir	1982	
<b>Total</b>	<b>3,903.0</b>			
<b>Independent System Hydroelectric Plants:</b>				
Hidrocenel <sup>(2)</sup>	107.6	Various	Various	
HDN <sup>(3)</sup>	118.5	Various	Various	
EDP Energia <sup>(4)</sup>	84.9	Various	Various	
<b>Total</b>	<b>311.0</b>			
<b>Total maximum capacity</b>	<b>4,214.0</b>			

<sup>(1)</sup> We invested approximately 13 million in the modernization of the electricity generating turbines and other dam equipment at Castelo de Bode, which was completed at the end of 2003.

<sup>(2)</sup> Hidrocenel which operates 15 plants with capacities ranging from 0.1 MW to 24.4 MW and dates of entry into service from 1906 to 2003, is in the process of being merged into CPPE. This process is expected to be completed in 2004.

<sup>(3)</sup> HDN, which operates 13 plants with capacities ranging from 0.9 MW to 44.1 MW and dates of entry into service from 1922 to 1992, is in the process of being merged into CPPE. This process is expected to be completed in 2004.

<sup>(4)</sup> 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.

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CPPE operates all our conventional thermal power plants, with total installed capacity, as of December 31, 2003, of 3,148.5 MW and installed capacity per generating unit ranging from 16 MW to 298 MW. The following table sets forth, as of December 31, 2003, our conventional thermal plants by installed capacity, type of fuel, net efficiency at maximum output, number of units and year entered into service.

<b>Thermal plants</b>	<b>Installed Capacity (MW)</b>	<b>Fuel</b>	<b>Net efficiency at maximum output</b>	<b>Number of units</b>	<b>Years entered into service</b>
Sines	1,192.0	Coal	36.9	4	1985-89
Setúbal	946.4	Fuel oil	38.3	4	1979-83
Carregado I	473.8	Fuel oil	37.4	4	1968/1974
Carregado II <sup>(1)</sup>		Fuel oil /			
	236.4	Natural gas	37.6	2	1976
Tunes	197.0	Gas oil	28.4	4	1973/1982
Tapada do Outeiro (EDP facility) <sup>(2)</sup>					1959/ 1967
	46.9	Coal /fuel oil	29.4	1	(unit 3)
Barreiro	56.0	Fuel oil	34.3	2	1978
<b>Total maximum capacity</b>	<b>3,148.5</b>				

<sup>(1)</sup> These units began burning natural gas in 1997.

<sup>(2)</sup> 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. From 2000 onward, only one 50 MW unit, currently burning fuel oil, is operational.

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**

In addition to our hydroelectric and thermal plants, we promote the use of renewable energy sources with other types of facilities. Enernova, our subsidiary specializing in this area, concentrated its initial investments in wind farms (due to greater technological advances made to date). Our first wind facility commenced operation in 1996. We now have five wind facilities with a combined installed capacity of 65 MW. In 2002, we created a new subsidiary for the biomass assets, EDP Produção Bioelétrica, which owns the Mortágua biomass (forestry waste) power plant. This plant started operations in 1999 and has an installed capacity of 9 MW.

*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 273.9 million in 2003 and 434.6 million in 2002, which represented approximately 41.2% and 52.8%, respectively, of CPPE's total operating expenses. The decrease in the total cost of fuel consumed from 2002 to 2003 resulted primarily from a decrease in the thermal production powered by fuel oil, due to increased hydroelectric production in 2003, which was a wet year.

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The table below shows a breakdown of costs of fuel consumed by CPPE from 1999 through 2003.

Type	Year ended December 31,				
	1999	2000	2001	2002	2003
	(thousands of EUR)				
Imported coal	116,823	128,902	142,810	148,773	130,531
Fuel oil <sup>(1)</sup>	109,371	146,721	193,867	259,816	117,716
Gas oil <sup>(2)</sup>	219	1,895	4,618	1,526	2,744
Natural gas	42,163	25,364	12,260	24,497	22,917
<b>Total</b>	<b>268,578</b>	<b>302,882</b>	<b>353,555</b>	<b>434,612</b>	<b>273,908</b>

<sup>(1)</sup> Includes consumption for the production of steam at the Barreiro power plant.

<sup>(2)</sup> 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,				
	1999	2000	2001	2002	2003
	(thousands of metric tons, except natural gas)				
Imported coal	3,533	3,564	3,108	3,587	3,593
Fuel oil <sup>(1)</sup>	1,712	1,052	1,237	1,941	716
Gas oil	0	0	26	3	10
Natural gas <sup>(2)</sup>	376	142	60	150	131

<sup>(1)</sup> Includes purchases for the production of steam at the Barreiro plant.

<sup>(2)</sup> Measured in millions of cubic meters.

**Coal**

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 both 2003 and 2002, CPPE purchased 78% of its coal through long-term contracts and 22% of its coal on the spot market. In comparison, in 2002 and 2001, CPPE purchased 78% and 70%, respectively, of its coal through long-term contracts, and 22% and 30%, respectively, of its coal on the spot market.

The following table shows a breakdown of CPPE's coal purchases from 1999 to 2003 by geographic markets as a percentage of total purchases.

Region	Year ended December 31,				
	1999	2000	2001	2002	2003
South Africa	28.0%	38.0%	28.0%	28.9%	34.6%
United States	12.0%	10.0%	17.0%	3.2%	9.9%
Australia	17.0%	0.0%	13.0%	23.2%	18.6%
South America	43.0%	48.0%	27.0%	16.3%	32.9%
Southeast Asia	0.0%	4.0%	15.0%	16.9%	0.0%
Europe	0.0%	0.0%	0.0%	11.3%	4.0%
Total	100%	100%	100%	100%	100%

In 2003, the average cost of coal consumed was 36.7 per ton. In 2002 and 2001, the average cost of coal consumed for imported coal was 41.4 per ton and 43.8 per ton, respectively.

**Table of Contents***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 2003 was 164.76 per ton, compared with 143.25 and 141.22 in 2002 and 2001, respectively. The increase in 2003 was due to increases in market prices as a result of the conflict in Iraq and production control by OPEC members. To meet its objectives to improve air quality, CPPE has shifted its fuel oil purchases to lower sulfur fuel oil, which has increased the cost of consumed fuel oil. In 2003, the average sulfur content of fuel oil purchased by CPPE was approximately 0.9%, compared with 2.1% in 2002. To comply with an EU Directive, in October 2002 CPPE initiated the use of fuel with a 1% sulfur content. The use of lower sulfur 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.

The increase in 2003 of the consumption of gas oil was due to higher production by the Alto de Mira plant prior to its decommissioning in order to exhaust its fuel inventory.

*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 into dual-fired (fuel oil and natural gas) in late 1997. In 2003, CPPE purchased 131 million cubic meters of natural gas for a total of 22.9 million compared to 150 million cubic meters of natural gas in 2002 for a total of 24.5 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.

<b>Facility</b>	<b>Type of generation</b>	<b>Developing entity</b>	<b>Planned capacity (MW)</b>	<b>Target year</b>	<b>Status</b>
Alqueva <sup>(1)</sup>	Hydroelectric	EDIA/CPPE	240	2004	Under Construction

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Venda Nova II	Hydroelectric	CPPE	192	2004	Under Construction
Baixo Sabor	Hydroelectric	CPPE	180	2010	Planning
Picote II	Hydroelectric	CPPE	236	2010	Planning
CCGT Ribatejo	CCGT	TER <sup>(2)</sup>	3x392	2004/2006	Under Construction

<sup>(1)</sup> *EDIA Empresa de Desenvolvimento e Infra-estruturas de 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 operate the Alqueva hydroelectric power plant.*

<sup>(2)</sup> *TER CCGT will operate in the Non-Binding Sector. The first unit began commercial service in February 2004, the second unit is expected to begin service in October 2004 and the last one in March 2006. TER is in the process of being merged into CPPE.*

### Capital expenditures

In 2003, we spent 261.1 million in capital expenditures in technical costs for our generation facilities, compared with 276.5 million in 2002 and 131.7 million in 2001. 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 2003, investing 142.4 million in the new TER CCGT

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(combined cycle gas turbine) power plant units 1 and 2, and 38.4 million in wind energy farms. At this stage, management expects that the TER CCGT plant will cost approximately 600 million, including all three units.

The following table sets forth our capital expenditures in technical costs from 1999 through 2003 on plants by type and status of generating plant.

Plant type and status	Year ended December 31,				
	1999	2000	2001	2002	2003
	(thousands of EUR)				
<b>Thermal/Hydro</b>					
<b>Public Electricity System</b>					
Hydroelectric plants under construction	6,449	14,235	16,877	25,690	34,359
Hydroelectric plants in operation	10,475	9,038	10,289	12,756	11,732
Thermal plants in operation	25,199	17,623	14,764	16,261	20,340
Plants under study	359	190	1,450	1,011	349
<b>Total CPPE</b>	<b>42,482</b>	<b>41,086</b>	<b>43,380</b>	<b>55,718</b>	<b>66,780</b>
<b>Independent Electricity System</b>					
Hydroelectric plants	11,457	7,913	4,964	4,137	3,849
TER	0	3,571	58,535	142,946	142,350
Wind	5,726	11,128	6,521	11,159	38,389
Cogeneration facilities	37,654	25,439	13,083	9,602	255
Biomass <sup>(1)</sup>	12,679	0	0	35,180	614
<b>Total Independent Electricity System</b>	<b>67,516</b>	<b>48,051</b>	<b>83,103</b>	<b>203,024</b>	<b>185,456</b>
Others <sup>(2)</sup>	0	0	0	0	312
Non-specific investment <sup>(3)</sup>	4,070	4,969	5,250	17,721	8,599
<b>Total Generation</b>	<b>114,068</b>	<b>94,106</b>	<b>131,733</b>	<b>276,463</b>	<b>261,147</b>

<sup>(1)</sup> Investments in 2002 include 35.2 million related to an intra-group transfer of the Mortagua biomass power plant (built in 1999), to EDP Produção.

<sup>(2)</sup> Other investments include studies and investment relating to our trading system.

<sup>(3)</sup> Non-specific investment refers to investments not directly related to our plants, such as administrative buildings, transportation equipment and implementation of new information systems.

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**

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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.

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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 2003, 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, 2003, approximately 2,438 km were 150 kV lines, 2,704 km were 220 kV lines and 1,403 km were 400 kV lines. At the end of 2003, REN had five interconnections with Spain, three of which are 220 kV lines and two of which are 400 kV lines. Additionally, at the beginning of April 2004, a new 400 kV circuit of the interconnection line Alto-Lindoso-Cartelle was put into operation. Management understands that, within the context of creation of MIBEL, REN plans to establish two additional interconnections with Spain by 2006: Alqueva-Balboa, a 400 kV line scheduled for completion in 2004 and Douro Internacional-Aldeadavila, a 220 kV or 400 kV 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**

REN purchased 36,155 GWh of electricity in 2003 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 PPAs with each operator of any individual power plant within the Binding Sector that supplies electricity to the Public Electricity System.

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. For more information on the regulation of PPAs, please see Regulation Portugal.

The existing site locations for power plants in the Public Electricity System are owned by or, in the case of hydroelectric plants, granted under a concession to, REN, which REN leases or makes available by sub-concession 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 intention to liberalize both the gas and electricity sectors. Within this goal, the government has stated its intention to transfer the high-pressure transportation network of gas to REN. To prepare for this transfer of



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assets, at the end of 2003 REN, in accordance with the Resolution of the Council of Ministers no. 193-A/2003 of December 26, 2003, bought for 420.9 million the capital owned by the Portuguese State in GALP, which owns 100% of Transgás, which in turn owns the high-pressure network for the transportation of gas. As a result of this acquisition, REN owns 18.3% of GALP, which is expected to approximately equal the value of gas assets that will be transferred to REN. See Strategy Iberian energy Developing an Iberian gas business for more information on this transaction.

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Apart from the power plants in the Public Electricity System, REN is also obligated to buy energy from auto producers, 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 buys and sells electricity into Spain's power pool at prevailing prices in the pool.

**Imports and exports**

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
1999	(857)	N/A
2000	931	2.5%
2001	239	0.6%
2002	1,899	4.7%
2003	2,794	6.5%

**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 regulated consumers and Qualifying Consumers, meter reading and installation, and supply to regulated consumers. The local electricity distribution function in mainland Portugal is carried out almost exclusively by EDPD. Through fourteen network distribution areas as well as seven commercial areas directed at serving customers supplied in the Public Electricity System, EDPD distributed electricity to 5,768 million consumers in 2003, amounting to 38,916 GWh, of which 4,048 GWh was distributed to Qualifying Consumers. At December 31, 2003, EDPD employed approximately 6,334 personnel.

Under Portuguese law, distribution of high voltage electricity, greater than 45kV and less than 110kV, and medium voltage electricity, greater than 1kV and less than or equal to 45kV, is regulated by DGGE through the issuance 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 1 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

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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, 2003, EDPD's distribution lines spanned a total of approximately 194,609 kilometers. The only distribution lines in Portugal not owned by EDPD are those of the auto producers and small cooperatives, which own their own lines. The following table sets forth the kilometers of EDPD's distribution lines, by voltage level, at December 31, 2003.

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Distribution lines	Km
<b>Overhead lines:</b>	
High voltage (60/130kV)	7,267
Medium voltage (6/10/15/30kV)	52,742
Low voltage (1kV)	98,099
Total overhead lines	158,108
<b>Underground cables:</b>	
High voltage (60/130kV)	361
Medium voltage (6/10/15/30kV)	11,513
Low voltage (1kV)	24,627
Total underground cables	36,501
<b>Total</b>	<b>194,609</b>

**Customers and sales**

EDPD distributes electricity to approximately 5.8 million customers. Approximately 67% of electricity consumption in 2003 was along the coast, with approximately 15% in the Oporto metropolitan region and 20% in the Lisbon metropolitan region. EDPD classifies its customers by voltage level of electricity consumed. The following chart shows the number of customers as of December 31, 2003, according to level of voltage contracted, and indicates whether such customers are binding customers supplied by EDPD or Qualifying Consumers to which EDPD distributes electricity on behalf of suppliers in the Independent Electricity System.

Customers by voltage level	Binding customers	Qualifying consumers	Total
High and very high voltage <sup>(1)</sup>	146	3	149
Medium voltage <sup>(2)</sup>	19,039	1,916	