

Informes Sectoriales

OPORTUNIDADES DE INVERSIÓN Y COOPERACIÓN EMPRESARIAL

Oficina Económica y Comercial
de la Embajada de España en Sofía

Environmental Equipment and Energy in Bulgaria

The logo for ICEX, consisting of the letters 'ICEX' in white, bold, sans-serif font, centered within a solid red square.

ICEX

Environmental Equipment and Energy in Bulgaria

This market report has been elaborated by NEWTON Finance Bulgaria AD under the supervision of the Spanish Economic and Commercial Office of the Spanish Embassy in Sofia

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INDEX

1. INTRODUCTION	5
1.1. THE BULGARIAN ECONOMY	6
1.2. PROSPECTS OF THE BULGARIAN MARKET	9
1.3. APERTURE TO FOREIGN INVESTMENT	11
2. OVERVIEW	17
2.1. DEFINITION AND DESCRIPTION OF EACH SECTOR	17
2.2. GENERAL OVERVIEW OF THE SECTORS	20
2.2.1. OIL & NATURAL GAS	20
2.2.2. COAL	20
2.2.3. THERMAL AND HYDRO-ELECTRIC ENERGY	21
2.2.4. ELECTRICITY DISTRIBUTION AND ELECTRICITY EXPORTS	21
2.2.5. ELECTRICITY PRICES	22
2.2.6. WATER RESOURCES AND WATER QUALITY	23
2.2.7. WATER SUPPLY NETWORK AND SEWERAGE SYSTEMS	23
2.2.8. AIR	24
2.2.9. WASTE	24
2.2.10. OLD SOIL CONTAMINATION	25
3. POLICIES AND LEGAL FRAME FOR FOREIGN INVESTMENT	26
3.1. GOVERNMENT POLICIES AND REGULATIONS FOR FOREIGN INVESTMENTS IN ENVIRONMENTAL EQUIPMENT AND ENERGY	27
3.2. POLICIES FOR THE PROMOTION OF INVESTMENTS	28
3.3. IMPLEMENTATION METHODS	30
3.3.1. ENERGY POLICY	30
3.3.2. RESTRUCTURING OF ENERGY SECTOR	32
3.3.3. PRIVATIZATION IN ENERGY SECTOR	32
3.4. RELEVANT ADMINISTRATIVE BODIES	37
3.4.1. ENERGY	37
3.4.2. ENVIRONMENT	38
4. PRACTICAL ASPECTS OF THE INVESTMENTS	41
4.1. MAIN COSTS FOR INVESTMENTS IN THE ENERGY AND ENVIRONMENTAL SECTORS	41
4.1.1. LABOR COSTS	41
4.1.2. TAXATION	42
4.1.3. PROPERTY TAXES	46
4.1.4. PROPERTY COSTS	46
4.1.5. LABOR AND SOCIAL SECURITY LEGISLATION	47
4.1.6. SECTOR SPECIFIC COSTS	47

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

4.2. MAIN BARRIERS TO INVESTMENTS	48
4.2.1. GENERAL BARRIERS TO INVESTMENTS	48
4.2.2. SPECIFIC BARRIERS TO INVESTMENTS IN THE SECTOR	50
4.3. SEARCHING FOR A PARTNER. ASPECTS TO BE CONSIDERED WHEN NEGOTIATING A CONTRACT	54
4.4. FOREIGN AND SPANISH INVESTMENT IN THE SECTOR. MAIN SUCCESSFUL CASES OF IMPLEMENTATION IN BULGARIA	57
4.4.1. ENERGY	57
4.4.2. ENVIRONMENT	59
5. ANALISYS OF THE MARKET OFFER	61
5.1. DOMESTIC PRODUCTION AND MAIN PRODUCERS	61
5.1.1. ENERGY PRODUCTION	61
5.1.2. ENERGY EQUIPMENT PRODUCTION	62
5.2. FOREIGN PRODUCTION AND MAIN SUPPLIERS	63
5.3. GEOGRAPHIC DATA	66
6. ANALISYS OF THE MARKET DEMAND	73
6.1. GENERAL CONSUMPTION TRENDS	73
6.2. CONSUMER PROFILE	76
6.3. PERCEPTION OF SPANISH PRODUCTS	77
7. OPPORTUNITIES AND RISKS FOR SPANISH COMPANIES	78
7.1. OPPORTUNITIES	78
7.2. RISKS	81
BIBLIOGRAPHY	82
8. ANNEXES	83
I. NON-GOVERNMENTAL ORGANIZATIONS (NGOs)	84
II. INTERNACIONAL FAIRS IN BULGARIA 2006	89
III. ENGINEERINGS AND CONSULTANTS OF ENERGY AND ENVIRONMENT	90

1 • INTRODUCTION

The territory of Bulgaria covers an area of 110 993.6 km². Situated in the southeast of the Balkan Peninsula, it is bordered by the Danube River and Romania to the north, the Black Sea to the east, Turkey and Greece to the south, and Serbia and FYROM to the west. The area is strategically placed between north and south Europe and between Europe, Asia and the Middle East. The total length of its boundaries is 2245 km, of which – 52.6% land areas, 30.6% river areas, and 16.8% sea areas. The country is divided into 28 regions.

With the exception of the Danube lowlands to the north and the Thracian plain in the south, the country is dominated by mountain ranges. It offers a rich diversity of landscapes, from mountainous terrain to rich farmland in the Danube Valley and 130 km of beaches along the Black Sea. Bulgaria is one of the fastest growing tourist destinations in Europe and aside from the summer resorts on the Black Sea coast and winter skiing resorts in the mountains, it offers a range of other attractions including mountain scenery, history and wildlife.

According to the latest census taken in 2001, the population of Bulgaria towards 01.03.2001 was 7 932 984 inhabitants. More than one half (51.6%) is concentrated in 40 towns with more than 25 000 inhabitants. 32.3% of the population lives in the largest towns of Bulgaria with more than 100 000 inhabitants, which is approximately one third of the whole population. There are nine Bulgarian towns with population of more than 100 000 inhabitants: Sofia, Plovdiv, Varna, Burgas, Russe, Stara Zagora, Pleven, Sliven and Dobrich. Sofia is the capital of the country, with population of 1 173 988 inhabitants, followed by Plovdiv (338 302), Varna (320 668), Burgas (209 479), Russe (178 435), Stara Zagora (167 708), Pleven (149 174), Sliven (136 148) and Dobrich (100 000). The average density of the country's population is 71.5 inhabitants per km². The regions of Sofia, Plovdiv and Varna are the most urbanized ones.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

1.1. THE BULGARIAN ECONOMY

Since 2001 the economic growth of Bulgaria has been stable. Bulgaria has maintained a high degree of macroeconomic stability with strong economic growth, relatively low inflation and falling unemployment, but the external deficit remains high.

GDP in 2004 compared to 2000 rose 20.5 percent. The increase was lowest in 2001 (4.1%). Boosted by strong domestic demand and high investment, real GDP grew at 5.6% in 2004 which was the highest rate since the start of transition. GDP per capita in purchasing power standards increased to 30.8% of the EU-25 average. In the first half of 2005, economic performance continued to be strong with a GDP growth rate of 6.2%.

Main economic indicators

No	Indicators	2000	2001	2002	2003	2004
1	Gross Domestic Product (BGN m)	26 753	29 709	32 335	34 547	38 008
	Indexes					
	2000=100	100	104.1	109.2	114.1	120.5
	Previous year=100	100	104.1	104.9	104.5	105.6
2	Inflation (CPI-100, %)	10.3	7,4	5,8	2,4	6,2
3	Investment (BGN m)	4 206	5 415	5 909	6 694	7 957
	Investment/GDP (%)	15.7	18.2	18.3	19.4	20.9
4	Unemployment (%)	16.4	19.5	16.8	13.7	12.0
5	Employed (thousands)	2 980	2 940	2 979	3 166	3 236
6	Foreign trade					
	Export - FOB (BGN m)	10 274	11 176	11 858	13 042	15 617
	Import - CIF (BGN m)	13 857	15 897	16 451	18 797	22 726
	Balance (BGN m)	-3 583	-4 721	-4 593	-5 755	-7 109
	Balance/GDP (%)	-13,4	-15,9	-14,2	-16,7	-18,7

Source: BNB

Investment activity speeded up. From 2000 to 2004 the value of the investments (gross fixed capital formation – GFCF) almost doubled with its share in the GDP rising by 5.2 points from 15.7% to 20.9%. Since the beginning of 2003, progress has been made in the privatization of several large enterprises, including shipbuilding and telecommunications:

- ♦ In October 2003, 75% of the Varna shipyard was sold to the Bulyard shipbuilding company, a US / Bulgarian joint venture company.
- ♦ In June 2004, Bulgaria finalized the sale of a 65% stake in the Bulgarian Telecommunications Company (BTC) to a private equity consortium led by Advent International, for EUR 230 mln. The estimated investment commitment for the next five years is EUR 700 mln. Until recently BTC was the dominant operator in land line telecommunications but this has recently changed with the government issuing licenses to a number of companies, increasing the total number of BTC's rivals to 11. Some will offer a full range of services whilst others will provide access to other networks.
- ♦ Five of the Bulgarian district heating companies have been prepared for sale and an international adviser has been appointed for the privatization of five of the country's thermal power plants.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

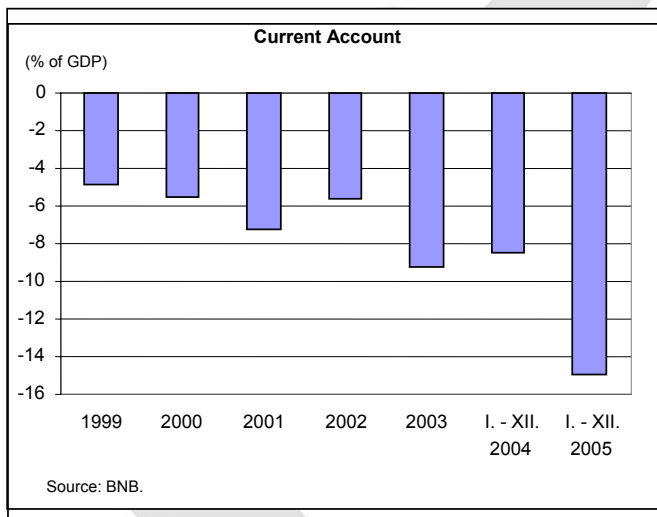
- ♦ The main failure of the privatization program has been in the tobacco industry, where the proposed sale of key factories collapsed after BAT withdrew due to the restrictions being placed on the deal. This was blamed on the June 2005 parliamentary election, with the Movement for Rights and Freedoms, largely backed by ethnic Turks who are a dominant worker group in the tobacco industry, unable to support the proposed sale.

Since 2001 employment has increased and unemployment has shrank. The employed people in 2004 compared with 2000 grew by 256 000 or nearly 9%. The unemployment rate fell by 4.4 points from 16.4% to 12.0%.

Inflation in the country was continuously decreasing until 2003. Compared with 2000 it fell over four times. In 2004, however, as compared with 2003, it was 2.5 times higher. This adverse to the economic development of the country trend continued in 2005 when, compared to 2004, the average annual consumer prices jumped 6.5%.

Foreign Trade

After a temporary improvement in 2004, the current account deficit increased again considerably in 2005. According to preliminary January – December 2005 data from the Bulgarian National Bank (BNB), the current account deficit was EUR 3.163 bln (14.9% of GDP), against a deficit of EUR 1.648 bln (8.5% of GDP) for 2004. In case of a continued deterioration, additional corrective measures may become necessary. Without the possibility for active monetary and exchange rate policies within the currency board arrangement, tight fiscal and wage policies are critical for maintaining internal and external stability.



Bulgaria's economic growth has been hampered by the continuously increasing foreign trade deficit. According to preliminary January – December 2005 data from BNB, the trade deficit amounted to EUR 4.083 bln (19.3% of GDP), and the deficit increased by EUR 1.354 bln compared to 2004 (a deficit of EUR 2.729 bln, 14% of GDP). Despite a better than expected export performance mainly due to favorable developments in commodity prices, the trade balance deteriorated further in 2005 because imports surged even more strongly. According to BNB, in January – December 2005 exports (FOB) amounted to EUR 9.454 bln and were up by 18.4% compared to January – December 2004. In 2005 imports (FOB) increased by 26.3% compared to 2004, reaching EUR 13.537 bln.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

The trade deficit and the current account deficit widened considerably in 2005 also because of the increase in oil prices.

Structural Reforms

According to the annual EC Monitoring Report 2004, structural reforms have been further deepened in all areas. Reforms of product and capital markets have continued and are broadly in line with key objectives of the Lisbon agenda. Privatization has been completed in many sectors. Good progress was made in the sale of remaining enterprises, for example in the energy sector, although not without setbacks and delays as regards for example the failed privatization of the tobacco company or the cancellation of the privatization process for a thermal power plant. Company restructuring in the network industries has been triggered by the privatization of companies and the increasing liberalization of markets.

Preparations for the unbundling of the National Electricity Company have started with the separation of accounting systems for different units. The implementation of the national program for restructuring the steel industry, adopted in March 2004, is to be completed by 2007. Progress in its implementation in the last year included the closure of some steel mills, staff reductions and further investments. In coal mining, three more coal pits were privatized during the reporting period and preparations for the privatization of one of the two remaining state-owned mines are under way.

Prices for energy, gas and telecommunication have been fully aligned with costs. Some cross-subsidization still exists with regard to electricity and heating energy for households, but should be phased out in 2006. Following tariff increases for rail passenger services, the gap to full cost recovery levels has been reduced. Market entry of new firms has been dynamic, but both market entry and exit continues to be hampered by relatively costly, complex and time-consuming procedures.

Although further reform is required, structurally the Bulgarian economy has developed considerably. Greater macroeconomic stability has improved in the business environment and the agricultural sector's contribution to GDP has halved since 1997, with the service industry now dominating.

Financial Sector

The currency board arrangement pegging the Bulgarian lev (BGN) to the euro continued to contribute to macroeconomic stability. Bank credits to households and non-financial enterprises expanded again at almost 50% in 2004 fuelling domestic demand and import growth. The Bulgarian National Bank (BNB) took additional measures in April 2005 to curb bank credit growth by imposing de facto ceilings on the extension of new credits. Partly in anticipation of these measures, credit growth increased again at record levels in the first quarter of 2005, but cooled down significantly to under 40% until the end of July. Fiscal policy remained stability-oriented. Due to better than expected revenues, the general government balance ended with a surplus of 1.3% of GDP in 2004 (based on EU accounting standards, ESA 95) contributing to the reduction of general government debt to below 40% of GDP in 2004.

Financial mediation has been further deepened both in the banking and non-banking sector. Due to the high credit growth rates, bank credits to non-financial private corporations and households have increased by almost 10 percentage points to 35% of GDP until the end of 2004. In line with credit expansion, the ratio of deposits to GDP increased by more than 10 percentage points to over 50%. Despite the high credit growth, bank performance indicators do not show any obvious deteriora-

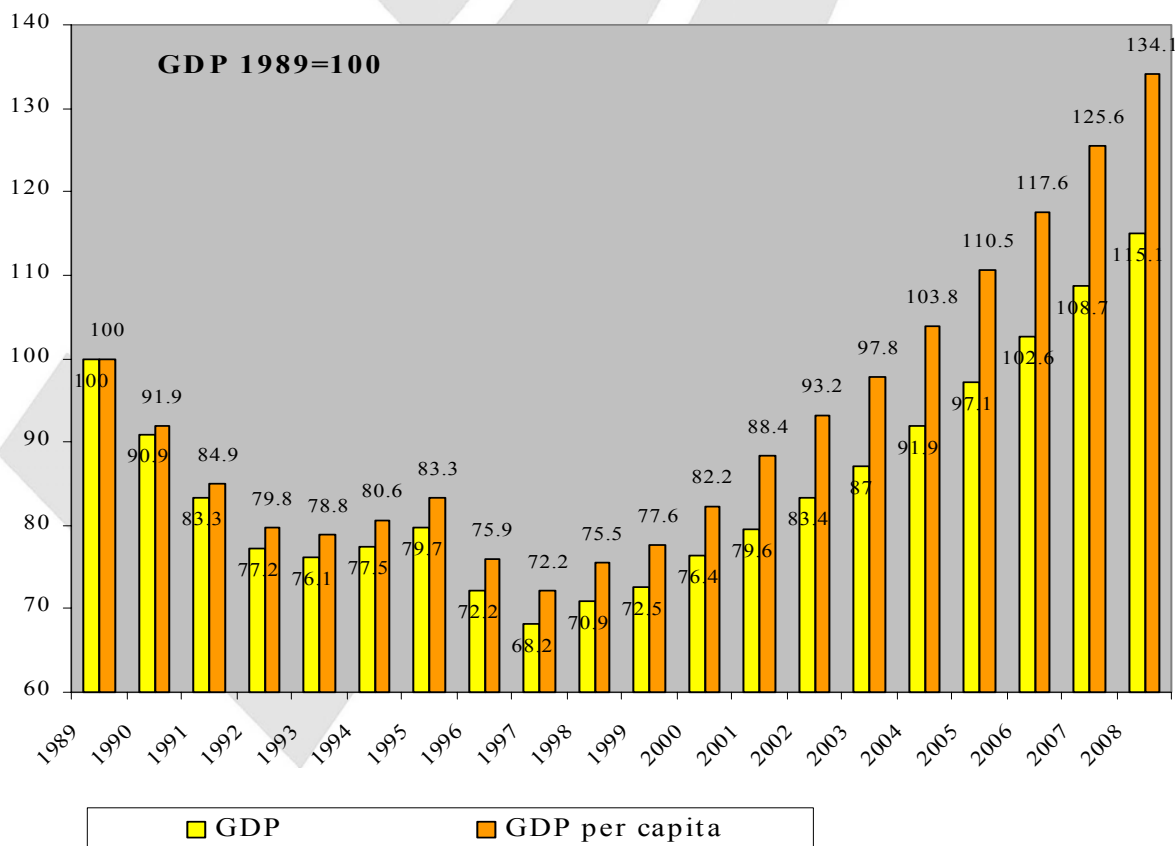
ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

tion in the financial situation of banks. The share of substandard and non-performing loans stood at 3.5% at the end of 2004 down from 4.2% at the end of 2003. The capital adequacy ratio declined from 22.0% at the end of 2003 to 16.1% at the end of 2004 but is still well above the legal minimum of 12%. A new regulation on the capital adequacy of banks entered into force in July 2005. The role of the non-banking sector in financial mediation remains limited but continues to increase. Stock market capitalization has increased as a share of GDP from 7.9% at the end of 2003 to 21.5% at the end of June 2005. The assets of pension funds have also further increased from 1.5% of GDP to 2.4% over the same period.

1.2. PROSPECTS OF THE BULGARIAN MARKET

In 2004, the economy approached by another 4.9 percentage points its 1989 GDP level, which, according to the Agency for Economic Analysis and Forecasting (AEAF) at the Ministry of Finance, will be reached in 2006. Concerning the GDP per capita indicator, the 1989 level was already reached in 2004. The share of the private sector in gross value added increased by three percentage points compared to the previous year, and reached a value of 76.5%. This was due both to the higher participation rate, and to the continuing privatization processes.

Gross Domestic Product



Source: NSI, AEAF

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

During the first half of 2005, the Bulgarian economy continued developing at high rates. For the first six months GDP increased by 6.2% in real terms, and its nominal value reached EUR 9.4 billion. This is the highest growth rate of the physical volume of the indicator for the first half of the year for the last seven years and it creates a good basis for the realization of an annual growth rate of about 5.7% in 2005. For the period 2006 - 2008 the Agency for Economic Analysis and Forecasting expects that the positive development of the Bulgarian economy will be maintained, with forecasted growth rates of about 5.7-5.9% annually. The factors underlying the forecasts are the dynamic exports developments and the increasing volume of investments in the economy.

Both the recent political stability of Bulgaria and its prospective accession to the EU have underpinned strong recent growth. One of the key factors driving this has been a credit driven boom which has accelerated since the privatization of the banking sector. Inflation has increased as a result but it remains in single digits and below the regional average. Inflation is forecast to fall back to around 4% this year.

One area of obvious risk, however, is that if domestic demand grows at a stronger than expected rate, then a more strict fiscal and monetary policy will be required to avoid deterioration in the deficit. Otherwise the sustainability of the currency board might be jeopardized.

Bulgaria has a lower level of GDP per capita than the average for the last wave of accession countries, although this is balanced to some extent by a lower than average level of living costs. In nominal terms for example, Bulgarian GDP (in 2003) stood at 39% of the level of the last EU accession countries. In terms of GDP at Purchasing Power Parity (PPP), which takes account of differences in living costs, Bulgarian GDP is however 60% of the average of the last accession countries.

Private consumption per head has risen rapidly since 1999 as income growth has recovered and real wage growth is expected to increase further in the short term, with plans by the current government to increase minimum wages by 25%. The taming of inflation has been a further positive boost to consumers and the main area of downside risk comes from the effect of a weak labor market, although unemployment is easing down slowly.

Average monthly incomes increased by 6.3% to BGN 306 in 2004 but average household spending surged ahead by 14% in the same period. Retail spending grew at a rate of 13.3% on the year, with household goods and appliances seeing particularly strong growth (25.2%). Spending has slowed in 2005 but at over 10% remains very robust.

Key indicators	2003	2004	2005	2006	2007	2008
Real GDP growth (%)	4.3	5.6	4.5	4.7	4.5	4.3
Consumer price inflation (avg %)	2.3	6.1	4.1	3.8	3.6	3.3
Budget balance (% of GDP)	0	1.7	1.1	0.3	-0.3	-0.5
Current-account balance (% of GDP)	-9.3	-7.5	-7.2	-7	-6.6	-6.2
Short-term central interest rate (avg %)	2	1.9	2.3	2.7	3.5	3.8
Exchange rate BGN: USD (avg)	1.73	1.57	1.43	1.4	1.45	1.51
Exchange rate BGN: EUR (avg)	1.96	1.96	1.96	1.96	1.96	1.96

Source: AEAf

With a recent agreement for the potential adoption of the Euro in Bulgaria in 2009 or 2010, thereby reducing exchange-rate risks, trade integration with the EU is expected to increase. Legislation is planned to allow parallel use of both the Euro and

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Bulgarian Lev in cash transactions as of 2008, whilst prices will be quoted in both currencies a year before the changeover.

GDP per capita in Bulgaria is expected to rise by 40% in purchasing power parity (PPP) terms between 2002-2007 and by 70% in nominal US dollar terms. Even following this rise, the country will still have some way to go to get in line with Central & Eastern European averages. It is believed, however, that the current GDP gap is overstated with Bulgaria's "grey" economy suggested to be the largest in the region; it is currently estimated at around 30% of GDP. The share of the grey economy is expected to decline over time as the economy develops and tax administration improves.

In addition to the EU accession negotiations and NATO membership from 2004, Bulgaria is also a member of the Central European Free Trade Agreement (CEFTA) and has negotiated bilateral agreements with each member state. This has significantly changed the trade flow from Bulgaria. However, export growth is expected to slow in the near term in light of the relative weakness in demand within Europe as a whole.

Bulgaria enjoys easy access to the 132 mln-strong markets of the 10 countries of the Balkans Region, most of which are undergoing a dynamic transition towards being market economies. A population of over 60 million lies within 500 km of Sofia and while local road infrastructure is in urgent need of improvement, a network of international motorways cross the country, allowing access to Western Europe, the Adriatic, the Black Sea Coast, as well as Russia and Asia.

1.3. APERTURE TO FOREIGN INVESTMENT

Bulgaria ranks first in the world by investment to gross domestic product (GDP) ratio for 2005. As regards 2005 overall investments, the money has been invested in construction of supermarkets, hotels, industrial enterprises, power engineering, telecommunications, and transport.

According to preliminary January – December 2005 data from the Bulgarian National Bank (BNB), the foreign direct investments (FDI) in Bulgaria amounted to EUR 1.876 bln (8.9% of GDP) against EUR 2.278 bln (11.7% of GDP) attracted in 2004.

Foreign direct investment in Bulgaria, EUR million

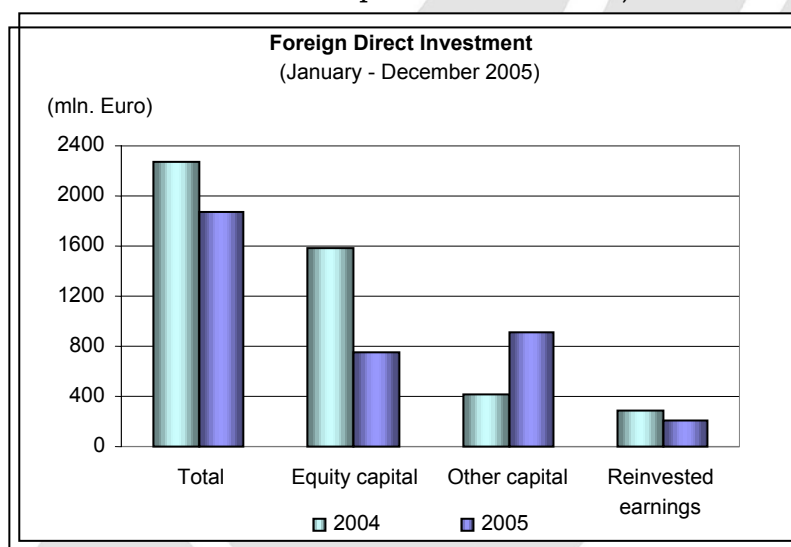
	2004					2005					Growth
	Q1	Q2	Q3	Q4	total	Q1	Q2	Q3	Q4	total	2005–2004
Direct investment, net	380.2	707.8	-572.5	1281.5	1797.1	353.5	322.2	600.8	327.5	1604.0	-193.1
Direct investment abroad	-12.3	-4.5	-5.1	190.3	168.3	15.2	10.2	215.3	15.9	256.5	-446.8
Foreign Direct Investment	392.6	532.3	262.1	1091.2	2278.2	368.6	375.7	506.8	624.9	1876.0	-402.2
Equity capital, incl.	105.5	283.1	110.8	1080.0	1579.4	125.6	117.7	259.4	255.0	757.7	-821.7
From privatisation	46.0	197.1	0.0	693.2	936.3	0.0	0.0	0.0	0.0	0.0	-936.3
Non-privatisation flows	59.5	85.9	110.8	386.8	643.0	125.6	117.7	259.4	255.0	757.7	114.6

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

	2004					2005					Growth
	Q1	Q2	Q3	Q4	total	Q1	Q2	Q3	Q4	total	2005-2004
Other capital	213.5	177.0	77.5	-55.2	412.9	200.1	200.8	175.4	332.8	909.1	496.3
Reinvested earnings	73.6	72.2	73.8	66.4	286.0	42.9	57.2	72.0	37.2	209.2	-76.7
Mergers and acquisitions, net	-	180.0	-	-	-	-	-	309.3	-	281.6	-
Receipts	-	180.0	270.5	-	450.5	-	-	1548.3	-	1548.3	-
Payments	-	-	1100.0	-	1100.0	-	43.3	1239.0	281.6	1563.9	-

Source: BNB

The attracted equity capital (acquisition/disposal of shares and equities in cash and in kind by non-residents in/from the capital and reserves of Bulgarian enterprises) reached EUR 757.7 million for the reporting period. Its relative share in the foreign direct investment for the reporting period amounted to 40.4%. It decreased by EUR 821.7 million compared to that attracted in 2004 (EUR 1,579.4 million, of which EUR 936.3 million from privatization deals).



Source: BNB

In January–December 2005 there was no equity capital on privatization deals with non-residents attracted. The attracted equity capital on non-privatization deals totaled EUR 757.7 million for the reporting period, increasing by EUR 114.6 million compared to EUR 643 million for 2004.

Foreign direct investment in Bulgaria by years

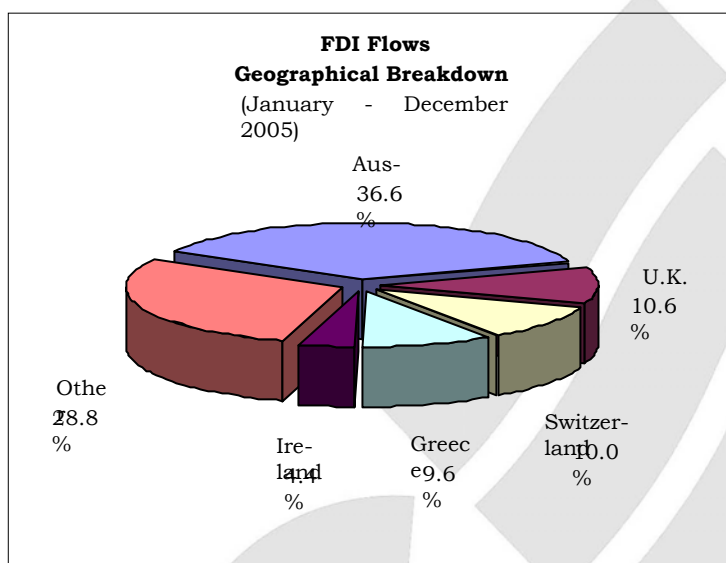
Year	Privatization	Greenfield + Expansion
	%	%
2000	36.5	63.5
2001	2.4	97.6
2002	15.0	85.0
2003	16.9	83.1

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

2004	47.8	52.2
Sept 2005	0.0	100.0

Source: InvestBulgaria Agency

By countries, the largest investments in Bulgaria for the reporting period were those of Austria (36.6% of the total foreign direct investment), Great Britain (10.6%) and Switzerland (10%).

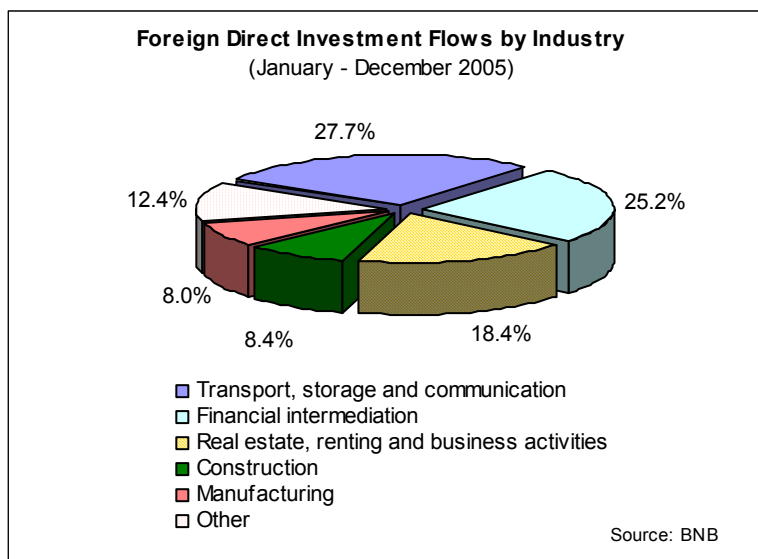


Source: BNB

By branch, the largest investments for January - December 2005 were in Transport, storage and communication (EUR 519.2 million), Financial intermediation (EUR 472.7 million), Real estate, renting and business activities (EUR 344.6 million), Construction (EUR 156.7 million) and Manufacturing (EUR 150.3 million).

The total amount of the expected investment in 2006 is EUR 6.1 bln. EUR 3.8 bln will come from domestic and EUR 2.3 bln from foreign investors.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA



Source: BNB

Some of the largest investments in 2005 include MobilTel's capital increase through Telekom Austria's buy out of the Bulgarian company, Lukoil's investments in Neftochim Bourgas, and financial institutions increasing their capital for loans to small and medium sized businesses. Among the largest investors were Sofia Med, Sisecam, Kremikovtzi, Dundee Precious Metals, Asarel Medet, and Festa hotels.

Investments in 2005 were relatively equally spread throughout all sectors and from all countries, whereas last year's bulk of investments was in the energy and bank sector.

In 2005, InvestBulgaria Agency certified 10 projects as first class investments and 2 projects as third class investments. InvestBulgaria Agency (IBA) expects the total volume of investments in 2006 to be EUR 6.1 bln of which EUR 3.8 bln will be domestic investments and EUR 2.3 bln will be foreign investments. These figures do not include privatization deals. According to InvestBulgaria Agency, investments in 2006 will have emphasis on high technologies and telecommunications sectors. Estimates indicate that the predicted investments will be distributed in the following manner: 25% in manufacturing, 20% in services, 20-25% in the energy sector and the rest in the transportation, and mining and quarrying sectors.

The underlying factors behind the increased level of green-field investment in Bulgaria include:

- ◆ Political and economic stability - Bulgaria is perceived to be the most stable country in the Balkans;
- ◆ GDP growth - commentators believe growth of circa 5% will be sustained over the medium term;
- ◆ Strategic geographic location;
- ◆ Significantly lower labor costs than the European average;
- ◆ Competitive tax regime - corporate tax and VAT among the lowest in Central and Eastern Europe;

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

- ◆ Duty-free movement of goods and services within a market of 550 million consumers. Bulgaria has free trade agreements with the EU, EFTA, CEFTA, Turkey, FYROM, Croatia and Israel;
- ◆ 55 double tax agreements and 52 on the mutual protection and promotion of foreign investment;
- ◆ Investment by foreigners receives equal treatment to investment by Bulgarian residents;
- ◆ Significant potential for hi-tech and Research and Development related ventures;
- ◆ The Bulgarian Lev will remain pegged to the Euro until it can join EMU (2009 at the earliest).

Looking ahead, in 2005 the Bulgarian Ministry of Economy retained Deloitte & Touche to prepare a report on the country's investment strategy. Three economic sectors were chosen by the consultant to target attracting investment: ICT (incl. electronics), outsourcing, and manufacturing of machines and electrical equipment.

Deloitte made a research among investors and determined the factors for taking a decision to attract investments in the three target sectors. The research indicated that Bulgaria has some important weaknesses and should address them as much as possible. It is expected that making commitments to effect these improvements and achieving an observable progress will be awarded with a sustainable increase of foreign direct investment.

The measures to overcome the competitive shortcomings of Bulgaria can be grouped as follows: education and training, infrastructure, management reforms, and incentives.

Education & training. Bulgaria's labor force has qualities in some key areas that are important for outsourcing, ICT and/or engineering sectors. The improved knowledge and skills of the laborers (present and potential) in these sectors will make Bulgaria more attractive for potential investors. Stepped up and more comprehensive training could additionally enhance the investors' interest in Bulgaria. Priority in the field of training could be given to areas such as: foreign languages (especially English and German), ICT (esp. IT maintenance, networks, telecommunications, and software), management (esp. directed towards ICT and outsourcing).

Infrastructure has improved significantly for the last 5 years and there are plans to continue building it in the near future. Nevertheless, infrastructure is a main constraining factor for the investors in industry sectors. Both international transport connections and many local roads and utilities need improvement.

Reform of the managerial / administrative environment. Investment climate in Bulgaria as a whole is similar or better than that of Croatia and Romania, but not as good as that in the five countries of Central Eastern Europe, showed the research among investors. Foreign investors are not satisfied with the level of administrative services and the level of transparency. It is necessary for the pace of administrative reform in Bulgaria to at least correspond to those in the neighboring countries, otherwise there is a danger for the country to be perceived as a difficult place to develop business.

Incentives. It is recommended to develop the system of incentives in such a way as to achieve two comprehensive goals: "compensating the investors for shortcomings" in Bulgaria and encouraging investments in target sectors. "Compensating the investors for shortcomings" in Bulgaria supposes focusing on financial incentives. Cur-

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

rently, Bulgaria has one of the lowest corporate tax tariffs in Europe. Since this is an area of competitive advantage, the incentives should be aimed somewhere else. They must be directed towards improving and ensuring the infrastructure. Subsidies, grants or credits under better terms could be given to companies that want to enhance the qualification of their employees, etc.

The report contains also an analysis of the countries that have made substantial investments in Bulgaria in the past and that are potential sources of investment in the three target sectors. The target countries - sources of investment are: Greece, Italy, the USA, Germany, Belgium, Austria, Great Britain, Switzerland, and France.

2. OVERVIEW

2.1. DEFINITION AND DESCRIPTION OF EACH SECTOR

A. Energy

Bulgaria has significant reserves only of low-grade coal and the country has been dependent on imports for 70% of its energy needs and almost 100% of its oil and gas needs. Before 1989, Bulgaria used its own coal and hydro-electric resources to generate most of its electricity while the Soviet Union supplied nuclear fuel, high-grade coal, crude oil, oil products and natural gas. Energy efficiency has been low and it is currently the second lowest in Europe (after Ukraine).

Bulgaria is heavily reliant on nuclear energy (25.5% of total primary energy supply). Kozloduy NPP is the most important power plant generator in Bulgaria but, urged by the EU, had to close units 1 and 2 in 2002 and is scheduled to close another two reactors – units 3 and 4 - in 2006. The share of high-polluting fossil fuels like coal (36.3%) and oil (21.1%) in the total primary energy supply is also quite high. Thus, the current energy supply structure presents another challenge from energy efficiency point of view – to promote renewable energy supply sources. Currently, renewable energy sources are not widely used in Bulgaria: the share of renewable energy sources in total primary energy supply was 4.4 per cent in 2002. Due to the geographic location and the geologic conditions, Bulgaria has a number of potential sources for renewable energy, i.e. solar, hydro, biomass, geothermal and wind energy. The energy service market is yet to develop, though some companies are implementing energy efficiency measures.

Bulgaria's energy intensity is still among the highest in the world, and there is large potential for energy efficiency improvements in every sector. In 2002, energy intensity of Bulgaria was 9.25 times higher than that of the EU-15, and the highest in Central and Eastern Europe. This is due to the fact that historically Bulgaria followed an energy-intensive development policy. The communist regime favored the development of heavy industry, which used energy imported at favorable prices from the former Soviet Union. The share of industry in GDP in Bulgaria is higher than in most western countries, and industry tends to consume more energy per unit of output compared with other components of the GDP. Low energy prices in the past have also contributed to high energy intensity levels.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Improving energy efficiency is a key element in the country's energy policy, as Bulgaria prepares for EU accession. The country has ratified the Kyoto protocol, and is currently in the course of implementing the necessary institutional set-up for energy efficiency. An energy efficiency law has been passed. Electricity tariffs have been raised and energy consumers respond to price incentives.

Electricity prices and gas prices have been liberalized and are comparable to EU levels, however heating prices are still subsidized, although the subsidy is being phased out. Elimination of the remaining price distortions in the energy sector, in particular for household electricity and heating prices remains a challenge. Therefore, achieving this compliance, coupled with improvements in energy efficiency, increases in energy savings, and the very important promotion of renewable energy sources, will be a key challenge in the energy sector over the next few years.

B. Environment

Bulgaria's environment is one of the most valued national assets that should be protected in view of future benefits. Simultaneously, this country is going through a transitional period and many of the current changes pose potential risk to these assets. In order to protect the natural resources and to improve the ecological situation in the country, both social-economic and ecological sustainable development should be ensured.

Changes in the past decade have been favorable to Bulgaria's environment. Still, efforts should be applied to address several problems that present potential health risk to people:

- ◆ Many river mouths are contaminated due to lack of built waste water treatment stations;
- ◆ A good part of the villages and some towns have no organized system of collecting domestic waste, and much of the existing waste treatment equipment does not meet European standards;
- ◆ National-level infrastructure to eliminate hazardous waste has not been put in place;
- ◆ Systems to separately collect and subsequently re-use and recycle domestic waste have not been put in place;
- ◆ In a number of settlements the air quality still does not meet standards;
- ◆ Due to strong development of polluting industries in the past together with ignoring measures for environmental protection, contamination has accrued that poses risks to the environment and human health.

Despite substantial improvements in the past decade, the environmental situation and the level of environmental protection are not up to the average level of the EU. Closing this gap requires harmonization of ecological legislation, on the one hand, and substantial investment in environmental protection, on the other hand.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

The table below shows main differences between Bulgaria and EU in terms of the environment.

Indicator	Definition of indicator	Bulgaria	EU – 25 (average)
Total emissions of greenhouse gases	Aggregated emissions of the 6 main gases (CO ₂ , CH ₄ , N ₂ O, HFC, PFC, SF ₆) causing greenhouse effect in CO ₂ equivalent. The basis year equals 100. (1990 = 100 for CO ₂ , CH ₄ , N ₂ O); (1995 = 100 for HFC, PFC, SF ₆)	44.0 (2002)	91.0 (2002)
Energy intensity of the economy	The indicator is a ratio between the economy's gross domestic energy consumption and GDP for a given calendar year. The gross domestic consumption is measured in kgoe (kilogram oil equivalent), and GDP – in EUR 1000. The ratio is measured in kgoe / EUR 1000.	1902.67 (2002)	209.86 (2002)
CO ₂ emissions	The indicator compares emission levels of CO ₂ in EU countries and the other countries measured in tonnes of CO ₂ emitted by one person.	5.9 (2002)	8.8 (2002)
Total emissions of SO ₂	The indicator represents total emissions of sulphur dioxide in the corresponding country for 2001, measured in kilotonnes.	849.0 (2001)	Austria-37 (2001) Portugal-301 (2001) Hungary-401 (2001) Czech R.-251 (2001) Poland – 1564 (2001)
Collected domestic waste	The quantity of collected domestic waste from the population, incl. from commerce, offices and public institutions (measured in kg/person/year).	500 (2002)	531 (2002)
Deposited domestic waste	The share of collected domestic waste, incl. from commerce, offices and public institutions, treated via depositing (measured in kg/person/year).	404 (2002)	267 (2002)
Incinerated domestic waste	The share of collected domestic waste, incl. from commerce, offices and public institutions, treated via incineration (measured in kg/person/year).	0 (2002)	91 (2002)
Population included in sewerage network	The percentage of the population included in the sewerage network vs. the total number of the country's population	67.0 (2000)	Austria - 85.0 (2000) Hungary – 51.0 (2000) Czech R. – 75.0 (2000)
Population with waste water treatment station (WWTS)	The percentage of the population connected to a local WWTS vs. the total number of the country's population	39.0 (2001)	Austria – 86.0 (2001) Czech R. – 68.0 (2001)
Share of electricity produced by renewable energy sources (RES)	Coefficient between electricity produced by RES and the gross national energy consumption for a period of 1 year. Electricity produced by RES includes electricity produced by hydro-equipment (excluding pumps), wind, solar, geothermal sources, and biomass/waste. The gross national energy consumption is the total gross electricity production from all fuel sources, plus electricity imports, minus electricity exports.	6.0 (2002)	12.7 (2002)

Source: Agency for Economic Analyses and Forecasting.

2.2. GENERAL OVERVIEW OF THE SECTORS

A. Energy

2.2.1. Oil & natural gas

Bulgaria has tiny reserves of crude oil and slightly more substantial reserves of natural gas. Current production is around 1000 barrels per day of crude oil and around 30 mln cu m of gas per year. Eight exploration blocks have been tendered for exploration, of which six are still being actively explored, incl. two by a UK-Bulgarian consortium of Petreco SARL and Petreco Bulgaria EOOD, which recently discovered the Galata gas field (offshore in the Black Sea, near the city of Varna).

Bulgaria's only operating oil refinery is the 134,000 barrels per day Neftochim plant near the Black Sea port of Burgas. The plant was constructed in the 1970s, and in the 1990s was bought by Russia's Lukoil. Demand for petroleum products was estimated at around 9 mln tonnes in 1989 and dropped to around 3 mln tonnes in 2002.

Bulgaria has modest reserves of natural gas – around 5.6 bln cu m on land and around 3 bln cu m in offshore Galata field, contributing around 1% of the country's gas needs. The bulk of the gas demand is met by Russian imports. Currently, state-owned Bulgargas dominates this sector by controlling the importation, transmission and storage of gas. In addition to receiving gas for its own use, Bulgaria also transits up to 14 bln cu m per year of Russian gas to Turkey via the Trans-Balkan pipeline. In 1998 Bulgaria signed a contract to buy from Russia's Gazprom gas under take-or-pay terms until 2010. Overgas, a joint venture between Gazprom (51%) and Bulgarian investors (49%) works to expand Bulgaria's underdeveloped gas distribution network.

Bulgargas recently reported that in 2005 domestic natural gas consumption rose 11% year-over-year to 2.9 bln cu m.

2.2.2. Coal

Bulgaria has recoverable coal reserves of around 2.7 gigatonnes, of which around 2.5 bln tonnes is low-grade lignite and the remainder is higher quality sub-bituminous coal. Most of Bulgaria's coal goes for electricity production, with smaller quantities used by industry and for domestic heating. Output has dropped considerably after social changes started in 1989, from 35 mln tonnes per year in 1990 to around 23 mln tonnes in 2002. Imports of high quality coal mainly from Russia and Ukraine for power generation and steel production have also declined from around 5 mln tonnes in 1990 to around 2 mln tonnes in 2002.

Bulgaria has 13 active coal-producing companies operating 21 mines, of which three are open-cast and the remainder are traditional underground mines. Largest by far is Maritsa East Coal Mines EAD, with reserves of around 1.3 bln tonnes of lignite that are expected to last around 50 years at current annual rates of extraction of around 21 mln tonnes per year. Over 85% of its output is burned in the adjoining Maritsa East TPP complex, with the remainder being used to produce coal briquettes

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

for domestic use. Coal from the other active mines is used for power generation, municipal heating plants and for domestic heating. Since 2000 the government has been following a strategy of liquidating unprofitable mines and preparing the remainder for privatization.

2.2.3. Thermal and hydro-electric energy

Thermal power plants (TPPs) usually supply electricity to large industrial enterprises with electricity-intensive production cycles. These power plants are located close to their main industrial consumers or coal mines since they mainly operate on coal fuel. TPPs account for about 49% of Bulgaria's power capacity. Bulgaria has 26 TPPs, meeting around 45% of the country's electricity demand, of which only seven are major producers and the remainder smaller units are attached to municipal heating plants. Under the terms of the EU accession agreement these plants must be both privatized and renovated to meet strict EU emissions standards.

Bulgaria has 64 hydro-power plants (HPPs) with an installed capacity of 2729 MW. Beginning in 2000, the National Electricity Transmission Company (NEK) started offering the HPPs for sale, and by end-2003 13 small plants totaling 114 MW were sold for USD 97 mln. Thus, at the end of 2002, NEK ran 51 hydro power plants with 2615 MW total capacity. There are four large hydropower complexes of cascading dams. Each one of them consists of at least three hydroelectric power plants, totaling 18 stations with an electric generating capacity of 4571 million kWh. These hydroelectric stations are located in the highest mountain ranges.

2.2.3.1. Nuclear energy

Bulgaria has one nuclear power plant – Kozloduy NPP – consisting of six units built between 1970 and 1993 with an installed capacity of 3760 MW, which by 2001 was meeting 56% of domestic demand. Questions over the safety of its Soviet-era technology led the EU to demand the closure of units 1-4 as a condition of the EU accession agreement. Units 1 and 2 were closed in 2002, and units 3 and 4 are to be closed in 2006 (10 years before the scheduled end of their working span). Since 2000, Bulgaria has launched a range of projects in order to fulfil its commitments on closing the four non-upgradeable units at Kozloduy NPP. Measures include setting up a special unit in the power plant to oversee the process of decommissioning units 1 and 2 and constructing a new dry storage spent fuel facility on the site. The modernization of the two units that are to remain operational (units 5 and 6) started in June 2001. Plans for the construction of a new NPP, at Belene, are under way.

2.2.4. Electricity distribution and electricity exports

In 2000 the electricity distribution network was split into seven regional electricity distribution companies, each of which was granted a 30-year renewable operating license for the distribution and sale of electricity. Under the terms of the license the companies are obliged to guarantee both supply and related services to their customers and to maintain and develop their network in accordance with both technical requirements and projections for growth in demand. In end-2004, the privatization of the seven electricity distribution companies was successfully completed, bringing up proceeds for the state totaling EUR 693.2 mln. The seven companies had been

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

grouped on regional basis in three pools, acquired by the Czech CEZ, the Austrian EVN and the German E.ON. The deal was recognized as one of the most successful privatization deals in Bulgaria with a positive impact on the development of the Bulgarian energy sector.

Industrial decline through the 1990s has left Bulgaria with excess generating capacity, which in turn has allowed it to export substantial quantities of electricity to its neighbors: Serbia & Montenegro, Albania, FYROM, Greece, Romania and Turkey. In 2003, Bulgaria exported 1135 GWh to Turkey, 2180 GWh to Greece, 2053 GWh to Serbia and 81 GWh to Romania. In 2005, Bulgaria exported the record-high 7 bln kWh, according to the National Electricity Transmission Company (NEK) General Manager Lubomir Velkov.

An important factor that will influence the future of the Bulgarian energy sector and the size of the Bulgarian energy market will be the development of the Balkan energy grid. Bulgaria is expected to play the most significant role as the main exporter of electricity in the region. Bulgaria has 46% of the total exports, followed by Romania (28%), and Serbia (22%). After the latest round of negotiations, hopes are rising that a deal could be struck to enable the resumption of electricity imports to Turkey. According to a 1999 agreement, Turkey must import a total of 33.7 billion Megawatts of electricity for a 10-year period, which is a serious part of Bulgaria's electricity export. Turkey paid out USD 566.3 million for electricity imports from Bulgaria in the period 1997-2002.

2.2.5. Electricity prices

The discount tariff for the first 75 kWh on each household's monthly electricity bill will be abolished by the end of 2006, the State Energy and Water Regulatory Commission (SEWRC) announced in February 2006. The discount tariff will mostly likely be phased out from October. The evening-out of the electricity tariffs will spike the bills of all household consumers because even the homes with monthly consumption higher than 75 kWh qualify for the rebate. At the moment, 28-30% of all electricity consumers have monthly consumption of around 75 kWh.

As regards industrial consumers, in end-2005 the energy regulator decided to cap off at 2.4 mln mWh the volume of electricity that will be sold on the liberalised segment which has admitted Maritsa East 2 TPP, Maritsa East 3 TPP, Varna TPP, Bobov Dol TPP and Rousse TPP, Kozloduy NPP, 13 eligible consumers and 2 power traders. The regulator will no longer allocate volume quotas as of 2007 when the whole power market will be open to competition. After 2007, the regulator will set only the charges that will be paid to the transmission grid operator.

Meanwhile, SEWRC will reportedly try to reach an out-of-court settlement with the electricity distributors on the dispute over their investment and price targets. The foreign owners of the electricity distributors - CEZ, E.ON and EVN, have contested in court the decision of the SEWRC to halve their investment plans and the requested electricity tariff hikes.

B. Environment

2.2.6. Water resources and water quality

Water resources are the usable part of the natural water (surface and underground) and are formed primarily via rain. Until 2000, there was an almost five-year trend of gradual decrease in the annual rain quantity to 419 litres/sq. m/year (65.4% of the annual norm) which reversed in 2001, and in 2002 registered were 574 l/sq. m/year in average (120% of the annual norm). Throughout the 1999 – 2003 period, there has been extremely uneven rain distribution over the country's territory. The quality of surface and underground water is monitored by the National System of Water Monitoring. For the last three years there has been a relatively stable level of water quality.

2.2.7. Water supply network and sewerage systems

The restructuring of economic sectors, incl. closure of water intensive and unprofitable production processes, the gradual increase in water prices, together with draught processes, have maintained a tendency towards a total decrease in water usage.

Towards 2003, nearly 98.8% of the country's population was connected to the public system of centralized water supply. The average daily water usage by the population ranges between 90 – 99 l/person/day for the 1999 – 2003 period, and was close to the 1997 minimum of 89 l/person/day. There has not been any substantial decrease in water transfer to end-users. Towards 2003, the inner losses of the distribution networks of water supply and sewerage companies were 61% of inflow water, and the inner losses of melioration systems – 62%.

The average annual water usage in this country amounts to around 10-12 bln cubic m per year, broken down by economy sectors as follows (percentage shares have been rounded): drinking water supply 10%, irrigation 35%, industrial water supply 20%, hydro energy 35%. Given the trend of increasing water usage, the water deficit will be increasing and will become a very serious social, economic and ecological problem for this country.

While the water supply infrastructure encompasses over 98% of the population, the level of construction of sewerage networks and settlement treatment stations is considerably lower. The share of the population connected to the sewerage system is 69.2%. The share of the population with access to waste water treatment stations is 39.9%. Over 20% of built sewerage networks are physically and morally obsolete, and need reconstruction and, in some cases, a complete replacement.

The number of active countryside waste water treatment stations (WWTSS) is increasing. Towards 2003, they were 63, of which 11 were with mechanical treatment only, 52 were with a biological water treatment element. They service 64 agglomerations, incl. 49 settlements with a total of around 3 mln inhabitants.

The share of waste water treated through urban WWTSS increased from 74% in 1999 to 79.5% in 2003. Their efficiency has been low, and towards 2003 they worked with

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

56% of their project capacity. The main reason for that is the incomplete / not built sewerage network.

2.2.8. Air

The air pollution from stationary and mobile sources exerts direct negative impact on people's health, vegetation, soil and water. In the 1999 – 2003 period, the appraisal of air quality encompasses the following main parameters: sulphur dioxide, ammonium dioxide, dust, fine dust particles, lead, ozone, hydrogen oxide and cadmium.

Given the current pace of development, without opening new big production lines, by 2010 Bulgaria is expected to fulfil its engagements to the Goeteborg Protocol on limiting the annual national emissions.

Energy sector remains the biggest source of sulphur dioxide with 86% of the total emitted quantity. Road transport and TPPs continue to be main sources of ammonium oxides, with 36% and 31%, correspondingly, of the total emitted quantity in 2003. The biggest source of methane continue to be the activities connected to the extraction and processing of extractive fuels, with up to 75% share in the total amount of such emissions in 2003. Agriculture activities are the main source of ammonium, with 69% of total emissions in 1999 - 2003. Other main sources are the waste treatment and depositing (with around 19% of total emissions) and the industry (with about 12%). Domestic heating and road transport are the biggest sources of hydrogen oxide, with 51% and 26% of emissions, respectively, in 2003.

2.2.9. Waste

In the 1999 – 2003 period, the generated amounts of waste remained relatively constant – around 13 000 000 tonnes/year, with a trend of slight decrease until 2002 and increase in 2003, due mainly to industrial waste. For the same period the quantity of collected domestic waste via the system of organized collecting and transporting remained relatively constant – around 3 230 000 tonnes/year. Around 70% of them were deposited in depots servicing population of over 20 000 inhabitants. The quantity of domestic waste versus the serviced population was also comparatively constant – around 500 kg/person.

In end-2002, the organized collection of domestic waste encompassed 80% of the country's population. Collection of domestic waste was done in 1377 settlements which is 24.2% of the total number of settlements in the country. Over 99% of the urban population is covered by collecting services, but that in the villages is slightly above 33%. Collecting hazardous waste in order to recycle it is limited to buying back lead-acid accumulators, used oils and waste petroleum products. Composting and incinerating with usage of waste energy are still underdeveloped practices in this country. There is no domestic waste incinerator built in Bulgaria.

The existing infrastructure for waste recycling is relatively well developed based on capacities built mainly in the 1970s and 1980s. The total capacity of recycling paper and cardboard waste is considered to be around 200 000 tonnes. Recycling of plastic waste is concentrated in three major plants with around 12 000 tonnes annual capacity. Recycling of waste glass is done in 6 plants. The annual amount of recycled glass waste does not exceed 15 000 tonnes.

Waste depositing remains the main method to eliminate waste in this country. As of 31.12.2002, the number of depots servicing the population was 663, and over 3 mln tonnes domestic waste had been deposited there. Currently, there are 84 depots for industrial non-hazardous waste, incl. 74 in exploitation and 10 closed, while 15 of the exploited depots are for inert waste. There are 18 depots in exploitation for hazardous waste, and no one of them meets the existing environmental requirements.

The number of unregulated depots and old waste contamination sites is large. This calls for immediate measures to gradually clean, sanitize and re-cultivate them. There are 5135 identified unregulated waste sites. Of them, 2228 were closed by end-2003.

2.2.10. Old soil contamination

The problem of old contamination is one of the most serious ones because of the variety of the contamination in terms of source and type and because of their wide spread over the territory of the whole country. At national level, there has not been a solution to the problem with accumulated waste, hazardous substances and other potential contamination in plants of all industrial sectors (excluding mining) that have been either liquidated or have gone bankrupt. Annually, monitoring and pre-emptive control are carried out over damaged and re-cultivated plots, technical and biological recultivation, treatment of waste water.

3. POLICIES AND LEGAL FRAME FOR FOREIGN INVESTMENT

Legal and International Guarantees for Foreign Investment

◆ **National Treatment**

The Bulgarian Constitution and the Encouragement of Investment Act provide national treatment to foreign investors which means that foreign investors are entitled to perform economic activity in the country under the same provisions applicable to Bulgarian investors except where otherwise is provided by law. In particular this principle covers the whole range of economic and legal forms of activities for accomplishing entrepreneurial businesses. The national treatment to foreign investors includes the participation in the process of Privatization and acquisition of shares, debentures, treasury bonds and other kinds of securities.

◆ **Most Favored Nation Status**

Bulgaria is a signatory to a system of bilateral treaties on promotion and mutual protection of foreign investment which provide, further to the national treatment regime, for the most favored nation status of the investment made by entities and individuals from one of the contracting countries on the territory of the other contracting country.

◆ **Priority of International Treaties**

When international treaties to which Bulgaria is a party provide for more favorable terms and conditions for foreign investment, these terms have precedence over the local rules. This guiding principle finds expression in the treaties for protection of foreign investment and especially in the agreements for abstaining of double taxation regulations. The international treaties on mutual protection of foreign investment always include an extended concept of a foreign direct investment, and the application of this concept shall be prior to the Bulgarian legislation.

◆ **Legal Guarantees against Adverse Changes in the Law**

The Encouragement of Investment Act stipulates the principle that foreign investment made prior to the adoption of amendments in law imposing statutory restrictions only with regards to foreign investment, shall not be affected by these restrictions. The sense of the law provides for that foreign investment shall be guaranteed against subsequent legislative changes.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

♦ **Protection against Expropriation**

The Bulgarian Constitution allows forcible expropriation of property in the name of the state or for municipal needs only if effected by virtue of a law provided that these needs cannot otherwise be met, and after a fair compensation has been ensured in advance.

Expropriation under Bulgarian law is governed by the State Property Act and Municipal Property Act.

3.1. GOVERNMENT POLICIES AND REGULATIONS FOR FOREIGN INVESTMENTS IN ENVIRONMENTAL EQUIPMENT AND ENERGY

• **Bulgaria in the process of joining the EU**

Focused on joining the EU as scheduled on 1 January 2007, Bulgaria's currently active legislation, reflecting the Government policy, offers quite a large number of opportunities for investments in the country.

According to the European Commission, Bulgaria is generally meeting the commitments and requirements arising from the accession negotiations in the areas of **capital movements and payments and payment systems** and is expected to be in a position to implement this *acquis* from accession. Some legislative alignment is still needed as regards the Social Insurance Code and in the area of cross-border payments in Euro, financial collateral arrangements and concerning the requirement for system operators to be established in Bulgaria. Minor adjustments are also needed in the field of redress procedure for the settlement of disputes between banks and customers.

In order to complete preparations for membership, Bulgaria must align with the revised recommendations of the Financial Action Task Force on money laundering and terrorist financing, and notably ensure that legislation in this area is fully and effectively enforced and that proven cases of money laundering are prosecuted.

Bulgaria is also generally meeting the commitments and requirements arising from the accession negotiations in the fields of **company law and accounting**, but some adjustments are still needed. Upon accession, Bulgaria is expected to be in a position to implement this *acquis*, as well as the Regulation replacing the Brussels Convention and the provisions of the Rome Convention.

Regarding the **competition policy** Bulgaria is generally meeting the commitments and requirements arising from the accession negotiations in the fields of anti-trust and state aid, and is expected to be in a position to implement this *acquis* from accession. In completing preparations for membership, particular attention must be paid to fine-tuning and updating legislative alignment, continuing to strengthen administrative capacity and, most importantly, continuing the development of a track record of proper application and enforcement of both anti-trust and state-aid legislation.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

In a way to provide equal opportunities for all the investors Bulgaria adopted **uniform corporate tax – 15 percent** for the profits and incomes of both local and foreign companies. The earnings and the incomes gained from capitals invested in Bulgaria are considered as profits and incomes of national origin regardless of the capital origin.

In the investment services sector, still important parts of the acquis remain to be transposed. Further alignment is needed as regards the acquis on market abuse and prospectuses, as well as the newly adopted acquis on securities markets (markets in financial instruments). The acquis on capital adequacy remains to be transposed. Bulgaria has been granted a transitional period until the end of 2009 as regards the investor compensation scheme, at the end of which it should reach the minimum level of coverage set out in the acquis.

3.2. POLICIES FOR THE PROMOTION OF INVESTMENTS

The main documents, which define government's investment policy, are:

- ◆ The new **Encouragement of Investment Act** / adopted on 23.04.2004/ regulates the terms and procedures for encouraging investment in the country, the activities of the state authorities in the field of investment encouragement, as well as the protection of investments.
- ◆ The **Rules and Regulations** for its implementation were adopted with Decision of the Council of Ministers No. 213 from 11.08.2004, promulgated in the State Gazette No. 74, 24.08.2004, in force since 24.08.2004.
- ◆ The **National Investment Promotion Strategy** /NIPS/, elaborated under coordination of the Investment Policy Directorate. The new Encouragement of Investment Act regulates the terms and procedures of investing in Bulgaria.

The National Investment Promotion Strategy is a horizontal strategy, involving all the relevant ministries. In its elaboration participated experts from the relevant ministries and from institutes and NGO's under the coordination the Investment Policy Directorate, within the Ministry of Economy. Although it is not a national industrialization strategy, it is developed in line with the major priorities from the National Plan for Economic Development (up to the year of 2006) and the National Plan for Development (2007 - 2013).

The NIPS contains measures, which are grouped in seven lines, each of them aiming at improving the business climate in Bulgaria and providing better conditions for foreign investors

- ◆ Improvement of the general administrative and legal environment;
- ◆ Development of the infrastructure;
- ◆ Labor quality improvement;
- ◆ Regional investment promotion policy;
- ◆ Support for investments in innovations and hi-technologies;
- ◆ Investment marketing;
- ◆ Improvement of the financial environment for the investors.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

The Encouragement of Investment Act

Under the Encouragement of Investment Act, **foreign investors are:**

- ◆ legal persons which are not registered in Bulgaria;
- ◆ partnerships which are not legal persons and are registered abroad;
- ◆ foreigners with permanent residence abroad.

Foreign investment is any investment or increase of investment of foreign persons or their branches in:

- ◆ stock or shares of trade companies;
- ◆ title to buildings and limited property rights over real estates;
- ◆ title and limited property rights over goods and chattels, having the nature of non-current tangible assets;
- ◆ title to unbundled parts of commercial companies with more than 50 percent state or municipal interest in their capital within the meaning of the Privatization and Post-Privatization Control Act;
- ◆ securities, including bonds and treasure bills, as well as instruments derivative therefrom, issued by the state, the municipalities or other Bulgarian corporate entities, with time remaining to due date not less than 6 months;
- ◆ credits, including in the form of financial leasing for a period not shorter than 12 months;
- ◆ intellectual property – subject to copyright and its related rights, patentable inventions, utility models, trademarks, service marks and industrial design;
- ◆ rights under concession contracts and contracts for commissioning of management.

The Encouragement of Investment Act regulates the terms and procedures for investing in Bulgaria. The **Minister of Economy** is the leading executive authority that shall perform the state policy in the investment sphere. In the implementation of this activity the Ministry of Economy prepares a strategy for encouraging investment in cooperation with other authorities of the executive power. In compliance with this strategy and the regional development strategies **regional Governors** shall develop investment encouragement programs for the respective region and coordinate their implementation.

The Encouragement of Investment Act sets forth preferential treatment measures for investment meeting certain criteria specified in the said law as follows:

- ◆ the investment to be in fixed assets acquisition with the purpose of creating new or enlarging or modernizing existing production of goods and/or services;
- ◆ new jobs to be created;
- ◆ the investment project to be implemented within 3 years;

The measures, however, do not apply to investment in banks, non-banking financial institutions, insurance companies, investment companies and companies with special investment purposes, managing companies, pension funds, health insurance companies, gambling companies and investment made under privatization agreements.

The measures are differentiated according to the class of the investment, as the latter are grouped in three classes, depending on the investment project value. The value thresholds are set forth in the Rules on the Enforcement of the Encouragement of Investment Act as follows:

- ◆ first class - investment over BGN 70 million.
- ◆ second class - investment from BGN 40 million to BGN 70 million, and
- ◆ third class - investment from BGN 10 million to 40 million;

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

General preference applied to all classes of investment is shortening the time limits for provision of administrative services to certified investors for realization of their investment plans. On presentation of a certificate for investment class, central and territorial executive authorities, and local self-government authorities shall provide administrative services within time limits by one third shorter than the ones provided for in the legislation.

For 3rd-class investment InvestBulgaria Agency provides information services to investors as follows:

- ◆ pre-developed information materials;
- ◆ information about potential partners in the country;
- ◆ information about all administrative procedures concerning the implementation of the investment project.

For 2nd-class investment InvestBulgaria Agency provides investors with:

- ◆ information services as mentioned above;
- ◆ individual administrative servicing with respect to all central and regional bodies of the Executive.

Investors have the opportunity to authorize officials of the Agency to obtain from the corresponding competent bodies on investors' behalf and on investors' account any documents necessary for implementation of the particular investment project as may be required under the existing legislation.

For 1st-class investment, the InvestBulgaria Agency assists investors as follows:

- ◆ individual informational and administrative services;
- ◆ assistance with real estate "titling" issues;
- ◆ infrastructure building support.

On the request of the 1st-category investor the Agency may propose to the corresponding authorities to transfer ownership rights or establish a limited ownership right over real estate (private - state or municipal property) without a tender or free of charge.

Where the technical infrastructure networks and facilities of the transport, water-supply, sewerage, communication, and other systems are public property, their construction will be financed from the state budget, or by the corresponding municipality on a decision by the Municipal Council; in all other cases they shall be on account of the managing operation company.

3.3. IMPLEMENTATION METHODS

A. Energy

3.3.1. Energy policy

In 2003, the **National Energy Strategy** was endorsed by the Council of Ministers having the following main priorities:

- ◆ Security of supply
- ◆ Competition in the energy sector
- ◆ Environmental protection
- ◆ Privatization and liberalization
- ◆ Establishment of a competitive energy market

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

The main principle of the strategy is Bulgaria to preserve its potential for exports of energy products through utilization and improved efficiency of the energy facilities. The strategy objectives are to curtail the role of the State as an administrator and to create transparent conditions for business in the energy sector, as well as to protect the public interest.

The main objectives of the governmental energy policy comprise of:

- ◆ ensuring the primary energy supply by diversification of sources and creation of the necessary infrastructure for transiting the Caspian oil towards Central Europe;
- ◆ elimination of subsidies for mining activities and closing inefficient mines;
- ◆ modernization of power and heat generation, transport and distribution installations, in accordance with the "Least cost development study";
- ◆ stimulation of private players on the electricity and heat market;
- ◆ elimination of cross-subsidies for heat and electricity;
- ◆ preparation of the EU accession, by adopting the "acquis communautaire";
- ◆ participation in East-West energy exchanges (interconnection of the Bulgarian power system to the UCPTE).

The energy sector is governed by the new **Energy Act** published in State Gazette, December 2003, the **Energy Efficiency Act** (State Gazette, 2004) and the regulations on their implementation. The Energy Act regulates implementation of production activities, import and export, transfer, transit transfer, distribution of electric and heat energy and natural gas, trade with electric and heat energy and natural gas, use of renewable energy sources, as well as the authority of state bodies in determining the state policy, regulation and control.

The **Ordinance on licensing** of activities in the energy sector was published in the State Gazette, June 2004. This ordinance establishes the terms and procedure for:

- ◆ Issuance, revision, amendment, termination and withdrawal of licenses for activities in the energy sector, as laid down by the Energy Act;
- ◆ Holding of tenders;
- ◆ Issuance of permissions for transactions specified by the Energy Act and granting authorization for corporate transformation by division, separation, consolidation or merger, and by change of the corporate legal status of licensees;
- ◆ Approving of the general terms of the contracts;
- ◆ Supply of consumers with electrical and heat energy and natural gas;
- ◆ Filing of complaints, their processing and voluntary settlement of disputes.

According to EC 2005 Monitoring Report, in the area of energy efficiency and renewable energy Bulgaria has achieved a good level of legal alignment, adopting the Energy Efficiency Act and the majority of implementing legislation in 2004. The Act, which is a priority for successful integration into the EU, establishes the institutional, legal and financial conditions for the implementation of a national energy efficiency policy.

In the field of nuclear energy and nuclear safety the legal framework is mainly in place, provided by the Law on the Safe Use of Nuclear Energy, and almost all implementing legislation has been adopted. Bulgaria has concluded a grant framework agreement with the European Bank for Reconstruction and Development (EBRD) to finance the decommissioning at Kozloduy NPP. It has also signed an additional pro-

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

tocol to its nuclear safeguards agreement with the International Atomic Energy Agency (IAEA) which entered into force in October 2000. In September 1998 Bulgaria became a signatory to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. A national strategy on waste and spent fuel has been presented.

Bulgaria's planned accession to the EU in 2007 obliges it both to meet EU standards on emissions and efficiency, and to liberalize its electricity sector. In the second half of 2005, the newly elected government announced the state policy's priorities in three main categories - restructuring, privatization and Belene NPP. The government seems intended to observe the engagements to EU regarding the four small units of Kozloduy NPP. According to Economy & Energy Minister Rumen Ovcharov, NEK (the national electricity distribution company) and Bulgargas (the national gas company) will be sold after restructuring. The construction of Belene NPP remains a priority for this cabinet, too.

3.3.2. Restructuring of energy sector

In 1992, NEK (the National Electricity Company) was created to administer transmission, distribution and generating capacity, with the exception of municipally owned heating plants. Bulgaria initiated the restructuring of its power sector in 2000. It was reorganized into seven independent power generators (six thermal power plants and Kozloduy NPP), seven distribution companies, and a transformed National Electricity Company (NEK).

NEK retains some hydropower stations, and is the primary grid operator and only supplier of power to distribution companies. NEK is responsible for electricity transmission, and being the system and market operator, its monopoly as a buyer and seller will end in 2007. NEK retained control of the 840 MW lignite-burning Maritsa East 2 TPP and 64 hydropower plants. The majority of NEK's facilities are expected to be sold by 2007.

In 2004, NEK posted net profit of BGN 18.9 mln, while its sales revenues increased by BGN 54 mln (3%) year-over-year. Bulgaria's electricity export forecast for 2005 is seen at 6,000-6,300 GWh. A total of 7720 MW were utilized to cover the load of the system (both from domestic consumption and exports) during the winter season. Household consumption declined by 11% for the period 1999-2004, but the consumption of the industry increased by 17.6%. NEK intended to make investments amounting to BGN 370 mln in 2005.

In line with the electricity sector, liberalization of the gas market has also started in 2004 and covers in principle 80% of the whole market. However, while growing the gas market remains relatively small and the actual degree of opening is only about 6.6% of total consumption. As a matter of priority, Bulgaria has to initiate the unbundling of Bulgargaz.

3.3.3. Privatization in energy sector

The EC's Comprehensive Monitoring Report on Bulgaria, issued in October 2005, noted the good progress made in the liberalization and restructuring of the energy sector. Privatization in the energy sector has advanced substantially with the sale of

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

the regional electricity distribution companies at the end of 2004, several district heating companies in 2004 and 2005 and several hydro-power plants and coal mines. The liberalization of the electricity sector continued with the lowering of the threshold for direct contracting between power generators and large industrial consumers. By August 2005, the liberalized market segment included eleven licensed buyers and five licensed producers and covered approximately 12.5% of the overall consumption. This process is set to continue gradually until full liberalization will be achieved in mid-2007. Alignment of electricity prices with cost-recovery levels had already been achieved in several steps until mid-2004 although a certain cross-subsidization of household consumption of electricity and heating energy continues to exist. In line with the successful restructuring of the energy sector, state aid has almost entirely been phased out.

B. Environment

Bulgaria has developed a **National Strategy for Environment and Action Plan 2000-2006**. It contains the main principles, goals and measures which have already been introduced to the National plan for economic development of 2000-2006 in the ISPA Strategy for Environment, also in other programs and strategies for sector Environment.

The achievement of the main objectives of Bulgarian policy is in compliance with the priorities laid down in the Accession Partnership document. The specific objectives are based on the national priorities and commitments following from the signed and ratified by Bulgaria global and regional conventions and all related protocols. Below are listed some objectives.

Air quality improvement objectives:

- ◆ Meeting the requirements of the standards for ambient air quality in settlements, where “hot spots” are situated;
- ◆ Abatement of the concentration of harmful substances emissions in regions with “hot spots”;
- ◆ Phasing out of trans-boundary pollution (emission of gases) for the towns located at the Danube River valley.

The analyses of the main pollutants show that local problems with the air pollution exist at some settlements in Bulgaria. Unfortunately, these are often the biggest towns, including the capital, where the main part of the population of the country lives (about 40%). The air quality of these settlements is directly dependant on the different emission sources.

Water quality improvement objectives:

- ◆ Improvement of underground and surface water quality;
- ◆ Supplying necessary quality and quantity of drinking water;
- ◆ Resolving the problems existing in the water supply;
- ◆ Supplying of water for irrigation and for the industry;
- ◆ Public Awareness for proper water resources use.

Waste management improvement objectives:

- ◆ Prevention and reduction of waste generation;
- ◆ Waste reuse and recycling;
- ◆ Improvement of waste collection and transportation;

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

- ◆ Environment sound waste management and construction of integrated facilities;
- ◆ Past contamination risk reduction;
- ◆ Legal regulation of the waste management;
- ◆ Public awareness;
- ◆ Improvement of monitoring and control systems.

According to the EC 2005 Monitoring Report, the so-called horizontal legislation is largely in place and is in line with the *acquis*, with the adoption of amendments to the Framework Environmental Protection Act.

The efforts of the Bulgarian government towards providing financial resources are focused on:

- ◆ Enterprise for environmental activities management.
- ◆ State and municipal budgets – mainly for the construction of public infrastructure sites in the field of domestic waste treatment, and in some cases, of hazardous waste and waste water treatment.
- ◆ Financial resources of the European Union – ISPA and PHARE – National trans-boundary program, etc.
- ◆ Attraction of foreign investments for ecological projects in the field of power engineering, through application of the scheme “Joint Implementation”, according to resources under the framework convention for climatic changes.
- ◆ Provision of resources from International Financial Institutions (IFIs). Having in mind the extent of the resources which Bulgaria will receive under ISPA financing and in the future - under the Cohesion fund, with the introduced rule for provision of precise percent national co-financing, the IFIs role will increase.
- ◆ Attraction of resources within the international agreements in the environmental field, and international donors programs, and bilateral agreements.
- ◆ Application of new swap-transactions “Debt for environment”.
- ◆ Attraction of private investments for improving the quality of municipal services in the field of domestic waste management and cleanness of settlements, water supply, sewerage and water treatment, through granting of concessions. The attraction of foreign investments under this scheme is of key importance for the municipalities, in view of renewal of the existing and construction of new infrastructure.

ISPA (Instrument for Structural Policies for pre-Accession)

The finance ministry and the delegation of the European Commission signed in January 2006 the financial memorandums for 133.2 mln euro in aid from EU's ISPA program. The Bulgarian side will provide 80 mln euro in co-financing. The resource will be divided among the projects for the renovation and expansion of the sewerage infrastructure in Sofia, Bourgas, Rousse, Sliven and Kyustendil, the modernisation of the wastewater treatment plants in the 5 cities and the construction of new plants where that is necessary. ISPA is a financial instrument, assisting the candidate countries to prepare for EU accession. It was designed to address environmental and transport infrastructure priorities identified in the Accession Partnerships with the 10 applicant countries of Central and Eastern Europe. ISPA is phasing out in 2010 for Bulgaria and Romania.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

As early as 2001, a pilot project of the World Bank for the environment protection at the region of Umikor Med JSC – Pirdop, was implemented. Under the World Bank project for environment protection and privatization, activities were undertaken to eliminate ecological damages caused by past action /inactions until the moment of privatization of three enterprises: Asarel-Medet JSC – Panagurishte; Kremikovtzi JSC– Sofia; and Neftochim JSC – Bourgas. Some arrangements on the program for reduction of past ecological damages were signed on three new enterprises: Sofarma JSC– Sofia; Neftochim JSC – Dimitrovgrad; and Agropolychim JSC– Devnya.

Attracting foreign investment

In practical terms, the recent projects of InvestBulgaria Agency in the field of environmental investment have included the following:

- ◆ Lyulin Heating Central – installation of low-emission burners in water boilers 2 and 5; main beneficiary is Sofia District Heating Power Plant through own financing and foreign financial institutions; total amount EUR 900 000.
- ◆ Zemlyane Heating Central – installation of low-NOx burners in water boiler 3; main beneficiary is Sofia District Heating Power Plant through own financing and foreign financial institutions; total amount EUR 450 000.
- ◆ Design and construction of central waste water treatment plant at KCM JSC, Plovdiv (non-ferrous metals smelter) - main beneficiary is KCM JSC-Plovdiv through Black Sea Trade and Development Bank (Greece); total amount EUR 4.5 mln.

For the last few years, the executive branch has envisaged introducing tax breaks and investment incentives to attract more foreign investment to Bulgaria. The 2004 Encouragement of Investment Act establishes incentives for investment in priority sectors of the Bulgarian economy. The InvestBulgaria Agency (IBA) is the only governmental institution authorized to assist the companies in the investment process. The Agency provides up-to-date information on the investment process in the country, legal advice, identification of suitable Bulgarian partners, coordination of the investment policy with other institutions to prospective investors. IBA provides for "granting back" up to 50% of the corporate income tax of companies carrying out the so-called "priority investment projects" that are defined by the Agency.

Joint Implementation projects

Good practical examples of Bulgaria's environmental investment policy are the Joint Implementation projects that have been carried out. For example, Agropolychim, Bulgaria's biggest fertiliser maker, has introduced a new technology for catalytic reduction of N₂O emissions that will cut pollution by 400,000 tons annually. The equipment was co-funded by the Danish government. Agropolychim will sell greenhouse gas emission reductions worth 3 mln euro to the Danish Environmental Protection Agency, investing the proceeds in a new wastewater treatment plant.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

JI projects implemented in Bulgaria

Country of cooperation	Project name	Location	Project developer
Kingdom of the Netherlands	Reduction of greenhouse gases through gasification of the towns	Veliko Turnovo, Lyaskovets and Gorna Oryahovitsa	Overgas Inc.
	Co-generation power station Biovet	Peshtera	Biovet JSC
	Plovdiv South co-generation project	Plovdiv	District Heating Plovdiv
	Reduction of greenhouse gas by gasification of Sofia municipality	Sofia	Overgas Inc.
Austria	Tzankov Kamak hydro power plant	River Vacha	NEK EAD
	Industrial energy efficiency and co-generation	Nikopol	Mayr-Melnhof Nikopol AD
	PFS biomass and energy efficiency project	Stambolijski	Paper Factory Stambolijski AD
Denmark	Agropolychim N2O reduction	Devnya	DEPA
Prototype Carbon Fund	Biomass Utilization in Svilosa	Svishtov	Svilosa
	Rehabilitation of district heating system in District Heating Sofia EAD	Sofia	District Heating Sofia EAD
	Rehabilitation of district heating system in District Heating Pernik EAD	Pernik	District Heating Pernik EAD

Source: InvestBulgaria Agency

District Heating Sofia AD, a JI project, has an Emission reduction purchase agreement with the Prototype Carbon Fund (PCF) under which PCF will be buying the reduction in the greenhouse gas emission for the period 2004 – 2012. The transaction is based on greenhouse gas swap generated by a project started in 2003 by District Heating Sofia AD for Sofia district heating rehabilitation. The project comprises the modernization of about 7500 district heating substations in residential buildings in Sofia and the replacement of over 70 km of pipelines of the city heating transmission network. The project is financed through loans from the World Bank, EBRD, PHARE and Kozloduy International Decommissioning Fund grants and own financing. The implementation of the joint investment project for Sofia district heating rehabilitation will lead to the reduction of greenhouse gases emission into the atmosphere with over 1.08 million tons for the period 2004 – 2012. Total cost of the project is EUR 114 million, according to InvestBulgaria Agency.

Meanwhile, a report prepared by the World Bank forecasts that Bulgaria will sell 50-60 mln tons of CO₂ emissions by 2012, raking in \$100-150 mln in the process. Between January 2008 and the end of 2011, Bulgaria will enforce a national plan for the greenhouse gas emissions allowances that will be traded between industrial enterprises, energy companies and municipalities.

The Tsankov Kamak hydro power facility is one of the local projects involved in a greenhouse gas emission scheme. Bulgaria's partner in the 220 mln euro project is the Austrian government.

Gas supplier Overgas, fertiliser plant Agropolychim, drug maker Biovet and the Sofia district heating company are among the other local participants in the trade with greenhouse gas emissions.

3.4. RELEVANT ADMINISTRATIVE BODIES

Government Organizations

3.4.1. Energy

Ministry of Economy & Energy

In the field of state policy the new government started with changing the structure of the Ministerial Council. The Ministry of Energy & Energy Resources and the Ministry of Economy were integrated to form the megastructure Ministry of Economy & Energy, with Minister Rumens Ovcharov.

State Energy & Water Regulatory Commission (SEWRC)

The whole economic and technical operation and development of the electricity sector is regulated, ruled, supervised and monitored by the State Energy and Water Regulatory Commission (SEWRC). It was set up as SERC by an Ordinance in October 1999 as a public institution, independent and autonomous. Water regulation was added to its mandate in 2005. The Commission is an independent specialized collective body with 13 members. The most important task of the Commission is preparing a legislative base for the application of the Energy Act and the Law on Regulation of the Water Supply and Sewerage Services.

The general capacity of the Commission includes:

- ◆ Regulation of the Water Supply and Sewerage Service (WSSS);
- ◆ Regulation of the WSS prices;
- ◆ Keeps a register of the contracts for assigning WSSS services;
- ◆ Registers the experts for control of the WSS services;
- ◆ Approves the proposed by the WSSS operators business plans.

Energy Efficiency Agency (EEA)

The Energy Efficiency Agency was established under the Energy Efficiency Act in 2004. It has executive independence and can formulate policy on energy conservation, draft legislation and act as a clearing house for the financing of energy saving initiatives.

Nuclear Regulatory Commission (NRC)

The Nuclear Regulatory Agency is in place but still needs to continue strengthening its capabilities and financial and institutional independence. Bulgaria should devote special attention to strengthening the state-owned enterprise dealing with radioactive waste management and to funding the radioactive waste-storage program, and generally ensure a high level of nuclear safety. In 2003, NRA was accepted as a member of the Western European Nuclear Regulator's Association.

National Electricity Company (NEK)

NEK acts as operator of the transmission company, power plants operator, wholesale trader and system operator. The restructuring of the company is high on the agenda, because this will result in its facilitated regulation and in the prevention of possible discrimination with regard to the free access.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Bulgargas

Bulgargas is responsible for developing the national strategy within the natural gas field and has as its scope of activity covers production, storage, transmission, dispatching, import, international transit and distribution of natural gas.

3.4.2. Environment

Ministry of Environment and Water (MOEW)

The Government is directly engaged in making decisions and taking positions related to the environment protection, where the central state institution responsible for the environmental policy implementation is the Ministry of Environment and Water. The Ministry of Environment and Water is responsible for:

- ◆ Development and implementation of the national policy in the field of environment;
- ◆ Development of Environment Regulations, and their harmonization with the related European Union Legislation;
- ◆ Management of EEAM and internationally funded projects in the field environment, including funds EU pre-accession funds;
- ◆ Preparation of the country position in the field of environment in the process of negotiations with the EU
- ◆ Coordination of other institutions activities regarding the environmental policy implementation;
- ◆ Management of the protected zones, being an exclusive state property;
- ◆ Management and distribution of water resources in the country, including mineral water, being an exclusive state property;
- ◆ Development of the policy for exploration and use of underground resources;
- ◆ Issuing EIA Resolutions for large investment projects with national importance, as well as obtaining of permits for waste handling, licenses for import, transit transfer and export of hazardous waste, species of the wild flora and fauna in danger, prospecting and exploration of underground resources.
- ◆ Public awareness about the state of the environment.

For smooth implementation of the Accession Partnership objectives, and consolidation of the administrative capacities for management and control of the pre-accession funds, a Directorate “European Union Funds for Environment” was established within the Ministry of Environment and Water. The Directorate is responsible for the project preparation, operative management and coordination of the entire project implementation. The functions of this Directorate are:

- ◆ Preparation of program documents for absorption of EU granted funds through the pre-accession instruments, as well as through the Cohesion Fund;
- ◆ Project preparation for funds application through the pre-accession instruments, as well as through the Cohesion Fund;
- ◆ Preparation, coordination and administration of the whole tender procedure;
- ◆ Project management and implementation;
- ◆ Financial management of funds granted by the European Union for the approved projects, including accounting system maintenance and update;
- ◆ Project progress reporting to the institutions responsible for monitoring and control of the funds granted by the European Union;
- ◆ Coordination of activities related to the funds granted by the European Union for sector environment with all national and international institutions involved.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Environment Executive Agency (EEA)

EEA is a specialized structure of the Ministry of Environment and Water, which:

- ◆ Exercises monitoring and analytic-laboratory activity;
- ◆ Carries out methodical guiding for RIEW, of the measurements and analysis performed;
- ◆ Collects and processes data on the state of environment, and issues the related bulletins;
- ◆ Prepares and issues annual report on the state of environment in Bulgaria;
- ◆ Coordinates activity of other institutions engaged in gathering and processing of environmental information.

Enterprise of environmental activities management (EEAM)

EEAM (former National Environmental Protection Fund) has a statute of a state enterprise within the MOEW, as states at Article 60 of the Environment Protection Act. This enterprise is the main source for environmental funding and co-funding of projects, besides the international financial institutions. Its experts participate in the project cycle by exercising monitoring and control to the project implementation, through monitoring and control mechanisms settled down for investment projects.

Regional Inspectorates for Environment and Water (RIEW)

Fifteen RIEW have been established as legal authorities of the Ministry of Environment and Water, having the following main functions:

- ◆ To control enforcement and application of the environment legislation;
- ◆ To render help to the municipalities in the process of local environmental policy implementation;
- ◆ To aware the public about the state of environment;
- ◆ To issue EIA Resolutions for projects and activities of regional importance, to issue licenses for waste handling activities, the water use and the use of water-courses;
- ◆ To supply data from the respective regions to the national environment monitoring system;

Water Basins Directorates (WBD), and Supreme Water Consultative Committee (SWCC)

The Water Basins Directorates were established at four regions purposed for the water basin control of the Danube region, Black sea region, Eastern White Sea region and West White Sea region. The Water Act specifies their boundaries and the towns, where the Water Basin Directorates have been established such as: Blagoevgrad, Varna, Plovdiv and Pleven. The Water Basin Directorates are responsible for the implementation of integrated management of the water quality and quantity. In order to manage and coordinate the activities of the four Water Basins Directorates a “Water” Directorate is established within the Ministry of Environment and Water. The main functions of these Water Basins Directorates are:

- ◆ to organize the development of the water basin management plans;
- ◆ to issue the relative licenses;
- ◆ to implement at water basin level the national water monitoring;
- ◆ to keep registers of the relative licenses, and to control the enforcement of their terms and requirements ;
- ◆ to organize and manage the collection and control of the results obtained from the monitoring; delivering and updating of data for wastewater needed for the information system;

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Supreme Water Consultative Committee

Assigned in order to support the MOEW in the water policy. It includes representatives from the MOEW, MRDPW, MAF, ME, MLS, MH, MF, MEER, Civil Protection, Bulgarian Academy of Science, the municipalities, non-governmental organizations in the field of water sector, etc. This committee renders assistance to the Water Basins. It works at a voluntary principle.

Municipal Authorities

The municipal authorities play an important role in the implementation of the environmental policy. Their main functions are:

- ◆ Development of environmental protection programs;
- ◆ Development of entire policy at local level for collection, transportation, removal of domestic waste, including policy application;
- ◆ Control of waste and of hazardous substances disposal within the territory of the municipality;
- ◆ Construction, maintenance and operation of UWWTP and domestic waste disposal sites;
- ◆ Public awareness about the state of environment;
- ◆ Law enforcement in the area of environmental protection within small sites of local importance.

Ministry of Regional Development and Public Works (MRDPW)

The Ministry of Regional Development and Public Works manages Directorate “Technical Rules and Norms”. The Directorate organizes and harmonizes the technical legislative base on project-making, execution, and operation of the constructions with the EU legislation; organizes the activity of introduction the principles of assessment of building materials conformity with the essential requirements to the constructions. The Directorate is authorized to:

- ◆ organize and manage the development of technical legislative base on project-making, execution and operation of the constructions
- ◆ manage the application of the technical legislative base on project-making, execution and operation of the constructions
- ◆ represent the ministry in the technical committees on standardization at the Bulgarian Standardization Institute, related to the construction and the construction sector and to participate in working groups for development and introduction of European and international standards as Bulgarian standards
- ◆ issue permits for observed technical rules and norms in the project-making and construction of facilities for manufacture and storage of explosives, arms and armory,
- ◆ organize and manage the process of issuing permits for assessment of the conformity of the building materials
- ◆ allows the application of new Bulgarian and imported building materials, etc.

The Ministry, via the Directorate PIU – ISPA Program – Public Works and Water Supply and Sewerage Systems, organizes the planning, preparation, execution, coordination, and the control over projects under the ISPA program in the environmental sphere – public works and the water supply and sewerage systems.

4. PRACTICAL ASPECTS OF THE INVESTMENTS

4.1. MAIN COSTS FOR INVESTMENTS IN THE ENERGY AND ENVIRONMENTAL SECTORS

4.1.1. Labor costs

4.1.1.1. AVERAGE MONTHLY WAGES AND SALARIES OF THE EMPLOYEES UNDER LABOUR CONTRACT BY ECONOMIC ACTIVITY IN 2005 * (BGN)

Economic activity	I quarter	II quarter	III quarter	IV quarter	IV quarter inc. annual bonuses
Total	299	314	317	326	339
Agriculture, hunting, forestry and fishing	223	235	244	243	245
Mining and quarrying	504	520	520	537	542
Manufacturing	275	288	292	299	305
Electricity, gas and water supply	536	566	566	585	591
Construction	244	268	277	278	283
Trade, repair of motor vehicles and personal and household goods	219	222	224	231	234
Hotels and restaurants	196	203	203	202	204
Transport, storage and communication	374	385	404	403	432
Financial intermediation	696	745	716	765	826
Real estate, renting and business activities	285	294	297	306	317
Public administration; compulsory social security	430	446	453	480	558
Education	307	346	342	350	362
Health and social work	339	372	373	386	394
Other community, social and personal service activities	231	237	240	244	258
Budget sector	328	352	354	366	399
Self-financing organizations	292	304	308	316	324

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Source: NSI

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

4.1.1.2. Structure of Labor Costs in 2004 (%)

Economic activity groupings	2004					
	Total	Wages and salaries	Employers' imputed social contributions	Employers' actual social contributions	Other social expenses and benefits	Taxes paid by the employer
Total	100.00	69.16	1.73	24.05	4.22	0.84
Agriculture, hunting, forestry and fishing	100.00	72.98	1.28	24.09	1.38	0.27
Mining and quarrying	100.00	60.63	2.92	27.37	7.50	1.58
Manufacturing	100.00	69.64	2.13	24.12	3.42	0.69
Electricity, gas and water supply	100.00	57.60	2.84	24.87	12.23	2.45
Construction	100.00	71.55	1.66	24.61	1.82	0.36
Trade, repair of motor vehicles and personal and household goods	100.00	74.26	0.77	23.58	1.15	0.23
Hotels and restaurants	100.00	72.20	1.23	24.14	2.05	0.38
Transport, storage and communication	100.00	59.49	2.00	21.97	13.77	2.77
Financial intermediation	100.00	69.54	1.32	21.49	6.40	1.25
Real estate, renting and business activities	100.00	72.41	1.35	22.59	3.04	0.61
Public administration; compulsory social security	100.00	71.92	1.62	25.44	0.87	0.15
Education	100.00	71.49	1.53	25.44	1.31	0.24
Health and social work	100.00	73.76	1.25	24.18	0.68	0.13
Other community, social and personal service activities	100.00	73.53	1.08	23.60	1.49	0.30

Source: NSI

4.1.2. Taxation

The Bulgarian tax regime can be classified in two main categories:

Direct Taxation:

- ◆ Corporate income tax
- ◆ Personal income tax
- ◆ Withholding taxes

Indirect Taxation:

- ◆ VAT
- ◆ Excise Duties

4.1.2.1. Corporate Income Tax

Under the Corporate Income Tax Act (CITA) all companies and partnerships (including non-incorporated partnerships), carrying out business in the country, are liable to a corporate income tax at a rate of 15%. Bulgarian resident entities are taxed on a worldwide basis. Foreign entities are taxed on their Bulgarian-source income. Companies are considered to be tax residents if they are registered in Bulgaria. Companies that are non-residents in Bulgaria, but operate in Bulgaria through a branch, office, agency or other form of a permanent establishment are only liable to tax on the profits generated through their Bulgarian establishment.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Annual profit must be declared no later than 31 March of the year following the taxable year. Generally, the taxable profit is determined in accordance with the financial result reported in the Profit and Loss Account ("P&L") adjusted for tax purposes. Depreciation is calculated by systematically applying the straight-line depreciation method. Depreciation norms should not exceed the following rates:

Category of assets	Assets description	Annual depreciation norms (%)
I	steady buildings, facilities, communication devices, electricity carriers, communication lines	4
II	machinery, manufacturing equipment, apparatus	30 - 50*
III	transportation vehicles, excluding automobiles; coverage of roads and airplane runways	10
IV	computers, software and right of using software	50
V	automobiles	25
VI	all other depreciative assets	15

*Possibility to be 50% when new investment is made and the equipment is new and purchased after January 1, 2005

4.1.2.2. Personal income tax

Under Personal Income Tax Act (PITA) tax liable persons are individuals - residents and non-residents, and corporate entities explicitly enumerated therein. Residents are considered individuals who reside in Bulgaria longer than 183 days for each 365 days period. Residents are liable for their world-wide income. Non-residents are considered those individuals who do not fit the above criteria for residents. Non-residents are liable only for their income derived from Bulgarian sources.

Local entities with annual turnover for the preceding year up to BGN 50 000 are taxed by a final annual (patent) tax for income resulting from sources in Bulgaria.

Incomes derived under an employment contract are taxed on a monthly basis as follows:

Monthly income	Tax
up to BGN 180	non-taxable
from BGN 180 to BGN 250	20% on the excess over BGN 180
from BGN 250 to BGN 600	BGN 14 + 22% on the excess over BGN 250
above BGN 600	BGN 91 + 24% on the excess over BGN 600

(As of 1.1.2006)

The annual taxable base is the sum of all taxable incomes received during the calendar year. The total annual income is subject to some adjustments and is then taxed in accordance with an annual progressive scale as follows:

Annual income	Tax
up to BGN 2,160	non-taxable
from BGN 2,160 to BGN 3000	20% on the excess over BGN 2,160
from BGN 3,000 to BGN 7,200	BGN 168 + 22% on the excess over BGN 3,000

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

above BGN 7,200 (As of 1.1.2006)	BGN 1092 + 24% on the excess over BGN 7,200
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4.1.2.3. Withholding Taxes

Certain types of income from sources in Bulgaria and payable to non-resident legal entities (if not generated through a permanent establishment) or individuals are subject to withholding taxes. The types of income are defined in CITA as:

- ◆ dividends and liquidation quotas
- ◆ interest, including such under finance leases
- ◆ royalties
- ◆ technical services remuneration
- ◆ rents
- ◆ payments under operating leases, franchising and factoring
- ◆ remuneration under management contracts
- ◆ capital gains from transfer of shares in local companies, securities issued by the State, a municipality or a local entity and local real estate

The withholding tax rate is 7% on dividends and liquidation quotas and 15% on the other types of taxable income. The withholding tax rate may be reduced under an applicable double tax treaty.

4.1.2.3.1 Withholding tax exemption for EU citizens

Dividends and liquidation shares, distributed by a local person in favor of a foreign natural or legal person, local for an EU member-country, are not subject to withholding tax under the conditions that:

1. According to the tax legislation of the respective EU member-country the person is considered as local of this country for tax purposes and by force of an agreement for avoiding the double tax levying with a third state is not considered as local person of a state out of the EU
2. The person is levied with corporate tax, without having right of choice or exemption from levying with this tax
3. The person is the actual possessor of the income and holds at least 20% of the shares/stocks of the local entity
4. By the moment of calculating of the dividends or the liquidation shares the person has owned the shares/stocks of item 3 continuously for a period not less than one year.

4.1.2.4. VAT

The Value Added Tax Act (VAT Act) currently in force is effective as from 1 January 1999. Although Bulgaria is not a member of the European Community, the VAT legislation in many aspects follows the provisions of the Sixth Council Directive 77/388/EEC on the common system of VAT and the uniform basis for its assessment.

The standard VAT rate is 20%. Zero rate of VAT applies to exports of products, certain eligible exports of services, as well as to some other transactions.

4.1.2.4.1 VAT Registration

Bulgarian and foreign businesses which carry out taxable transactions with a place of supply in Bulgaria and have a taxable turnover of at least BGN 50,000 during the preceding twelve months is obliged to register for VAT purposes. Non-residents, ex-

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

cept for branch offices, are registered for VAT through a VAT representative. Voluntary VAT registration is limited to some specific cases such as:

- ◆ if the business performs both VAT taxable transactions and zero-rated transactions (i.e. export) and has a turnover of at least BGN 50,001 (as of the 1-st of April, 2006 the required turnover drops to BGN 25,001);
- ◆ if a company incorporated in Bulgaria has a registered and paid up share capital of at least BGN 500,000.

There are special rules for the VAT registration in some cases of commercial companies' transformation and acquisition.

4.1.2.4.2 VAT Credit Refund

The VAT credit to be refunded can be set off against the VAT due, as well as against other liabilities to the state. The offsetting takes place during a 3-month term following the month in which the VAT credit occurred. If after this term there is still VAT to be refunded, the taxpayer may request a refund or continue offsetting it in the following months. Within three months as of the date of submitting the request for refund the tax authorities have to refund the remaining VAT after setting it off against any outstanding tax liabilities (there are indications that the second 3-month term may be reduced to 45 days).

4.1.2.4.3 Special preferential VAT regime for imports

As of 1 January 2003 VAT on the import of goods can be charged by the VAT registered importer if he holds a permit issued by the Minister of Finance and imports goods (with the exception of excise goods) according to a list approved by the Minister of Finance.

The importer shall exercise his right by:

- ◆ declaring in the filed customs declaration that he will use this regime;
- ◆ declaring that at the time of the import he is registered for VAT and has no outstanding tax liabilities and liabilities to the obligatory social and health insurance.

Where the importer has exercised his right, the customs authorities shall admit lifting the goods **without effective payment or securing of the VAT**.

The above special import regime is applicable to a person who simultaneously meets the following requirements:

- ◆ realizes an investment project approved by the Minister of Finance;
- ◆ is registered for VAT;
- ◆ has no outstanding tax liabilities and obligatory social and health insurance liabilities;
- ◆ has obtained a permit by the Minister of Finance;
- ◆ the project should be eligible for state aid for regional development.

The investment project shall be approved by the Minister of Finance in compliance with the following requirements:

- ◆ term of fulfillment of the project – up to two years;
- ◆ size of the investment – over BGN 10 million for a period not longer than two years;
- ◆ opening of more than 50 new jobs;
- ◆ the possibilities of the person to finance the project, as well as to construct and maintain sites providing its fulfillment.

The permit shall be issued for a period of up to two years on the grounds of a written request, to which the document designates by the law are enclosed.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

4.1.2.5. Excise Duties

Excise duties are levied on goods and services listed in the Excise Duties Tariff, which are:

- ◆ subject to transactions performed in Bulgaria, or
- ◆ subject to cross-border transactions from abroad to Bulgaria.

Subject to excise duties are:

- ◆ Spirit drinks, including beer and wine
- ◆ Tobacco products
- ◆ Fuels
- ◆ Some types of automobiles
- ◆ Gambling machines and other casino facilities
- ◆ Coffee and tea

The Excise Duties Act provides for reimbursement of excise duties upon exportation of goods, when excise stickers have been paid but not used by producers, etc

Countries that have Double Taxation Treaties with Bulgaria:

Albania; Armenia; Austria; Belarus; Belgium; Canada; China; Croatia; Cyprus; Czech Republic; Denmark; Egypt; Finland; France; Georgia; Germany; Greece; Hungary; India; Indonesia; Ireland; Italy; Israel; Japan; Kazakhstan; Korea North; Korea South; Kuwait; Lebanon; Luxembourg; FYROM; Malta; Moldova; Mongolia; Morocco; Netherlands; Poland; Norway; Portugal; Romania; Russia; Singapore; Slovakia; Slovenia; Spain; Sweden; Switzerland; Syria; Thailand; Turkey; Ukraine; Vietnam; Yugoslavia; Zimbabwe; United Kingdom.

4.1.3. Property Taxes

Profits from rental income are treated as taxable and are based on the gross income less tax-deductible, property related expenses and depreciation. Such expenses include repairs, maintenance, renovation and other similar costs and interest on loans used for the acquisition of the property or related expenses. A 10% municipal tax is charged on the taxable sum, which is then taxed at a flat corporate rate at 15%. Capital gains from the sale of property are treated as general income.

Land is not subject to a depreciation allowance but any immovable property is, provided it is used for the business activities of the company and is considered a fixed asset. Depreciation for tax purposes is at 4% pa and is calculated using the straight line method. Real estate acquired and then sold is considered to be an investment and can not be depreciated but is subject to an annual re-valuation to market value. In practice however, it can be unclear when a property should be treated as an investment property or a fixed asset.

4.1.4. Property Costs

Leasing Costs

Leasing costs associated with commercial property are usually in the range of a month's rent depending on whether any leasing strategy is involved in which instance costs are higher and subject to further negotiation. A standard level of leasing costs is not yet established, with deal structures and agency charges varying considerably. However as the market is maturing and a greater degree of professionalism is emerging in the leading agency firms, a more standard level of charging will soon develop.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Management Costs

Management costs vary significantly depending on the client's business objectives. Typical rates for a standard commercial management service are of the order of 5-10% of the annual rent but can be over 20% in some instances, particularly for residential schemes.

Costs of Owning Property

Building / land owners are obliged to pay property tax on annual basis. Where a building is on state / municipal land, the value of the land is also included in the tax base. The tax is equal to 0.15% of the book value of the property. In addition, property occupiers pay waste collection fee which for Sofia is currently 2.45% on the book value of the property. Elsewhere in the country this tax is typically 40% lower. Agricultural land is exempt from such taxes.

Trading Costs

Apart from corporate tax on profits, no other national taxes are levied on the transfer of property. However the transfer of property is subject to transaction fees including notary and municipal fees. The notary fees are paid on the higher of the market price or the book value of the property at varying rates, with the maximum being BGN 3500 (EUR 1786). In addition, 2% of the market value of the property is paid to the municipality in which the property is situated. This tax is based on the declared price of the property - a matter of growing debate due to reported abuses of the system, whereby some buyers declare below market values. Agents charge fees of around 3-6%, with higher fee levels usually split between the purchaser and the vendor, subject to the property transaction value. Higher fee levels of up to 10% are, however, still charged by some agents. Commercial property transactions and leases are subject to 20% VAT, which is refundable if the prospective purchaser/tenant is VAT registered. Transactions of land and property leases for residential purposes are exempt from VAT.

4.1.5. Labor and Social Security Legislation

Employers and employees from the Sector are observing the general provisions of Bulgaria's Labor Code, concerning employment, collective labor contracts, length of workweek and workday, rests and leaves. The Social Security Code (SSC) stipulates the obligation to pay social security, where the social security payments are shared between the securer and the secured person, as follows:

- ◆ 2006 - 65 (securer):35 (secured person);
- ◆ 2007 - 60:40;
- ◆ 2008 - 55:45;
- ◆ 2009 and the years after - 50:50.

4.1.6. Sector specific costs

4.1.6.1. Energy

Licenses are issued by the State Energy & Water Regulatory Commission (SEWRC). Licensed entities shall pay:

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

- (i) initial license fee - for issuance, or amendment, of a license; and
- (ii) annual license fees - for the regulatory activity of SEWRC.

The amounts of license fees are set forth in a tariff which is to be approved by the Council of Ministers upon proposal of the SEWRC.

4.1.6.2. Environment

The Environmental Impact Assessment of investment proposals is supervised by the Ministry of Environment and Water (MOEW) or the respective Regional Inspectorate on Environmental Protection. The fees for conducting the assessment range between BGN 700 – 1500 (EUR 360 – 770).

The process of issuing a Complex Permit is under the supervision of the Minister of Environment and Water, Executive Environment Agency (EEA), Regional Inspectorate of Environment and Water (RIEW). Different fees apply for different industrial activities, and the amount ranges between BGN 1000 – 20 000 (EUR 500 – 10 000).

4.2. MAIN BARRIERS TO INVESTMENTS

4.2.1. General barriers to investments

The legal system in Bulgaria is based on the constitution of July 1991. The legislative and regulatory framework in general corresponds to international requirements and standards. However, it has been identified by the EU as an area, which needs further reform. Judicial decisions can be subject to delays, sometimes resulting from corruption and inefficiency. The government is presently in the process of reviewing existing permit and licensing regimes to remove these obstacles to developing new businesses.

Following successive reports by the European Commission stressing the need for reform, some fundamental steps were taken in December 2003. The parliament passed important constitutional amendments which reduced the security of tenure and immunity from prosecution for judicial and prosecution officials.

In addition to the slow pace of judicial reform, corruption and bureaucracy are identified as another problem, which could disrupt the timetable for Bulgaria's accession to the EU. The privatization process, including the sale of some of the state's major assets, has been viewed as being subject to political influence by some observers. Despite the fact that the government made corruption a leading issue and have taken visible steps to tackle it, some observers don't believe that adequate progress has yet been made.

Despite this, Bulgaria has been one of the most progressive transition countries as defined by the EBRD. Bulgaria has been identified as a country with a high level of compliance in respect of international insolvency standards, for example, together with countries such as Romania and Croatia.

The *European Commission 2005 Report* confirmed the findings of its 2004 Report that the business environment, in particular the efficiency of the administrative and judicial system as well as regulatory procedures, should be further improved to increase Bulgaria's attractiveness for investment.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Efforts to improve the business environment have continued, but many obstacles remain and some reforms have been delayed or still need to be fully implemented. Despite some improvements, business surveys indicate that procedures for market entry and exit as well as contract enforcement still tend to be very time-consuming, costly and complex. Some first steps have been taken to streamline business registration with the adoption of the long-awaited Law on the Bulstat registry on 27 April 2005 and the ensuing adoption of a government strategy for the actual establishment of a central register of legal entities and of an electronic register of Bulgaria. The aim is to unify the registration of businesses with the Registry Agency under the Ministry of Justice, to turn business registration from a court procedure into a purely administrative procedure, and to introduce a single Bulstat number for tax and social security purposes. These measures will be important for making business registration simpler and more transparent, but still need to be fully implemented.

The Tax and Social Security Procedural Code which will provide for the integration of the collection of taxes and social security contributions and thereby lay the basis for the functioning of the National Revenue Agency also still needs to be adopted in this context.

The project for the modernization of the land registration system has encountered delays, although some progress in the functioning of the Cadastre Agency has been made especially at regional level. Hardly any progress has been made to improve the efficiency of bankruptcy procedures. Moreover, further planned amendments to the insolvency legislation are still only in the process of preparation.

Further efforts have been made to improve the functioning of the administration and to streamline existing regulation in line with the Law on the Restriction of Administrative Regulation and Control on Business Activity of December 2003. The review of existing licensing, registration and authorization regimes with a view to alleviate or lift these regulations has continued, as well as the introduction of one-stop shops. A majority of administrative units have tried to strengthen their service-orientation by adopting clients' charters and by increasing the availability of e-government services. The Law on Investment Promotion was also amended in April 2005 lowering the thresholds for potential investors to receive preferential treatment. However, the extent to which these measures lead to tangible improvements in the conditions for doing business is not always clear. A more systematic and comprehensive assessment of the business impact of existing as well as new legislation beyond the review of regulatory regimes mentioned above, including regulations at local level, would be important to further improve the business environment especially for SMEs.

While the Law on the Restriction of Administrative Regulation envisages the introduction of regulatory impact assessments, this needs to be implemented more systematically. The same holds for the introduction of 'silent consent' as a general principle in administrative procedures.

Some steps were taken to improve the functioning of the judicial system, but major challenges remain. Judicial reform made some progress but improving the functioning of the judicial system remains crucial for providing a transparent, stable and reliable legal framework for doing business and enforcing property rights. Delays have occurred in the adoption of the Administrative Procedure Code and the revision of the Civil Procedure Code which will be important for speeding up legal procedures,

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

facilitating the review of administrative acts and providing greater clarity and legal certainty. A Law on Mediation as an alternative out-of-court procedure for conflict resolution entered into force in December 2004. The enforcement of judgements by private bailiffs has in principle been facilitated by a law adopted in May 2005. Both measures still need to be fully implemented, but should help improving the functioning of the judicial system and in particular the conditions for contract enforcement.

4.2.2. Specific barriers to investments in the sector

4.2.2.1. Law for the Concessions

According to the Law **concession** is:

- ◆ the granted special right to use objects which are public state property, including those which shall be built by the concessionaire and funded by him.
- ◆ the granting of special right of use of objects over which the State exercises sovereign rights under the Constitution of the Republic of Bulgaria, inclusive through the use of existing facilities which are public state property and/or the construction of new facilities on the part and with the funding of the concessionaire;
- ◆ the granting of permission to perform activities over which monopoly has been established by law.

In cases when concession is granted over objects that are public state property which shall be built by the concessionaire and funded by him, these objects shall be cited in the decision to grant a concession, while the specific rights and obligations shall be settled in a concession contract.

The **procedure** for granting a concession shall include:

- ◆ taking a decision to grant a concession;
- ◆ holding of a tender or auction to determine the concessionaire or direct selection of the concessionaire in cases envisaged by law;
- ◆ conclusion of a contract for concession.

Decisions to grant concession are adopted by the Council of Ministers. The Prime Minister and the Ministers, in compliance with their competence, make reasoned proposals to grant concession with a legal, financial-cum-economic, social and environmental analysis for the concession. The procedure for granting concessions for objects which are municipal property, and for granting permissions for activities which are carried on by municipalities, is governed by the Law for the Municipal property.

No concessions may be granted that jeopardize the national security and the defence of the country, the environment, the territories and objects protected by law, and the public order.

Concessions are granted for **periods up to 35 years** as from the enforcement of the concession contract. The term of a concession may be extended with the consent of the parties under the concession contract, pursuant to a decision by the body which has taken the decision to grant the concession. The overall term of a concession **may not exceed 50 years**. The concessionaire under an expired contract, other conditions being equal, shall have preference for granting a new concession for the same object or activity.

Concessions may be granted for objects such as:

- ◆ ores and minerals in connection with relevant extraction;
- ◆ the waterfront beach strip;
- ◆ the biological, mineral and energy resources of the continental shelf and in the

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

exclusive economic zone, in reference to exploration, development, production, utilization thereof;

- ◆ the republican roads, sites of the railway infrastructure, including the land on which they are constructed or designated for their construction one or more terminals of a port for public transport of national importance, and in cases determined by a law – on parts of a port terminal and civil aerodromes for public use, existing and/or to be constructed with resources of the concessionaire, public state property;
- ◆ the waters, including mineral waters - sole state property;
- ◆ the aquaculture and the water supply facilities and systems, which are public state property;
- ◆ the plants for generating electric and thermal power, the electric power transmission and distribution networks, the main pipelines and major deviations therefrom for the transmission of power resources and products which are public state property;
- ◆ the forests and parks of national significance;
- ◆ the natural and archaeological preserves;
- ◆ other objects which are public state property, specified by law.

Concessions for the above mentioned objects may include the adjoining infrastructure and facilities. The concessionaire shall be determined by **tender or auction** or without an auction or tender, in cases envisioned by law. Participants in the tender or auction may be Bulgarian and foreign natural or legal persons registered as merchants.

The Council of Ministers shall create and maintain a **National Concession Register**, entering data for all granted concessions on the territory of the Republic of Bulgaria. The National Concession Register shall be public and an access to it shall be provided including through Internet.

As of 28 February 2006, there are 294 state and 562 municipal granted concessions in the register.

4.2.2.2. Energy

Limits in energy trading

The slow deregulation rate, the limited number of eligible consumers and price distortion are seen as the main setbacks facing the power traders. In general, big local industrial consumers tend to buy power directly from the power plants rather than from licensed traders who are unable to underbid the producers.

The only power trader that is currently active here is EFT Bulgaria. Apart from EFT Bulgaria, the regulator has issued trade licences to CEZ Trade, Albus and PCC Energia.

The industrial customers eligible to buy power directly from the power plants are copper smelters Cumerio, Asarel Medet, Elatsite Med and Chelopech Mining, non-ferrous smelter KZM, fertiliser producer Agropolychim, cement plant Devnya, steel maker Stomana Industry, chemical works Polimeri, the Maritsa East mines, lead and zinc smelter OZK, soda ash maker Solvay Sodi, and oil refinery LUKoil Neftochim.

Slow pace of liberalization

Under the terms of its EU accession agreement Bulgaria is obliged to liberalize its gas market, incl. the end of Bulgargas' monopoly on retailing and distribution. Since the mid-1990s Bulgaria has been issuing licenses to private companies to operate as

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

gas distributors, with the intention of creating a fully liberalized gas market by 2007. By late 2003, a total of 37 licenses had been issued to private distributors to operate around 90% of the country's low-pressure distribution network. Still, Bulgargas was responsible for 60% of gas sales to end-users, incl. most of the country's large gas users such as industrial complexes, and power and heating generators.

Licensing regime

According to the Energy Act, the activities subject to licensing are:

- (i) production of electricity and/or thermal energy;
- (ii) transmission of electricity or thermal energy or natural gas, as only one license for the territory of the country shall be issued for transmission of electricity or natural gas, and one license for one detached area – for transmission of thermal energy;
- (iii) distribution of electricity or natural gas - as only one license shall be issued for one detached area;
- (iv) storage of natural gas;
- (v) trade in electricity;
- (vi) organizing a regulated electricity market - only one license for the territory of the country;
- (vii) public procurement of electricity or natural gas - only one license for the territory of the country;
- (viii) public supply of electricity or natural gas - only one license shall be issued for one detached area; and
- (ix) transit transmission of natural gas.

Licenses are issued by the State Energy & Water Regulatory Commission (SEWRC) after a detailed procedure and upon submission of required documents provided for by the law. Only legal entities registered under the Bulgarian Commerce Act may apply for a license. Licenses are issued for a term of up to 35 years with a possibility for extension for another up to 35-year period. The SEWRC shall issue, or refuse to issue, a license within 3 months as of submission of the application.

Licensed entities shall pay:

- (iii) initial license fee - for issuance, or amendment, of a license; and
- (iv) annual license fees - for the regulatory activity of SEWRC.

The amounts of licensee fees are to be set forth in a tariff which is to be approved by the Council of Ministers upon proposal of the SEWRC.

License is issued to a corporate body registered according to the Commercial Code who:

- Has technical and financial capacities, material and human resources and an organizational structure for fulfillment of the normative requirements for carrying out the activity under the license;
- Has real rights on the energy sites through which he will implement the activity, if they are constructed;
- Presents proof that the energy sites through which the activity under the license will be implemented meet the normative requirements for safe operation and for protection of the environment.

In cases of a necessity of a new capacity for production of electric power, established and announced by the order of the law, the holder of the license containing an obligation for its construction is determined by a competition.

If the competition is won by a foreign person, the license will be issued to a company registered according to the Commercial Code, of which the foreigner possesses at least 67 percent of the capital. This person will not have the right to transfer his share in the licensed company to a third parties until the date of starting the licensed activity.

4.2.2.3. Environment

Environmental Impact Assessment (EIA)

The process of EIA of investment proposals falls within the legal framework of the Environmental Protection Act and the Regulation on the terms and conditions for carrying out Environmental Impact Assessment. The process is supervised by the Ministry of Environment and Water (MOEW) or the respective Regional Inspectorate on Environmental Protection. According to the Investment Encouragement Act, certified investors are provided with faster administrative servicing (please, see below the timeframe given in brackets). The main steps of the procedure are as follows:

- ◆ Notification to the competent authorities and the public concerned;
- ◆ Assessment of the need for EIA (screening of EIA) - within 1 month (5 days) as of submission of the request;
- ◆ Identification of the scope, contents and form of the EIA statement (scoping of EIA);
- ◆ Reviewing EIA Statement - 14 days (5 days) as of deposition;
- ◆ Public discussion on the EIA statement - 30 days (5 days);
- ◆ Taking decision on the EIA - within 3 months after discussion (1/3 shorter)
- ◆ The competent authority should provide the decision to the investor and announce it through the national media or in another appropriate manner - within 7 days after the decision (5 days).

Complex Permit

The process of issuing a Complex Permit is under the supervision of the Minister of Environment and Water, Executive Environment Agency (EEA), Regional Inspectorate of Environment and Water (RIEW). The legal framework is provided by the Environmental Protection Act and the Ordinance for conditions and order for issuing of complex permits for construction and exploitation of new and exploitation of operational industrial installations and facilities.

The procedure starts when application has been filed. The application should be presented in written form, as well as electronic. The application should contain also:

- ◆ draft of program for achieving of compliance;
- ◆ plan for own monitoring in compliance with the normative provisions for environment;
- ◆ decision on environmental impact assessment (EIA).

The timeframe of this step is 30-45 days. The competent authority places the application at public disposal for 30 days. Then the competent authority prepares technical assessment, including

- ◆ Assessment of opportunities for reduction of consumption of energy and raw materials;
- ◆ Assessment of measures for optimization of the production process;
- ◆ Assessment of measures for prevention of waste formation.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

The draft for complex permission has to be coordinated with MOEW and the respective RIEW and the basin directorate within 37 days. The competent authority places the project at public disposal for 30 days. The timeframe for issuance of complex permission document is 5 months for new installations and facilities, and 8 months for existing installations and facilities. The decision to issue a permit must be announced through the media of mass communication within 14 days.

Water supply and sewerage systems

The lack of criteria and principles to define the ownership of the water supply and sewerage infrastructure has created extremely complex problems in its management. There are 13 state Water Supply & Sewerage EOOD companies that are 100% state-owned; 16 mixed Water Supply & Sewerage OOD companies that are 51% state-owned and 49% municipality-owned; and 20 companies are municipal with 100% municipal ownership.

4.3. SEARCHING FOR A PARTNER. ASPECTS TO BE CONSIDERED WHEN NEGOTIATING A CONTRACT

The Bulgarian Commercial law allows for the following types of business organizations:

- ◆ unlimited (general) partnership;
- ◆ limited partnership;
- ◆ private limited company;
- ◆ public limited company (joint stock company);
- ◆ public limited partnership;
- ◆ sole trader;
- ◆ joint venture;
- ◆ branch;
- ◆ holding;
- ◆ co-operation;
- ◆ representative office.

The most appropriate types of companies for carrying out business in Bulgaria are: a **private limited company**, a **public limited company**, a **single-person private limited company**, a holding, a branch, and a representative office. All of these (with the exception of a representative office) have to be entered into the commercial register kept with the relevant district court.

Private Limited Company (a limited liability company) - "**OOD**" - is a commercial company with share capital owned by its members whose liability is limited to the amount of the capital subscribed. A private limited liability company may be founded by one or more persons, including foreign natural or legal persons. The minimum foundation capital is BGN 5000 divided into shares with nominal value of BGN 10 each and at least 70% of the capital must be paid at the company's set up. Contributions to the foundation capital may be paid in cash or in kind. The statutory bodies of the private limited companies are the general meeting of shareholders, which must be held at least once a year, and the managing director or board of directors.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

A single-person private limited liability company is called "**EOOD**". It is owned by a natural or a legal person, the sole shareholder exercises the powers of the general meeting and the managing director or board of directors is appointed to run the company. A private limited company must prepare a balance sheet and financial statements each year.

Below is a general explanation of what is needed to set up a private limited company in Bulgaria:

- ◆ produce its articles of association (Memorandum of Association - in the case of a single-person private limited company); the Law on Commerce stipulates the obligatory provisions of the articles;
- ◆ have appointed a managing director (or board of directors);
- ◆ have paid up at least 70% of its authorized capital, including at least one-third of each member's contribution.

This information together with details of the management, etc., is recorded in the commercial register and promulgated in the State Gazette.

Public Limited Company (a joint stock company) - "AD" - is a commercial company with share capital owned by its members whose liability is limited to the amount of the capital they subscribe. A joint stock company can be founded by two or more persons, including foreign natural or legal persons. The only exception to this rule is when the State is the only founder and, therefore, the sole owner of the whole capital of the company - in this case we have a **single person public limited company** ("EAD").

The minimum capital of a joint stock company is BGN 50 000, increasing to BGN 100 000 if the capital is raised by a public offer. A capital higher in value is required for the establishment of banks, insurance companies and investment companies:

- ◆ **banks** - the minimum capital required amounts to BGN 10,000,000,000;
- ◆ **insurance companies** - the minimum capital required amounts to:
 - ◆ Leva 2,000,000 for life insurance and personal accident insurance;
 - ◆ Leva 3,000,000 for property insurance;
 - ◆ Leva 4,000,000 for reinsurance;
- ◆ **Investment companies** - the minimum amount and the structure of the required capital as well as its relation to the assets and liabilities as per the balance sheet are determined by the Securities and Stock Exchange Commission according to the Law on Securities, Stock Exchange and the Investment Companies.

In the general case of a registration of a public limited company, contributions to foundation capital may be paid in cash or in kind, in which case an independent valuation is required, and at least 25% of the capital must be paid up on foundation. A joint stock company may issue either registered or bearer shares. The general meeting of shareholders is the highest body of the company, and must be held at least once a year. The shareholder's meeting elects a board of directors (a one-tier management structure) or a board of directors and a supervisory board (a two - tier management structure). A public limited company must prepare a balance sheet and financial statements each year. Special statutory instruments provide additional requirements to the foundation of banks, insurance companies and investment funds in the form of joint stock companies.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Below is a general explanation of what is needed to set up a public limited company in Bulgaria:

- ◆ have adopted articles of association;
- ◆ have all of its authorized capital fully subscribed;
- ◆ have paid up at least 25% of its authorized capital;
- ◆ have elected a board of directors; and
- ◆ have met any other legal requirements.

Details of the official business name and registered office of the company, its management bodies, and other facts related to its incorporation, existence and winding-up are recorded in the commercial register and promulgated in the State Gazette.

Holding - it is a public limited company, a public limited partnership or a private limited company with the purpose to participate in whatever form in other companies or in their management. At least 25% of the capital of a holding has to be entered directly in subsidiaries. A subsidiary means a company in which the holding owns or controls directly or indirectly at least 25% of the stocks or shares, or can appoint directly or indirectly more than 50% of the members of the managing body. The Law on Commerce explicitly names the activities, which a holding is allowed, and those not allowed, to perform.

Branch - foreign legal entities registered abroad, as well as foreign natural persons and entities that are not legal persons, can register a branch in Bulgaria provided they are registered as commercial entities in accordance with the relevant legislation in their home country. No authorized capital is required to found a branch. A branch is not a legal entity, it is part of the company - founder. Branches are obliged to maintain accounts as an independent company. A branch of a foreign company must prepare a balance sheet.

Representative Office - it is regulated by the Foreign Investment Law. Foreign persons who are entitled to engage in business activity under the legislation of their own countries may set up a representative office which is registered with the Bulgarian Chamber of Commerce and Industry. Representative offices are not legal persons and may not engage in economic activity.

Joint Venture - it is a company formed jointly by a Bulgarian and a foreign partner. The size of the foreign participation in a joint venture is not limited. Joint ventures must take one of the forms of business entities pursuant to the Bulgarian Law on Commerce. Establishment of a joint venture is one of the forms of investing in Bulgaria.

Bulgarians like to do business with people, face-to-face, therefore visiting the country to **meet and work with local partners and customers is vital**. You will need to be prepared to visit Bulgaria regularly to maintain the relationship with your partner and customers. Simply sending emails or faxes, or relying on distance selling techniques will not work.

Finding the **suitable local business partner(s)** is the most important factor for export success. Managing already established business relationships will require more time than in other countries, and regular visits to the market are vital.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Business etiquette

The usual office hours of business in Bulgaria are 9.00 am - 5.00 pm, Monday to Friday. Below are some words of advice about the ways Bulgarian people do business:

- ◆ Appointments can take some time to arrange, depending on the seniority of the person you wish to meet. It is recommended to seek appointments in advance of a visit.
- ◆ Allow sufficient time for business meetings, which can be quite protracted – always allow more time than you expect.
- ◆ It is expected that visitors arrive on time for an appointment. If unexpected circumstances arise to cause a delay of more than 10-15 minutes, call to notify the person of the delay.
- ◆ In the public sector, Bulgarians have at least two to four weeks holiday per year. The annual vacation period is usually in July and August and it is advisable not to arrange appointments during this period or Christmas/New Year.
- ◆ At formal meetings surnames are used. As relationships gradually build up it would be natural to address your counterpart in given (first) names. Business cards are normally exchanged at the beginning of a meeting.
- ◆ Decision-making is usually made on a consensus basis and it is recommendable to include all possible decision-makers.
- ◆ A business lunch or dinner usually follows negotiations. Bulgarians are very hospitable, and enjoy Bulgarian food and drink. Occasionally some of these lunches and dinners may take longer than usual. Lunch normally starts between 12.30pm-1.00pm, while dinner starts around 7.00pm-8.00pm. English is spoken in most of the big restaurants, especially in the capital, Sofia.
- ◆ There is a Bulgarian habit of toasting by clinking glasses with a 'rakia', a strong grape or plum brandy that comes together with a salad. The toast in Bulgarian is 'nazdrave' which means 'to your health'.
- ◆ Smoking is not an issue in Bulgaria, and Bulgarians can light up a cigarette in the middle of their salad. Nevertheless, it would be polite to ask whether it is accepted to smoke when visiting someone's office or home.

4.4. FOREIGN AND SPANISH INVESTMENT IN THE SECTOR. MAIN SUCCESSFUL CASES OF IMPLEMENTATION IN BULGARIA

4.4.1. Energy

InvestBulgaria Agency forecast that Bulgaria will need EUR 6 billion in energy investment over the next years to meet projected market needs. Some recent investment deals are presented in the table below.

Vendor	Investor	Target	Size (EUR m)
Government	Mitsui / Toshiba (85% financed by JBIC)	Rehabilitation of TPP Maritsa East 2	230
Government	VA TECH Hydro (Austria)	Tsankov Kamuk hydro power project	200
Government	EBRD, Societé General	Rehabilitation of TPP Maritsa East 3	518
Privatization	Energo-Pro (Czech Republic)	"Petrohan" HPP cascade	17.2

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Vendor	Investor	Target	Size (EUR m)
Privatization	CEZ (Czech Republic)	"Western Bulgaria" package of Electricity Distribution Companies (EDC)	281.5
Privatization	EVN AG (Austria)	"South-East Bulgaria" package of EDCs	271
Privatization	E.ON Energie AG (Germany)	"North-East Bulgaria" package of EDCs	140.7
Siemens	National Electricity Company (NEC)	Upgrade of a 400 kV power substation	9
Government	EBRD / EIB	Rehabilitation of Bulgaria's high-voltage network	153
Government	Global Environment Facility (GEF) Trust Fund (The World Bank)	Energy Efficiency Project for Bulgaria	7.6
Government	Varna Heating Utility	2 co-generating units with an installed capacity of 2.2 MW each	2.1
Greenfield	Horizon Energy Development Inc. (USA)	100 MW co-generation unit project	75.4
Government	Siemens (Germany), Framatome (France) and Atomenergoexport (Russia)	Modernization of units 5 and 6 of Kozloduy NPP	491

Source: InvestBulgaria Agency

Maritza East 2 TPP

The rehabilitation of Maritza East 2 TPP follows the award of EUR 226 million contract to Mitsui and Toshiba. The project is financed by the Japan Bank for International Cooperation (JBIC) with a credit of up to EUR 196.8 million. Maritza East 2 TPP plans to invest BGN 825 mln in the rehabilitation of its first four units and the retrofitting of units 5 and 6 with sulphur dioxide removal equipment. The main goal of the investment program is to increase the capacity of the plant by 156 MW and to extend its life by 20 years. Italian-owned commercial bank Bulbank AD has committed EUR 32 mln to the project. EU's ISPA program is expected to extend EUR 36 mln for the desulphurisation equipment with another EUR 25 mln coming from the EBRD.

Maritsa East 3 TPP

The modernisation of lignite-fired Maritsa East 3 TPP, in Southern Bulgaria, will be prolonged by 2 extra years, according to Energiyna Kompaniya Maritsa Iztok 3 which is in charge of the rehabilitation project. The project kicked off in April 2003 and was due for completion by April 2007. The delay is due to the poor shape of the power station and the lack of necessary expertise on the part of the chief contractor, Germany's consortium DCD&RWE. The rehabilitation of unit 1 was originally due for completion in the first half of 2004 but was later postponed first for July 2005 and then for September. The overall cost of the ongoing rehabilitation project is EUR 600 mln. Energiyna Kompaniya Maritsa Iztok 3 is co-owned by Maritsa East 3 Power Holdings with 73% and NEK. Italy's gas and water utility Enel holds 60% of Maritsa East 3 Power Holdings, U.S.-registered Entergy controls the remainder. Recently, Entergy quit the Maritsa East 3 modernisation project due to the current policy of the American company which is withdrawing from many European countries like Italy, Spain and England.

CEZ

Czech utility CEZ, which owns 67% stakes in the electricity distribution companies based in Sofia, Sofia region and Pleven, reported it had invested BGN 65 mln levs to

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

cut transmission losses, achieving a reduction of 10%. The resource was spent on the replacement of electric meters and prevention of power thefts. The company has replaced 222,615 electric meters so far. The process should be completed by the end of 2006.

4.4.2. Environment

According to InvestBulgaria Agency data, some of the major recent investment deals in the environmental sector are the following:

Vendor	Investor	Target	Size (EUR mln)
Government	EBRD / RWE NUKEM and GNB (Germany)	Construction of a dry storage facility for spent nuclear fuel at Kozloduy NPP	48.7
Government	ISPA / MNG Group (Turkey)	Construction of a waste water treatment plant (WWTP) in Northern Bulgaria	16.6
Greenfield	French TEC EM; EU pre-accession funds	Waste Treatment Plant	10
Government	Bulgarian NEK, JAERI, IAEA	Ecological installation in Maritsa East 2 TPP	6.1
Government	TPP Rousse	Noxious gases decrease	5.1
District Heating Rousse	Komercni Banka (Czech Rep.) - creditor; ZVVZ (Czech Rep.) - supplier	Rousse District Heating Company - Dust filter installation	4
Government	PHARE - National program	Reconstruction of "Buhovo" Tailings Pond Reconstruction – II Phase	3.1
Government	DEPA, National Trust Ecofund	Low Nox Burners for Sofia – East Thermal Power Plant	2.7
Government	EMEPA - MoEW	Kremikovtzi JSC	1.8
Government	DEPA	Grant for Modernization of Urban Waste Water Treatment Plant /UWWTP/ Varna- II Phase	1.5
KCM JSC	KCM JSC	JSC Designing and Reconstruction of the Hazardous and Industrial Waste Landfill of KCM JSC, Plovdiv	1.1
Greenfield	Government	Construction of a Nuclear Waste Depot by 2015	51.3
Greenfield	J/V between Biosphere Development Corp (USA) with USD 4.3 m and Silistra city	Solid Waste Processing Plant	6.5
Government	EBRD	Maritsa East 2 to install pollution control equipment	34
Government	ISPA	Administrative preparation of water	15.9

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

		and waste management	
Government	ISPA	Water, solid waste and air pollution projects	91

Source: InvestBulgaria Agency

Japan's Mitsubishi is building a 33MW wind power station near the village of Balgarevo, South-eastern Bulgaria. German-Bulgarian joint venture Universum Energy is another investor working on a wind power project. The company plans to build a wind farm in the Kavarna area. The SEWRC said the combined capacity of the proposed wind farm projects adds up to 50-60MW. The construction of wind power stations is attractive for investors because NEK is bound by law to purchase their electricity output at a price equal to 80% of the household electricity tariff that was in force the year before.

Bulgarian soda ash producer Solvay Sodi, part of the Belgian chemicals and drug group Solvay, was quoted by news outfit SeeNews it would invest 21.1 mln euro in environment protection projects by 2009 to further align its operation to the European Union's quality standards. Solvay Sodi, in which Solvay, Turkish glass maker Sisekam and the European Bank for Reconstruction and Development (EBRD) jointly hold 98%, posted a 11.6 mln euro net profit last year, down 5.4% from 2003, reported SeeNews. The company has produced over 1 mln tons of soda ash in 2005. Solvay Sodi has an installed capacity of 1.2 mln tons of soda ash, of which 800,000 tons of heavy soda ash and 400,000 tons of light soda

5. ANALYSIS OF THE MARKET OFFER

5.1. DOMESTIC PRODUCTION AND MAIN PRODUCERS

A. Energy

5.1.1. Energy production

Bulgaria's national power grid operator NEK exported over 7.6 bln kWh of electricity in 2005, an all-time high. Power supplies to clients abroad generated 22% of the company's sales. Another fresh peak was reached by the hydro power plants which produced 4.5 bln kWh in 2005. NEK plans to increase investment spending from BGN 193.5 mln to BGN 300 mln in 2006. The bulk of the investment resource will be absorbed by the Tsankov Kamak hydro power project.

According to NEK's executive director Lyubomir Velkov, the company will export next year 1 bln kWh electricity less than it did in 2005 due to the temporary closure of 2 units of the Maritsa East 2 TPP which are undergoing rehabilitation. Electricity exports could reach 6 bln kWh at best in 2006 and should decrease further in 2007 when units 3 and 4 of the Kozloduy nuclear power plant will be retired and the delays in the renovation of TPP Maritsa East 3 and the construction of a replacement capacity on the site of TPP Maritsa Iztok 1 take their toll on domestic power output.

In January 2006, power output has increased 13% as compared to January 2005 to meet domestic demand. Exports have jumped 30%. However, the capacity of the powerlines to the neighbouring countries does not allow for a further rise, NEK said in an official statement. Currently Bulgaria exports 600MW to Greece and Serbia each, and 110MW to FYROM daily. NEK can count on 700MW of reserve capacity at the thermal power plants in Varna, Bobov Dol and Rousse, and another 600MW which the water power plants can generate.

According to state-owned gas distributor Bulgargas data, in 2005 domestic natural gas consumption rose 11% year-on-year to 2.9 bln cu m. The energy sector accounted for 1 bln cu m of the consumed volumes. The chemical and metallurgical industries have increased their intake. Sales to gas distribution companies increased by 42% y/y, indicating that more Bulgarian households are switching to natural gas. Bulgargas reported revenues of BGN 930 mln for 2005, down BGN 30 mln from year ago.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

5.1.2. Energy equipment production

Energy products, spare parts and equipment made by local companies account for a very small proportion of resources. Also, some of the equipment manufactured locally is not up to international standards. As a result, Bulgaria is dependent on imported power equipment, devices and machinery.

Some local companies in the sector have focused only on assembly and manufacture of minor spare parts. The electric power equipment and distribution switchgear manufacturing is one of the traditional productions in Bulgaria. Two of the largest plants were procured by ABB and Hyundai. Well-known is Elprom TRAFO, the only manufacturer of distribution transformers. Some smaller companies that manufacture medium-voltage equipment for the country's power distribution network are also successfully developing in the sector. Cables and wires are probably the fastest growing sub-sector. The main production is concentrated in four large enterprises - Energokabel (hard drawn wire and bare conductors), Gamakabel (low power and voltage cables), Elkabel (high power and voltage cables) and EMKA (enameled wires).

B. Environment

Top companies in environmental activities

Company	Activity	Net sales (EUR '000)	Number of Employees	Year
Chistota-Sofia (Sofia)	Waste disposal and street cleaning	13,316	781	2003
Wolf-96 (Sofia)	Waste disposal and street cleaning	5,579	520	2003
DITTs (Sofia)	Waste disposal and street cleaning	5,127	329	2003
Volf (Sofia)	Waste disposal and street cleaning	3,910	127	2003
Scheele Bulgaria (Sofia)	Waste disposal and street cleaning	3,625	317	2003

Source: InvestBulgaria Agency

Companies in environmental engineering

Company	Activity	Net sales (EUR '000)	Number of employees	Year
Ruvex	Design, assembly and technical support of ecological heating systems	3,612,277	57	2003
Ecotech Products	Eco-tech products; environmental engineering	817,044	15	2002
Vodokanalengineering	Engineering design and investigation	840,564	69	2003
BalBok Engineering Co.	Environmental engineering	426,929	40	2003
Povvik-OOS Ltd.	Environmental consulting and engineering	303,707	20	2003
Bioeco (Varna)	Environmental engineering	373,754	36	2003
Water Engineering Ltd (Sofia)	Environmental consulting and engineering	N/A	50	2003

Source: InvestBulgaria Agency

In some recent developments, Dobrich-based company Ecoprocess, 40%-owned by venture capital fund management company Small Enterprise Assistance Funds, has

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

completed the construction of a factory for the recycling of used automobile tires. The plant uses a technique called vacuum pyrolysis to incinerate the tires and break them down into carbon, pyrolysis oil and gas. The recycling plant has so far absorbed BGN 1.5 mln levs of investment. The designed recycling capacity of 25 tons of tires daily should be achieved by mid-2006. Ecoprocess has asked the state-run Enterprise for Environment Activities Management to subsidise the cost of transporting disused tires to the recycling plant. Bulgaria is estimated to produce 60,000 tons of used automobile tires every year.

The Lovech municipality, in Northern Bulgaria, is drafting the paperwork for the construction of a 20 mln euro waste recycling plant. The facility, with annual capacity of 40,000 tons, could begin operation within the next 2 years, according to the mayor of Lovech. Belgian waste treatment solutions provider Keppel Seghers is a potential partner of the Lovech municipality. The Belgian side could extend 8 mln euro in grants for the project. The plant will be co-owned by the municipalities in the Lovech region with a minority stake held by the contractor that will build it.

5.2. FOREIGN PRODUCTION AND MAIN SUPPLIERS

Below is a brief description of some major upcoming investment projects. They appear to be indicative of the fields of investor interest and potential development in the energy and environment sectors in Bulgaria.

Construction of replacing capacity on the site of Maritsa East 1 TPP

In end-2005, U.S. company AES announced the launch of its EUR 1.1 bln power plant project in Bulgaria. The Bulgarian Government and AES officially signed the financial agreement for the construction of a 670 MW lignite-fired replacement capacity on the site of Maritsa East 1 TPP, in Southern Bulgaria. The company has engaged to build two electricity generation units, including desulphurising installations and the adjacent infrastructure.

The investor will contribute 30% of the project's EUR 1.1 bln. Calyon, ING Bank, BNP Paribas and EBRD will jointly loan EUR 790 mln for the construction of the power facility. The loan agreement has no state guarantee, and will be paid back from the project's revenues. Bulgarian banks will chip in a further EUR 45 mln. The company estimates that the new Bulgarian plant will bring in USD 300 mln in annual revenue starting in 2010. The size of the project qualifies AES for a First Class Investor certificate which, in turn, means that the Bulgarian government undertakes to finance the construction of the necessary infrastructure.

AES has subcontracted French engineering company Alstom SA on the project, which is scheduled to start commercial operations in 2009 and will replace some of Bulgaria's current nuclear capacity. AES has obtained the relevant construction permit and purchased part of the land that will be needed for the installation of the new capacity. AES was granted a 35-year concession license by the State Energy and Water Regulatory Commission and the Environment Ministry. Bulgaria's national electricity grid operator NEK will buy the output of the new power capacity at a fixed price for a period of 15 years.

Construction of a new nuclear capacity on the site of Belene NPP

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

In early 2006, two bidders entered the final stage of NPP Belene tender. Both are consortia - one led by the Czech Skoda, and the other by Russia's Atomstroyexport. The bidding prerequisites for the construction of Bulgaria's second nuclear plant include an annual turnover of at least USD 5 bln and previous experience in the construction and commissioning of water-pressurised nuclear units. Skoda formed a consortium with two banks, and Atomstroyexport - with the French Framatome and German Siemens.

The Belene project was suspended in the early 1990s due to cost overruns and environmental concerns. By the time the building of the 1,000 MW Soviet-designed plant was put on hold, some 40% of construction works worth USD 1.0 bln had already been finished, including the delivery of a Skoda reactor. The estimated cost of completing the plant is seen anywhere between EUR 1.5 and 4 bln. The construction site of Bulgaria's second nuclear power plant Belene is likely to receive the approval by the regulator in May 2006.

Construction of Yadenitsa dam

Bulgaria will employ a carbon credit scheme in the construction of Yadenitsa Dam, according to a memorandum signed by NEK and consortium of Austrian companies in 2005. The memorandum envisages using the proceeds from the sale of the greenhouse gas emission reduction to securitize the sale of the electricity output from the cascade and the trade with green certificates. The Yadenitsa project will be implemented in accordance with the signed Memorandum under Kyoto protocol between Bulgaria and Austria.

Rehabilitation of the heat distribution network of District Heating – Sofia

Austrian company VA TECH HYDRO GmbH&Co is exploring the opportunities to build a co-generation facility on the site of the Sofia-based Lyulin thermal power plant. The final decisions whether to grant VA TECH permission to go ahead with its plans lies with the Sofia municipal council and the Energy ministry. The state holds 42% of the shares of the heating utility of Sofia, the remainder are municipal property. The Austrians are also interested in building a similar facility on the site of the Zemlyane TPP, also in the Sofia area.

Energy and environmental equipment

According to InvestBulgaria Agency data, currently on the environmental equipment market in Bulgaria 25% is local equipment and 75% is imported equipment. Much of the energy equipment and technologies now in place in the Bulgarian factories is of European origin, purchased in the sixties and seventies. The Bulgarian import market for equipment related to the energy sector is dominated by German, French, Italian companies. Present are also some U.S. companies such as AES, Entergy, Westinghouse, General Electric, Honeywell, Horizon, Parsons.

Most of the installed network in Bulgaria was made in the former Soviet Union. However, there are some boilers, turbines, and generators imported from the U.S., Germany, former Czechoslovakia, Finland, Italy, Sweden, U.K., and France. Most of them were installed in the 1970s and 1980s through a centralized supply system. German firms such as Schneider, Rheinbraun, and Siemens are leading exporters of electrical equipment to Bulgaria. Currently, more than 30% of Bulgarian imports of

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

electric power equipment consist of German-made equipment. Although most electric facilities in Bulgaria were Soviet-made and often require Russian-made spare parts and replacements, imports from Russia declined from 37% (1993) to 10% (2003).

Most of the Bulgarian power generation assets are outdated and, therefore, need to be upgraded or replaced. With approximately 40% of the Bulgarian generating capacity scheduled to be retired by 2010, Bulgaria needs investment in the power sector. Since Bulgaria does not produce its own electrical power equipment, almost all installed assets and equipment have been imported.

According to NSI (National Statistical Institute) 2003 data, the import market share of energy equipment was as follows: United States 3.4%, Germany 32%, Russia 10%, Denmark and Finland 12%, United Kingdom 2.9%, France and Italy and Austria 17.9%. Other countries accounted for 21.8%.

Wind energy generators

In February 2006, the Bulgarian company Ecosource Energy received by InvestBulgaria Agency a certificate for 1st class investor for its project to build 44 wind energy generators with a total capacity of 100 MW in the area of Murgash peak in Stara Planina (Balkan) Mountain. This means the company will invest at least BGN 70 mln, and the state will assist it in building the infrastructure. The project is worth BGN 156 mln and will be implemented in two stages. The facilities comply completely with the requirements of the EU regarding the environment safety and are completely noiseless. The capacity of each generator will be 2.3 MW, with a total capacity of the park of 100 MW.

Twenty of the wind turbines, produced by the German leading company Enercon, will be installed during the first stage of the project, which will be completed at the end of 2006. The rest 24 turbines will be installed in the following two years. All generators will be 65 m high and with 71 m diameter of the runners. Preliminary estimations show that during the first stage the wind-power generation park will generate about 180 000 MWh electricity power annually, with a minimal annual exploitation of 3000 hours. The installation of the first 20 wind turbines is scheduled to start in mid-2006. The exploitation and maintenance of the generators will ensure permanent employment of at least 50 people and of over 100 employees engaged in the related activities.

Enercon Germany is one of the global leading companies in the design and trade of power-generators using wind sources. On a global scale the company has already produced and installed over 8000 wind turbines in more than 30 countries with a total capacity of over 6000 MW. The biggest in the world wind-power generation park in Magdeburg, Germany, also functions using wind turbines produced by Enercon.

Also, Sofia-based Tessa Energy plans to start construction of a wind farm in the Balchik area, on the Black Sea. The investor plans to install 25 generators on 110 ha site near the village of Momchil. Norway's Nordex is projected to supply the necessary equipment. Tessa Energy has pledged to invest over 50 mln euro in alternative energy projects in the Balchik area.

5.3. GEOGRAPHIC DATA

Geographic map of the Republic of Bulgaria



A. Energy

By its nature, electricity is less dependent on local resources within a strictly defined geographic area. Therefore this report is focusing on energy production rather than on the geographic location of energy consumers.

B. Environment

The quality of the environment demonstrates a continuous improvement in all planning regions. The main problems concern the access to drinking water with good quality for all the settlements, the sewerage systems in the settlements and the improvement of air and water quality in certain areas.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

In the Northwest region 98.5% of the population is supplied with water, however, 15% of it is dependent on water supply restrictions. The most serious are the water supply problems of Vratsa. Almost the whole population in the North Central region is supplied with water (99.6%), however about 20% of it is dependent on water supply restrictions. Lovech has the greatest deficiency. The Northeast region suffers heavy water supply problems – the aquifers are underground, at big depth and the water losses are over 65%. Their exploitation requires high energy consumption and determines the highest prices for water services; the population supplied with water in the region is 99.6%. Settlements in the Southeast region are comparatively well supplied, and the share of population supplied with water is the highest in the country (99.8%). A main problem is the poor condition of the water supply network. The population with water supply in the South Central region is 97.7% (the lowest rate in the country). Although the region is rich in water sources, about 1/6 of the people live on water restrictions and the most problematic districts are Smolyan and Pazardjik. For the needs of Madan and Rudozem municipalities Plovdivtsi Dam Lake is been constructed. There are still settlements in the Southwest region, which are not supplied with water. The share of supplied population is 98.8%, while 1/5 of it lives on water restrictions because of insufficient water storage volumes constructed for accumulating water during the periods of high water. In some municipalities of Sofia District, the entire population lives with water restriction regimes. Serious problems continue to exist in the district and city of Pernik.

Region	Share of population connected to water supply %	Share of population connected to water sewerage %	Share of population with shortage in the water supply %	Share of population served by Sofia Waste Water Treatment Station %
Northwest	98.5	52.9	4.6	14.1
North Central	99.6	59.7	12.4	21.6
Northeast	99.6	63.2	10.8	50.0
Southeast	99.8	65.6	7.1	43.8
South Central	97.7	64.9	13.5	21.1
Southwest	98.8	87.2	8.4	69.5
Republic of Bulgaria	98.8	69.2	10.3	39.9

Source: NSI, 2003

The inter-regional disparities in the share of population serviced with sewerage networks are extremely high - from 87.2% in the Southwest region to 53% in the Northwest region, while in the rest of the regions this indicator varies between 60-66%. The South Central region has been identified as the most polluted region in terms of air, water and soil. The largest numbers of areas with accumulative environmental problems are in this region. In the municipality of Kardjali, some areas have been identified with heavily polluted air, water and soils. Air and soils in some areas in the municipalities of Plovdiv, Assenovgrad, Radnevo and Dimitrovgrad show high levels of pollution emitted by the metallurgy, energy sector, mining, transport and the households. The Southwest region is classified at the second place with areas suffering accumulative environmental problems. Industrial activities, energy and transport

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

sectors, mining and processing of fossil fuels are the main polluters in this region. Their pollution impact is significant in terms of quality and quantity, and evidence for that are the isolated zones in Sofia Municipality (Kremikovtsi), Pernik–Batanovtsi, Ellin Pelin, Svoge and Srednogorie (Pirdop–Zlatitsa–Anton–Etropole). The pollution in these zones has a complex impact on air, water and soils. In the North Central region, areas with environmental problems exist in the municipalities of Pleven, Dolna Mitropolia, Veliko Tarnovo and Gorna Oryahovitsa because of air, water and soil pollution exceeding the permissible rates. Cross-border pollution is also observed (Rousse, Nikopol) coming from neighboring Romania, also there are landslide processes along the Danube River banks. The environmentally problematic areas in the Southeast region are localized in the city of Burgas and the Burgas Bay. In the Northeast region, the environmental problems are concentrated in the areas of Varna and Devnya. There are no areas with accumulative environmental problems registered in the Northwest region.

Air

The overall reduction of harmful emissions of the separate pollutants, having been monitored since 1991, is a result mainly from the confinement of production activities. The trend towards decrease in the annual concentration of lead aerosols in the urban agglomeration areas and the rest of the country territory is still continuing. This is because of the limited consumption of leaded fuels and the quality control system established. In 2003, high concentration levels of nitrogen dioxide were registered in the urban centers of the three largest agglomerations – Sofia, Plovdiv and Varna, while in other parts of the country the registered levels remained comparatively stable. There has been a decreasing trend in the sulphur dioxide levels, however, at a slower pace in comparison to previous years. For example in Plovdiv, maximum concentrations at the limit are often registered. The existence or absence of polluting industries is the main factor for impact on environment. In 2003, the Integrated Mining and Power Production Complex Maritsa East in Stara Zagora area had major contribution for air pollution. Approximately 69% of all sulphur oxides, 24% of nitrogen oxides, and 41% of carbon oxides were emitted in this area. Problematic with high levels of emitted harmful substances are the agglomerations, where chemical and copper-extraction enterprises are located: Sofia–Kremikovtzi (carbon oxide, carbon dioxide, nitrogen oxides), Dimitrovgrad (ammonia), Varna agglomeration area, including the territory of Devnya, which has increasing ecological problems (nitrogen oxides, nitrogen dioxide and ammonia), Bourgas (non-methane volatile organic compounds), Pernik, Rousse, Svishtov. In these cases, the concentration of harmful productions is more important than the size of the agglomeration itself. Dust bits continue to be serious polluter keeping the trend of steady high pollution levels all over the country. The main causes for the bad indicator rates are the widespread consumption of solid fuel (firewood and coal) for home heating, the old car park, as well as the dirty and dusty streets. The measurement results in recent years have proven the necessity of designing municipal programs for air quality management in three more cities. These are Shumen, Smolyan and Blagoevgrad, apart from the designated 35 areas which are subject to air quality assessment and management.

Water supply and sewerage systems

Water supply and drinking water treatment

Most of the settlements in Bulgaria have central water supply systems. The percentage of the population provided with water supply services is high in comparison with other European countries – 98.8% national average. No big disparities in terms of water supply are observed between agglomeration areas of the capital city and those of large cities and medium-size towns. 99.8% of the population in the capital city agglomeration is supplied with water, 99.9% in large cities agglomerations, and 99.0% in medium-size towns. Three agglomeration areas are exceptions: Kardjali - 92.2%, Razgrad – 93% and Smolyan – 95.7%. There is minor difference between the identified agglomeration areas (99.6%) and the rest of the country (97.3%).

The drinking water consumption of the population connected to public water supply is 95.3 liters per capita daily (743 231 402 liters). The capital agglomeration area has the largest volume of water consumption – 141.9 liters per capita daily (184 392 098 liters). The volume consumed in large cities' agglomeration areas is 95.4 liters per capita daily (186 284 342 liters), while in medium-size towns' agglomeration areas it is 77.9 liters per capita daily (160 936 895 liters). The overall volume of consumed drinking water for all agglomeration areas is 99.9 liters per capita daily (531 613 335 liters per day), while for the rest of the country it is 85.3 liters per capita daily or 211 618 067 liters. The population on water supply restrictions has decreased (seasonally and annually) from 21.0% in 2001 to 10.3% in 2003. The capital agglomeration has the lowest share in this respect – 0.8%. The shares for large cities and medium-size towns agglomeration areas are respectively 8.8% and 15.5%. Totally, 9.5% of the population of the identified agglomeration areas are on water restrictions, while for the rest of the country the share is 12.3%. A large part of the population in Pernik (91.1%), Dobrich (78.9%), Lovech (77.5%), Stara Zagora (75.6%) is under water restriction regimes. Although small in number, there are still some settlements not supplied or partially supplied with water. Most of these are located in mountainous and semi-mountainous areas and have small number of inhabitants.

Despite the high rate of completion of water supply systems in the settlements, most of these systems (over 88%) were constructed with asbestos and steel pipes in the period 1960 – 1980. This makes these systems physically fatigued and outdated, with high risk of damages, low exploitation efficiency and high water losses. The constructed 42 water purification plants aim to achieve the improvement of water quality in order to meet the drinking water requirements. In contrast to the high rate of population supplied with drinking water, the national average share of *population serviced with purification plants is comparatively low (42.9%)*. This share is more than twice larger in the capital agglomeration area – 93.2%. 53% of the population in large cities' agglomeration areas are serviced with water treatment plants against 37.4% in medium-size towns' agglomerations (which is below the national average). On average, the share of the population serviced with purification plants for all identified agglomeration areas (where most of them are located) is 56.8%. The share of the population serviced in the rest of the territory is only 13.2%.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Water supply and drinking water treatment

Territory	Quantity	Structure (%)
<i>Water consumption of the population serviced with water supply (liters per day)</i>		
Capital city agglomeration area	184392098	24,8
Agglomeration areas of the large cities	186284342	25,0
Agglomeration areas of the medium-size cities	160936895	21,7
Total (all identified agglomeration areas)	531613335	71,5
The rest of the country territory	211618067	28,5
Republic of Bulgaria	743231402	100,0
<i>Water consumption of the population serviced with water supply (liters per capita daily)</i>		
Capital city agglomeration area	141,9	
Agglomeration areas of the large cities	95,4	
Agglomeration areas of the medium-size cities	77,9	
Total (all identified agglomeration areas)	99,9	
The rest of the country territory	85,3	
Republic of Bulgaria	95,3	
<i>Population serviced with public water supply (number)</i>		
Capital city agglomeration area	1297376	99,8
Agglomeration areas of the large cities	1951992	99,9
Agglomeration areas of the medium-size cities	2046290	99,0
Total (all identified agglomeration areas)	5295658	99,6
The rest of the country territory	2415482	97,3
Republic of Bulgaria	7711140	98,8
<i>Population with water supply difficulties/restrictions (number)</i>		
Capital city agglomeration area	9997	0,8
Agglomeration areas of the large cities	172804	8,8
Agglomeration areas of the medium-size cities	320043	15,5
Total (all identified agglomeration areas)	502844	9,5
The rest of the country territory	304198	12,3
Republic of Bulgaria	807041	10,3
<i>Population serviced with water purification plants (number)</i>		
Capital city agglomeration area	1211583	93,2
Agglomeration areas of the large cities	1035601	53,0
Agglomeration areas of the medium-size cities	773430	37,4
Total (all identified agglomeration areas)	3020614	56,8
The rest of the country territory	328166	13,2
Republic of Bulgaria	3348780	42,9

Source: NSI

Sewerage and wastewater treatment

Compared to the development of the water supply systems, the completion of sewerage network in the settlements and the wastewater treatment plants is lagging behind. The constructed sewerage network serves a population of 5 395 420 inhabitants. The operational status of the existing sewerage systems is unsatisfactory. Over 20% of the sewerage systems are physically amortized and outdated and need partial or total reconstruction because of their failure to collect the wastewater generated by all consumers. The share of the *population serviced with public sewerage system* is

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

lower compared to the one supplied with drinking water – 69.2% national average. The largest share is registered in the capital agglomeration area – 94.3%. The shares in large cities' agglomeration areas is 80.5%, while in the medium-size towns' agglomeration areas – 72.9%. The total percentage for all identified agglomeration areas serviced by public sewerage system is 80.9% against 44.0% for the rest of the country. A number of 56 urban wastewater treatment plants were constructed in the country until 2003 and are presently operational. Two of them are located in the capital agglomeration area, 18 on the territory of large cities' agglomerations, and 16 in medium-size towns' agglomerations. Twenty urban wastewater treatment plants are operational in the rest of the country.

Sewerage and wastewater treatment

Territory	Quantity	Structure (%)
<i>Population serviced with public sewerage (number)</i>		
Capital city agglomeration area	1225307	94,3
Agglomeration areas of the large cities	1571713	80,5
Agglomeration areas of the medium-size cities	1506947	72,9
Total (all identified agglomeration areas)	4303967	80,9
The rest of the country territory	1091453	44,0
Republic of Bulgaria	5395420	69,2
<i>Population service with urban wastewater treatment plants (number), including biological treatment</i>		
Capital city agglomeration area	1131485 (1131485)	87,1 (87,1)
Agglomeration areas of the large cities	1040839 (1026887)	53,3 (52,6)
Agglomeration areas of the medium-size cities	751328 (664128)	36,4 (32,1)
Total (all identified agglomeration areas)	2923652 (2822500)	55,0 (53,1)
The rest of the country territory	185657 (126753)	7,5 (5,1)
Republic of Bulgaria	3109309 (2949253)	39,9 (37,8)
<i>Operational urban wastewater treatment plants (number)</i>		
Capital city agglomeration area	2	
Agglomeration areas of the large cities	18	
Agglomeration areas of the medium-size cities	16	
Total (all identified agglomeration areas)	36	
The rest of the country territory	20	
Republic of Bulgaria	56	

Source: NSI

The share of population serviced with *urban wastewater treatment plants* (UWWTP) is relatively small. The national average is 39.9%. In the capital agglomeration area it is 87.1%, while for the large and medium-size town agglomerations the numbers are 53.3% and 36.4%, respectively. The total share of population serviced in all identified agglomeration areas is 55.0% of the total population and for the rest of the country territory only 7.5%. Part of the UWWTPs do not have biological treatment module, and the share of the population serviced with biological treatment is respectively smaller. The share of wastewater treated with rural wastewater treatment plants has grown from 63% in 1999 to 78.5% in 2003. Rural wastewater treatment plants, how-

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

ever, still have unsatisfactory efficiency. In 2003, they had reached only 56% of their operational capacity. Main reason for this is the incomplete sewerage networks in the settlements. In settlements without sewerage systems and treatment plans, the household wastewater are piped out into septic pits. Untreated waters are also piped out into rivers and ravines thus polluting surface and underground waters leading to a serious negative impact on the local flora and fauna.

Wastes

A decrease in the volume of wastes was registered in the country for the period 1999 - 2003. The overall waste volume included 95% non-hazardous wastes, 4% household wastes and 0.7% hazardous wastes. In 2003, the largest volumes of industrial wastes were generated in the agglomeration areas with developed mining industry, e.g. Stara Zagora 37%, Sofia 30%, Kjustendil 14% and Pernik 13% of the total wastes in the country. The total household wastes collected is 3 916 thousand tons, and the quantities related to the population serviced remain relatively constant – approximately 500 kg. In the end of 2003, the organized collection of household and construction wastes services 82.0% of the country population. The population serviced in the urban agglomeration areas is 62.5%, while the rural population with waste transportation services in 2003 was 37.5%. The entire population of Sofia, 94.5% in Gabrovo and 92.8% in Kjustendil is provided with waste collection services. The populations of Silistra (47.1%) and Targovishte (49.5%) are in the most unfavourable conditions. A trend towards increasing the number of waste depots with organized waste collection has been observed over the last years. The depots are 706 in 2003, or with 29 more than 2002. The largest increase of depots number was registered in the districts of Vidin (20 new depots), Plovdiv (15) and Montana (11). In 2003, a drop in the number of depots was observed in Stara Zagora, Kardjali, Smolyan, and Vratza due to the closure of some illegal depots. The changes in the number of depots are related to the opening of new depots, shift of their status (from unorganized to organized), as well as the closure of depots with exhausted capacity and not meeting the requirements. Since 1999, the majority of new depots have been organized in the districts of Rousse (39), Vidin (32) and Veliko Tarnovo (31). The most important **problems** emanating from the current situation of waste management in the country are as follows:

- ◆ Inappropriate organization of collection and transportation;
- ◆ Solid waste depots do not satisfy the sanitary, normative and environmental requirements;
- ◆ Most of the waste collection and waste transportation equipment is in poor technical condition and is insufficient to meet the needs of municipalities;
- ◆ No system for separate collection of household waste has been introduced;
- ◆ Not all inhabited areas are serviced with organized waste collection and transportation which leads to uncontrolled waste disposal, appearance of new pollution and illegal depots;
- ◆ There are many unauthorized depots and abandoned polluted areas;
- ◆ Insufficient qualification of the employees working on the environmental issues;
- ◆ Insufficient knowledge and motivation of the population and low public involvement.

6. ANALYSIS OF THE MARKET DEMAND

6.1. GENERAL CONSUMPTION TRENDS

Renewable Energy Sources (RES) at the intersection between energy and environment sectors

According to a UNEP report on the inter-relation between energy and environment and its implications for Bulgaria, the preservation of the competitive advantages of Bulgarian industry requires its adequate development including environmental protection measures.

Bulgaria implements the UN Framework Convention on Climate Change and the Kyoto Protocol. Under the Kyoto Protocol, Bulgaria undertook the obligation to reduce the greenhouse gas emissions by 8% within 2008-2012, compared to 1988.

Recently a range of measures have been implemented in the energy sector, which have stabilised and reduced greenhouse gas emissions. Based mainly on the market principles, the energy industry has contributed significantly to emissions reduction in the other sectors of economy. The greenhouse gas emissions in the country have reduced by 56%, and in the energy sector – by 25%. Although most of the environmental protection activities require significant expenses, they are justified from an economic point of view because they minimize possible sanctions related to obligations under international environmental agreements.

The *Energy Efficiency Fund* has been established for financing the activities on energy efficiency improvement. The Fund finances investment projects for development of energy efficiency in compliance with the priorities set in the adopted by the Council of Ministers national long-term and short-term energy efficiency programs.

Under the EU Directive 77/2001 for the promotion of electrical energy produced from renewable sources in the domestic electricity market, Bulgaria has the obligation to achieve 11% share of the electricity generated from RES in gross electricity consumption by 2010.

At present, the share of the electric power from RES in the energy balance of the country is being formed mainly from water and wind energy utilization. This share is 13% of the gross electric power production for the first half of 2005, which is about

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

8% of the gross domestic consumption. During the last two years, there is a tendency of increase in the share of electric power produced from Renewable Energy Sources as a result of the friendly climate conditions and the active policy implemented in this sphere.

The first wind farms were built in 2003, which was the beginning of the usage of a new Renewable Energy Source in the country. Due to its climate and geographic characteristics, Bulgaria has a considerable potential of RES, which in practice has not been utilized and exploited effectively. RES are a local resource, which usage will contribute to the decrease of the country dependence on the import of energy sources and will have a positive social effect. A result of their usage is the greenhouse gas emissions reduction, which contributes to the fulfillment of the commitments under the Kyoto Protocol.

A draft Programme for the development of Renewable Energy Sources for the period 2005-2015 was elaborated in 2005. Its goal is to formulate measures and policies to promote RES usage in the energy balance of the country.

The Bulgarian Energy Efficiency and Renewable Energy Credit Line (BEERECL) developed by the European Bank for Reconstruction and Development (EBRD) under the Kozloduy International Fund is being implemented at present. To date 25 projects have been financed under the BEERECL, receiving loans worth more than EUR 12.8 million and worth total projects value of over EUR 25.3 million. These projects will generate annually more than 234,000 MWh of electricity and more than 198,000 MWh heat energy, over 8,000 MWh electricity savings and more than 160,900 GJ of heat energy savings, and around 164,700 tonnes of carbon emissions reductions.

There is an increased interest of the local banks to invest in such type of projects, developing programs, conforming to their investment policy of the banks and directed to their realization.

According to InvestBulgaria Agency forecast, electricity consumption in the country is expected to grow by 1.7 – 2.3% on an annual basis until 2020. This tendency for absolute increasing of the electric power consumption could be limited not only through energy efficiency measures, but also through redirecting of the final consumers (especially the industry) to alternative fuels and energies. Bulgaria has a number of potential renewable energy sources – hydro, solar and biomass, with geothermal and wind energy potential considered to be the highest.

By now, there have been established some good practices as regards implementation of RES projects in Bulgaria with the participation of foreign companies and suppliers.

Tsankov kamak Hydro Power Plant is the first pilot project under the joint implementation mechanism to the Kyoto Protocol based on the Memorandum of Understanding between the Republic of Bulgaria and the Republic of Austria, signed in September 2002. Through the joint implementation of the project, Austria will purchase the CO₂ reduced emissions from Bulgaria, as a result of the Vacha River Cascade construction.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Through this project, the greenhouse gas emissions will be reduced, as well as the emissions of sulphur dioxide, nitrogen oxides and dust, which are being otherwise released from the conventional Heating Power Plants in the electric power system of the country. The estimated reduced emissions after the construction of *Tsankov Kamak* Hydro Power Plant are about 200,000 tonnes carbon dioxide annually.

Sustainable use of the geothermal resources in Bulgaria Project is another example of good practice in the area of RES development. The main objectives of the projects are identification of the main obstacles to the utilization of the national geothermal resources in Bulgaria and preliminary researches for construction of geothermal heating systems, and preparation of banking projects using the geothermal resources and leading to the reduction of greenhouse gas emissions.

NATIONAL PROGRAMME ON RES IN REPUBLIC OF BULGARIA 2002 – 2010 RES NATIONAL POTENTIAL	Total Value in Million USD	Total Power Capacity MW	Total Heat Capacity MW
1. Solar hot water systems	73.2762		183.191
2. Solar PV power systems	46.6865	11.671	
3. Wind power generators	85.661	57.107	
4. Small and Medium Hydro PSs up to 10 MW	136.196	90.797	
5. Geothermal installations	385.396		770.792
6. Biomass installations	374.285		249.523
7. Biogas and Natural gas installations	244.257	122.129	122.129
RES TOTAL	1345.7577	281.7	1325.64

Source: Draft National Program on Renewable Energy Sources in Republic of Bulgaria 2002-2010, Executive Energy Efficiency Agency.

In February 2006, Bulgarian company Bul Eco Energia announced it would invest BGN 6 mln in the construction of a 8 MW wood-fuelled power station in Bansko. The investor has applied for a 15-year license for power production. The new power station will supply heating energy to the Bansko municipal buildings as well as the local phone equipment factory and several hotels. Bul Eco Energia will sell its output at BGN 78-80 / mW. The equipment for the power station, which will consume 200 tons of timber annually, will be supplied by Austrian company Polytechnik which has already outfitted similar facilities in Apriltsi, Ardino and Razlog.

In a separate development, another 15 large companies from Bulgaria's cement, chemical and ceramics industries have been issued permits for integrated pollution prevention and control. The recipients included Solvay Sodi, Agropolychim, Devnya Tsiment, Zlatna Panega, Vulkan, Plevenski Tsiment and Ideal Standard Bulgaria. The environment ministry has granted 76 such permits since '03. All 240 installations of the energy, metallurgical and chemical industries should be issued permits for integrated pollution prevention and control before Oct '07.

6.2. CONSUMER PROFILE

There are two tiers of consumers – companies that buy energy generation and environmental protection equipment, and end-consumers of the generated energy and environmental services.

A. Energy

Electricity consumption

In 2005, Bulgarian households used 3% less electricity than they did a year earlier, according to data from the national power grid operator NEK. Overall domestic electricity consumption rose 2.7% to 26.78 bln kWh. Sales to the public sector increased by 5.8% year-on-year. Industrial customers used less electricity in 2005, benefiting from investment in energy-saving technologies. If domestic consumption increases by 5-7% in 2007, Bulgaria may have to import electricity due to the upcoming retirement of units 3 and 4 of the Kozloduy nuclear power plant and the delays in ongoing projects on the sites of the Maritsa Iztok 1 and 3 thermal power plants.

Energy equipment

The industrial growth over the last two years has led to an increase in energy consumption. An important purchaser of power energy equipment is Bulgargas, the Bulgarian gas distribution and transmission monopolist. Bulgargas buys such items as gas turbine units, gas stations, valves, and pipeline equipment. Also, petrochemical companies rank the third in purchase volumes, specializing in boiler units and valves.

Enterprises of the metallurgical sector prefer to own private power plants that allow them to generate electric and thermal energy (especially those involved in energy dependent production as copper, zinc and aluminum smelting). Thus, they could control their costs and assure supply.

Regional and municipal governments usually buy power industry equipment within the framework of tenders. However, the terms and mechanisms of these tenders are not always transparent and it is difficult for foreign companies to penetrate this largely unexplored area.

Potential Bulgarian importers of electrical equipment are very price-sensitive. The ability to secure trade financing will be a crucial aspect to any potential sale in Bulgaria. The credit market in Bulgaria is improving and local banks, privatized by large foreign banks, are more open to provide funding for serious projects that involve big resources, such as those in the power industry.

Since many of the Bulgarian power plants use a high-ash-content coal, there are also short/medium-term opportunities for foreign suppliers of environmental equipment for coal-fired power generating plants.

Another opportunity for foreign companies is to sell licenses, know-how and special equipment to existing power equipment manufacturing facilities. Spanish firms could also form joint ventures or sign other types of agreements with these plants to produce higher quality/lower priced equipment to be sold to local power facilities or third countries.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Well-qualified expertise and capability exists in Bulgaria for export of consulting and engineering services for all types of projects in the energy sector. A significant number of turnkey projects have been performed by Energoproekt, Glavbulgarstroy, Gassstorymontaj, Chimcomplex in other countries. One option for foreign engineering companies is to form associations with these firms for work on joint third-country projects.

B. Environment

For a detailed review of consumers broken down by regions, please, refer to 5.3. Geographic data.

6.3. PERCEPTION OF SPANISH PRODUCTS

In general, Spanish companies in the energy and environment sectors are not well known for the general public in Bulgaria.

Construction of 400 kV interconnection line Bulgaria – FYROM

In 2005, seven companies submitted offers to build a 400-kV power line linking Bulgaria and FYROM. The bidders for the EUR 40.5 mln contract were Iberdrola of Spain, Croatia's Dalekuvod, Elektromonta of Romania, China's CWE, FYROM's EMO AD/EMO EB, SAG of Germany and Energoinvest of Bosnia and Herzegovina. The selected company will sign separate contracts for the section of the power line on Bulgarian and on FYROM territory. A total of 80 km of transmission infrastructure will be installed on Bulgarian territory and will cost EUR 20 mln. NEK has committed BGN 2.5 mln to the project with the remainder coming from EBRD.

For an indication of Spanish companies' presence, below is a table of Spanish imports of power generating machinery and equipment to Bulgaria.

Bulgaria's Exports and Imports to/from Spain 2004 (Thousand BGN)

Code		Exports	Imports
7	Machinery and transport equipment	26340	164170
71	Power generating machinery and equipment	2501	2587
72	Machinery specialized for particular industries	1647	13484
73	Metal working machinery	2369	2148
74	General industrial machinery and equipment, n.e.s., and machine parts, n.e.s.	6342	24502
75	Office machines and automatic data processing machines	39	268
76	Telecommunications and sound recording and reproducing apparatus and equipment	818	8923
77	Electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof (including non-electrical counterparts, n.e.s., of electrical household-type equipment)	12385	26509
78	Road vehicles (including air-cushion vehicles)	47	85749
79	Other transport equipment	192	0

Source: NSI (Code by sections and divisions of SITC, rev. 3).

7. OPPORTUNITIES AND RISKS FOR SPANISH COMPANIES

7.1. OPPORTUNITIES

A. Energy

Increasing electricity demand and the closure of Kozloduy units 3 and 4 can be supported by a combination of energy efficiency and renewable energy, increased use of Kozloduy NPP newly refurbished Units 5 and 6, and by a comprehensive program of rehabilitation of existing and construction of new power stations. The Bulgarian government has already announced plans for the closure of inefficient power plants or their conversion to natural gas, as well as the conversion of district heating plants into more efficient co-generation units capable of producing both heating and electricity.

Forthcoming significant projects

Project	Value (EUR m)	Period
Construction of new replacing capacity on the site of Maritsa East 1 – 2 units x 335 MW together with FGD plants	989	2005 - 2009
Construction of Belene NPP	2,045	2005 - 2011
Construction of highway gas pipeline for natural gas transit from Central Asia through Turkey to Central and Western Europe	350 - 400	2008 - 2012
Privatization of 12 Hydro Power Plants	N/A	
Privatization of DHC Plovdiv, DHC Pravetz, DHC Lovech and DHC Pernik	N/A	2005 -

Source: InvestBulgaria Agency

Bulgaria is expected to divest 100% the heating utilities in Varna, Shumen, Plovdiv and Pernik in 2006. The privatisation of the said utilities was held back in the past 2 years due to ongoing modernisation projects. The Pernik utility ended the January-October 2005 period in the red and was headed for a full-year loss of 1.3 mln levs. Bulgaria has so far sold the utilities in Bourgas, Pleven, Veliko Tarnovo, Razgrad, Gabrovo, Pravets, Vratsa and Loznitsa.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Other upcoming investment projects are as follows:

- ◆ Rehabilitation of unit 3 of Rousse TPP
- ◆ Aleko HPP rehabilitation
- ◆ Devin HPP rehabilitation
- ◆ Construction of Gorna Arda cascade
- ◆ Rehabilitation of Orpheus HPP and Krichim HPP
- ◆ Rehabilitation of Teshel HPP
- ◆ Construction of 400 kV interconnection line Bulgaria – Greece
- ◆ Construction of highway gas pipeline for natural gas transit from Central Asia through Turkey & Bulgaria to Central & Western Europe
- ◆ Expansion of the gas transit network capacity for the purpose of the quantity increase of the transit gas to Greece
- ◆ Construction of a transit gas pipeline to the Bulgarian-Serbian border
- ◆ Natural gas storage
- ◆ Construction of installation for combined generation of electricity and heating power in Varna EAD district heating company
- ◆ Construction of modules for the combined generation of electric and heating power in existing district heating companies

The biggest forthcoming investments in the energy sector are the construction of the new Belene NPP, the replacement capacity in Maritza East 1 TPP and investment in renewable energy sources. The overall investments in energy sector in 2004 amounted to EUR 3 bln, of which EUR 693.2 mln proceeds from the privatization of the seven electricity distribution companies.

In 2005, the Bulgarian Council of Ministers adopted a draft Energy Community treaty, aimed at creating a liberalized regional market for electricity and natural gas within Southeast Europe, following the rules of the common energy market of the EU. The contracting parties are the EU, Albania, Bosnia & Herzegovina, Bulgaria, FYROM, Romania, Serbia & Montenegro, Croatia, Turkey and UNMIK/Kosovo. The establishment of Energy Community between southeast European countries and the EU is expected to become an integrated competitive energy market based on common rules with nearly 500 mln consumers. The regional energy market will be established in line with the requirements of the EU Electricity and Gas Directives and other legal acts related to the operation of the internal energy market of the EU, environmental issues, etc. The high number of users and producers in this market will guarantee its high liquidity, that is minor price fluctuations and better predictability of the money inflow, which will lead to feasible return on capital and low risk for the potential investment in the region.

Environment

In 2004, Bulgaria completed the harmonization of its environmental legislation with the EU. Additionally, with the ratification of the Kyoto Protocol in 2002, Bulgaria committed to reducing the release of greenhouse gas emissions into the atmosphere by 8% compared to 1990 levels. As a consequence, Bulgarian companies have to triple their annual spending to EUR 460 mln in order to meet EU environmental requirements by 2014. It should be noted that current annual spending to meet EU

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

environmental standards is about EUR 150 – 180 mln. The cost of waste depots, wastewater treatment plants and incinerators alone is seen at 400 mln euro for the 7-year period. According to Invest Bulgaria Agency, the most intensive investment is required in the following areas:

- ◆ Chemical and biological treatment of waste water;
- ◆ Waste disposal, separation, composting and recycling, and incineration;
- ◆ Reconstruction and modernization of central heating systems;
- ◆ Reconstruction of existing facilities in the metallurgical sector;
- ◆ Installation of filters for reduction of heavy metal and persistent organic pollutant emissions.

Projects announced by InvestBulgaria Agency in the field of environmental investment include the following:

- ◆ Rousse East TPP – refitting of ignition burners for operation on natural gas; main beneficiary is Sofia District Heating Power Plant through own financing and foreign financial institutions; total amount EUR 350 000; period 2005 - 2007.
- ◆ Shumen TPP – installation of low-emission burners in four steam generators and termination of the use of residual oil; main beneficiary is Shumen District Heating Power Plant through own financing and foreign financial institutions; total amount EUR 1 mln; period 2004 - 2008.
- ◆ Sliven TPP – installation of low-emission burners in water boiler 1; main beneficiary is Sliven District Heating Power Plant through own financing and foreign financial institutions; total amount EUR 350 000; period 2004 - 2006.
- ◆ Sliven TPP – installation of two natural gas combined cycle units with electricity generating capacity 10 – 15 MW; main beneficiary is Sliven District Heating Power Plant through own financing and foreign financial institutions; total amount EUR 10 mln; period 2004 - 2008.
- ◆ Mladost Heating Central in Vratsa – rehabilitation of burners in water boiler 1 and 2; main beneficiary is Vratsa District Heating Power Plant through own financing and foreign financial institutions; total amount EUR 600 000; period 2004 - 2008.
- ◆ Varnenchik Heating Central – rehabilitation of burners; main beneficiary is Varnenchik District Heating Power Plant through own financing and foreign financial institutions; total amount EUR 450 000; period 2004 - 2007.
- ◆ Veliko Tarnovo Heating Central – construction of distribution gas pipes and replacement of burners in water boiler 1 and 2; main beneficiary is Veliko Tarnovo District Heating Power Plant through own financing and foreign financial institutions; total amount EUR 825 000; period 2004 - 2007.
- ◆ Regional Danube River Project - Bulgaria, Georgia, Romania, Russia, Turkey, Ukraine; main beneficiary is the Ministry of Environment & Water through GEF (Global Environment Fund); total amount EUR 4 707 692; period 2004 - 2007.
- ◆ Rhodope Project - main beneficiary is the Ministry of Environment & Water through GEF; total amount EUR 2 988 960; period 2004 - 2009.

In 2005, some of the amendments made to the Environmental Protection Act affected the Waste Management Act. The collecting, transportation, temporary storage, usage and/or neutralisation of waste can be now undertaken not only by Bulgarian legal and physical entities but also by foreign ones. The goal stipulated in the law is by 2011 to utilize or incinerate in energy generating installations minimum 60% of the waste generated by packages. The amendments also set requirements for recycling of waste generated by packages – from 45% to minimum 55% and maximum 80% of

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

the packages' weight. The most stringent requirements are those for recycling of glass, paper and cardboard packages.

7.2. RISKS

Potential risks are related to specific procedure issues and the manner of conducting tenders.

In early 2006, Bulgaria's Privatisation Agency (PA) cancelled the sell-off procedure for the district heating company based in Rousse, Northeast Bulgaria. The price offered for the heating utility by CEZ of the Czech Republic was deemed unsatisfactory. The other candidate, Russian state-owned company RAO EES, did not have a valid offer, the PA stated. Bulgaria was seeking a buyer for 100% of the combined-cycle utility. In addition to the Rousse utility, RAO EES also bid for the thermal power station in Varna but was barred from pursuing both by Bulgaria's anti-trust authority. After this decision, the negotiations with the Russian company for the Rousse utility were abandoned by mutual consent. RAO EES had priced a 51% stake in the Rousse heating company at 61.198 mln euro.

Austrian utility company EVN is seeking to collect damages of 27.1 mln euro after the Bulgarian state defaulted on clauses in the sale contract for the electricity distributor in Stara Zagora, according to sources from the Privatisation Agency (PA).

The Austrian company has lodged a request for arbitration with the International Arbitration Court in Paris. The PA official said that the arbitration case notwithstanding, the negotiations on settling the issue are still ongoing.

The contract that EVN signed in 2004 for the acquisition of the electricity distributor in Stara Zagora bound the Bulgarian state to sell the resort utility to the Austrians for 25 mln levs. However, the minority shareholders dismissed the agreed sale price and insisted for a higher price tag, effectively blocking the transaction.

After a period of negotiations, the state and the minority shareholders agreed to ask 42.5 mln levs without taxes for the utility. and a general meeting was called to approve the deal. However, at the meeting, the minority shareholder unexpectedly voted down the proposal.

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8. ANNEXES

Government Organizations on the Internet

Council of Ministers
Ministry of Economy & Energy
Ministry of Environment and Waters

www.government.bg
www.mi.government.bg
www.moew.government.bg

I. NON-GOVERNMENTAL ORGANIZATIONS (NGOS)

1. National Committee of Bulgaria for the World Energy Council (NCBWEC)

The National Committee of Bulgaria for the World Energy Council (NCBWEC) is the Bulgarian Member Committee of the World Energy Council. NCBWEC organizes the Bulgarian participation in WEC activities, participates in international energy projects organized by WEC, and promotes and disseminates information about WEC. NCBWEC is established in September 2002. It is a non-profit organization devoted to the social benefit. NCBWEC is a voluntary association of individuals and private and public entities.

Objectives:

- ◆ To represent Bulgaria in the World Energy Council (WEC) and to organise the Bulgarian participation in the WEC activities;
- ◆ To research issues related to the supply and use of all forms of energy having high social benefit and minimum environmental damage, in short and long term.
- ◆ To promote the research results
- ◆ To exchange information within the energy sector
- ◆ To collect, analyse, develop, and disseminate the energy sector perspectives.
- ◆ To collaborate with other entities that have similar objectives

Activities

- ◆ Organization and participation in energy-related research, discussions, and technical programs;
- ◆ Exchange of information under the WEC Global Energy Information Service;
- ◆ Identification and analysis of the most important Bulgarian and world energy problems, preparation of proposals to solve these problems, and preparation of strategic recommendations;
- ◆ Organization of seminars and conferences related to energy problems, publications, meetings and events;
- ◆ Carrying out of meetings of NCBWEC and exchange of information among its members;
- ◆ Collaboration with other entities.

Contact

National Committee of Bulgaria for the WEC

Tel. (+359 2) 9885722

E-mail: bnc-wec@doe.bg

<http://www.wec-bulgaria.org/index.html>

2. Bulgarian Atomic Forum - BULATOM

Established in June 2001, it is a non-governmental organization and represents engineering and construction companies, those engaged in equipment supplies and experts in nuclear field.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Main objectives:

- ◆ To influence the elaboration of public opinion on nuclear energy as part of a balanced energy policy in Bulgaria.
- ◆ To promote Bulgarian nuclear industry in front of the Bulgarian governmental and European institutions, mainly by the European Nuclear Forum (FORATOM).
- ◆ To coordinate the activity of its members in the elaboration of technical expertise on various matters related to the Bulgarian nuclear energy to be presented to governmental and non-governmental organizations in the country, as well as to international institutions.
- ◆ To coordinate and support participation of Bulgarian experts in international conferences and exhibitions, related to nuclear industry.

Membership

Members of Bulatom are more than 52 companies working in the nuclear energy field. Bulatom is a member of Foratom – the association of the European nuclear industry. Bulatom's main objectives are to promote the use of nuclear energy in Europe and to represent the interests of the Bulgarian nuclear industry. In pursuing these goals, Bulgarian Atomic Forum aims to participate fully in Europe's energy debate and to make the voice of the Bulgarian nuclear industry heard in the discussions about the EU's energy future.

Contact

Bulgarian Atomic Forum
1000 Sofia, Bulgaria
16 Veslets Str.
tel./fax: +359 (2) 93 98 150
<http://www.bulatom-bg.org/>

3. National Chamber of Electrical Engineering in Bulgaria - NCEEB

Contact

Bulgaria, 1407 Sofia, POBox 76,
tel.: +359 2 963 3532,+359 2 963 3437
fax: +359 2 963 0727,
<http://www.bcee-bg.org/eng/bncee.html>

4. Association of Bulgarian Energy Agencies - ABEA

Contact

1505 Sofia, BULGARIA
44 Oborishte str.
Tel: +359 2 943 49 09
Fax: +359 2 943 44 01
<http://www.managenergy.net/actors/A1950.htm>

5. Sofia Energy Agency - SOFENA

Established in July 2001 under the SAVE II Program of the European Union. SOFENA is a non-governmental organization and non-profit legal entity. Its founders are the Sofia Municipality, the State Energy Efficiency Agency, the Sofia district

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

heating utility - "Toplofikacia", the big private construction company - "Glavbolgargstroy" and 14 private persons (representatives of scientific institutes, universities, consumers and business organizations).

Goals

- ◆ To assist Sofia Municipality in developing a sustainable energy policy;
- ◆ To develop models for Sofia Municipality energy planning and to support their implementation;
- ◆ To involve the intellectual potential of the capital city in solving problems, concerning energy efficiency and implementation of new energy saving and ecological technologies;
- ◆ To reveal possibilities and to participate in projects, financed by foreign institutions, in the area of sustainable energy policy, energy savings and ecology;
- ◆ To establish and develop international contacts with related organizations in European Community and other countries for transferring know-how and up-to-date technologies;
- ◆ To contribute for the dissemination of positive experience of finalized projects in the area of energy efficiency, new energy sources and clean technologies;
- ◆ To initiate, assist, and support scientific and implementation work, research programs and projects in the field of energy efficiency and new technologies;
- ◆ To cooperate with other non-profit organizations with similar activities;
- ◆ To carry out research and to propose solutions for implementation of new schemes for financing energy efficiency projects;
- ◆ To complete preliminary studies for investment projects;

Main activities

- ◆ Assessment of the energy consumption and initiation of energy saving projects in the municipal, residential, industrial and office buildings;
- ◆ Assessment of the possibilities for energy savings in Sofia public transport and stimulation of corresponding projects.
- ◆ Development of a strategy for achieving energy efficiency of the street lighting;
- ◆ Development of proposals and participations in projects for increasing the efficiency of existing energy generating utilities in Sofia Municipality;
- ◆ Studies to identify the main transport and industry air pollutants and work out measures for decreasing the pollutions;
- ◆ Development of proposals for decreasing environment pollution and its impact on climate change;
- ◆ Assessment of the potential for implementation of renewable energy sources and supporting projects in that area.
- ◆ Investigations for the implementation of new schemes for financing the energy saving projects, as well as the implementation of flexible mechanisms of the Kyoto Protocol;
- ◆ Development of proposals for improvement of the legal basis concerning the stimulation of projects for energy efficiency and environment protection.

SOFENA is one of the founders of Association of Bulgarian Energy Agencies - ABEA (established on 10th January 2003) and during the first two years of its work the chairmen of the management board will be the executive director of SOFENA and the headquarter coincides with the SOFENA's address.

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Contact

Sofia Energy Agency - SOFENA
1505 Sofia, Bulgaria
44 Oborishte str.
Tel.: (+359 2) 943 49 09
Fax: (+359 2) 943 44 01
<http://www.sofena.com>

6. Energy Agency of Plovdiv - EAP

EAP is the first energy management agency established in Bulgaria under the SAVE II program of the European Commission (EC).

Goals

- ◆ To promote energy efficiency and clean energies as well as identifying and developing new energy projects at the local and regional level;
- ◆ EAP cooperates closely with partnership agencies in Portugal, Germany, Spain, France, Poland, and Italy.

Main activities

- ◆ Performing energy-conservation audits for factories and buildings;
- ◆ Developing local/regional energy plans;
- ◆ Identifying and developing energy-saving and renewable energies projects;
- ◆ Providing education and training on energy conservation;
- ◆ Conducting a public information campaigns on energy conservation and clean energies, entailing exhibitions and publicity; and
- ◆ Acting as a source of information on energy conservation, which involves the creation and maintenance of databases.

Office address

15 Gladstone Str.
Plovdiv House of Culture
4000 Plovdiv, Bulgaria

Mailing address

P. O. Box 364
4000 Plovdiv, Bulgaria
Tel: +359 32 62 57 55, +359 32 62 57 56
Fax: +359 32 62 07 80
<http://www.eap-save.org>

7. Municipal Energy Agency - Rousse

Created in 2001 under the SAVE II program of the European Commission (EC).
7000 Rousse, Bulgaria
3A Ferdinand Blvd
Tel: +359 82 82 12 44
Fax: +359 82 82 12 44
<http://www.managenergy.net/actors/A1359.htm>

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

8. Center “Clean Industry”

(www.bia-bg.com) was established in 1995 within the structure of the Bulgarian Industrial Association (BIA) with the aim to support the dialogue between industry and administration through increasing the enterprises' capacity to develop and implement environmental policy.

9. BluLink (www.bluelink.net) is a citizens' portal on environment in Bulgaria.

10. **Green Balkans** (www.greenbalkans.org) is the biggest Bulgarian non-governmental nature-conservation organization. The Green Balkans Federation has 4000 members and volunteers, and it comprises of four Regional Green Balkans Societies. Established in 1988.

11. **TIME – Eco-projects Foundation** (www.time-foundation.org) supports sustainable development, effective management of natural resources, and protection of environment.

12. **Priroda Nazaem /Nature on Loan/ Association** (www.bornat.org) is a nature conservancy organization with various projects and programs at international, national and regional level. Established in 1992.

II. INTERNACIONAL FAIRS IN BULGARIA 2006

MULTISECTORIAL

INTERNATIONAL TECHNICAL FAIR – AUTUMN (Information Technologies, Software, Machine – Building, Power Engineering and Ecology, Chemical Industry, Construction and Architecture, Transport and Autoservice Equipment, Electronics and Electrical Engineering)

Date of celebration: 25.09.2006 - 30.09.2006

Frecuency: annual

Place: Plovdiv

Organizer: INTERNATIONAL PLOVDIV FAIR

FAIRS OF ECOLOGY AND ENERGY

INTERNATIONAL TECHNICAL FAIR – AUTUMN (Information Technologies, Software, Machine – Building, Power Engineering and Ecology, Chemical Industry, Construction and Architecture, Transport and Autoservice Equipment, Electronics and Electrical Engineering)

Date of celebration: 25.09.2006 - 30.09.2006

Frecuency: annual

Place: Plovdiv

Organizer: INTERNATIONAL PLOVDIV FAIR

ENECO – International Exhibition of Power Engineering and Ecology

Date of celebration: 25.09.2006 - 30.09.2006

Frecuency: annual

Place: Plovdiv

Organizer: INTERNATIONAL PLOVDIV FAIR

AQUATECH – International Exhibition of Water Management and Technologies

Date of celebration: 25.09.2006 - 30.09.2006

Frecuency: annual

Place: Plovdiv

Organizer: INTERNATIONAL PLOVDIV FAIR

EXPO ENERGY – International specialized exhibition for heating, cooling and air-conditioning. Environmental protection

Date of celebration: 30.05.2006 - 02.06.2006

Frecuency: annual

Place: International Exhibition Centre - Sofia

Organizer: BULGARREKLAMA LTD.

INTERNATIONAL CONGRESS AND EXHIBITION ON ENERGY EFFICIENCY AND RENEWABLE ENERGY SOURCES

Date of celebration: APRIL 2006

Frecuency: annual

Place: Sofia

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Organiziner: VIA EXPO LTD.

Web: <http://www.viaexpo.com/congressen.html>

ORGANIZERS IN BULGARIA 2006

BULGARREKLAMA AGENCY LTD.

Blvd. Tzarigradsko shose, 147 - 1784 Sofia; phone: (003592) 9655280, 9655220; fax: 9655231

E-mail: bul-reklama@bulgarreklama.com

Internet: <http://www.bulgarreklama.com>

INTERNATIONAL PLOVDIV FAIR

4003 Plovdiv, Bulgaria, 37, Tzar Boris III Obedinitel Blvd.

Phone: (0035932) 903146, 903551; Fax: 902432, 620511

E-mail: mailbox@fair-plovdiv.com exhibitions@fair-plovdiv.com

Internet: <http://www.fair-plovdiv.com>

Sofia Office: 42, Parchevich Str., 7th Floor, Room 2 -1000 Sofia

Fax: (00359 2) 9872758, Tel: 9872631-5 (ext. 204)

VIA EXPO LTD.

3, Anton Chehov Str.- Plovdiv 4003; phone: (00359 32) 960011, 960012; phone/fax: 945459;

E-mail: via-expo@plovdiv.techno-link.com

www.viaexpo.com

III. ENGINEERINGS AND CONSULTANTS OF ENERGY AND ENVIRONMENT

BALBOK ENGINEERING CO.

Avda. Vasil Levski, 118 - 1504 Sofia; Tel: (003592) 9441905,9446364; Fax: 9441907

E-mail: balbok@balbok.com, Web: www.balbok.com

Established: 1993

Executives: Lilia Nikolova-Zhelyazkova (Exec. Director)

Environmental, antipollution and public health consultants

Waste recovery consultants

Hazardous waste storage consultants

Ecological studies, consultants

BIOECO CO

Zapadna promishlena zona; P.O.Box 94 - 9009 Varna; Tel: (0035952) 502014; 502023; Fax: 502009

e-mail: bioeko@mbox.contact.bg

Established: 1997

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Profit: 474000 (2002)

NetSales: 472000 (2002)

Number of employees: 36

Executives: Dimitar Keremedchiev (Exec. Director); Georgi Grozev (Product.)

Metal machining contractors (cont'd)

Toolmaking services

Environmental, antipollution and public health consultants

Water treatment and purification plant design and development consultants

DELPHIN PROJEKT ECOTECHNICA LTD

ul. Timok 4, et. 6, 1202 Sofia; Tel: (003592) 9319855, 9319780; Fax: 9319781

e-mail: delphineco@aster.net web: www.delphineco.hit.bg

Established: 1999

Number of employees (approx.): 11-20

Executives: Ivan Sekoulov (Manager); Krasimira Kuzmanova (Manager)

Nature of Business

Water and wastewater treatment. Solid waste treatment. Water supply and sewerage systems.

Water quality analysis. Industrial waste water treatment. Science development. Measurement, analysis.

Machinery and equipment for water and sewage treatment (trading)

Water and sewage treatment equipment (trade)

Civil, structural, hydroelectric and mining engineering consultants

Water supply engineering consultants

Environmental, antipollution and public health consultants

Ecological studies, consultants

Solid waste management consultants

Water treatment and purification plant design and development consultants

Research, general

Material testing, assaying, analysing and inspection services (cont'd)

Water analysis services

ECOPROGRESS INTERNATIONAL LTD

bul. Tsarigradsko shosse 7 km, 1784 Sofia; Tel: (003592) 8752060; Fax: 8752060;

Móvil: (00359888) 509380;

e-mail: ecoprog@tea.bg web: www.ecoprog.hit.bg

Executives: Ivan Zapryanov Valchinov (Manager)

Contact Persons: Diana Valchinova (Sales dept.)

Environmental, antipollution and public health consultants

Ecological studies, consultants

EPS BULGARIA LTD

Avda. Dragan Tsankov 35 - 1125 Sofia; Tel: (003592) 97713583; 8703066 Fax: 8700405

e-mail: eps-bg@bnc.bg web: www.epsbulgaria.com

Representative office: Naval OY

Foreign representative offices

Foreign representative offices, sales and technical support

Environmental, antipollution and public health consultants

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

GEOZASHTITA LTD

Zapadna promishlena zona - 9000 Varna; Tel: (0035952) 446151; 500583, Fax: (0035952) 452276

e-mail: geoz_vn@info-business.bg

Established: 1989

Number of employees: 60

Executives: Jordan Petrov Jordanov (Manager)

Civil, structural, hydroelectric and mining engineering consultants

Structural restoration and underpinning consultants

Environmental, antipollution and public health consultants

Ecological studies, consultants

Geological, geotechnical, geochemical and oilfield engineering consultants

Geological engineering consultants

Geotechnical engineering consultants

Rock formation and core analysis services

GLOBAL TEST LTD

ul. Yanko Zabunov, bl. 3, vh. B, 1408 Sofia; Tel: (003592) 9530796; Fax: 9535195

e-mail: glbl_tst@sps.bg

Established: 1994

Import countries: Germany

Executives: Roumen Andronov (Manager)

Distributor of: Teso

Distributor of: Vega

I Measuring and testing equipment (trade)

Electrical and electronic measuring, monitoring and controlling instruments for various applications (trade)

Environmental, antipollution and public health consultants

Air pollution consultants

Water pollution consultants

Water treatment and purification plant design and development consultants

HAFI PLC

ul. Ladoga, bl. 208 A-V, vh. 1, et. 1, ap. 3 - 1618 Sofia; Tel: (003592) 8558548; 8558773; Fax: 8555244

e-mail: hpesheva@abv.bg

Number of employees: 9

Executives: Jordan Peshev (Exec. Director)

Representative office: Aerzen

Compressors

Air compressor sets, stationary

Water, sewage and industrial effluent treatment plant and equipment (cont'd)

Water purification equipment, ultra high purity

Drinking water treatment and purification plant

Treatment systems for water percolated from solid urban waste disposal areas

Environmental, antipollution and public health consultants

Water treatment and purification plant design and development consultants

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

INSTITUTE OF METEOROLOGY AND HYDROLOGY

Avda. Tsarigradsko shosse, 66 - 1784 Sofia; Tel: (003592) 9753986; 9753988;

E-mail: office@meteo.bg Web: www.meteo.bg

Established: 1989

Number of employees: 300

Executives: Konstantin Tsankov (Exec. Director); Margarita Petkova (Adm.)

Subsidiary: NIMH, Plovdiv 4000, bul. Ruski 139, tel.: (032) 623695

Subsidiary: NIMH, Pleven 5800, ul. Hadji Dimitar 60, tel.: (064) 827057, fax: 827920

Subsidiary: NIMH, Varna 9005, ul. Sveti Nikola 10, tel.: (052) 302256, fax: 302256

Subsidiary: NIMH, Kjustendil 2501, tel.: (078) 33488

Environmental, antipollution and public health consultants

Meteorological services

Meteorological research

Meteorological research institutes

INTERHEMA LTD

P.O.Box 135 - 1113 Sofia; Tel: (003592) 9743255; 9743690; Fax: 9743689

Established: 1994

Number of employees: 17

Executives: Peter Zlatkov (Manager)

Filters and strainers (cont'd)

Filters, process water

Filters for the drinks and beverages industry

Water, sewage and industrial effluent treatment plant and equipment (cont'd)

Water purification equipment, ultra high purity

Drinking water treatment and purification plant

Environmental, antipollution and public health consultants

Water pollution consultants

Water treatment and purification plant design and development consultants

METEKO PLC

C/ Boryana 26 - 1618 Sofia; Tel: (003592) 9555493, Fax: 9555495

e-mail: meteco@techno-link.com

Established: 1990

Number of employees: 15

Executives: Stoyan Bonev (Exec. Director)

Nature of Business

Air filtration, dust and fume collection and extraction equipment

Dust exhausting plant, centralised

Civil, structural, hydroelectric and mining engineering consultants

Heating, ventilation and air conditioning (HVAC) consultants

Environmental, antipollution and public health consultants

Air pollution consultants

Ecological studies, consultants

P & M CONSULTING PLC

ul. Tsvetna gradina 19-21, 1421 Sofia; Tel: (003592) 9630502; 9630501; Fax: 9633630

e-mail: office@pimconsultingbg.com

web: www.pimconsultingbg.com

Number of employees: 15

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Executives: Vladimir Petkov (Exec. Director)

Pumps (trade)

Pumps for liquids (trade)

High vacuum pumps and equipment (trade)

Machinery and equipment for water and sewage treatment (trading)

Water and sewage treatment equipment (trade)

Collection and processing equipment for waste and refuse (trade)

Environmental, antipollution and public health consultants

Water treatment and purification plant design and development consultants

RECO ENGINEERING LTD

C/ Baba Iliitsa 42 - 1612 Sofia; Tel: (003592) 8510134; Fax: 8510134

e-mail: reco@netplus.bg

Established: 1996

Owner: Vili Dashinova-Stefanova

Civil, structural, hydroelectric and mining engineering consultants

Water supply engineering consultants

Environmental, antipollution and public health consultants

Water treatment and purification plant design and development consultants

SIMKO-7 MK LTD

j.k. Krasno selo, bl. 198, vh. 1, et. 1, ap. 4 , 1618 Sofia; Tel: (003592) 8566744; Fax: 8566744

e-mail: simko7mk@argonfilters.com

Established: 1994

Number of employees: 10

Executives: Mimi Georgieva Koleva (Manager)

Filters and strainers

Filters, domestic and drinking water supply

Filters and strainers (cont'd)

Filters, process water

Filters for the drinks and beverages industry

Water and sewage treatment plant and equipment

Sewage and effluent treatment plant, complete

Water filtration equipment, activated carbon

Environmental, antipollution and public health consultants

Water treatment and purification plant design and development consultants

SRIOKOZ

ul. Vranja 20- 1233 Sofia; Tel: (003592) 8130420; Fax: 8312129

e-mail: director@siokoz.com web: www.siokoz.com

Executives: Georgi Kostov (Director)

Building pest control services

Building disinfecting contractors

Rodent elimination contractors

Fumigation contractors, pest and vermin control

Environmental, antipollution and public health consultants

Information services, health and safety

Public health and safety consultants

Material testing, assaying, analysing and inspection services (cont'd)

Disinfection and hygiene testing services

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Food testing services
Testing services, food products
Testing services for edible fats and oils

UNONA LTD

ul. Plovdivska 6 - 6300 Haskovo; Tel: (0035938) 622855; Fax: 622855

Established: 1991

Executives: Veselin Alexandrov (Exec. Director)

Environmental, antipollution and public health consultants

Soil cleaning consultants

Agronomical engineering consultants

Crop spraying and dusting consultants

VODOKANALPROJECT-METALPROJECT ENGINEERING AD

ul. Kamen Andreev 24 - 1606 Sofia; Tel: (003592) 9520092; Fax: 9516879

e-mail: vodokanal@speedbg.net

Established: 1991

Executives: Plamen Karastoyanov (Exec. Director)

Civil, structural, hydroelectric and mining engineering consultants

Water supply engineering consultants

Fabricated steelwork design consultants

Environmental, antipollution and public health consultants

Water treatment and purification plant design and development consultants

WATER SUPPLY AND SEWEGE SYSTEMS LTD

ul. 6 septemvri 250 - 4000 Plovdiv ; Tel: (0035932) 632828; 605955 ; Fax: 624303

e-mail: vik@vik.bg

Established: 1991

Profit: 1512000 (2001)

Number of employees: 1145

Executives: Krasimir Tsvetkov (Manager)

Water supply services

Drinking water supply services

Plumbing, piping and tubing contractors

High pressure pipework installation contractors

Sewage system maintenance; pipe and tank cleaning services

Sewer and drain cleaning contractors

Underground pipework inspection and repair contractors

Pipeline inspection contractors

Cleaning and disinfection contractors for drinking water tanks

Civil, structural, hydroelectric and mining engineering consultants

Water supply engineering consultants

Environmental, antipollution and public health consultants

Water pollution consultants

Water treatment and purification plant design and development consultants

WATER SUPPLY AND SEWERAGE JSC

Gorublyane, ul. Georgi Belov 2 - 1138 Sofia; Tel: (003592) 9745525; 9745926; Fax: 9753401

e-mail: vikboss@applet-bg.com

ENVIRONMENTAL EQUIPMENT AND ENERGY IN BULGARIA

Established: 1989

Number of employees: 80

Executives: Boris Stoichkov (Exec. Director)

Nature of Business

Flow measuring and control equipment (cont'd)

Water meters

Plumbing, piping and tubing contractors

High pressure pipework installation contractors

Civil, structural, hydroelectric and mining engineering consultants

Water supply engineering consultants

Environmental, antipollution and public health consultants

Water treatment and purification plant design and development consultants

WATERENGINEERING LTD

C/ Hristo Belchev 35, 1000 Sofia; Tel: (003592) 9800153; Móvil: (00359) 48 992200, Fax: 9800153

e-mail: watherin@fastbg.net web: www.waterengineeringltd.com

Established: 1991

Number of employees (approx.): 21-50

Executives: Avram Radev (Manager)

Sewage system maintenance; pipe and tank cleaning services

Sewer and drain cleaning contractors

Pipeline inspection contractors

Civil, structural, hydroelectric and mining engineering consultants

Water supply engineering consultants

Environmental, antipollution and public health consultants

Drainage, sewerage and trade effluent consultants

Water treatment and purification plant design and development consultants

BLS ENERGYPLAN BULGARIA EOOD (Company for design of energy saving and ecological facilities and installations)

Sofia 1124, Nikolay Rakitin 1

Tel.: 003592 9437748; Móvil: 00359 887854421

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Фирма БЛС Енергиплан - България ЕООД е създадена през 2004г.

Дружеството се ръководи от управляващите съдружници Кристоф-Ф.

Ланге и прокуриста Йенс Боневиц.

POVVIK-OOS Ltd. - INDEPENDENT ENVIRONMENTAL AND BUSINESS CONSULTANTS AND ENGINEERS (interlocutor de INITEC- ESPAÑA <http://www.initec.es/>)

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