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April 2004

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Spain

Spain is one of the fastest growing European economies but has very limited domestic energy resources. As a result, Spain is expected to become an increasingly important energy importer in coming years.

Note: The information contained in this report is the best available as of April 2004 and is subject to change.



BACKGROUND

Spain has been a member of the European Union (EU) since 1986, and in January 1999, adopted the European single currency, the Euro. From 1994 to 2001, Spain experienced robust economic expansion, growing on average 3.4% per year, one of the highest rates in the EU. Economic growth slowed, however, in 2002 and 2003, with real gross domestic product (GDP) of 2.0% and 2.4%, respectively. For 2004, Spain's economy is projected to expand modestly, with a real GDP growth rate of 2.8%.

On April 16, 2004, Spain's parliament approved José Luis Rodríguez Zapatero, the leader of the Spanish Socialist Workers' Party (PSOE), as the country's newest prime minister. The PSOE won 40% of the vote in general elections, held on March 14, 2004, displacing the center-

right Popular Party (PP) from power. Under the leadership of former Prime Minister José María Aznar, the PP had ruled Spain for 8 years. The Zapatero administration has pledged to offer more affordable housing and to expand funding for education and for state aid to spur employment.

ENERGY OVERVIEW

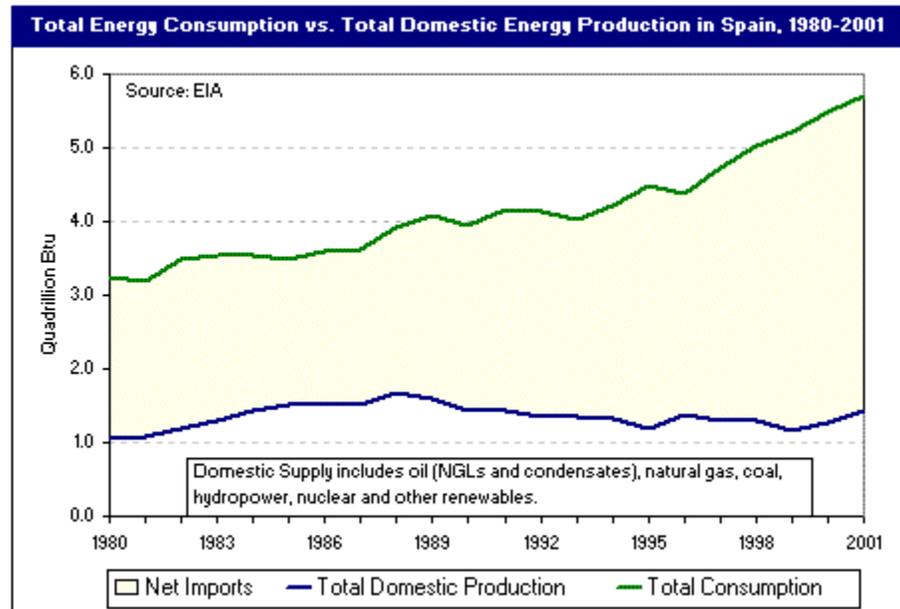
Economic growth and accelerated industrialization associated with EU membership have led to increased Spanish energy demand, up over 100% since the mid-1970s. Electricity demand, in particular, grew on average 4.6% per year from 1993 to 2002. In September 2002, the Spanish Cabinet approved a 10-year energy plan ([Planificación de los Sectores de Electricidad y Gas](#)), which focuses on meeting the country's future energy requirements. The plan reflects an increased reliance on natural gas and renewables, projected to account for 22.5% and 12.0%, respectively, of

Spain's primary energy consumption by 2011. The plan encourages revamping the country's basic energy infrastructure, investing heavily in the electricity sector, and expanding natural gas distribution networks.

With limited domestic fossil fuel reserves (oil, natural gas and coal), Spain is highly dependent on imports to meet its energy requirements. In 1980, Spain met 23.6% of its fossil fuel demand with domestic production, while in 2001, the country only provided 7.1% (In 2001, fossil fuels accounted for 80% of Spain's primary energy consumption). Overall, Spain's ability to meet the country's total primary energy demand decreased significantly during the past two decades, from providing 32.3% in 1980 to 25.4% in 2001 (see [table](#)). Over the same period, total Spanish primary energy demand increased an estimated 76%.

OIL

Spain has limited proven domestic crude oil reserves-158 million barrels as of January 2004, according to *Oil and Gas Journal*. Its crude oil production is also marginal, averaging an estimated 7,400 barrels per day (bbl/d) in 2003 from its five oil fields: Lora; Casablanca-Montanazo D; Rodaballo; Chipirón; and Aangula-Casablanca. Casablanca-Montanazo D was Spain's most prolific field in 2003, producing 4,564 bbl/d .



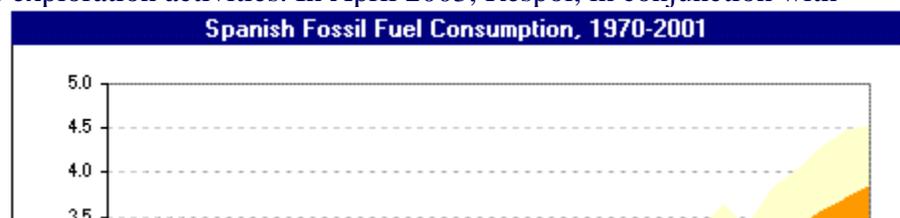
Although its share of primary energy consumption in Spain is decreasing, oil continues to play a major role in the country's energy sector. In 2001, oil accounted for roughly 55% of Spain's primary energy consumption, down from 72% in 1976. Despite this decrease, oil consumption has increased in absolute terms considerably in the past decade, from 1.1 million bbl/d in 1993 to 1.5 million bbl/d in 2003. In 2003, Spain imported the largest portion of crude oil from Russia with 17.3%, followed by Libya with 13.3%, Mexico 12.7%, Saudi Arabia 12.2% and Nigeria 10.8%.

Exploration

Repsol-YPF currently is exploring for oil and natural gas in two offshore regions: in the Atlantic waters between the Canary Islands and Morocco; and in the Bay of Cadiz (Southern Spain). In March 2004, Spain's supreme court annulled Repsol's license to explore off the Canary Islands, due to faults found in the original license. The company, however, expects the government to revise and reissue the license, allowing Repsol and its partners, Woodside Energy Ltd. (30%) and RWE-DEA (20%), to continue with their exploration activities. In April 2003, Repsol, in conjunction with RWE-DEA (30%), began drilling offshore wells in the Bay of Cadiz.

Sector Organization

Market Liberalization



Over the past decade, the Spanish government has introduced legislation to liberalize the country's oil sector and to increase competition. In 1992, with the adoption of Law 34/92, the government abolished state-owned oil logistics company Compañía Arrendataria del Monopolio de Petróleos (Campsa), which previously had monopolized imports, distribution and sales of crude oil. The government subsequently created a new company, Compañía Logística de Hidrocarburos (CLH), to operate Spain's transport logistics, including storage facilities, pipelines, trucks and tankers. CLH originally was a state-owned company but was privatized during the country's market liberalization process. Under Spanish law, a single owner of CLH is limited to 25% of the shares and voting rights in the company. Currently, the company has ten shareholders.

Repsol-YPF

Today, formerly state-held Repsol, now Repsol-YPF, controls about 45% of Spain's downstream oil market (refining and retail marketing), despite increased competition and loss of control in CLH according to Royal Decree 6/2000. In 1999, Repsol acquired the Argentine oil company, YPF, changing the company name to Repsol-YPF. The merger greatly increased the company's hydrocarbon reserves and production, placing the group among the world's largest oil companies. In 1998, prior to the merger, Repsol's reserves stood at 976 million barrels of oil equivalent (boe), and the company produced an estimated 246,000 barrels of oil equivalent per day (boe/d). In 2003, Repsol-YPF's hydrocarbon reserves stood at 5.4 billion boe, and the company produced an estimated 1.13 million boe/d.

Repsol-YPF's exposure to the Argentine economic crisis in 2001-2002 severely affected the company's financial performance. In 2001, Repsol-YPF's net income decreased 57.8% year-on-year. Subsequently, Repsol-YPF has sought to diversify operations by decreasing its production concentration in Argentina, where the company produced about two-thirds of its hydrocarbons in 2003. This goal was echoed in Repsol-YPF's 2003-2007 Strategic Plan, in which the company set a goal of reducing its total hydrocarbon production in Argentina, from 72% in 2002 to 56% in 2007. Repsol-YPF already has exploration and production operations in Trinidad and Tobago, Libya, Venezuela, the Gulf of Mexico, Ecuador, Bolivia and Brazil. Notable activities in 2003 include: winning the first Multiple Service Contract (MSC) to develop natural gas in Mexico's Burgos Basin; reaching an agreement with Saudi Arabian Ministry of Oil and Natural Resources to explore for non-associated natural gas in Area C, in conjunction with Eni and Saudi Aramco; and entering into a new production sharing agreement with Libyan National Oil Company to explore blocks in the Sirte and Murzuq basins.

Compañía Española de Petróleos (Cepsa)

Cepsa, established in 1929, is Spain's oldest private oil and natural gas company. The company has exploration and production activities in Colombia and Algeria and is aiming to expand its operations in Yemen and in Iran. Cepsa is the second largest oil group in Spain, with a 25% retail market share. Besides Cepsa, BP Oil España is also active in Spain.

Refining

Spain's nine major refineries had a combined crude oil refining capacity of 1.27 million bbl/d as of January 2004, according to the *Oil and Gas Journal*. Repsol-YPF owns and operates four refineries (Cartagena, La Coruña, Puertollano and Tarragona) and controls a fifth, Bilbao, through its subsidiary, Petronor. Repsol-YPF's holdings account for nearly 60% of Spain's refining capacity. Cepsa operates three refineries (Tenerife, Huelva and San Roque) and BP Oil España one refinery (Castellon). Repsol-YPF and Cepsa also have joint ownership of a bitumen plant, Asesa, located at the Tarragona refinery.

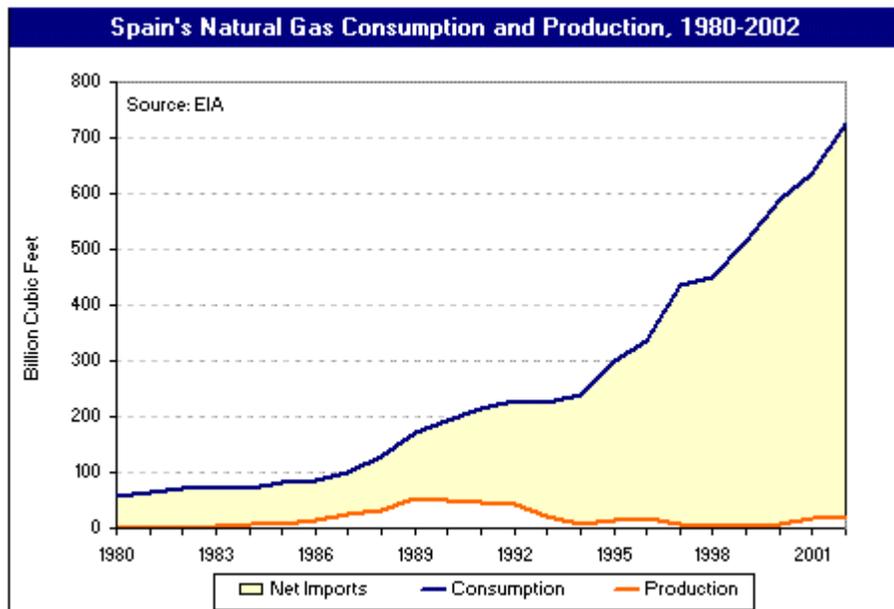
EU Regulations

Increasingly strict EU environmental regulations have been forcing refineries in Spain, as well as in all EU member states, to upgrade their facilities not only to reduce their emissions but also to meet new fuel specifications. The EU's [Directive 2003/17/EC](#), for example, requires each EU member state to market in their prospective territories gasoline and diesel fuels with maximum sulfur content of 10 milligrams per kilogram (mg/kg) by no later than January 1, 2005. By January 1, 2009, all gasoline and diesel fuels marketed in EU member states must have a maximum sulfur content of 10mg/kg (see Articles 3(2) and 4(1) and Annexes III and IV in the [Directive](#) for more specifics).

In compliance with abovementioned fuel specifications, both Repsol-YPF and Cepsa have been investing in their refineries. In 2003, Repsol-YPF completed upgrades at its Puertollano and La Coruña facilities. These projects followed the completion of a new hydrocracker at Repsol-YPF's Tarragona refinery in July 2002. In 2003, Cepsa completed construction of a new hydrodesulfurizing plant at its San Roque refinery, as well as remodeled four existing hydrodesulfurizing plants at its refineries.

Strategic Petroleum Reserve

In October 1994, Royal Decree 2111/1994 established the Corporación de Reservas Estratégicas de Productos Petrolíferos (CORES) to oversee Spain's strategic petroleum product reserve. The Law 34/1998, adopted in October 1998, obligates the country to maintain reserves of petroleum products equivalent to 90 days of consumption, as well as minimum reserves of liquefied petroleum gas and natural gas equal to 30 and 35 days of sales or consumption, respectively.



NATURAL GAS

As of January 2004, Spain's natural gas reserves stood at only 94 billion cubic feet (Bcf), according to the *Oil and Gas Journal*. In 2002, natural production was also minimal, with 18 Bcf. Most of Spain's production comes from one offshore field, Poseidón, which is operated by Repsol-YPF. With limited production, nearly 98% of Spain's natural gas demand was met by imports in 2002. For the year, Spain's Ministry of the Economy reported that

57.6% of the country's natural gas imports came from Algeria, followed by Nigeria with 16.9%, Norway 9.9%, and Qatar 8.2%. Libya, Oman and the United Arab Emirates accounted for the remainder. Article 99 of Spain's Hydrocarbons Act of 1998 set a 60% limit on natural gas imports from any one country in order to enhance the security of supply. This limit also applies to supplies from each individual supplier.

Within the EU, Spain is regarded as having the fastest growing natural gas market, with a shift to combined cycle gas-fired power plants stimulating this demand in recent years. Between 1993 and 2002, Spain's natural gas consumption increased 224%. According to Spain's Ministry of Economy, natural gas demand growth is set to average 9%-12% per year until 2011. As indicated in

the government's 10-year energy plan, natural gas has established itself as the energy source that will see the highest growth over the next decade, ultimately accounting for 22.5% of total consumption of primary energy by 2011, in comparison to 12.5% estimated for 2002.

Sector Organization

Market Liberalization

Spain's natural gas liberalization process has been faster than that required by the EU. Spain's Hydrocarbons Act of 1998 established the initial implementation schedule for natural gas market liberalization in Spain, which was further accelerated by Royal Decrees in 1999 and in 2000. Since January 2003, all customers in Spain have been able to choose their suppliers. The Hydrocarbons Act also established a regulatory body, Comisión Nacional de Energía (CNE), to oversee the natural gas market and to guarantee competition.

Gas Natural SDG

Gas Natural SDG (GN) is the leading natural gas conglomerate in Spain. GN was a result of a merger in 1992 between Catalana de Gas, Gas Madrid and the piped gas assets of Repsol Butano. Prior to liberalization, the company controlled almost all aspects of the natural gas market, including supply, distribution, regasification (LNG) and storage.

However, privatization legislation has forced GN to relinquish some of its control of Spain's natural gas market, as well as hampered expansion. In May 2003, for example, CNE blocked GN's attempt to take control of Iberdrola, one of Spain's largest utilities. In 2002, in accordance with Royal Decree 6/2000, GN was required to divest 65% of Enagás, the main Spanish company responsible for transport, regasification, and storage of natural gas. The Royal Decree also made Enagás solely responsible for coordinating natural gas supplies among access points, storage sites, transportation and distribution. Enagás currently controls Spain's three LNG regasification terminals, two underground storage sites, nearly all of the country's pipeline network, and four international interconnectors. The government is currently debating whether to reduce GN's stake to 5% from the current 35% over the next three years. In October 2001, in order to help companies gain a foothold in the country's natural gas market, Spain's Ministry of Economy awarded 25% of the natural gas contracted by GN with Algeria and transported through the Maghreb-Europe pipeline to Endesa, Iberdrola, Union Fenosa, and Hidrocarbónico, BP, and Royal Dutch/Shell. The clause expired in January 2004, with these companies increasing their share in Spain's natural gas market.

Increased Competition

The expected growth of natural gas consumption and the continued liberalization of the market have attracted outside and domestic companies to invest in the Spanish market. In 2003, Eni, an Italian oil and gas company, purchased 50% of Union Fenosa Gas, the gas unit of Spain's electricity company Union Fenosa. Domestically, Iberdrola is looking to gain 20% of Spain's natural gas market by 2006. Endesa plans to increase its share of the natural gas market by integrating its natural gas and electricity distribution subsidiaries into a new company called Endesa Red. Although Gas Natural still controls much of Spain's natural gas market, the company's has begun to expand its operations in Europe. GN already established a presence in Italy with the creation of Gas Natural Vendita in September 2002, and with the acquisition of Brancato Group, the leading private natural gas operator on the island of Sicily, in January 2004. Pending approval from the Greek government, GN will acquire 35% of Greek national natural gas supplier DEPA.

Imports

International Pipelines

Enagás imports natural gas to Spain via two international pipelines. The Lacq-Calahorra pipeline in the north allows Enagás to import natural gas from Norway, while the Pedro Duran Farell pipeline

(formerly the Mahgreb-Europe line) in the south connects Spain via Morocco to Algeria. Enagás also operates two cross-border pipelines with Portugal.

Pipelines under Development

In July 2001, Cepsa and Algeria's Sonatrach signed an agreement for the construction of a 137-mile undersea natural gas pipeline between Beni Saf, Algeria and Almeria, Spain, known as Medgaz. The pipeline is expected to have an initial capacity of 564 billion cubic feet per year (Bcf/y). Construction of the pipeline, however, has been delayed recently, with the final-go-ahead hinging on whether the group can secure sufficient funding. Sonatrach and Cepsa have the largest stakes in the project, with 20% each. The remaining stakeholders - BP, Gaz de France, Endesa, and Iberdrola - each have 12% stakes.

In February 2003, Spain's Gas de Euskadi, a subsidiary of NaturCorp Multieservicios, along with partner Total, announced that they plan to construct a pipeline linking Bilbao, Spain to Lussagnet, France. The 19-mile pipeline, running along the Bay of Biscay, will have an initial capacity of 48 million cubic feet per day (Mmcf/d). Construction of the pipeline is scheduled for completion in 2005.

Liquefied Natural Gas (LNG)

In 2002, Spain was Europe's second largest LNG importer, behind France. The country's LNG import portfolio is highly diversified, with nearly 48% coming from Algeria in 2002, followed by Qatar with 17% and Nigeria 13%. Spain also imported LNG from the United Arab Emirates, Libya, Qatar, Trinidad and Tobago, Oman, Australia and Brunei.

Existing LNG Terminals

Enagás operates three of Spain's four regasification terminals, located in Barcelona, Cartagena, and Huelva. Enagás plans to invest in new infrastructure in order to handle increased LNG imports for rising domestic consumption. Enagás aims to expand the capacity of its three regasification terminals from 734 Bcf/y to 1.2 trillion cubic feet per year by 2005.

The Bahía de Bizkaia Gas group, a consortium comprising BP, Repsol-YPF, EVE (the Basque Energy Authority), and Iberdrola, operates Spain's fourth LNG terminal located at the port of Bilbao, which received its first LNG delivery in August 2003. The group plans to double the throughput capacity of the facility from an estimated 212 Bcf/y to 424 Bcf/y. In January 2004, Iberdrola reportedly raised its stake in Bilbao terminal from 25% to 50%. It remains unclear whether Iberdrola acquired the stake from BP or Repsol-YPF. The facility is linked to an 800-megawatt (MW) combined cycle gas-fired power plant - Bahía de Bizkaia Electricidad.

LNG Terminals under Development

Sagunto Terminal

Union Fenosa and an Iberdrola/Endesa joint company are constructing a regasification terminal at the Sagunto port in Valencia. The plant, to be completed in late 2004, will be able to process 127 Bcf/y initially, increasing to 191 Bcf/y eventually. Both Union Fenosa and Iberdrola are constructing combined cycle gas turbine power plants that will siphon off some of the LNG delivered to the Sagunto terminal. The companies are also planning to construct a new pipeline linking the terminal to Madrid. The terminal is scheduled to be fully operational by 2006.

El Ferrol Terminal

In 2002, the Reganosa group, comprising Endesa, Union Fenosa, the Tojeiro Group and Algeria's Sonatrach, began construction on the El Ferrol LNG import facility. Algerian LNG will supply the

new terminal, located in Galicia in northwest Spain, for ten years following the El Ferrol's projected 2006 commissioning. In conjunction with the terminal, which will have an initial capacity ranging from 88 Bcf/y to 123.5 Bcf/y, a new pipeline will be constructed to connect the terminal to power plants located in the region.

Spanish companies are also involved in developing liquefaction terminals (export) in order to secure access to supply. Union Fenosa, for example, is involved in constructing two LNG liquefaction plants, namely in the port of Damietta (Egypt) and in the port area of Qalhat in the city of Sur (Oman). Once these terminals are completed, Union Fenosa will have access to 141 Bcf/y (Egypt) and 77 Bcf/y (Oman).

COAL

Coal is Spain's most plentiful indigenous energy source, with reserves of 728 million short tons (Mmst). Coal mining is spread over a number of small and isolated fields: Asturias (Central and Western field), León (Bierzo-Villablino, Sabero and Nord), Palencia (Guardo and Barruelo), Cataluña (Pirenaica), Teruel (Teruel-Mequinzenza), and Sud (Purtollano and Peñaroya). Private companies produce most of the coal in Spain, with the only exception being Hunosa, which is owned by the government's holding company, Sociedad Estatal de Participaciones Industriales (SEPI).

Similar to other EU members, Spain's coal industry has struggled for decades to remain competitive vis-à-vis imported coal and other energy sources. Spain's attempts to modernize and to restructure its coal industry to be more competitive have resulted in a decline in production of about one-third between 1993 and 2002, but have not led to decreasing production costs, which remain prohibitively high without state support. It has also been difficult for the government to phase out coal mining completely because many regions of the country are dependent on the industry for employment. The Spanish government has introduced alternative plans for mining communities in conjunction with Sociedad Asturiana de Diversificación Minera (Sadim), a company that helps communities develop alternatives to coal mining.

Spain's consumption of coal has remained relatively static over the last decade. In 2002, however, coal consumption reached 50.7 Mmst, an 11% increase year-on-year. The increase reflects higher use of coal for generating electricity to compensate for a shortfall in electricity generated from hydro and nuclear. In 2002, coal-generated power accounted for 34.9% of Spain's electricity production, according to Spain's Ministry of Energy and Mines.

Coal Subsidies

In July 2002, the European Commission introduced a new regulation – [No 1407/2002](#) - on state aid to the EU coal industry. This regulation allows Spain to continue subsidizing the country's coal industry, not for economic reasons, rather for security of supply. As indicated in the European Commissions green paper, published in 2000 and adopted by the European Parliament in 2001, on a [European strategy for the security of energy supply](#), it remains necessary to undertake measures “to guarantee access to coal reserves and hence a potential availability of Community coal.” Regulation 1407/2002 permits three forms of aid: 1) reducing activity (this form expires on December 31, 2002); 2) maintaining access to coal reserves; 3) covering exceptional costs, such as costs related to environmental rehabilitation of former coal mining sites. Spain therefore will be permitted to continue subsidizing coal production until 1407/2002 expires on December 31, 2010.

ELECTRICITY

In 2002, Spain had the fifth largest electricity market in the EU (behind Germany, France, the United Kingdom, and Italy). For the year, Spain consumed 218 billion kilowatthours (Bkwh), an

increase of 3.3% year-on-year. From 1998 to 2002, Spain's electricity consumption increased annually on average 6%. In 2002, Spain's generation mix comprised the following: thermal (oil, natural gas and coal) accounting for 52.3%; hydro 25.2%; nuclear 14.9% and other renewables (mainly wind), 7.6%. Spain has nine nuclear reactors in operation with one, Vandellós I, having been decommissioned in July 1990. Union Fenosa reportedly plans to close its nuclear power plant, Zorita (José Cabrera), on April 26, 2006. In 2002, Spain's nuclear reactors produced 59.9 Bkwh, a 1% year-on-year decrease.

According to Spain's current 10-year energy plan, natural gas and renewables are projected to increase their share of electric generation considerably, providing 33.1% and 28.4%, respectively, of total electric generation by 2011, while nuclear, coal and oil are expected to account for smaller percentages of total generation.

Sector Organization

Market Liberalization

As is the case with natural gas, Spain's government liberalized the country's electricity sector ahead of the schedule mandated by the EU. Since January 1, 2003, all customers have been able to choose their electricity supplier. Consumers still have the possibility of staying under regulated tariffs until 2007, at which point all consumers will have to buy their electricity from the liberalized electricity market.

Spain's Electric Power Act of 1997 established OMEL (Compañía Operadora del Mercado Español de Electricidad, S.A.) to operate an electricity pool. Some of OMEL's responsibilities include settling payments between market participants and for operating physical daily spot and the futures markets.

Red Eléctrica de España (REE), created in 1985, is responsible for the country's power transmission network and for the operation of the Spanish electricity grid. As system operator, REE's main responsibility is to guarantee a balance between electricity production and consumption. After acquiring transmission assets from Union Fenosa and Endesa in November 2002, REE's ownership of Spain's entire transmission grid increased to 84%. In June 2003, Endesa, Iberdrola Union Fenosa, Hidrocantábrico reduced their stakes in REE to 3%, fulfilling a law that limits ownership in REE by Spanish utilities to 3%. The government, through state-holding company SEPI, owns 28.5% but would like to reduce that stake to 10%. Viesgo holds 1% and the remaining 58.5% has been floated.

REE is playing a key role in the government's plans to modernize the electricity grid, particularly in constructing transmission lines to new power plants, as well as in increasing interconnectedness with surrounding countries, namely, France, Portugal and Morocco. In July 2003, REE signed an agreement with the Moroccan National Electricity Office (ONE) to construct a second underwater transmission line between the Puerto de La Cruz substation in Spain and the Melloussa substation in Morocco. The second line is expected to increase supply security in each country during periods of high demand or disruption. The Spain-Morocco line is expected to come onstream in 2005. REE is also in the process of constructing a second line parallel to the existing Cartelle-Lindoso transmission line to Portugal

Companies

In 2002, Endesa and Iberdrola supplied 76% of the electricity in Spain. Union Fenosa contributed 12%, followed by Hidrocantábrico with 8% and Gas Natural 4%. To meet Spain's increased demand for electricity, which is forecast to grow 3.0%-3.5% per year until 2011, power companies have invested heavily in generation facilities. Iberdrola, for example, expects to have more than 5,600

megawatts (MW) of new capacity in Spain by 2008. In 2004, the company will commission 2,000 MW of new capacity (1,200 MW in combined-cycles and 800 MW in wind), increasing its total installed capacity 6,700 MW. In 2003, Endesa brought two, 400-MW combined-cycle plants onstream, at Besós (Barcelona) and San Roque (Cádiz). In March 2004, Endesa announced that it planned to invest 1.3 billion euros between 2004-2008 to build 3,400 MW of renewable energy capacity. Other companies investing in generation operations in Spain include Irish state-owned ESB International, Hidrocantábrico, Union Fenosa, Repsol-YPF and Gas Natural.

Hidrocantábrico and EdF

In 2001, Energie Baden-Württemberg (EnBW), Electricidade de Portugal (EdP), and Caja de Ahorros de Asturias (Cajastur), a Spanish bank, took joint control of Spain's electricity utility Hidrocantábrico. This acquisition, however, became controversial when the Spanish government limited both France's state-owned utility, Electricité de France (EdF), which has a 34.5% share in EnBW, and Portugal's state-owned utility EdP, voting rights in Hidrocantábrico. Under Law 55/1999, the Spanish government can limit the voting rights of a foreign company operating in the domestic energy sector if it is government controlled or if it is based in a country that has not liberalized its markets to the same extent as Spain. In October 2003, the Spanish government lifted voting restrictions placed on EdP. Recently, there have been rumors circulating that EdP wants to acquire EnBW's 35% stake in Hidrocantábrico. Voting restrictions placed on EdF were lifted in October 2001 after the company agreed to increase capacity of a France-Spain interconnector.

Single Iberian Electricity Market (Mibel)

In January 2004, Spain and Portugal formally signed an agreement to create a pan-Iberian electricity market (Mibel). The new market will allow generators in the two countries sell their electricity on both sides of the Spanish-Portugal border. OMEL and Portugal's equivalent, OMIP, are expected to merge in April 2006, creating OMI, a single operator for the Mibel electricity market. Mibel was to be inaugurated in April 2004 but this date has been postponed until July due to the transition to a new Spanish government.

COUNTRY OVERVIEW

Head of State: King Juan Carlos (since November 1975)

Prime Minister: José Luis Rodríguez Zapatero (since April 16, 2004)

Independence: 1492 (expulsion of the Moors and unification)

Capital City: Madrid

Population (2003E): 40.8 million

Location/Size: Southwestern Europe, bordering the Bay of Biscay, Mediterranean Sea, North Atlantic Ocean, and Pyrenees Mountains, southwest of France/504,750 sq. km (slightly more than twice the size of Oregon)

Language: Castilian Spanish 74%, Catalan 17%, Galician 7%, Basque 2%

Religion: Roman Catholic 94%, other 6%

ECONOMIC OVERVIEW

Finance Minister: Pedro Solbes Mira (since April 18, 2004)

Currency: Euro

Exchange Rate (4/20/04): US\$1= 0.83 Euro

Nominal Gross Domestic Product (GDP 2003E): \$840 billion

Real GDP Growth Rate (2003E): 2.4% **(2004F):** 2.8%

Inflation Rate (consumer prices, 2003E): 3.0% **(2004F):** 2.2%

Unemployment Rate (2003E): 11.3%

Merchandise Exports (2003E): \$156.3 billion

Merchandise Imports (2003E): \$208.9 billion

Major Trade Partners: France, Germany, Italy, United Kingdom, United States, Portugal

Major Export Products: Automobiles, tourism, power generation equipment, electrical machinery, petroleum and chemical products, foodstuffs

Major Import Products: Crude petroleum, vehicle and automobile parts, capital goods, and food

ENERGY OVERVIEW

Proven Oil Reserves (1/1/04E): 158 million barrels

Oil Production (2003E): 21,417 barrels per day (bbl/d), of which 7,417 bbl/d was crude oil

Oil Consumption (2003E): 1.5 million bbl/d

Net Oil Imports (2003E): 1.5 million bbl/d

Crude Oil Refining Capacity (1/1/04E): 1.3 million bbl/d

Natural Gas Reserves (1/1/04E): 94 billion cubic feet (Bcf)

Natural Gas Production (2002E): 18 Bcf

Natural Gas Consumption (2002E): 725 Bcf

Net Natural Gas Imports (2002E): 707 Bcf

Coal Reserves (2001E): 728 million short tons (Mmst)

Coal Production (2002E): 24.3 Mmst

Coal Consumption (2002E): 50.7 Mmst

Net Coal Imports (2002E): 26.4 Mmst

Electric Generation Capacity (2002E): 50.4 gigawatts (52.3% thermal), (25.2% hydro), (14.9% nuclear), 7.6% other renewables)

Net Electricity Generation (2002E): 229.0 billion kilowatthours (Bkwh)

Electricity Consumption (2002E): 218.4 Bkwh

ENVIRONMENTAL OVERVIEW

Minister of Environment: Cristina Narbona Ruiz (since April 18, 2004)

Total Energy Consumption (2001E): 5.7 quadrillion Btu* (1.4% of world total energy consumption)

Energy-Related Carbon Dioxide Emissions (2001E): 303 million metric tons (1.3% of world carbon dioxide emissions)

Per Capita Energy Consumption (2001E): 141.5 million Btu (vs U.S. value of 341.8 million Btu)

Per Capita Carbon Dioxide Emissions (2001E): 7.5 metric tons (vs U.S. value of 20.2 metric tons)

Energy Intensity (2001E): 7,708 Btu/\$1995 (vs U.S. value of 10,810 Btu/\$1995)**

Carbon Dioxide Intensity (2001E): 0.41 metric tons/thousand \$1995 (vs U.S. value of 0.64 metric tons/thousand \$1995)**

Fuel Share of Energy Consumption (2001E): Oil (54.9%), Natural Gas (12.7%), Coal (11.9%), Nuclear (10.9%)

Fuel Share of Carbon Dioxide Emissions (2001E): Oil (66.8%), Coal (20.6%), Natural Gas (12.6%)

Status in Climate Change Negotiations: Annex I country under the United Nations Framework Convention on Climate Change (ratified December 21st, 1993). Signatory to the Kyoto Protocol (signed April 29th, 1998 and ratified on May 31, 2002).

Major Environmental Issues: Pollution of the Mediterranean Sea from raw sewage and effluents from the offshore production of oil and gas; water quality and quantity nationwide; air pollution; deforestation and desertification.

Major International Environmental Agreements: A party to Conventions on Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulphur 94, Air Pollution-Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic Treaty, Biodiversity, Climate Change, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Tropical

Timber 83, Tropical Timber 94, Wetlands and Whaling. Has signed, but not ratified: Air Pollution-Persistent Organic Pollutants, Desertification.

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.

**GDP figures from OECD estimates based on purchasing power parity (PPP) exchange rates.

Sources for this report include: Asia Africa Intelligence Wire; Dow Jones International News; CIA World Factbook; Economist; Economist Intelligence Unit; Electric Utility Week; Europe Information Service; European Union; Financial Times; Gas Natural; Global Insight; International Energy Agency; National Energy Regulatory Commission (Spain); Petroleum Economist; Power Engineering International; Power News; Red Electrica de España; Repsol-YPF; Reuters; U.S. Census Bureau; U.S. Department of Commerce; U.S. Department of State; U.S. Energy Information Administration; World Gas Intelligence; World Markets Online.

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