

RUSSIAN FEDERATION

*Review of the
Investment Climate
and Market Structure
in the Energy Sector*

2004



*Energy Charter
Secretariat*

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ON THE INVESTMENT CLIMATE AND MARKET STRUCTURE
IN THE ENERGY SECTOR**

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FOREWORD

The Russian Federation (RF) signed the Energy Charter Treaty (ECT) on December 17, 1994. The Russian Federation agreed to apply the ECT on a provisional basis pending its ratification by RF. Under the ECT such a provisional application is possible to the extent that it is not inconsistent with the constitution, laws or regulations of the relevant country. The Government of the Russian Federation presented the ECT to the State Duma for ratification on August 26, 1996 but the Treaty has not been ratified yet. The reasons for non-ratification of the ECT include, *inter alia*, dissatisfaction with the results of the ongoing negotiations on the ECT Transit Protocol and lack of initiative on the part of the Energy Charter Conference governing bodies with a view to developing a number of new protocols. In particular, it concerns a gas protocol, which would facilitate resolution of investment problems that producers face in connection with the gas market liberalisation policies of the West European countries. Despite this lack of ratification the Russian Federation reiterates its adherence to the Energy Charter process as a multilateral mechanism for energy dialogue. At the December 17 2002 Energy Charter Conference Mr. A. Denisov, Deputy Minister of Foreign Affairs of Russia, stressed that “Russia views the Energy Charter as an important instrument of international energy co-operation and reiterates its resolve to continue its participation in the discussions within the framework of the Energy Charter process of a wide range of issues related to energy transit, trade, investments and energy efficiency.”

Under the ECT, the member-countries should provide periodic reports to the ECT Secretariat on the state and prospects of the investment climate development in fuel and energy complexes of their respective countries as foreseen in the ECT Article 10(9).

The Russian Federation already provided its report in 1997. At that time, however, the report only covered issues relevant to the development of the investment climate in the country, and exceptions from national treatment for foreign investments and investors.

In recent years, the Energy Charter Secretariat has expanded its requirements for such reports by inclusion, in addition to issues related to investment climate, of the issues relevant to the fuel and energy complex (FEC) proper, as well as changes therein. In this connection, this second report submitted to the Investment Group at its Meeting on 4 November 2003 (ICMS 14, short and full versions) is much more comprehensive and, in addition to an analysis of the state and changes in the Russian investment climate, includes an examination of the restructuring processes in the fuel and energy complex of Russia, and activities relevant to further FEC development.

Given the scale of the Russian FEC, and its special importance both for the Russian economy and for the development of international economic relations, the section dealing with development prospects of the Russian fuel and energy sectors, and the section devoted to the Russian Federation legislation regarding foreign investments into FEC have been significantly expanded.

The Investment Group and the Conference of the Energy Charter at its session on 10 December 2003 welcomed the progress achieved by the Russian Federation regarding investment climate liberalization and market restructuring. In their recommendations to the Report they noted that it is a comprehensive document that analyses key aspects of the energy sector of Russia, which has great importance for foreign investors (document CS(03) 851, CC 256). The conclusions also take note of the positive steps taken by the Russian Federation in streamlining its energy sector legislative framework and conducting market

reform, which may mitigate the impact of monopolies and oligopolies and contribute to the strengthening of the rule of law.

The Group stated its considerable interest in continuing work on the Report in 2004 on the basis of more accurate information, due to be received from Russian agencies.

1. GENERAL INDICATORS OF THE COUNTRY AND ITS ECONOMY

1.1. Size of the country, population, climate

The Russian Federation is a *democratic federal constitutional state with a republican form of government*.

The State Authority in the Russian Federation is exercised by the President of the Russian Federation, the Federal Assembly (Council of the Federation, and the State Duma), the Government of the Russian Federation, and the Courts of Law of the Russian Federation.

The Russian Federation is the largest country of the world. The country's area covers 17075.4 thousand square kilometres. Part of the territory is situated in Europe, and another part – is in Asia.

Russia stretches 4 thousand kilometres north to south, and 9 thousand kilometres east to west. The shoreline is 37 655 km.

Russia *borders* many countries. Its land borders are as follows: with Norway, 167 km; Finland, 1313 km; Estonia, 294 km; Latvia, 217 km; Lithuania (bordering Kaliningrad *oblast*), 227 km; Belarus, 959 km; Poland (bordering Kaliningrad *oblast*), 206 km; Ukraine, 1570 km; Georgia, 723 km; Azerbaijan, 284 km; Kazakhstan, 6846 km; Mongolia, 3441 km; China, 3605 km (south-eastern border section), and 40 km (south border section; DPRK, 19 km. It has maritime borders with the U.S.A. and Japan.

As of January 1, 2003, agricultural land accounted for 13%, forests – 51%, and surface water bodies, including swamps, -- 13%.

Russia is the seventh largest country of the world in terms of its *population*. As of December 1, 2003, its population was 144.2 million people with an average population density of 8.4 people per 1 km². 78% of the population lives in the European part of the country and the remaining 22% in the Asian part. Eighty percent of the population are ethnic Russians. Urban population of Russia accounts for 73%, and agricultural for 27%.

In 2002 65.6 million were occupied in the economy. Unemployed persons were estimated at some 5.8 million.

The Russian Federation is composed of 89 legal entities (RF subjects), including 21 republics, 6 *krais* (territories), 49 *oblasts*, 1 autonomous *oblast*, 10 autonomous *okrugs* (districts), and 2 Federal Cities (capital city of Moscow, and Sankt-Peterburg).

The climate in the Russian Federation is varied and differs from the maritime climate in the extreme Northwest to harsh continental climate throughout the enormous territory of Siberia to monsoon climate in the Far East. The average January temperature varies between 0°–5° (North Caucasian region), and -40°-50° (in the Republic of Sakha (Yakutia) where temperatures reach as low as -65-70⁰). Average July temperatures vary between 1°C (northern Siberian coast) and 24-25°C (Caspian lowlands).

Overall, Russia is a country of harsh, cold climate. Snow cover persists for 60 to 80 days in the south of the country and 260 to 280 days in the north, especially in the extreme north areas. Sixty percent of the country's territory has subterranean permafrost.

The harshness of the Russian climate affects production efficiency in the country by way of increased costs in industry and agriculture, more expensive transportation services and construction work, as well as extra costs related to the vital supply to the population of heat and electricity.

Russia is tremendously rich in *natural resources* valued at \$270-300 trillion. The country is the world leader in explored reserves of natural gas, iron ore, coal, asbestos, zinc, and other mineral resources. Major resources of diamond, nickel, platinum, palladium, gold, potassium salts, and other types of non-ore minerals are found in its territory. Estimated oil resources of Russia are 44 billion ton, and gas – 127 trillion m³. Russia is endowed with 13-15% of the world's proved oil and gas condensate reserves and about 35% of the world's gas reserves.

1.2. Macro-economic indicators

2003 was one of the most successful years since reforms began (*cf.* Table 1.1.). Results from the first few months of 2004 indicate that the growth of the Russian economy continues.

In 2003 current prices, *Gross Domestic Product* (GDP) of the Russian Federation was 13.3 trillion roubles. The 2003 GDP growth is estimated at 7.3% as compared to 4.7% in 2002 and 5.1% in 2001.

GDP structure in 2003 was as follows: 68%, final consumption; 11%, net exports of goods and services; and 21%, gross capital formation, including some 18% for fixed assets formation.

Industrial production at 2003 current prices was 8.5 trillion roubles, and *agricultural production* – more than 1.1 trillion roubles. Industrial production in 2001 grew by 3.7%, by 3.7% in 2002, and by 7.0% in 2003.

Prevailing in the *industrial production* in 2003 are electricity, the fuel sectors and engineering and metal processing (accordingly, 12%, 18.5%, 19.9%), ferrous and non-ferrous metals (17.2%), and food processing (14.1%). Chemical and petrochemical industries accounted for 5.5%, while forestry, woodworking, and pulp and paper industry for 4.2%.

In 2003, *capital investments* amounted to 1,775 billion roubles (more than \$60 billion)¹. In recent years, share of investments in the Russian GDP was between 14 and 16%.

Given the enormous area of the country, *transportation* plays an extremely important role in Russia. Out of the total transportation turnover, which amounted to 4,269 billion ton/km in 2003, the rail transport accounted for 1,664 billion ton/km, pipelines – 2,270 billion ton/km, road transport – 173 billion ton/km, merchant marine – 78 billion ton/km, inland water transport – 81 billion ton/km, and air cargo – 2.7 billion ton/km. The share of the pipeline transport in 2003 was 53% of the total Russian cargo traffic.

Table 1 1 Major Macroeconomic Indicators of the Russian Federation

	1992	1997	1998	1999	2000	2001	2002	2003
Gross Domestic Product (GDP) @ current prices (billion roubles)	19	2,343	2,630	4,823	7,306	9,039	10,863	13,304
Total industrial production @ current prices (billion roubles)	18.5	1,626	1,707	3,150	4,763	5,881	6,868	8,498
Consumer price index (%)	26.1	111.0	184.4	136.5	120.2	118.6	115.1	112.0
GDP change @ comparable prices (% year-on-year)	85.5	101.4	94.7	106.4	110.0	105.1	104.7	107.3
Official USD/rouble rate (@ year end)	415	5,960	20.65	27.00	28.16	30.14	31.78	29.45

Source: Goscomstat of Russia, Statistical Yearbook 2003, Socio-Economic Status of Russia, January 2004.

¹ Calculated at the year-end rate of 29.45 roubles per \$1.

Foreign trade is important for the Russian economy. In 2003 *foreign trade turnover* (imports plus exports) of Russia was at the highest level since the breakdown of the USSR. According to customs statistics it was \$191.1 billion. The Russian Federation *exports* amounted to \$133.7 billion, including exports of \$113.2 billion to countries other than CIS (85%) and \$20.5 billion (15%) to CIS countries. In the same year *imports* to the Russian Federation amounted to \$57.4 billion, including imports from countries other than CIS of \$43.8 billion (76%) and from CIS countries of \$13.6 billion (24%). Russian foreign trade is characterized by a substantial *trade surplus*, which in 2003 amounted to \$76.3 billion. Foreign trade revenues are important for ensuring the foreign currency position of the country and its economy.

Traditionally, *major foreign trade partners of Russia* include member-countries of EU, CIS, and APEC. In 2003, the European Union accounted for 36% of the Russian foreign trade, CIS, 10%, APEC countries, 16%. Leading trading partners of Russia include Germany, with 2003 trade valued at \$18.5 billion, Belarus (\$12.4 billion), Italy (\$10.9 billion), the Netherlands (\$10 billion), the U.S. (\$7.1 billion), the U.K., Switzerland and Poland (6.3 billion each).

The commodity structure of the Russian exports is characterised by a prevailing share of fuel and energy products (56.4% in 2003 as opposed to 54.4% in 2002), ferrous and non-ferrous metals, precious stones and products thereof (18.6%), machinery, equipment and vehicles (8.9%), wood and pulp-and-paper products (4.2%). Machinery, equipment and vehicles (40.9% in 2001), food and agricultural commodities (20.7%) *dominate Russian imports*.

In 2002 *exports of services* from the Russian Federation, on a balance of payments basis, amounted to \$13.1 billion, including exports to countries other than CIS of \$10.2 billion and to CIS countries of \$2.9 billion. In 2002 transportation services accounted for 42% of the Russian exports of services. *Imports of services* into the Russian Federation in 2002 amounted to \$22.1 billion, including imports from countries other than CIS of \$18.4 billion, and from CIS countries of \$3.7 billion. Travel related services accounted for more than 54% of the total services imports and more than 13% of total transportation services.

As of October 1, 2003, **the State foreign debt** of the Russian Federation Government was estimated at \$165.4 billion, including \$55 billion of debt incurred by the former USSR. The debt (burden) has been significantly reduced in recent years: in 2002 it represented 38% of the GDP, as compared to 45%, in 2001. Most of the questions related to debt have now been resolved. The country pays its debts to other countries on time and properly.

As of January 1, 2003, the country's internal debt was valued at 680 billion roubles.

Russian international reserves (including gold) have grown noticeably in recent years. As of 1 March 2004, they were valued at \$86 billion (\$63 billion in July 2003).

Inflation rate has been slowing, down to 12% in 2002, against 15.1% in 2001, 18.6% in 2000, and 20.2% in 2000.

The prospects of the social and economic development of the country have been developed in a number of basic documents. **In his Message to the Federal Assembly of May 16, 2003**, the President of the Russian Federation Vladimir V. Putin noted that this country faces a strategic choice: to at least double the Gross Domestic Product within ten years. To achieve this, it will be necessary to secure economic growth of at least 7% starting from 2004; and to achieve the same target by 2010 the growth rates should be at 7.9%. For 2003 the GDP growth rate has been estimated at 7.3%.

The Medium-Term Programme for Social and Economic Development of the Russian Federation in 2003-2005 is focused on ensuring a sustainable growth of the population's

living standards, high rates of economic growth, alleviation of social disparity, further improvement of the economic and political role of the country in the world community, which could only be achieved through a significant improvement of Russia's competitiveness, including by means such as the improvement of government management, business and "human capital".

A structural shift in favour of manufacturing industries ought to take place. While in 2002 the share of primary industries was 49%, and that of manufacturing was 51%, by the year 2005 this split (in 2002 prices) should be 48.2% to 51.8%, respectively and in 2008 – 45.7% and 54.3%.

Enhanced use of growth factors and improving the competitiveness requires the implementation of the "accelerated diversification" scenario for the Russian economy. The main avenue for more rapid development of the economy and diversification is the accelerated development of the manufacturing sectors (first and foremost in high technologies) and the services, along with improving the degree of processing of raw material.

In parallel with the Programme, **Main Parameters of the Forecast of Social and Economic Development of the Russian Federation for 2004 and through 2006** have been developed that envisage for 2004-2006 economic growth at a rate of 5% to 6%, and prepare the ground for an accelerated economic growth at the end of the decade with a view to doubling the GDP by 2010. In addition to the main parameters of the forecast of social and economic development of the Russian Federation for 2004-2006, scenarios for the social and economic development for 2004 and through 2006 have been developed.

"The Main Parameters of the Forecast of Social and Economic Development of the Russian Federation for 2004, and through 2006" envisage increased foreign investment flows into Russia. This expected growth is tied to considerable efforts by the Russian Federation Government to improve the investment climate in Russia. Increased foreign investments in the Russian economy would be facilitated by the development of orderly forms of land ownership and land transactions, de-bureaucratisation of the economy, liberalised tax regime, active banking sector reform, adoption of international accounting standards, liberalised currency legislation, reform of natural monopoly industries, etc.

1.3 Statistical Data on Foreign Investment Flows in the Russian Federation

Russia is not very successful in attracting foreign investments. According to UNCTAD, foreign direct investments (FDI) into Russia in 2002 amounted to \$2,421 million (0.3% of the world FDI), while cumulative FDI were estimated at \$22.6 billion (0.3% of the world total cumulative FDI).

At the same time, the country holds an enormous potential in this regard, as demonstrated by a notable *improvement of Russia's credit and investment ratings in recent years by leading rating companies*. An *increased foreign investment flow to the Russian Federation* in recent years also testifies to this. Between 1995 and 2003 foreign investments attracted by Russia grew almost ten times. 2003 saw record foreign investments inflows to the Russian Federation in recent years. They amounted to \$29,699 million, compared to \$2,983 million in 1995. By the end of 2003 cumulative foreign capital in Russia amounted to \$57 billion. i.e. 32.8% more than in 2002 (Table 1.2).

So-called "other investments" representing mostly various loans (75.8% in 2003) dominate the foreign investments structure in Russia, followed by foreign direct investments (22.8%), with the lowest share going to portfolio investments (1.4%).

The rates of growth of FDI in Russia have been rather modest in comparison to the overall growth of foreign investments. Over 1995-2003, FDI in Russia increased from \$2,020 million to \$6,781 million, or a bit more than three-fold. .

In 2003 the FDI structure was as follows: asset purchases (33%), loans from foreign co-owners (31%), and other FDI (36%).

Portfolio investments have not so far played an appreciable role in the investment process. In 2002 their share in the total foreign investments was only 1.4%. However, compared to 1995, their volume has grown more than ten-fold from \$39 million to \$401 million. Portfolio investments in the form of equity participation have grown especially fast (from \$11 million in 1995 to \$369 million in 2003). Equity participation comprised 92% of portfolio investments in 2003.

In the group of *other investments* (75.8% of the total investments in 2003, \$22,517 million), commercial (13%) and other loans (85%) were the main sources².

Industry and trade are the main *targets for foreign investments* in Russia. In 2003, foreign investment in industry attracted \$12,330 million (41.5%), while trade and catering attracted \$10,516 million (35.4%), including \$5,734 million (19.3%) in foreign trade. For comparison, in 1995 the share of industry was 43.3% (\$1,291 million) and that of trade and catering, 17% (\$567 million).

In the mid-1990s, the financial and insurance business became an important investment target accounting for 13.6% of foreign investments in 1995, 29% in 1996, and 38.7% in 1997. This type of activity has currently become less attractive and in 2003 it accounted for only 2.1% of the total foreign investments.

In accumulated foreign investment stock at the end of 2003, industry is the leader as well with \$22,453 million (39.4%), followed by trade and catering (\$17,853 million, 31.3%).

Among industry sectors, in 2003 the fuel and energy complex sub-sectors ranked at the top, they attracted 43.2% of foreign investment in industry (\$5,332 million). Iron and non-ferrous metals metallurgy followed (\$3,494 million, 28.3%), and the third slot went to food processing (\$1,024 million, 8.3%). Engineering and metal processing was in fourth place (\$769 million, 6.2%).

95% of the total foreign investments attracted to FEC in 2002 went to the petroleum sector.

The share of the FEC in total foreign investments in Russia in 2003 was 18%. Foreign investments in the FEC are mostly made in (fossil fuel) production. The inflow into the power sector in 2003 constituted just 0.5% (\$27 million) of all foreign investment in the FEC.

The geographical distribution of foreign investments in Russia is highly uneven. Moscow and the Moscow *Oblast* have traditionally received the bulk of foreign investments. In 2003 the share of Moscow and the Moscow *Oblast* in total foreign investments was 51% (Moscow, 46.8%) and in FDI, 47% (Moscow, 37%). It should be noted at the same time that a downward trend in the Moscow region's foreign investment share has become evident. This share dropped between 1996 and 2003 from 71.4% to 51%. Regardless of this highly uneven geographic pattern of foreign investment, many regions during the recent years tried in earnest to attract foreign investment and some enjoyed considerable success. Among (other) regions the most attractive to foreign investors include (2003): Siberian Federal

² Under the *Goscomstat* methodology, category "other loans" includes loans from international financial institutions, foreign government loans, loans to pay previous debts, to address social, environmental, and other problems, that do not have direct relevance to the investment process.

District, 7.2% of all foreign investments in the Russian Federation; Urals Federal District, 18.7%; and Privolzhsky Federal District, 3.2%.

Analysis of the *statistical data on FDI* in the Russian Federation economy suggests the following³:

Firstly, foreign investments in the Russian economy are growing, tripling between 1995 and 2003. As a result the total cumulative FDI in the Russian Federation is estimated at end of 2003 at \$26,131 million, i.e. 45.8% of the overall investments in the country (\$57 billion).

FDI in 2003 stood at a record high, exceeding 2002 levels by 70%. At the same time, however, FDI's share in overall foreign investment continues to be low (23% in 2003 as opposed to 68% in 1995).

Table 1 2. Foreign Direct Investments in the Russian Federation Economy, 1995-2003, by economic sector (million USD)

	1995	1998	1999	2000	2001	2002	2003
Total	2,020	3,361	4,260	4,429	3,980	4,052	6,781
Of which:							
Industry	915	1,991	2,603	1,844	1,753	1,932	3,420
Of which:							
Fuel	262	307	1189	442	430	667	1,917
Ferrous metals	26	39	55	39	116	20	84
Non-ferrous metals	36	58	18	30	21	65	47
Chemical and petrochemical	69	50	19	49	88	106	96
Engineering and metal processing	102	127	126	228	316	262	323
Forestry, wood processing, and paper and pulp	84	112	140	141	131	133	284
Food processing	250	1,192	963	821	528	439	668
Agriculture	3	11	41	31	48	22	45
Construction	201	108	59	45	31	88	113
Transport	11	128	517	948	689	112	223
Trade and catering	469	489	597	835	757	959	1,513
Industrial wholesale	28	24	11	30	109	47	104
Market support commercial activities	134	253	83	148	227	299	441
Financial, credit, insurance, pension support	159	66	31	26	39	56	186

Source: Goscomstat Rossii, Investitsii v Rossii, 2001, M., 2001; 2003 Statistical Yearbook; Sotsial'no-ekonomicheskoe polozhenie Rossii, January 2004.

Secondly, industry has remained the main FDI area, accounting for 45-60% of the total FDI into the country in recent years.

Thirdly, in the industry, FEC extraction sectors, metallurgy, and food processing were leading in terms of FDI.

³ While analyzing FDI investment in the Russian economy, one should mind that many such operations are not reported by Russian statistics, since they take place in offshore zones. For example, a major 2003 deal (the merger of TNK into BP) valued at \$6.5 billion, was not reported in RF statistics. It is comparable to all FDI inflows in Russia in 2003 (\$6.8 billion). On the other hand, one should have in mind that growth of foreign investment in 2003 reflects investment planned in two Sakhalin projects, which according to experts account for about 50% of FDI in 2003.

Fourthly, the leaders among the FDI countries of origin of available FDI stocks were Cyprus (19.3%), U.S.A. (16.4%), the United Kingdom (10.8%), and the Netherlands (10.7%).

Fifth, Moscow and the Moscow *Oblast*, accounting for more than 51% of total foreign investments in 2003, is the region where foreign investments, including FDI, are concentrated. Despite the persisting highly uneven distribution of such investments throughout the country, many regions have made notable efforts in recent years to attract foreign investments, with some regions being quite successful in this business.

Foreign investments still play a negligible role among the financial sources for investments in the Russian economy. In 2003, they accounted for only 5.7% of the total capital investments. At the same time, enterprises' own resources secured 45.6% of the investments, with borrowed funds representing 54.4%, including the 5.7% share of foreign investments mentioned above.

The Government of the Russian Federation is actively pursuing the improvement of the business and investment climate in the country: it is developing transparent and stable rules for economic activities that would provide incentives for further development of business initiatives, and attraction of investments, including from foreign sources. The Medium-Term Programme of the Social and Economic Development of the Russian Federation for 2003-2005 is based on the assumption that during the period in question foreign investments would be an important source of financing the country's economic growth. In 2005 the total value of FDI in Russia may well reach 7.8-8.5 billion USD, in other words, almost double as compared to 2002. More significant FDI flows may only come somewhat later as domestic investors become more active and sustainable.

The improvement of the investment attractiveness of Russia, of its credit worthiness regarding foreign debt, and better economic and financial performance have prompted international credit rating agencies to upgrade in recent years Russia's investment ratings.

For example, on October 8, 2003 Moody's credit agency upgraded Russia's credit rating to investment grade (BAA 3). On 27 January 2004 Standard & Poor's (S&P) assigned to Russia long-term sovereign foreign currency credit rating of BB+ and national currency rating of BBB-. These ratings are one notch below investment grade. A decision by OECD, made effective as of July 1, 2003, to upgrade Russia from group five to group four in borrowing rating is very important for improving the business image of Russia. As a result of the improved borrowing rating, loans to Russia would be some two percentage points cheaper.

The fact that Russia was accorded the market economy status is important for foreign investment dynamics. On June 6, 2002 the U.S. Department of Trade decided to accord the market economy status to Russia; on November 6, 2002 the European Union accorded Russia the same status.

Russia's forthcoming accession to WTO is very important regarding the improvement of Russia's investment attractiveness.

1.4. Significance of the fuel and energy complex in the economy of the Russian Federation

FEC is the **basic and strategic sector of the modern Russian economy**. In 2002 it accounted for ¼ of the GDP, 1/3 of the Russian industrial production, 1/3 of total budget revenues, and about ½ of the federal budget earnings, as well as 56% of export earnings and 45% of foreign currency earnings. FEC's share in capital investments for the purposes of the development of the fuel and energy sectors was 25.4%, and in capital investments into

the Russian industry some 60%. FEC sectors employ more than 1.8 million people, or 14% of the industrial workforce in Russia.

FEC's contribution to Russia's economy and its social and economic development is even bigger taking into account **the key role of FEC in assuming the social and economic viability of the country, efficiency and the material welfare of its population.**

FEC also plays an important role in securing and maintaining the competitiveness of Russia, which has to *offset its climatic features and the enormous length of transportation ways* by increased consumption of energy materials and products (EMP), in order to match production conditions in Russia with those in other countries. For example, heating one unit of living space in Russia requires 4 times more energy than in Germany, and 8 times more than in the U.S.A. Construction costs in Russia are 2-3 times higher than in Western Europe. Higher EMP consumption is characteristic for industry, as well as for agriculture and transport.

Omnipresent use of obsolete equipment and vehicles and insufficient availability of energy saving equipment *force the fuel and energy complex into supporting the economy's excessive energy intensity by producing additional EMP for consumption.* Thus, the specific energy intensity of the Russian national income is 3-4 times higher than that of developed countries.

Another feature of the Russian FEC is that *gas and electricity prices and transport tariffs for some EMPs are still strictly regulated by the State.* In the short run, such regulation restrains dramatic price increases, offsets inflation, stabilises population income, and maintains the competitiveness of national industry and agriculture.

The ability of FEC to generate additional demand in many adjacent industries, primarily in metallurgy and chemical industry, engineering and construction sectors, as well as in such services as transport and communications, is also important. This is mostly valid with respect to ferrous and non-ferrous metallurgy, chemicals, engineering and metal processing and construction, but also regarding transport and telecommunications. One job in the oil sector of the FEC, for example, generates at least eight jobs in adjacent industries.

The Russian FEC is fully integrated in the international division of labour. EMP exports play a particularly important role in the economy of the Russian Federation. The EMP export earnings are more than sufficient to cover all of the country's imports. Moreover, these export earnings are a major contribution to the Russia's currency earnings necessary to pay the foreign debt, maintain a stable rouble exchange rate, and address other important social and economic issues.

The share of exports in the total energy material production, especially in the oil and gas sectors, is rather high and continues to grow. In 2003, 53% of the total production of oil, 41% of petroleum products, 30% of gas, and 22.5% of coal were exported (as opposed to 44% of oil, 33% of oil products, 35% of gas and 9% of coal in 1999). It is worth noting that in 1991 exports constituted 37% of oil and 31% of gas output.

The active participation of Russia in the international EMP market, especially in years of unfavourable world market situation, may affect economic development and social progress. And, conversely, a favourable world market conditions lead to additional earnings that could be used to continue the development of the economy, improve standards of living, and to build up currency reserves to offset any possible market disruptions in the future. According to the Ministry of Finance of the Russian Federation, a \$1 change in the world market price for a barrel of oil results in a change of Rbl 59 billion (\$2 billion) in consolidated budget revenue, and a change of Rbl 45 billion (\$1.5 billion) in federal budget revenue.

Data developed by the Ministry of Economic Development and Trade of RF indicates that out of seven (percentage) points of GDP growth in 2003, two percent were caused by average price increase in 2003 for Russian oil over typical levels prevailing in the last 10 years. The World Bank estimates the impact of the oil factor (on growth) to be even higher – 3.3%.

The falling prices of oil in 1998, down to about \$12 per barrel, contributed to the devaluation of the Ruble and the default that occurred at that time in Russia. To hedge against such situations, the RF established at the end of 2003 a Stabilization Fund, which will accumulate part of the revenue (export tax, production tax) resulting from the fact that the average oil price exceeds the one used for budgeting. At the end of March 2004 inflows in the Fund stood at Rbl 122 billion (about \$4.3 billion) (*cf.* Chapter 4.4.23 of this report for details).

The Russian Federation's foreign policy objectives include stabilisation of the EMP world prices, primarily of oil.

Status of the Russian FEC. Throughout the last decade of the twentieth century, the Russian FEC, as the entire Russian economy, lived through a rather difficult time. A downward trend in the production of energy materials and products emerged already in the last years of the existence of the USSR and continued in the period of the Russian Federation. In total, during the period between 1991 and 1999 oil production dropped by 34%, oil processing by 41%, oil exports by 23%, coal production by 30%, electricity generation by 21%, and gas production by 8%.

In recent years, however, both the Russian economy at large and the FEC arrived at a major turning point: production and exports started to grow. A stronger world market situation for fuel and energy products coupled with a continued trend towards independent economic operation of the Russian oil companies had positive effects on the development of the national oil and gas industry, enabling it to considerably improve its production performance (see Table 1.3). By 2004 oil production in Russia reached 422 million tons, while gas production also began growing, reaching 620 billion m³. The situation in the coal and power industries also improved. The recovery of the oil and gas FEC sector that began in 2000 onwards has served as a strong incentive for the development of many Russian economic sectors and has become an important factor in the improvement of its economic, social and financial conditions in Russia.

Table 1 3. Fuel and Energy Production and Export in Russia

Production and Export by year						
	1991	2000	2001	2002	2003	2003 to 1991 (%)
Production						
Primary energy (Mtoe)	1,758	1,418	1,465	1,515	1,618	92
Oil production including Oil gas (Mt)	462	324	348	380	422	91
Gas production (bn. m ³)	643	584	581	595	620	96
Coal production (Mt)	353	258	270	256	275	78
Electricity production (bn. kWh)	1,068	878	891	889	915	86
Primary oil processing (Mt)	286	173	178	185	190	66
Production (Mt):						
Petrol	39	27	28	29	29	74
Diesel fuel	72	49	50	52.7	54	75
Fuel oil	91	48	50	54	54	59
Oil processing depth (%)	65*	71	71	70	70	108

Exports of main energy types						
Oil (Mt)	173.5	145	161	180	223	129
Countries other than CIS	67	128	138	152	186	277
CIS countries	106.5	17	23	28	37	35
Petroleum products (Mt)	43*	62.5	63.5	75	78.5	182
Including:						
Countries other than CIS	39.6*	59	61	72	75	187
CIS countries	3.5*	3.5	2.5	3	3.5	100
Gas (billion m ³)	197.5	194	181	185	189	96
Including:						
Countries other than CIS	115.5	134	132	134	142	123
CIS countries	82	60	49	51	47	57
Coal (Mt)	23.2**	44.1	41.5	43.4	62	270
Including:						
Countries other than CIS	17.7	38.0	36.0	39	52	293
CIS countries	5.5	6.1	5.5	4.4	9.8	178
Electricity (billion KWh)	-	15.1	19.8	18.0	21	-
Including:						
Countries other than CIS	-	6.0	9.6	10.0	12.7	-
CIS countries	-	9.1	10.2	8.0	8.2	-

Source: Goscomstat RF; Statistical Yearbook 2003; The Social and Economic Conditions of Russia, January 2004.

* 1995 data

** 1994 data

A further significant development of all energy sectors of the Russian Federation and their export capabilities is envisaged in the context of the medium- and long-term development of the Russian economy. Russia possesses a sufficient base for such a development, given its diversified economy, know-how capacity and extensive mineral resources base. Accounting for 2.8% of the world's population and 12.8% of the territory, Russia possesses some 12-13% of the estimated total mineral resources, including some 12% of proven oil reserves and 42% of the probable, 32% of the proven natural gas reserves and 23% of the probable, 10% of the explored coal reserves and 14% of the estimated, and 8% of the proven uranium reserves

Furthermore, it should be noted that the Russian mineral resource base is far from being fully explored. Therefore, one could reasonably expect further improvements in the country's resource base. While 41% of the total oil reserves of Russia are explored, in Eastern Siberia only 9.7% of the reserves have been explored, in the Far East, 15.5%, and on the sea shelf, only 4.4%. Such a low degree of exploration, coupled with the fact that the largest area of sedimentary rock related to oil and gas deposits and the largest sea shelf area in the world are in Russia, has enabled the U.S. Geological Survey to rate Russia second after Saudi Arabia in terms of probable large oil reserves.

2. STATE ENERGY POLICIES OF THE RUSSIAN FEDERATION

2.1. Energy strategy of Russia through 2020

The key role of the FEC in the Russian economy has imposed the need to develop medium-term and long-term development programmes and to identify the main areas of the state energy policy. The “Energy Strategy of Russia until 2020” (the Strategy) was approved by the Government of the RF on 28 August 2003.

The Strategy formulates the objectives and priorities of the Energy Strategy, examines problems and the main factors of the FEC development and major trends and forecast elements of the future development of the Russian economy, and identifies the fundamentals of the state energy policy. The Strategy devotes considerable attention to the analysis of future demand for Russian energy on domestic and international markets, as well as to the outlook for the development of the FEC and its sectors. The document also covers in detail the regional features in the FEC development, science and technology and innovation policies for the energy sector, as well as issues related to the interaction of FEC with the related industries. The Strategy concludes with a section devoted to the expected results and to a scheme to implement the Strategy.

The main objective of the Strategy is to achieve maximum efficiency in the use of natural fuel and energy resources, and in the use of the energy sector potential for the promotion of economic growth and improved standards of living.

The main task of the Energy Strategy of Russia is to identify ways to achieve an entirely new FEC structure, make its products and services more competitive on the international markets through the utilisation of its potential and setting priorities for the complex’s development, development of the state energy policy measures and mechanisms taking into account the expected results of its implementation.

The main means of achieving the Strategy’s objectives and tasks lies in the development of orderly energy markets and by creating a level playing field between the entities themselves and between them and the state. The state, while limiting its functions as an economic agent, would strengthen its role in the development of the market infrastructure as a market regulator.

The state regulation for the above processes will be implemented through the following tools:

- Measures to create a rational market environment, including coherent tariff, taxation, customs, and anti-monopoly regulations and institutional changes in the FEC;
- More effective management of the state assets;
- Introduction of a system of forward-looking technical regulation, national standards and rules that secures a better management of the energy development and provides incentives for energy savings;
- Provision of incentives and support of strategic initiatives in investment, innovation and energy saving activities of economic entities.

The main problems of the development of the Russian FEC include:

- A high degree of wear and tear of capital assets; more than 50% presently (80% in oil processing); commissioning of new production capacity in all FEC sectors was down by 2 to 6 times through the 1990s; there has been an increasing number of breakdowns in the FEC.

- A persisting shortage of investment in all sectors (except oil) and their inefficient use. Given the high investment potential of the FEC sectors, inflow of investments from outside is less than 13% of the total capital investments. In the gas and electricity sectors, appropriate conditions were not created for securing the necessary investments; as a result these two sectors may impede the emerging economic growth.
- Lack of competition between substitutable types of energy resulting from distorted prices and demand structure that features an excessive focus on gas and a reduced share of coal;
- The FEC lags behind the international level of science and technology. The share of oil production using sophisticated methods of reservoir stimulation and the share of advanced oil processing is low;
- Insufficient development and a growth of real costs in exploiting the potential hydrocarbon production base, especially in the gas sector;
- Deficient market structure and the absence of an orderly energy market;
- Continued high environmental burden resulting from fuel use and energy sector activities;
- High dependence of the oil and gas sector on the conditions and cycles on the world energy markets, resulting in high dependence of government revenue on these factors;
- Lack of mature and stable legislation that fully takes into account the specificity of operating FEC enterprises.

The Energy Strategy is founded on two base scenarios for the social and economic development of Russia: a moderate and an optimistic. In addition to those, a favourable (in-between the two base scenarios), and a critical scenario were taken into account. The critical scenario is based on assumed low world market prices for oil.

The optimistic scenario is marked by a 3.3 times GDP growth by 2020, as compared to 2000, seven-fold increase of investments, and continued high prices for oil (\$30 per barrel for Urals grade in 2020) and for gas (\$138 per thousand m³ in 2020).

The moderate scenario envisages a GDP growth of 2.3 times by 2020, investment growth of 3.6 times, and stable oil and gas prices (\$18.5 per barrel of oil and \$118 per thousand m³ gas).

2.2. State energy policy

Implementation of the long-term state policy is based on the following principles:

- Consistency of the state actions aiming at implementing the major strategy milestones of the energy development;
- An interest in the development of strong, sustainable energy companies ready for a constructive dialogue with the state;
- Valid and predictable state regulatory measures that would provide incentives for private enterprise initiatives including in the investment area.

Strategic objectives of the long-term state energy policy include energy security, energy efficiency, budget efficiency, and environmental safety of the energy sector.

The main elements of the energy policy include: the use and management of the state owned subsoil assets, development of domestic energy markets, development of a rational fuel and

energy balance, regional and external energy policies, social, scientific and technological and innovation policies in the energy sector.

The main tool for their implementation consists of a package of price (tariff), taxation, customs, and antimonopoly regulatory measures.

A continuously evolving legal framework will provide the basis for the implementation of the state energy policy.

The Energy Strategy has a specific focus on energy security as an important element of the state energy policy. Energy security represents the most important element of the national security of Russia.

Improved energy efficiency has a prominent place in the Energy Strategy. At present the Russian economy is very energy intensive, with specific energy intensity 2 to 3 times that of the developed economies. The reasons for such a situation, apart from harsher climate and the territorial factor, lie in the inherited industrial structure and a growing technological backwardness of energy intensive industries and of the residential sector, as well as the under-pricing of energy resources, primarily gas, which does not provide energy saving incentives.

The state investment policy for FEC would envisage addressing two tasks: 1) investment growth; and 2) change of the structure of such investments.

State measures in support of FEC investments will include:

- Improved business climate, development of clear, transparent, and stable rules for economic activities of companies, primarily on the basis of a predictable and balanced taxation regime, and a legal framework, that would protect investments and safeguard investor rights;
- Improvement of depreciation policies;
- Improvement of the state price (tariff) regulation of natural monopolies;
- Long-term economic investor guarantees in cases where tariffs are regulated;
- Measures to reduce commercial and non-commercial investment risks, support for comprehensive insurance programmes;
- Improvement of the legal framework related to investor participation (including foreign investors) in the development of projects for mining, production, and transportation of fuel and energy resources (including the reasonable use of PSA and concession agreements to implement unique or expensive projects);
- Improvement of licensing policies, removal of unjustified administrative barriers;
- Development of financial leasing.

The nature of the state support would differ depending on the specific sector; but economic incentives would continue to be the primary tool. Direct support in the form of financial flows from public budgets of all levels would be limited to projects of strategic importance or of high social importance and would be implemented through targeted programme mechanisms.

Despite the limited direct financing from budgets, state support for investments in FEC will not mean the elimination of *investments made under the state control*. In particular, investment programmes for the development of the state nuclear energy and of the common national electricity grid (implemented by the federal grid company), main pipeline systems

for gas, oil and petroleum products, comprehensive development of deposits in new regions, and developments of sea-port infrastructures will be reviewed and approved by the Government of the Russian Federation, or by federal executive bodies authorised by it, and will be financed by the organisation's own resources or by third-party investments, provided that regulated prices (tariffs) for the services ensure an economically sound return on the invested capital, following the implementation of the principles of budget efficiency of the energy sector.

The state investment policy will provide *support by the Russian Federation Subjects of investment projects* related to energy production and transportation, mostly to small scale and medium sized facilities, creation of special economic conditions leading to increased production, and creation of new jobs in the relevant regions, promotion of future-oriented regional economic policies, and fair tax competition.

Development in Russia of production of modern energy-, coal-, and oil and gas-related equipment and technologies, and basic materials for FEC will be an important area of the state investment policy.

According to the Strategy, the **investment needs** of the FEC sectors through 2020 would be as follows:

- *In the gas industry*, between \$170 and \$200 billion;
- *In the oil complex*, \$230-\$240 billion;
- *In the electricity sector*, \$120-\$170 billion;
- *In the coal industry*, some \$20 billion;
- *In centralised heat supply*, some \$70 billion; and
- *In energy savings*, \$50-\$70 billion;

In the next twenty years it will be necessary to mobilise for FEC investment needs a total of \$660-770 billion, or some \$33-\$38 billion a year (in 2002 investment in FEC from all sources of funding stood at about \$12 billion). In other words, there is a need for more than a three-fold increase of FEC investments. The growth of investment in FEC is expected to be accompanied by a significant increase of foreign direct and portfolio investments and loans.

About 60% of investment to 2020 should be allocated to the petroleum sector, 20% to the gas sector, and the rest should be allocated to coal, heat supply and energy saving activities.

Great importance is attached in the Energy Strategy to addressing **environmental issues**. The fuel and energy complex is one of major pollution sources in the Russian Federation. It accounts for 48% of harmful air emissions and 23% of pollution of surface water, 22% of the total industrial harmful waste, as well as 70% of greenhouse gas emissions. Despite a stable trend leading to a reduction of harmful air emissions, the electricity sector is the main polluting industry (25%). 20% of the associated gas is still being flared.

The objective of the state environmental policy is to consistently reduce the FEC environmental effects, eventually reaching European environmental standards.

The Energy Strategy is based on the premise that *Russia is to implement its international environmental commitments*.

In accordance with the Kyoto Protocol to the UN Convention on Climate Change Russia will undertake (in case it ratifies the Protocol) to maintain for the period of 2008-2012 its

greenhouse gases emissions at the level of 1990. Based on the forecast of the Energy Strategy, by 2010 the level of greenhouse gas emissions from the energy sector will be at 75-80% of the 1990 level, and even in 2020 they will not reach the 1990 level, thus enabling Russia to implement its commitments.

The most important **areas of the state subsoil use policy** include:

- Improvement and co-ordination of management of the FEC mineral resource base development through medium-term and long-term subsoil exploration programmes;
- Co-ordination of the interaction between executive bodies of all levels; mandating federal executive bodies to exercise strategic planning of the FEC mineral resource base, and to implement the main regulatory and oversight functions;
- Improvement of the subsoil legislation that would provide for the right to use subsoil areas both through an administrative decision, and through a private contract, including concession agreements; streamlining the mechanism of authorisation of the subsoil use by clearly regulating all stages and phases of the licensing process; a simplified licensing procedure for smaller reserves to satisfy local energy demand; envisaging in the licenses and in the subsoil use agreements an obligation for the subsoil users to implement the required amounts and types of work relevant to the use of the subsoil, the phases and duration of reserve development, and the verification of the financial viability of an applicant prior to a decision to give the subsoil use rights;
- Development and implementation of the subsoil use programmes with a wider use of public auctions for the subsoil use rights, including licenses for comprehensive exploration and development;
- Establishment of reliable legal conditions for subsoil users enabling them to take long-term investment decisions in connection with the development of unique (very large) hydrocarbon deposits and the construction of the related transportation systems for their development and production.

The state policy for the development of the domestic fuel and energy market is aimed at a sustainable satisfaction of domestic demand for high quality energy supplies at stable prices acceptable to Russian consumers, based on the establishment and development of transparent energy markets with high levels of competition and fair trade principles.

Structural policy measures will include:

- State regulation of prices, throughout the period in question, in the natural monopoly segments (of the industry);
- Continued electricity sector reform by way of unbundling natural monopoly activities and potential competitive activities; and transforming the existing federal (wholesale) electricity (capacity) market into a fully competitive wholesale electricity market; developing retail electricity markets; as well as implementing structural changes in the gas industry through improved financial and economic transparency of JSC “Gazprom” based on cost accounting separation of different types of activities, more efficient corporate management, improvement of domestic trade system, including elimination of gas transportation bottlenecks impeding development, and a phased introduction of a liberalised gas market.

In pricing policies the following measures are envisaged:

- Phase-out of price distortions between different energy types based on bringing natural gas prices closer, first, to a level reflecting its consumer and environmental value that

would provide incentives for the use of alternative fuels, and, later, to a level that would ensure equal profitability of exports and domestic supplies of gas;

- Energy price (tariff) differentiation that would reflect to the maximum extent different cost of transportation of fuel and energy resources and sales thereof to different consumer categories (time of day, season, consumption volume, capacity etc.).

Measures to develop a rational fuel and energy balance (FEB) envisage:

- Electricity production and consumption growth as a prerequisite for economic development and improved comfort of life for the population;
- A significant improvement in the efficiency of fuel and energy use in the national economy and in the residential sector through the realisation of the energy saving potential;
- Improved electricity production structure, including faster growth of output at nuclear power plants (NPP) and better use of the hydro potential, primarily by completing the unfinished power plants;
- Improved petroleum product quality, while improving the oil refining yields and efficiency;
- Comprehensive processing of natural and associated gas and their increased use for non-fuel related purposes (e.g. feedstock);
- Broader use of cost-effective renewables.

The optimisation of the demand side of the fuel and energy balance requires both the implementation of cost-effective energy savings and a gradual change of the energy demand structure in the following major areas:

- Continued electrification of the economy with electricity consumption growth exceeding the overall energy demand growth rate by a factor of 1.05-1.1, through an improved electric power availability primarily in industry, agriculture and the household sectors;
- Slower energy use growth for district heating by a factor of 1.07-1.1 as compared to the average growth of energy use, due to a very considerable potential for reductions in heat losses and savings, as well as faster development of local and individual heat sources;
- Faster penetration of cars in the economy and use by the population results in a motor fuel consumption growth by a factor of 1.2 compared to the average growth in the energy use with a wider utilisation of alternatives to gasoline and diesel (LPG and CNG, hydrogen etc.);
- Reverse the unfavorable trend towards greater domination of natural gas on the domestic energy market, by reducing its share in total energy consumption (including for electricity and heat production) from the present 50% to 49% in 2010 and to 46% in 2020, by increasing electricity production at NPPs and HPPs (growth from 10.8% to 12%), greater use of liquid fuels (from 20 to 22%) and coal (share to grow from 19% to 20%).

The proposed FEB envisages *energy exports growth* in accordance with world prices movement and changes in the product supply structure, as well as *a possibility of imports*.

The objectives of the **state regional energy policy at the federal level** include wider regional integration and creation of a single economic space in the energy area through the

development of interregional energy markets and transport infrastructure, streamlining territorial fuel and energy production and consumption structure.

Regions of Russia with high energy costs and low energy availability are given *priority in the energy development* (Far East, Trans-Baikal (east of the lake Baikal), North Caucasus, and Kaliningrad *Oblast*).

Guaranteed supply of energy resources to the population and to socially important and strategic facilities at affordable prices is one of the most important tasks of the **state social policies in the energy sector**.

A relatively high share of energy costs in low-income population budgets and lack of public support to reforms call for the implementation of an active social policy aimed at minimising the negative consequences of higher energy prices for socially vulnerable population groups.

Energy savings enjoy a considerable attention in state energy policies. The modern Russian economy is using energy wastefully. The Russian GDP energy intensity is 2.3 times higher than the world average and 3.1 times higher than EU. The existing energy saving potential is estimated at 360-430 Mt of oil equivalent or 39-47% of the current energy consumption. Almost 1/3 of it is concentrated in the energy sectors (including 1/4 in electricity and district heating), while another 35-37% are in industry and 25-27% in the residential sector.

Some 20% of the energy saving potential may be tapped at a cost of less than \$20 per ton of oil equivalent even at prevailing oil prices. The most expensive measures (costing more than \$50 per ton of oil equivalent) account for some 15% of the possible energy savings. Measures costing between \$20 and \$50 per ton of oil equivalent would cover the remaining 2/3 of the energy savings potential and require substantial investments. It would take up to 15 years to fully realise the energy savings potential.

It is projected that economic restructuring and energy saving technologies will reduce the GDP energy intensity by 26-27% by 2010, and 45-55% by 2020. In this connection, up to 50% of the forecasted economic growth may be achieved by structural adjustment without increased energy use; energy saving technologies would result in more than 20% of additional savings; and only 1/3 of the GDP growth would require more energy.

In determining long-term **foreign energy policies** it is believed that Russia's integration into the world energy trade system, its co-operation with foreign investors in the development and exploitation of fuel and energy resources, improved efficiency and development of new energy markets do not just represent one of the most important areas of the national energy policies; they will also significantly contribute to addressing the global energy problems that confront humanity in the first decades of the twenty-first century.

For these reasons, state energy policies in the foreign trade area will be focused on the country's transition from the role of, mostly, an energy supplier to the role of an independent actor in world energy product trade, with established independent policy in the global energy market. This need is dictated both by the observed trend towards a stronger international economic integration in the energy area and by the perceived advantages of a qualitative change of Russia's role in the world energy trade.

The objectives of foreign energy policies are as follows:

- Strengthening of the position of Russia in the world energy markets; maximum efficiency in realising export capabilities of the national FEC; higher competitiveness of its products and services in the world markets;

- Non-discriminatory treatment of foreign energy sector activities, including access for the Russian energy companies to foreign energy markets, financial markets, and advanced energy technologies;
- Promotion of foreign investments in the Russian energy sector on a reasonable scale and on mutually attractive terms and conditions.

Foreign FEC policies envisage:

- Maximisation of the national benefits from foreign economic activities, taking into consideration the interdependent effects of export, import, and transit policies, and the presence of Russian companies' on world energy and capital markets;
- Incentives for diversification of the export structure with an increased share of higher value added products;
- Diversification of energy markets and a wider presence of the Russian companies in the international markets subject to the achievability of this;
- Support to projects aiming at attracting more actively foreign capital to Russia;
- Development of new forms of international energy co-operation, including in the areas of science and technology;
- Creation of a system for co-ordination of the state foreign trade regulatory policies in the energy area.

A strengthening of Russia's position on the world oil market and also on the gas markets is strategically important for a maximum realisation of the FEC export capabilities in the next twenty years, in order to contribute to the economic security of the country while remaining a stable and reliable partner for the European countries and for the world community at large. Russia's contribution as a major energy supplier to maintaining international energy security will become a new factor in the period to 2020.

Russia's strategic interests lie in *the development of a common energy and energy transportation infrastructure* in the neighbouring areas of Europe and Asia, the development of *international energy transportation systems*, and of a non-discriminatory *transit* of energy. With this in view, the state will promote the participation of Russian joint stock companies and businesses in the development and the implementation of large-scale international projects involving transportation of gas, oil, and electricity, both to the west and to the east.

Given Russia's unique geographical and geopolitical situation, the issues related to *transit* are of special significance. Because of this situation Russia has all the prerequisites for transit to ensure reliable energy supply, efficient exports, and income generated by transit.

The global nature of the energy issues and their political nature, combined with the important position of the Russian FEC in the world energy system, have turned energy issues into one of the basic elements of Russian diplomacy. The main tasks of the energy diplomacy through 2020 are as follows:

- Foreign policy support for the implementation of the Energy Strategy of Russia;
- Diplomatic support of national energy companies' interests abroad;
- Active energy dialogue with the countries of CIS, EuraSEC, the European Union, U.S.A., Northeast Asia, and other states, as well as with international organisations.

Russia, being one of the world's largest producers, exporters and consumers of fuel and energy, will continue to pursue an active dialogue both with energy producing and with the consuming countries. Russia will continue participating in international energy conferences, cooperate with industrialised countries on the basis of the Declaration of Co-operation with IEA and with the G-8, as well as interact with the leading oil exporters, both non-OPEC and OPEC members, with a view to securing fair energy prices.

Russia is interested in a long-term and large-scale involvement of the CIS Central Asian countries in contributing to its hydrocarbon energy supplies (especially natural gas). This would enable Russia to avoid accelerated investments into an expensive development of its northern gas reserves, and to ease pressure on the markets of strategic interest to Russia itself.

Russia is interested in the *participation of national companies in projects for the expansion of energy transport infrastructure throughout the CIS countries.* Priority co-operation areas include rehabilitation and further development of the common electricity system of the Commonwealth countries, strengthening of the CIS countries' mineral resource base, Russia's participation in the development and exploitation of oil and gas reserves, and in the construction of electricity plants in the Commonwealth countries. The strategic priorities also include resolving Caspian Sea issues, including drafting a convention on the legal status of the Caspian Sea.

Being one of the key actors on the global energy market, *Russia should actively participate in establishing reasonable and predictable energy prices,* which would be fair and to the benefit of both producing countries and energy consumers. At the same time, the state policies must take into account the possibility of considerable energy prices fluctuations due to changes in the world market situation.

The state will support the participation of Russian companies in investment projects abroad. Better efficiency and security in the supply of energy to national energy consumers and avoiding the support of Russian companies' participation in unfeasible projects will be principal features of the implementation of the state energy policy in this area.

Legislative support will play an important role in implementing effective policies in the external energy markets.

The optimisation of the country's fuel and energy balance would necessitate the following strategic goals for the national energy suppliers and for the development of the FEC sectors:

- Increase primary energy production from 1,418 Mt of oil equivalent in 2000 (1,515 Mt of oil equivalent in 2002) to 1,700-1,820 Mt of oil equivalent in 2010, and 1,810-2,030 Mt of oil equivalent in 2020;
- Increase electricity production from 878 billion kWh in 2000 (892 billion kWh in 2002) to 1015-1070 billion kWh in 2010, and 1215-1365 billion kWh in 2020;
- Increase oil production from 324 Mt in 2000 (379 Mt in 2002) to 445-490 Mt in 2010, and 450-520 Mt in 2020;
- Increase motor fuel production from 83 Mt in 2000 (88 Mt in 2002) to 100-110 Mt in 2010, and 115-135 Mt in 2020;
- Increase gas production from 584 billion m³ in 2000 (595 billion m³ in 2002) to 635-665 billion m³ in 2010, and 680-730 billion m³ in 2020;
- Increase coal production from 258 Mt in 2000 (253 Mt in 2002) to 310-335 Mt in 2010, and 375-435 Mt in 2020;

- Increase heat supply from 1,452 million Gcal in 2000 (1,437 million Gcal in 2002) to 1,570-1,625 million Gcal in 2010, and to 1,720-1,820 million Gcal in 2020.

Russia will remain the largest energy supplier on the world market. It has been estimated that energy exports could grow by 45-64% by 2020, which would satisfy the requirements of maintaining the stability of the country's balance of payments, strengthen its economic situation and geopolitical influence.

Exports of oil and petroleum products are expected to reach 305-340 Mt in 2010 and 305-350 Mt in 2020, as compared to 265 Mt in 2002. Exports of gas would reach 250-265 billion m³ in 2010 and 273-281 billion m³ in 2020, against 185 billion m³ in 2002. Exports of all types of fuel and energy resources and electricity would grow from 548 Mt of oil equivalent in 2000 to 770-840 Mt of oil equivalent in 2010, and to 795-895 Mt of oil equivalent in 2020.

The main results of the Energy Strategy are expected in the following areas:

- Energy intensity per unit of GDP is expected to be halved and accompanied by better energy efficiency of the economy; the share of energy consumption in GDP would drop from 22% in 2000 to 13-15% in 2020;
- Domestic primary energy needs will be met in a most efficient way: by 2020 demand would increase by 27-40% as compared to 2000, as opposed to a GDP growth of 2.3-3.3 times;
- Between 2001 and 2020 a moderate growth is expected in the *per capita* energy costs to the population (2.3-2.4 times) accompanied by a more substantial growth of the population's real income (3.4-3.7 times);
- Annual FEC earnings would grow 1.5 times by 2010, accompanied by a 1/3 increase in tax contribution to the country's budgets. FEC share (as a capital intensive and energy intensive sector) in industrial production will be reduced from the present 30% to 25-26% in 2010 and to 18-20% in 2020, primarily due to the accelerated growth of the high-tech and processing sectors with lower energy intensity.

2.3. State bodies regulating FEC

On March 9, 2004 the President of the Russian Federation issued Decree 314 "On the system and structure of Federal bodies of executive power". By virtue of the Decree 14 Ministries, 34 Federal services and 28 Federal agencies became part of the system of Federal bodies of executive power.

The main players in the field of regulation of Russia's FEC and the investment policy of the country are:

1. Ministry of industry and energy of the Russian Federation, including the Federal nuclear energy supervision service, the Federal service for technical regulation of metrology, the Federal service for technology supervision, the Federal nuclear power agency, the Federal industrial agency, the Federal energy agency;
2. The Ministry of economic development and trade of the Russian Federation, including the Federal customs service, the Federal tariffs service, the Federal agency for federal property management;
3. The Ministry of natural resources of the Russian Federation, including the Federal service of supervision in the area of environment and natural resources use, the Federal water resources agency, the Federal forestry agency and the Federal subsurface use agency;

4. The Ministry of finance of the Russian Federation, including the Federal tax service;
5. The Ministry of transport and communications of the Russian Federation;
6. The Federal antimonopoly service and the Federal financial market service, which report to the Government of the Russian Federation.

3. PARTICIPATION OF RUSSIA IN INTERNATIONAL ORGANIZATIONS, CONVENTIONS, TREATIES AND AGREEMENTS WHICH CONCERN THE INVESTING PROCESSES

3.1. List of bilateral agreements on protection and stimulation of foreign investments

Russia has the following bilateral agreements on stimulation and mutual protection of investments with other countries (as of March 15, 2004):

№	Country	Date of signing	Ratification by Russia	Entry into force
ON BEHALF OF THE GOVERNMENT OF THE USSR (12)				
1.	Austria (intergovernmental)	08.02.90		01.09.91
2.	Belgium and Luxemburg	09.02.89		18.08.91
3.	Great Britain and Northern Ireland	06.04.89		03.07.91
4.	Germany (intergovernmental)	13.06.89		05.08.91
5.	Spain (intergovernmental)	26.10.90		28.11.91
6.	Canada	20.11.89		27.06.91
7.	China	21.07.90		26.07.91
8.	Korea	14.12.90		10.06.91
9.	The Netherlands (intergovernmental)	05.10.89		20.07.91
10.	Finland	08.02.89		14.08.91
11.	France	04.07.89		29.05.91
12.	Switzerland	01.12.90		26.08.91
ON BEHALF OF THE GOVERNMENT OF THE RUSSIAN FEDERATION (45)				
13.	USA (intergovernmental)	17.06.92	<i>Submitted in 1993</i>	
14.	Poland	02.10.92	<i>Submitted in 1993</i>	
15.	Bulgaria	08.06.93	<i>Submitted in 1994</i>	
16.	Greece	30.06.93	13.06.96	24.02.97
17.	Cuba	07.07.93	13.06.96	08.07.96
18.	Romania	29.09.93	13.06.96	19.07.96
19.	Denmark	04.11.93	08.07.96	28.08.96
20.	Slovakia	30.11.93	08.07.96	02.08.96
21.	Czech Republic	05.04.94	23.05.96	06.06.96
22.	Vietnam	16.06.94	23.05.96	03.07.96
23.	Portugal	21.07.94	-	-
24.	Kuwait (intergovernmental)	21.11.94	23.05.96	30.05.96
25.	India	23.12.94	23.05.96	05.08.96
26.	Hungary	06.03.95	23.05.96	29.05.96
27.	Albania	11.04.95	23.05.96	29.05.96
28.	Sweden	19.04.95	23.05.96	07.06.96
29.	Norway	04.10.95	23.03.98	21.05.98
30.	Yugoslavia	11.10.95	08.07.96	19.07.96
31.	Mongolia	29.11.95	<i>Submitted in 1997</i>	
32.	Italy	09.04.96	17.12.96	27.08.98
33.	Ecuador	25.04.96	<i>Submitted in 1996</i>	
34.	Croatia	20.05.96	<i>Submitted in 1996</i>	
35.	Democratic People's Republic of Korea	28.11.96	<i>Submitted in 1997</i>	
36.	Lao People's Democratic Republic	06.12.96	<i>Submitted in 1997</i>	
37.	Lebanon	08.04.97	09.02.98	11.03.03

38	Cyprus	11.04.97	<i>Submitted in 1998</i>	
39	Philippines	12.09.97	29.10.98	29.11.98
40	Egypt	23.09.97	08.04.00	13.07.00
41	The Former Yugoslav Republic of Macedonia	21.10.97	20.05.98	13.07.98
42	Turkey	15.12.97	30.12.99	15.05.00
43	Uzbekistan	22.12.97		
44	Moldova	17.03.98	25.04.01	
45	Argentina	25.06.98	25.10.99	20.11.00
46	Kazakhstan	06.07.98	02.01.00	11.02.00
47	Japan	13.11.98	29.02.00	27.05.00
48	Republic of South Africa	23.11.98	08.04.00	12.04.00
49	Ukraine	27.11.98	02.01.00	27.01.00
50	Tadjikistan	16.04.99		
51	Lithuania	29.06.99	<i>Submitted in 2000</i>	
52	Ethiopia	10.02.00		20.12.02
53	Slovenia	08.04.00		
54	Armenia	15.09.01		
55	Thailand	17.10.02		
56	Yemen	17.12.02		
57	Bulgaria (Protocol)	03.03.03		

Out of all 57 signed agreements, 38 have been ratified and 36 have entered into force.

The agreements mentioned above that were concluded with the Soviet Union and the Russian Federation, were elaborated in accordance with international legal regulations and had as their basis standard Model agreements established by the governments of the USSR and the Russian Federation at different moments in time. The older Model agreement was approved at governmental level in 1992 and the supplement to it – in 1995 (Government Regulation of the Russian Federation of June 11, 1992 №395, Government Regulation of the Russian Federation of June 26, 1995 №625).

Improvement of the international practices for the elaboration of bilateral investment agreements, modification of the legislative foundation regulating the foreign investments regime in Russia, as well as Russia's prospect to join the World Trade Organization, have necessitated the review of the Model agreement on stimulation and mutual protection of the investments. On June 9, 2001 by Government Regulation of the Russian Federation №456 the new text for such an agreement was approved on the basis for negotiations. Government Regulation of the Russian Federation №229 of April 11, 2002 has supplemented the new Model agreement with new provisions.

The new Model agreement contains 12 articles, generally covering the same range of issues, as the preceding Model agreement.

3.2. List of bilateral agreements on avoidance of double taxation

Russia has signed the following international agreements on avoidance of double taxation with other countries (as of 15 March 2004):

I. Agreements in force			
	Country	Date of signing	Applied since
1.	Poland	22.05.1992	01.01.94
2.	USA	17.06.1992	01.01.94
3.	Bulgaria	08.06.1993	01.01.96
4.	Vietnam	27.05.1993	01.01.97
5.	Ireland	29.04.1994	01.01.96
6.	Korea	19.11.1992	01.01.96
7.	Romania	27.09.1993	01.01.96
8.	Uzbekistan	02.03.1994	01.01.96

9.	Sweden	15.06.1993	01.01.96
10.	Germany	29.05.1996	01.01.97
11.	Byelorussia	21.04.1995	01.01.98
12.	China	27.05.1994	1.01.98
13.	Slovenia	29.09.1995	01.01.98
14.	Croatia	02.10.1995	01.01.98
15.	Switzerland	15.11.1995	01.01.98
16.	Denmark	08.02.1996	01.01.98
17.	Great Britain	15.02.1994	01.01.98
18.	Canada	05.10.1995	01.01.98
19.	Mongolia	05.04.1995	01.01.98
20.	Slovakia	24.06.1994	01.01.98
21.	Moldova	12.04.1996	01.01.98
22.	Yugoslavia	12.10.1995	01.01.98
23.	Czech Republic	17.11.1995	01.01.98
24.	Philippines	26.04.1995	01.01.98
25.	Luxemburg	28.06.1993	01.01.98
26.	Hungary	01.04.1994	01.01.98
27.	Kazakhstan	18.10.1996	01.01.98
28.	Albania	11.04.1995	01.01.98
29.	India	25.03.1997	01.01.99
30.	Armenia	28.12.1996	01.01.99
31.	The Netherlands	16.12.1996	01.01.99
32.	Italy	09.04.1996	01.01.99
33.	France	26.11.1996	01.01.2000
34.	Turkmenistan	14.01.1998	01.01.2000
35.	Cyprus	05.12.1998	01.01.2000
36.	Mali	25.06.1996	01.01.2000
37.	Ukraine	08.02.1995	01.01.2000
38.	Turkey	15.12.1997	01.01.2000
39.	Morocco	04.09.1997	01.01.2000
40.	Azerbaijan	03.07.1997	01.01.1999
41.	Qatar	20.04.1998	01.01.2001
42.	The Former Yugoslav Republic of Macedonia	21.10.1997	01.01.2001
43.	Republic of South Africa	27.11.1995	01.01.2001
44.	Namibia	31.03.1998	01.01.2001
45.	Spain	16.12.1998	01.01.2001
46.	Kirghizia	13.01.1999	01.01.2001
47.	Belgium	16.06.1995	01.01.2001
48.	Israel	25.04.1994	01.01.2001
49.	Democratic People's Republic of Korea	30.05.2000	01.01.2001
50.	Egypt	23.09.1997	01.01.2001
51.	Lebanon	07.04.1997	01.01.2001
52.	Norway	26.03.1996	01.01.2003
53.	Finland	04.05.1996 (agreement) 14.04.2000 (protocol)	01.01.2003 01.01.2003
54.	Iran	06.03.1998	01.01.2003
55.	Sri Lanka	02.03.1999	01.01.2003
56.	Indonesia	12.03.1999	01.01.2003
57.	Austria	13.04.2000	01.01.2003
58.	Portugal	29.05.2000	01.01.2003
59.	Kuwait	09.02.1999	01.01.2004
60.	New Zealand	05.09.2000	01.01.2004
61.	Iceland	26.11.1999	01.01.2004
62.	Australia	07.09.2000	01.01.2004
63.	Tajikistan	17.03.1997	01.01.2004
64.	Syria	17.09.2000	01.01.2004
II. Agreements signed but not entered into force			

	Country	Date of signing	
1.	Mauritius	24.08.1995	
2.	Laos	15.05.1999	
3.	Lithuania	14.07.1999	
4.	Georgia	04.08.1999	
5.	Thailand	23.09.1999	
6.	Ethiopia	26.11.1999	
7.	Greece	26.06.2000	
8.	Malta	15.12.2000	
9.	Cuba	14.12.2000	
10.	Argentina	10.10.2001	
11.	Oman	26.11.2001	
12.	Singapore	09.09.2002	
13.	Estonia	05.11.2002	
III. Effective Agreement, concluded by the former USSR with other countries			
1.	Malaysia	31.07.1987	04.07.1988
2.	Japan	18.01.1986	27.11.1986

3.3. Membership of Russia in international economic and ecological organizations or in agreements on economic integration, customs unions or free trade zones, as well as membership in other major international organizations, groups, financing organizations or relations with them.

Russia participates in the following international organizations and agreements:

- United Nations Organization (UNO)
- Economic Commission for Europe (ECE)
- Economic and Social Commission for Asia and the Pacific (ESCAP)
- United Nations Development Programme (UNDP)
- United Nations Human Settlements Programme (UN-HABITAT)
- United Nations International Children's Fund (UNICEF)
- United Nations Industrial Development Organization (UNIDO)
- United Nations Fund for Population Activities (UNFPA)
- World Food Programme (WFP)
- United Nations Environment Programme (UNEP)
- World Meteorological Organization (WMO)
- World Health Organization (WHO)
- Agenda 21 of the Baltic Sea Region (Baltic21)
- World Conservation Union (WCU)
- Interoceanmetal Organization
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- United Nations Conference on Trade and Development (UNCTAD)
- Organization for Security and Cooperation in Europe (OSCE)
- International Labour Organization (ILO)
- Common Fund for Commodities
- International Monetary Fund (IMF)
- European Bank for Reconstruction and Development (EBRD)
- World Bank Group and institutions that are part of it: International Finance Corporation (IFC), International Development Association (IDA), Multilateral

Investment Guarantee Agency (MIGA), International Centre for the Settlement of Investment Disputes (ICSID)

- Bank for International Settlements (BIS)
- World Customs Organization (WCO)
- Commonwealth of Independent States (CIS)
- Eurasian Economic Association
- Agreement on Economic Cooperation (September 24, 1993)
- European Free Trade Area Agreement (April 15, 1994)
- Agreement on the Customs Union between the Russian Federation and the Republic of Belarus (January 6, 1995)
- Agreement on the Customs Union and the Common Economic Space (February 26, 1999)
- Agreement on the Transport Union between the Republic of Belarus, the Republic of Kazakhstan, the Kirghiz Republic and the Russian Federation (1998)
- International Maritime Organization (IMO)
- World Intellectual Property Organization (WIPO)
- Hague Conference on International Private Law
- International Chamber of Commerce (ICC)
- Bureau of International Expositions
- Black Sea Economic Cooperation (BSEC)
- Black Sea Trade and Development Bank (BSTDB)
- Parliamentary Assembly on the Black Sea Economic Cooperation (PABSEC)
- Council of Baltic Sea States (CBSS)
- Barents Euro-Arctic Regional Council (BEARC)
- Charter of the Shanghai Organization of Cooperation (2002)
- Financial Action Task Force on Money Laundering (FATF)
- Asia-Pacific Economic Cooperation (APEC)

Significant conventions to which Russia is a party (that concern the energy sector and/or investment disputes or the intellectual property rights).

- Paris Convention for the Protection of Industrial Property (1883)
- Madrid Agreement Concerning the International Registration of Marks (1891)
- Hague Convention on the Service Abroad of Judicial and Extrajudicial Documents in Civil and Commercial Matters (1965)
- Hague Convention on the Taking of Evidence Abroad in Civil or Commercial Matters (1970)
- Convention on the Protection of the Marine Environment of the Baltic Sea Area (1992)
- Convention on the Long-Range Transboundary Air Pollution (1979)
- Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal (1989)
- Stockholm Convention on Persistent Organic Pollutants (SCPOP) (2001)
- Convention of Biological Diversity (1992)
- International Whaling Convention (1946)
- Convention on the Wetlands of International Importance Especially as Wildlife Habitat (Ramsar Convention) (1971)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1973)

- The Vienna Convention for the Protection of the Ozone Layer (1985) and The Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
- The Convention on the Protection of the Black Sea against Pollution (Bucharest Convention) (1992)
- Convention on Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London) (1972)
- The UN/EEC Convention on the transboundary effects of industrial accidents (2000)
- The UN/EEC Convention on the protection and use of transboundary watercourses and international lakes (1993)
- United Nations Framework Convention on Climate Change (1994)
- World Customs Organization's International Convention on the Harmonized Commodity and Coding System
- European Convention on the Suppression of Terrorism (1997)
- Strasbourg Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime (1990)
- International Convention for the Suppression of the Financing of Terrorism (2000)
- International Telecommunication Union Convention (Geneva, 1992)

4. THE LEGISLATIVE FRAMEWORK GOVERNING THE FOREIGN INVESTMENTS IN THE FUEL AND ENERGY SECTOR OF THE RUSSIAN FEDERATION

4.1. Russia's legal framework

4.1.1. *Constitution of the Russian Federation*

The Constitution of the Russian Federation adopted by a nation-wide referendum on December 12, 1993, is the basis of the legal system of the Russian Federation. The Constitution has supreme legal force and direct effect on the entire territory of the Russian Federation. All laws and other normative legal acts adopted by Federal bodies and subjects of the Russian Federation must not and shall not contradict the Constitution of the Russian Federation. The supremacy of the Constitution of the Russian Federation is ensured through the consistent application of laws and other normative legal acts.

4.1.2. *International treaties and agreements*

In accordance with the Constitution of the Russian Federation, the universally recognized principles and norms of international law as well as international agreements of the Russian Federation shall be an integral part of its legal system. If an international agreement to which the Russian Federation establishes rules which differ from those stipulated by law, then the rules of the international agreement shall apply (Art. 15 para 4 of the Constitution of the Russian Federation).

In accordance with the Constitution of the Russian Federation, **ratification of international treaties** of the Russian Federation is carried out by adopting a federal law. International treaties and agreements of the Russian Federation that result in changing or modifying the legislation in force or the adoption of new federal laws providing rules other than those stipulated by laws in force, are subject to ratification.

In accordance to the Constitution, federal laws adopted by the State Duma on ratification of international agreements of the Russian Federation must be examined by the Federation Council, signed by the President of the RF, and published.

4.1.3. *Federal laws*

Federal laws have priority and direct effect on the entire territory of the Russian Federation.

Federal laws are adopted to govern matters in the domain of authority of the Russian Federation and matters in the shared domain of authority of the Russian Federation and the subjects of the Russian Federation⁴.

The right of legislative initiative is vested in the President of the Russian Federation, the Federation Council, the members of the Federation Council, the deputies of the State Duma, Government of the Russian Federation, the legislative (representative) bodies of the subjects of the Russian Federation, as well as the Constitutional Court of the Russian Federation, the

⁴ Matters in the domain of authority of the RF include, for example, federal energy systems, nuclear energy, fissile materials; federal transport, railroads, information and communications; space activities; international treaties and agreements of the Russian Federation; foreign economic relations of the Russian Federation. Matters in the joint domain of the RF and subjects of the RF include, for example, ownership, use and transactions with land, subsoil, water and other natural resources, natural resource use, environmental protection and ecological safety and security; coordination of the international and foreign economic relations of the subjects of the Russian Federation, implementation of the international agreements and treaties of the Russian Federation.

Supreme Court of the Russian Federation and the Supreme Arbitration Court of the Russian Federation within their respective domains of authority.

Federal constitutional laws are adopted on issues envisaged by the Constitution of the Russian Federation. Federal laws cannot contradict federal constitutional laws.

Laws must be officially published. Unpublished laws do not have force.

The first publication of a law in “Parliamentskaya Gazeta” (“The Parliament Paper”), “Rossiyskaya Gazeta” (“The Russian Gazette”) or the “Compilation of Legislation of the Russian Federation” is considered to be the official publication of a law

4.1.4. Acts of the President of the Russian Federation.

The President of the Russian Federation issues edicts and regulations which are binding on the entire territory of the Russian Federation. Edicts and regulations of the President of the Russian Federation must not contradict with the Constitution of the Russian Federation and federal laws.

4.1.5. Acts of the Government of the Russian Federation.

The Government of the Russian Federation, proceeding from and in fulfillment of the Constitution of the Russian Federation, federal constitutional laws, federal laws, edicts of the President of the Russian Federation issues decrees and regulations and ensures their execution.

Acts of a regulatory nature must be published as regulations by the Government of the Russian Federation. Acts on executive and other current issues other than regulatory ones, must be published as regulations by the Government of the Russian Federation.

Decrees and regulations by the Government of the Russian Federation are binding on the entire territory of the Russian Federation. They must also be published.

Acts by the Government of the Russian Federation may be appealed at the courts.

The Government of the Russian Federation has the right to make appeals, statements and other acts of non-legal nature.

4.1.6. Legislation of the subjects of the Russian Federation

The Division of the domains of authority and the powers between various levels of authorities in Russia is governed by FZ No 119 of June 26, 1999. “On Division of Competence and Powers between State Government Bodies of the Russian Federation and the Public Authorities of the Subjects of the Russian Federation”. Under this Law, some issues are within the competence of the government authorities of the Russian Federation, some – within the shared competence of the state government bodies of the Russian Federation and the subjects of the Russian Federation, and some issues are within the competence of the authorities of the subjects of the Russian Federation.

Laws and other normative legal acts of the subjects of the Russian Federation shall be published and adopted on issues the joint competence of the Russian Federation and the subjects of the Russian Federation, as well on issues pertaining to the competence of the subjects of the Russian Federation.

Laws of the subjects of the Russian Federation must not conflict federal laws that are adopted on matters within the competence of the Russian Federation and on issues within the joint competence of the Russian Federation and the subjects of the Russian Federation. In the event of such a conflict, the federal law shall prevail.

4.1.7. Legal acts of the local government

The bodies of the local government in Russia are not part of the system of state government bodies, but at the same time the power is vested unto them to issue their own legal instruments. The nature of these instruments is determined by the charters of the municipal entities in accordance with the laws of the subjects of the Russian Federation.

4.2. National judiciary system

4.2.1. General provisions

Justice in the Russian Federation is administered only by court.

Judicial authority is exercised by constitutional, civil, administrative and criminal court proceedings.

The judicial system in the Russian Federation is established by the Constitution of the Russian Federation and the federal constitutional law “On Judicial System in the Russian Federation” of December 12, 1996. The judicial system in the Russian Federation is based on the fundamental principle of independent courts and judges.

Should a court establish (when considering a case) that a legal act of a state or other body contradicts the law, it must rule out in accordance to the law.

The examination of cases in all courts is open. Cases may be heard in closed sessions in the instances permitted by federal law.

The examination of criminal cases *in absentia* in courts is prohibited except in the instances permitted by federal law.

Judicial proceedings are conducted on the basis of contest and equality of the parties concerned.

In cases where this is foreseen by federal law, judicial proceedings are conducted with the participation of a jury.

Rulings of courts that have come into effect, as well as their legal orders and other resorts, are with no exception compulsory for all bodies of state government powers and citizens and must be unswervingly observed throughout the entire territory of the Russian Federation.

Failure to comply with a court ruling, as well as other contempt of court, entail liability established by federal law.

Rulings of foreign courts, international courts and courts of arbitration are binding if envisaged by international agreements of the Russian Federation.

All are equal before the law and the court.

Courts do not extend preference to bodies, persons, parties involved in the legal proceedings on the grounds of their national, social, sexual, racial, ethnic, language or political background, or their origin, property and official status, place of living, place of birth, religion, beliefs, membership in public associations, as well as on other grounds not stated by federal law.

Justice in the Russian Federation is administered only by courts established in accordance to the Constitution of the Russian Federation and the Federal Constitutional Law mentioned above. The creation of extraordinary courts and courts that are not envisaged by this Law is not permitted. Justice in the Russian Federation is administered by federal courts, constitutional (statutory) courts and justices of the peace of the subjects of the Russian

Federation that are a part of the judicial system of the Russian Federation. The judicial system of the RF is set in accordance to the Federal constitutional law dated 31 December 1996 No. 1-FKZ “On the Judicial System of the RF”.

4.3. Regulation of investment activities

4.3.1. *Most important terms*

In accordance to the definition in the Russian legislation, the term of **foreign investor** means:

- A foreign legal entity. Its civil legal capacity is determined in accordance to the legislation of the state where it was established, and in accordance to the legislation of the that state it may invest on the territory of the Russian Federation;
- A foreign organization that is not a foreign legal entity. Its civil legal capacity is determined in accordance to the legislation of the state where it has been established, and which, in accordance to the legislation of that state it may invest on the territory of the Russian Federation;
- A foreign citizen. His/her civil capacity and legal capacity are determined in accordance to the laws of the state of his/her citizenship, and who, in accordance to the legislation of the said foreign state, may invest on the territory of the Russian Federation;
- A stateless person who is permanently residing outside the territory of the Russian Federation. His/her civil and legal capacity are determined in accordance to the legislation of the state where he/she permanently resides, and who, in accordance to the legislation of the said state may invest in the territory of the Russian Federation;
- An international organization. It may be entitled under an international treaty of the Russian Federation to invest on the territory of the Russian Federation;
- Foreign states. In accordance to the procedure established by federal laws.

A Russian commercial organization is granted the status of **a commercial organization with foreign investment** from the date when a foreign investor joins its members. From this date, the business entity with foreign investment and the foreign investor enjoy the legal protection, guarantees and preferences established by Federal Law “On Foreign Investment in the Russian Federation” No 160-FZ, of 9 July 1999; it ceases to enjoy this status upon the retirement of the foreign investor from its participants.

Foreign investment, in accordance to Federal Law “On Foreign Investment in the Russian Federation” No 160-FZ of 9 July 1999, means an investment of foreign capital into a business entity within the territory of the Russian Federation in the form of civil right objects belonging to the foreign investor, unless such civil right objects are exempt or restricted in use in the Russian Federation in accordance to federal laws, including funds, securities (whether in foreign currency or in the currency of the Russian Federation), other property, property rights, exclusive rights on the results of intellectual activity that have a monetary value (intellectual property), as well as services and information.

Foreign direct investment means:

- Acquisition by a foreign investor of a share of at least 10%, shares (contributions) to the authorized (stock) capital of a commercial organization established or re-established on the territory of the Russian Federation in a form of a business

partnership or a company in accordance to the civil legislation of the Russian Federation;

- Investment of capital into fixed assets of a branch of the foreign legal entity being established in the territory of the Russian Federation;
- Provision by a foreign investor as a lessor of financial renting (leasing) of equipment stated in Chapters XVI and XVII of the CIS Foreign Economic Activity Commodity Classification of a customs value of at least 1 million Roubles.

4.3.2. Legal treatment of foreign investment

Legal treatment governing activities of foreign investors (and commercial organizations with foreign investment) and use of profit gained from investment must not be less favourable than the legal treatment governing activities and use of profit from investment accorded to Russian investors, with exclusions provided by federal laws. Exemptions of restrictive nature for foreign investors may be established by federal laws only as far as this may be deemed necessary to safeguard the fundamental principles of the constitutional system, morals, health, rights and legitimate interests of other persons, and to ensure national defence and security. Exemptions of stimulating nature in a form of preferences for foreign investors may be introduced to the benefit of the social and economic development of the Russian Federation. The types and procedure of granting preferences must be established by the legislation of the Russian Federation.

Legal protection, guarantees and preferences as established by the Federal Law “On Foreign Investment in the Russian Federation” No. 160-FZ, of 09. 07. 1999, apply fully to:

- Foreign investors;
- Commercial organizations with foreign investment, established in the territory of the Russian Federation wherein foreign investor(s) hold at least 10% of the shares, of shares (contribution to in the authorized (stock) capital of the said entity when making reinvestment.

A subsidiary of a foreign legal entity established on the territory of the Russian Federation must perform, on behalf of the foreign legal entity that has established it, some or all functions, including those of a representative office, provided that the purposes for which it has been established and the activities of the parent organization are of commercial nature and the parent organization is directly liable for its commitments related to the said activities on the territory of the Russian Federation.

The affiliate and dependant companies of a commercial organization with foreign investment do not enjoy legal protection, guarantees and preferences established by the Federal Law “On Foreign Investment in the Russian Federation” No. 160-FZ, of 09.07.1999, when conducting their business activities in the territory of the Russian Federation.

In accordance to Article 15 of the RSFSR Law “On Investment Activities in the RSFSR” No. 1488-1, of 26.06.1991, the state, in accordance to the legislation in force on the territory of the Russian Federation, shall ensure protection of investment, including foreign investment, regardless of forms of ownership. At the same time, the state must ensure equal treatment of activities, precluding use of discriminatory measures which could affect the management and the use of investments.

Investments may not be nationalized or confiscated without compensation, and no measures having similar effect may apply to them either. Such measures can be used only together with full compensation for losses incurred by the investor as a result of alienation of

property invested, including lost profit, and strictly in compliance to the legislation of the Russian Federation. The procedure for compensation of the investment for losses to the investor must be established by the said legal acts.

Establishment and liquidation of a commercial organization with foreign investment

shall be governed under the terms and procedure provided for by the Civil Code of the Russian Federation and other federal laws, with exceptions that may be imposed by the federal laws.

Legal entities that are commercial organizations with foreign investment are subject to state registration according to the procedure established by the Federal Law “On State Registration of Legal Entities”.

A subsidiary of a foreign legal entity may established for the purposes of carrying out on the territory of the Russian Federation the activities which are carried out by the parent organization outside the territory of the Russian Federation, and may be liquidated by a decision of the foreign legal entity that is the parent organization.

The state supervises the establishment, activities and liquidation of a subsidiary of a foreign legal entity through accreditation of such a subsidiary in accordance to the procedure established by the Government of the Russian Federation. In accordance to the Regulation of the Government of the Russian Federation “On Federal Executive Body for Coordination of Activities of Federal Executive Bodies for Attracting Foreign Direct Investments in the Economy of the Russian Federation and Accreditation of Subsidiaries of Foreign Legal Entities” No. 1419 of December 21, 1999:

- The Ministry of Economic Development and Trade of the Russian Federation is responsible for accreditation of subsidiaries of foreign legal entities;
- A subsidiary of the foreign legal entity may be denied accreditation on the grounds of safeguarding a fundamental principal of the constitutional system, morality, health, rights and legitimate interests of other persons and ensuring national defense and security.

4.3.3. Major legislation governing investment and investment

The Federal Law “**On Investment Activity in the Russian Federation Performed in Form of Capital Investment**” No. 39-FZ, of 25.02.1999, provides the legal and economic framework of investment activities performed in the form of capital investment on the territory of the Russian Federation, and also ensures equal protection of the rights, interests and property of those involved in investment activities in the form of capital investment, regardless of form of ownership.

Relations associated with investment activities performed in the form of capital investment as defined as investments in fixed capital (capital assets), including expenditures for construction, expansion, reconstruction and technical upgrading of enterprises in operation, procurement of machinery, equipment, tools, appliances, research and development work and other expenses.

Objects of capital investment in the Russian Federation are defined as various types of property in private, public, municipal and other forms of ownership, which is new and (or) upgraded, with exceptions imposed by the federal laws.

No capital may be invested in creation and use of any property in a way that it is inconsistent with the legislation of the Russian Federation and standards (norms and regulations) established under due procedure.

Subjects of investment in capital assets are investors, customers, contractors, users of the objects of capital investment and other parties.

Investors may invest on the territory of the Russian Federation their own and (or) raised capital in accordance to the legislation of the Russian Federation. Any individual or legal entity, any association of legal entities established under an agreement for joint activities that is not in itself a legal entity, or a government authority, a local self-government authority, or a foreign business entity (hereinafter referred to as “foreign investors”) may act in the capacity of an investor.

A **customer** means a natural or a legal entity duly authorized by the investors to act as customer to an investment project. Unless otherwise stipulated by the contract signed between the parties to an investment project, the customer may not interfere with the business and (or) other activity. An investor may act as a customer.

A customer who is not an investor is entitled to ownership, use and disposal of investments during the period and within its powers established by agreements and (or) government contract in accordance to the legislation of the Russian Federation.

A **contractor** means a natural or a legal entity performing services under an agreement with the contractor and/or a government contract signed with the customer as required by the Civil Code of the Russian Federation. A contractor shall hold a proper license authorizing it to carry out any types of business that are subject to mandatory licensing under federal law.

The user of the property which results from a capital investment is defined as the Russian or foreign natural or legal entity, the government authority, the local self-government authority, the foreign state, the international association or institution for the benefit of which the property is created. The investor may itself/himself/herself be the user of a property that results from a capital investment.

An actor of investment activity may combine the functions of two or more investment actors, unless otherwise stipulated by the agreement and (or) government contract signed between the parties to the investment process.

Relations arising out of or in connection to foreign capital investment activity on the territory of the Russian Federation are **governed** by applicable international treaties of the Russian Federation, the provisions of the Civil Code of the Russian Federation, the Federal Law “On Investment Activity in the Russian Federation”, carried out in the form of capital investments, other applicable federal laws and regulatory acts of the Russian Federation. Should the provisions of any international treaty of the Russian Federation come contradict the provisions of this Federal Law, the provisions of the international treaty shall prevail.

All investors are equally entitled to:

- Invest their capital, except as otherwise provided by a federal law;
- Determine at their sole discretion the scope and strategies of their capital investment, and enter into agreements with any other investment actors under the Civil Code of the Russian Federation;
- Own, use and dispose of the investee(result?) of their capital investment and the results of their capital investment;
- Assign, under an agreement and (or) government contract, their right to invest capital and their interest in the results of such investment to any natural, legal entity, government authority, or self-government authority in accordance to the laws of the Russian Federation;

- Monitor the proper use of any funds allocated for the purposes of capital investment;
- Pool their own and (or) raised funds with the capital of other investors in order to make joint capital investment on a contractual basis, subject to the provisions of the laws of the Russian Federation;
- Enjoy any other rights granted by their agreement and (or) government contract executed under the legislation of the Russian Federation.

Actors of the investment activity must:

- Carry out their investment activity in compliance with the applicable international treaties of the Russian Federation, federal laws and other normative legal acts of the Russian Federation, laws and other normative legal acts of the subjects of the Russian Federation, and duly accepted standards (norms and regulations);
- Fulfil any requests of the government authorities or officials thereof, except in cases where they contradict an applicable law of the Russian Federation;
- Use all funds disbursed for the purposes of capital investment in strict compliance with their envisioned target.

Relations between investment actors are governed ***by an agreement and (or) a government contract*** signed between them under the Civil Code of the Russian Federation.

Government regulation of investment activity carried out in the form of capital investment focuses on:

- Creation of favourable treatment for promotion of investment activity carried out in the form of capital investment by:
 - Improving the taxation system, the methods of depreciation accrual and allocation of depreciation funds;
 - Extending special taxation regimes to investment actors that are not of individual nature;
 - Protecting the interests of investors;
 - Granting preferential treatment to investment actors with respect to the use of land and other natural resources in such a way that it not prohibited by the laws of the Russian Federation;
 - Increasing the use of funds belonging to the population and other extra budgetary funding sources in housing construction and construction of social and cultural facilities;
 - Creating and developing a system of information processing centres that provides rating services and regularly publish their ratings of investment actors.
 - Application of antimonopoly measures;
 - A wider use of collateral facilities in lending;
 - Promotion of financial leasing in the Russian Federation;
 - Revaluation of fixed assets in accordance to inflation funds;
 - Encouraging the formation by investment actors of their own investment funds.
- Direct government participation in capital investment activities in the form of:

- Development, approval and financing of investment projects carried out by the Russian Federation jointly with foreign states, and investment projects financed from the federal budget or the budgets of the subjects of the Russian Federation;
- Listing of construction sites and facilities due for technological upgrading for federal purposes, and their financing from the federal budget. The procedure of listing is defined by the Government of the Russian Federation;
- Provision through competitive bidding to investment projects of government guarantees backed by the federal budget (the Development Budget of the Russian Federation) or by the budgets of the subjects of the Russian Federation;
- Allocation, on competitive terms, of federal funds (Development Budget of the Russian Federation) or funds of the subjects of the Russian Federation to investment projects. Any funds thus allocated are due for repayment within a specified time period, and bear interest at interest rates that may be stipulated by the Federal Law on Federal Budget for the current year, and (or) by the law on the budget of the subject of the Russian Federation, or may be allocated in exchange for a share or shares in a new established company, which are to be sold on the securities market on the maturity date, with the proceeds from the sale incorporated in the relevant budget.
- Expert evaluation of investment projects;
- Protection of Russian organizations from the supplies thereto of morally outdated and excessively material and energy-consuming, and non-knowledge intensive technologies, equipment, assemblies and materials (including, when implementing the Development Budget of the Russian Federation);
- Development and approval of standards (norms and regulations) and monitoring of compliance.
- Emission of government bonds and secured special purpose loans;
- Extension of investment projects rights to temporally suspended or mothballed state-owned construction sites and facilities;
- Granting of concessions to Russian and foreign investors that are winners of tenders (auctions or competitions).

The Government may resort to other forms and methods of regulation of capital investment activity in accordance with the laws of the Russian Federation.

The Law defines the *procedure of carrying out government capital investment*. It includes a requirement for the carrying out of a mandatory expertise of all investment projects; the requirement is independent of the source of funds and form of ownership of the objects of capital investment.

Investment projects financed from the federal budget or the budgets of the subjects of the Russian Federation, as well as investment projects of primary economic importance, irrespective of their financing sources and of ownership of the property wherein investment is made, are subject to state expert evaluation performed by duly authorized government authorities. The procedure of state expert evaluation of the investment projects is established by the Government of the Russian Federation.

According to the laws of the Russian Federation, all investment projects are subject to environmental expert evaluation.

Guarantees are granted to all investors irrespective of their rights of ownership, which include:

- Promotion of equal opportunities for investment activity;
- Transparency of discussions on investment projects;
- Right to appeal in the courts decisions and actions (omissions) on the part of government authorities, local self-government bodies and their officials
- Protection of capital investment.

Investments may be *nationalized* only if full compensation is paid in advance by the state for losses incurred by the subjects of the Russian Federation, as required by the Constitution of the Russian Federation and the Civil Code of the Russian Federation. Investments may be *confiscated* by a decision of the government authorities in cases, under a procedure and subject to conditions established by the Civil Code of the Russian Federation.

Disputes arising from investment activity carried out in the form of capital investment are resolved in accordance to the procedure established by the legislation of the Russian Federation and other international agreements of the Russian Federation.

The Law of the RSFSR “**On Investment Activity in the RSFSR**” No. 1488-1, of June 26, 1991, also governs relations arising from investments, including foreign ones. However, at present this Law is partially applicable in its part which is not in conflict with the Federal Law “**On Investment Activity in the Russian Federation Carried Out in the Form of Capital Investment**” No. 39-FZ, of 25.02.1999.

The Federal Law “**On Foreign Investment in the Russian Federation**” No. 160-FZ, of 09.07.1999, *provides for* major protection for guarantees for the rights of foreign investors on investments, proceeds and returns on them, and for conditions of business activities of the foreign investors on the territory of the Russian Federation.

This Law does *not apply* to relations arising from foreign capital investment in banks and other lending agencies and insurance agencies which are governed by the laws of the Russian Federation on banks and banking activity and the laws of the Russian Federation on insurance, respectively. It does not apply to relations concerning foreign capital investment in non-profitable organizations for certain socially useful purposes, including for educational, charitable, scientific or religious purposes which are governed by the laws of the Russian Federation on non-profit organizations.

A foreign investor on the territory of the Russian Federation shall have *guarantees* of:

- Full and unconditional protection of rights and interests which is provided for by this law, other federal laws and other normative legal acts of the Russian Federation, as well as by international treaties of the Russian Federation.
- Right to be compensated for any losses inflicted on such an investor as a result of illegal actions (omissions) of the government authorities, local self-government bodies or officials of, as envisaged by the civil legislation of the Russian Federation.
- Their right to invest on the territory of the Russian Federation in any forms not prohibited by the laws of the Russian Federation.

The evaluation of the capital invested into the fixed (reserve) capital of a commercial organization with foreign investment shall be made in accordance to the laws of the Russian Federation. The invested capital is evaluated in the national currency of the Russian Federation.

In accordance to an agreement, a foreign investor *may transfer* (assign claims) his *rights* and liabilities (transfer a debt) to a third party, while in compliance to a law or pursuant to a court order a foreign investor must transfer his rights (assign claims) and liabilities (transfer debt) to another party.

If a foreign state or a state authority authorized by the former pay in favour of a foreign investor under guarantees (insurance contract) granted to a foreign investor with respect to his investment made in the territory of the Russian Federation and the rights (claims) to such investment of the foreign investor are transferred (assigned) to such an foreign state or an authorized authority by the same, then such transfer of rights (assignment of claims) shall be deemed as lawful under the laws of the Russian Federation.

The *property* of a foreign investor or business entity with foreign investment *shall not be subject to seizure, including nationalization, confiscation, except the cases and the grounds provided for by the federal law or international treaty of the Russian Federation.*

In case of *confiscation*, a foreign investor or a business entity with foreign investor shall be reimbursed the value of the property being confiscated. When the circumstances that have prompted the confiscation cease to exist, a foreign investor or a business entity with foreign investor shall have the right to seek in court the return of the remaining property, but at the same time this foreign investor or this business entity with foreign investor must reimbursed the amount of compensation paid to them with account for depreciation costs of the property.

In case of *nationalization*, a foreign investor or a business entity with foreign investment shall be reimbursed the value of the property being nationalized and other losses. All disputes arising in the process of reimbursement of losses shall be resolved according to the procedure envisaged by the Law.

Disputes involving foreign investors and arising from the investment and business activities in the Russian Federation shall be resolved in accordance with the international treaties of the Russian Federation and federal laws in a court or court of arbitration, or an international court of arbitration (arbitration tribunal).

A foreign investor, having paid the taxes and duties required by the legislation of the Russian Federation, shall have the *right to freely use revenues and profits in the territory of the Russian Federation* for the purposes of reinvestment of other purposes that do not contradict the legislation of the Russian Federation, and to unimpeded transfer abroad of revenues, profits and other legally money proceeds in foreign currency from investments previously made, including:

- Return from investment, received as profits, dividends, interests and other revenues;
- Amount of money for the purposes of fulfillment of liabilities under the contracts and other transactions of a business entity with foreign investment of a foreign legal entity that has established its subsidiary in the territory of the Russian Federation;
- Money obtained by a foreign investor as result of liquidation of the business entity with foreign investment or a subsidiary of a foreign legal entity, or as a result of alienation of the invested property, ownership rights and exclusive rights to the results of the intellectual property;
- Compensations as provided for by the present Law.

A foreign investor which has initially brought property and information in a documentary form or in a form of records on electronic media into the territory of the Russian Federation as foreign investment, shall have the right to freely (without quotas, licenses and other non-

tariff measures of regulation of foreign trade that may be applicable to such a foreign investor) to export the said property and information from the territory of the Russian Federation.

A foreign investor *shall have the right to acquire stock and other securities of the Russian commercial organizations and those issued by the state authorities* in accordance with the legislation of the Russian Federation.

A foreign investor may *take part in privatization of the objects of* state-owned and municipal property by acquiring ownership rights to state-owned and municipal property or part thereof, shares (contributions) in the authorized (stock) capital of the entity being privatised under the terms and in the procedure established by the laws of the Russian Federation on privatisation of the state-owned and municipal property.

Acquisition by a foreign investor of *the right of ownership with respect to land plots, other natural resources, buildings, constructions and other immovable property* shall be executed in accordance with the laws of the Russian Federation and the laws of the subjects of the Russian Federation.

The tenant right to a land plot may be acquired by a commercial organization with foreign investment through a bidding (auction, tender), unless otherwise envisaged by the laws of the Russian Federation.

Customs duties preferences are granted to foreign investor and business entities with foreign investment conducting priority investment projects under the customs laws of the Russian Federation and certain of the Russian federation on taxes and duties.

The subjects of the Russian Federation and local self-government bodies may, within their respective competence, grant a foreign investor preferences and guarantees, finance and provide other forms of support for investment projects, that are implemented by the foreign investor and use funding from budgets of the subjects of the Russian Federation and of local authorities, as well as extra-budgetary financing.

Property insurance against the risks of loss (destruction), peril or damage, third party risks and entrepreneurial risks are covered by business entities with foreign investment at their own discretion, and by a subsidiary of a foreign legal entity – at the discretion of the parent organization, unless otherwise required by the legislation of the Russian Federation.

The Government of the Russian Federation regulates foreign investments by:

- Elaborating and implementing the state policy in the area of international investment co-operation;
- Determining the expediency of imposition of prohibitive measures and restrictions on foreign investment activities on the territory of the Russian Federation, and drafting legislation concerning list of such prohibitions and restrictions;
- Establishing measures to monitor foreign investor activities on the territory of the Russian Federation;
- Approving the list of priority investment projects;
- Elaborating and ensuring the implementation of federal programmes for the attraction of foreign investments;
- Attracting investment credits from international financial institutions and foreign states for the purpose of financing the Development Budget of the Russian Federation and federal investment projects;

- Interacting with subjects of the Russian Federation in addressing issues related to international investment co-operation;
- Supervising the drafting and the signing of investment agreements with foreign investors regarding the implementation of large-scale investment projects;
- Supervising preparation and the signing of international treaties of the Russian Federation on promotion and mutual protection of investments;
- Establishing a federal executive body responsible for the coordination of attraction of direct foreign investments into the economy of the Russian Federation.

The Federal Law “**On Production Sharing Agreements**” No. 225-FZ, of 30.12.1995, (as provided in Federal Laws No. 19-FZ, of 07.01.1999, No.75-FZ, of 18.06.2001, and No.65-FZ, of 06.06.2003) provides the legal framework governing Russian and foreign investments prospecting, exploration and production of mineral resources on the territory of the Russian Federation and on the continental shelf and (or) within the exclusive economic zone of the Russian Federation on **production sharing terms**.

“Production sharing agreement” means an agreement under which the Russian Federation grants a subject of the business activity (hereinafter referred to as investor) free of charge and for a definite period of time exclusive prospecting, exploration and production rights on mineral resources within the subsoil limits specified in the Agreement, and rights to perform related works, while the investor undertakes to perform the activities at its own expense and risk. This agreement establishes requirements with respect to the use of subsoil, including terms and procedure for production sharing between the parties to the agreement in accordance to the provisions of the Law.

The right to use subsoil may be limited, suspended or terminated in accordance to the provisions of the Agreement signed under the legislation of the Russian Federation.

The lists of subsoil areas wherein the right of use under the provisions of a production sharing agreement may be granted in accordance to the provisions of Federal Law on PSA, are established by federal laws.

The lists of subsoil areas include subsoil areas with respect to which the Government of the Russian Federation has decided that it is appropriate to include such subsoil plots into the said lists.

The Law stipulates that provision may be covered by no more than 30% of all the explored and registered natural resources reserves may be covered by production sharing agreements. As far as oil and gas deposits are concerned, at present this quota is practically taken up.

Grounds for inclusion of some subsoil areas into lists of areas that may be granted for use under production sharing agreements include the lack of capabilities for geological prospecting, exploration and production of natural resources on conditions of use of the subsoil that differ from those of the production sharing agreements as provided by the laws of the Russian Federation.

The holding of a tender for the rights to use subsoil areas on conditions other than those of production sharing agreements under the Law of the Russian Federation “On Subsoil” (pursuant to the Federal Law No.27-FZ of March 3, 1995), followed by declaring the tender null and void due to absence of participants, constitutes proof of the absence of such capabilities.

Should absence of capabilities for the geological prospecting, exploration and production of natural resources on the terms and conditions for the use subsoil that do not require the

signing of PSA be established, a subsoil area may be included in the list of subsoil areas which may be granted for use on production sharing terms and conditions as long as the following prerequisites defined by the Government of the Russian Federation are met :

- In cases where the development of a given subsoil area may preserve jobs at an employer that is key to an urban area, while discontinuing the use of this subsoil area will lead to adverse social effects;
- In cases where the development of the subsoil area is required for developing natural resources the continental shelf of the Russian Federation and in the Far North or in equivalent areas, and the resources are located in non-populated areas where transport and other infrastructure is not available.
- In cases where the development of a given field is impossible without applying special costly technologies to extract reserves of natural resources located in difficult mining and geological conditions That are difficult to recover but are significant in quantity.

PS Agreements that have been executed prior to the entry into force of this Federal Law must be implemented in accordance with the provisions defined in the agreements. The provisions of this Law apply to the said agreements insofar as its application does not contradict the terms and conditions of the agreements and does not restrict the rights obtained and enjoyed by investors by virtue of these agreements.

The parties to production sharing agreements are:

- The Russian Federation, on behalf of which the Government of the Russian Federation and the executive authority of the subject of the Russian Federation on the territory where a subsoil area granted for use is located, or other authorities duly authorized by them, act;
- Investors, namely legal entities and associations of legal entities being established on a contractual basis without a status of a legal entity, that invest their own borrowed or attracted funds (property and (or) property rights) into prospecting, exploration and production of mineral resources, and at the same time are the subsoil users under the terms and conditions of the agreements.

In cases where an association of legal entities which is not a legal entity acts as an investor in the agreement, the participants of such an association enjoy joint and several rights and liabilities under the agreement.

The right to use a subsoil area under a production sharing agreement is granted to an investor subject to an ***agreement*** concluded under this Federal Law.

A subsoil area is granted for use to an investor in accordance to the terms and conditions of the agreement. At the same time, the license to use a subsoil area which proves the right to use the subsoil area specified by the agreement, is given to an investor by the executive authority of the relevant subject of the Russian Federation and the federal authority for management of public subsoil reserves (or by its territorial branch) within 30 days from the date of signing the agreement. The license is granted for the period of the validity of the agreement and is subject to extension or renewal, or may become inoperative under the terms specified in the agreement.

The validity period of the production sharing agreement is established by the Parties in the agreement in accordance with the laws of the Russian Federation in force on the date of signing the agreement.

The production sharing agreement must be extended, at the investor's initiative and subject to compliance with obligations undertaken by it, for a period of time which is deemed sufficient for the completion of economic recovery of mineral resources and the assurance of efficient use and the protection of subsoil. With this, the terms and procedure of such extension is established by a provision of the agreement. If the agreement is extended, the license for subsoil use is subject to renewal for the period of validity of the agreement by the authorities which have issued the license.

Procedure governing the conclusion of a production sharing agreement

A production sharing agreement may be signed with a successful tenderer held in compliance with the procedure established by the laws of the Russian Federation and within the agreed period of time but not later than one year after the establishment a commission. The winner of the tender is the participant in the tender which has proposed the highest bid for the right to conclude an agreement.

The procedure for holding a tender must provide for participation of Russian legal entities in the implementation of production sharing agreements in shares defined by the Government of the Russian Federation and the relevant executive authorities of the subjects of the Russian Federation.

The Government of the Russian Federation and the executive authority of the respective subject of the Russian Federation sign production-sharing agreements on behalf of the Russian Federation.

If a subsoil area granted for use is located on the continental shelf of the Russian Federation and (or) within an exclusive economic zone of the Russian Federation, the Government of the Russian Federation with the consent of the executive authority of the subject of the Russian Federation on the territory where the operations envisaged by the agreement will be carried out, and regarding the issues of competence of this subject of the Russian Federation, signs a production sharing agreement on behalf of the Russian Federation.

General terms of execution of work. The Work and other activities envisaged by the agreement must be performed in compliance to programmes, projects, plans and estimates that are to be approved in the manner envisaged by the agreement.

All activities and operations under an agreement must be performed in compliance to the requirements of the laws of the Russian Federation and in conformity to duly approved standards (norms, regulations) on safety of operations, protection of the subsoil, the environment and the public health. In doing so, production-sharing agreements must contain ***obligations of an investor*** to:

- give preference to Russian legal entities participating in all activities under the agreement as a contractor, supplier, carrier or in any other capacity subject to the contracts (agreements) signed with investors;
- employ citizens of the Russian Federation, whose number should be at least 80% of the total number of all employees. Foreign employees and experts may be contracted only at the initial stages of operations under the agreement, or if no Russian citizens qualified for these positions are available;
- purchase equipment, technical means and material of Russian origin needed for geological prospecting, production, transportation and processing of natural resources in amount of at least 70% of the total value of the equipment, technical means and material purchased (including on lease contracts, leasing and on other grounds) in each calendar year to perform activities under the agreement which are indemnified to the

investor through cost production. Moreover, the equipment, technical means and material shall be deemed to be as of Russian origin, only if they have been produced by Russian legal entities and (or) by citizens of the Russian Federation on the territory of the Russian Federation by using components, details, components and parts which are at least 50% (in terms of value) made on the territory of the Russian Federation by Russian legal entities and (or) by citizens of the Russian Federation. This provision shall not apply to use of facilities of major pipelines the construction and purchase of which is not stipulated by the agreement;

These requirements are not in compliance to the principles of the World Trade Organization. In case of accession of the Russian Federation to the World Trade Organization, they should become ineffective or must be brought in compliance with these principles by the date and in the manner stipulated by the instruments of the World Trade Organization and the instrument of accession of the Russian Federation to the World Trade Organization. PSA agreements signed by the Parties must contain a requirement that certain part of the technological equipment for the production and processing of natural resources (if stipulated by the agreement) purchased by the investor must be produced on the territory of the Russian Federation.

- take measures aimed at preventing the adverse effects of the activities on the environment and at accident liquidation;
- to insure liabilities for compensation of damage by accidents that resulted in adverse effect on the environment;
- remove all facilities, installations and other property upon the completion of activities under the agreement, as well as decontaminate polluted areas where activities under the agreement have been conducted.

Geological, technical and economic information about the facilities, where activities under the agreement are performed and production of natural resources is planned, must be submitted for state expert evaluation, in the form and to the extent set forth by the laws of the Russian Federation.

A **Management Committee** comprising of equal number of representatives of each party must be established in order to coordinate the activities performed under the agreement.

Production must be shared between the State and the investor pursuant to a production sharing agreement which establishes the terms and the procedure for:

- determining the total amount of production and the value thereof. The term “production” means the output of the mining industry and the production of quarry operations contained in the actually produced (extracted) out of subsoil (waste, outage) mineral raw materials (massive materials, effluents and other blended products), being first by its quality to comply with corresponding state standards of the Russian Federation, industrial standards, regional standards, international standards, and in case of unavailability of such standards for the specific mineral resources extracted – to the standards of the organization (enterprise), as mined by the investor in the course of performance of activities under the production sharing agreement (less the total amount of technological loss within established standards) ;
- determining the amount of the production to be assigned to and used by the investor for recovery of costs incurred in performing activities under the agreement (cost production). The maximum amount of cost production must not exceed 75%, and when produced on the continental shelf of the Russian Federation – 90%, of the total amount

of production. Costs to be recovered must be determined by the agreement in accordance with the legislation of the Russian Federation;

- sharing the profit production between the State and the investor, profit production which means production extracted in implementing the agreement after deduction of the part of the production the equivalent of which in terms of value is used to pay severance tax and cost production tax over the reporting period;
- transferring to the State the amount of the production or its equivalent in terms of value belonging to the State under the terms of the agreement;
- transferring to the investor the amount of production which belongs to the investor under the production sharing agreement.

Investor property rights on output, assets and information. The investor's share of output produced under the agreement is investor's property.

Exception for cases listed in the Federal law "On State Regulation of Foreign Trade", mineral raw materials which become investor's property under the agreement may be shipped out of the customs territory of the Russian Federation in accordance with the terms and conditions of this agreement without any export quantitative restrictions.

Under the agreement provides otherwise, any assets produced or acquired and used by the investor to carry out activities under the agreement shall be investor's property.

Property rights on such assets may be transferred from the investor to the State when the cost of the above assets is fully recovered, or as of the date of termination of the agreement or on any other day agreed by the parties in accordance with the terms and conditions of the agreement. At the same time, during the period of validity of the agreement the investor shall enjoy an exclusive right for a free-of-charge use of these assets to carry out activities under the agreement, and is responsible for their due maintenance and risk of loss or accidental damage.

The State has property rights on all preliminary geologic, geophysical, geochemical and other information, its interpretation and derived data, as well as material samples, e.g. cores, formation liquids, acquired by the investor as a result of his or her activities under the agreement. The investor has the right to a free and unrestricted use of the information, data and samples for the purposes of activities under the agreement provided that he or she observes confidentiality conditions stipulated in the agreement. The terms of use of the information, data and samples and conditions of their shipment out of the territory of the Russian Federation are defined by the agreement in accordance to the legislation of the Russian Federation.

Guaranties for a free transportation, storage and processing of mineral raw materials. The investor has the right of a free contractual access to pipeline transportation facilities, as well as the right of free contractual use of pipelines and other transportation facilities, and storage and processing facilities on a non-discriminative basis.

When carrying out activities under the agreement, the investor has the right to construct facilities to store, process and transport mineral raw materials; the property rights on such facilities are stipulated in the agreement.

Taxation of the parties to the production-sharing agreement is carried out in accordance with the following provisions:

1. When executing the agreement, a special procedure is applied for calculation and payment of taxes and levies listed in the Tax Code and other legislative instruments on taxation and dues of the Russian Federation.
2. When executing the agreement and in case of an event stipulated in the agreement, the investor must make lump sum payments for exploiting the subsoil and licenses (bonuses), a payment for earth information, annual payment for the agreed body of water and sea bed sites, which must be paid for as defined for by the agreement and in accordance to the Russian legislation in place as of the date of signing the agreement. The investor must also pay auction participation fees, license fees, regular payments for subsoil exploitation (rentals), compensation of state expenses on mineral exploration and prospecting, recovery of damage caused to the indigenous people of the Russian Federation in their traditional habitat and to areas of their economic activity when carrying out activities under the agreement. The amount to be paid and the terms of payment are provided for in the agreement.

When carrying out activities under the agreement, **book-keeping and accounting** must be in Russian (ruble) or foreign currency. If book-keeping is in a foreign currency, any reporting form submitted to a state agency shall contain data, calculated both in the relevant foreign currency and the Russian ruble. All amounts calculated in a foreign currency must also be presented in their Russian ruble equivalents calculated at the exchange rate of the Bank of Russia as of the date of closing the account.

In order to carry out activities under the agreement, the investor must open **special ruble and (or) foreign currency accounts** with banks on the territory of the Russian Federation and (or) a foreign state which are to be used exclusively for the purposes of the above activities.

The investor has the right to partially or fully transfer rights and liabilities under the agreement to any legal party or any citizen (physical party) only with the consent of the State and on the condition that these parties have sufficient financial and technical resources and management experience to carry out activities under the agreement.

With the consent of the state and in line with the civil legislation of the Russian Federation, the investor may use its property and property rights as a collateral for their obligations under contracts concluded in connection with the execution of the agreement.

The investor's **property and other rights** acquired and executed in line with the agreement are **guaranteed**.

The investor is **immune** to normative legal acts of federal executive authorities, laws and other regulatory legal instruments of the subjects of the Russian Federation and legal acts of local self-government agencies if these instruments limit the investor's rights acquired and executed in accordance with the agreement, except for rulings by the appropriate supervisory authorities issued in compliance to the legislation of the Russian Federation for the purposes of enforcing the safety in operations, the conservation of mineral resources, the protection of environment and the health of the population and in order to ensure the security of the state.

The parties are **liable** for the non-fulfilment or undue fulfilment of their obligations under the agreement in accordance with the terms of the agreement and in line with the civil legislation of the Russian Federation.

The agreement is deemed **null and void** upon its expiration or prior to the expiration date in case of the consent of the parties, or on other grounds and in the manner provided for in the

agreement and in accordance with the valid legislation of the Russian Federation as of the date of signing the agreement.

Termination of the agreement as agreed between the parties follows the same procedure as the initial agreement except of auction procedure.

Any *disputes* between the state and the investor over the execution, termination or inoperativeness of agreements are settled in accordance to the conditions of the agreement in the courts or courts of arbitration (including international arbitration institutions).

The new stage of reorganization of the PSA government management began in 2001. On February 2, 2001 the government of the Russian Federation adopted the Decree No. 26 “On Measures to Improve Activities of the Federal Agencies to Prepare and Conclude Production-Sharing Agreements and Ensure Control over Their Implementation”, which identifies prerogative rights of the government of the Russian Federation and the sphere of activities and responsibility of other federal executive agencies in the field of the PSA (the Ministry of Economic Development and Trade, the Energy Ministry, the Ministry of Natural Resources, the Ministry of Taxes and Levies, the Finance Ministry, the Ministry of Property Relations, the State Customs Committee and the Federal Mines and Industrial Inspectorate). The Ministry of Economic Development is in charge of major regulatory functions in the field of PSA.

The Federal Law No. 65-FZ “On Amending Part II of the Tax Code of the Russian Federation, On Amending Other Legislative Acts of the Russian Federation and On Declaring Void Some of the Legislative Acts of the Russian Federation” of June 6, 2003 added a special chapter to the Tax Code (see “Tax System” Section) on taxation under the PSA and introduced a number of amendments of principal character into the law on PSA and provisions on PSA practical implementation.

As stated above, the Law on PSA establishes a special arrangement which provides for the use of some part of the Russian-made equipment, technical means and materials when implementing the agreement. It is worth mentioning that similar provisions were enacted in two other normative acts adopted in the early 1990-s that established limitations or special conditions for the non-residents’ activities in Russia.

The Decree of the Government of the Russian Federation No. 531 of June 8, 1993 states that an open contract auction (tender) with the participation of foreign and Russian construction companies is mandatory when selecting a general contractor to implement investment projects in the territory of the Russian Federation if they are financed through the government foreign currency funds and government foreign investment credits. It also writes that if during such contract auction (tender) a foreign company is selected to take part in the construction of the above sites, the contracts must provide for the maximum use of the Russian-made equipment and materials and for at least 30% of the overall work and services to be done by the Russian companies.

In accordance with the *Decree of the President of the Russian Federation No. 1928 of September 17, 1994*, the Government of the Russian Federation shall annually allocate 0.5% of the GDP as investments to finance high efficiency investment projects launched with the participation of business sector if these funds are used on a tender basis. Additionally it provides that the projects shall be submitted to the Ministry of Economy of the Russian Federation (now - the Ministry of Economic Development and Trade) along with the business plan, EIA of the public environmental experts, state extra departmental or independent experts. The Government of the Russian Federation has the right to impose additional requirements to the projects which allow for foreign investments.

4.3.4. *Key Guarantees to Foreign Investors*

In the territory of the Russian Federation any foreign investor shall have a ***full and unconditional protection*** of their rights and interests which is enacted in the federal legislation and other normative legal acts and international agreements of the Russian Federation.

The foreign investor has ***the right for indemnity of losses inflicted by illegal actions (failure to act) of the state or local self-government agencies or officials of these agencies*** as provided for by the civil legislation of the Russian Federation.

The foreign investor has the ***right to any form of investment in the territory of the Russian Federation provided they are not prohibited by the Russian legislation.***

The foreign investor has ***the right to transfer his or her rights (assign claims) and liabilities (transfer a debt)*** under the contract. The investor may have to cede his or her rights (assign demands) and liabilities (transfer a debt) to a third party on the basis of a law or court ruling as provided for in the civil legislation of the Russian Federation.

The property of a foreign investor or a commercial organization with foreign capital shall not be subject to the compulsory expropriation, e.g. nationalization, requisition with the exception of cases and on the grounds provided for in the federal legislation or international agreement of the Russian Federation.

In case of requisition, the cost of the expropriated property is to be compensated to the foreign investor or commercial organization with foreign capital. When the conditions that necessitated expropriation are over, the foreign investor or commercial organization with foreign capital shall have the right to judicially claim the remaining property back; however they shall pay back the compensation sum adjusted for the depreciation of that property.

In case of nationalization the cost of the nationalized property and other losses are to be compensated to the foreign investor or commercial organization with foreign capital (read above).

Any ***disputes*** of foreign investor arising in connection with effecting investments or his or her business activity in the territory of the Russian Federation ***shall be settled*** according to the international agreements and federal laws of the Russian Federation ***in court or arbitration or in the international court of arbitration.***

Having paid off taxes and dues provided for in the Russian legislation, the foreign investor shall ***have the right for a free use of his or her income and profit for investment or other lawful purposes in the territory of the Russian Federation or for the unhindered transfer of their investment-yielded income, profit and other legal revenues in foreign currency abroad,*** including:

- investment returns in the form of profit, dividends, interest or other revenues;
- sums of money under contracts or other transactions with a commercial organization with foreign capital or foreign legal entity which has a branch in the Russian Federation;
- sums of money that the foreign investor receives in connection with the winding-up of a commercial organization with foreign capital or a branch of a foreign legal entity or alienation of invested assets, property or exclusive intellectual rights;
- compensations.

The foreign investor who initially imported property and information in the hard or electronic form as a foreign investment in the territory of Russian Federation, shall have

the right for a free (quota-free, license-free or free of other types of non-tariff regulation of foreign trade) *withdrawal of this property and information from the Russian Federation.*

Guarantees of a stable legal regime for investments. In the Russian Federation a number of laws ensure stable legal regime for investments. These laws provide guarantees for different types of investment agreements, different time framework and different kinds of benefits.

Thus, Article 17 of the Federal Law No. 225-ФЗ “**On Production-Sharing Agreements**” of December 31, 1995 guarantees that the terms of a production-sharing agreement shall be valid throughout the validity term of such an agreement.

If during the validity period of the agreement the legislation of the Russian Federation and its subjects or legal acts by the local self-government agencies introduce new norms which have negative effect on the investor’s business results under the agreement, this agreement may be amended to ensure such business results that would be equal to those that might have been achieved under the legislation of the Russian Federation and its subjects or legal acts by the local self-government agencies that were effective when signing the agreement. The introduction of such amendments shall be set forth in the agreement.

The above provision on the amendment of the terms and conditions of the agreement is not applied if the legislation of the Russian Federation amends safety, environment or state health standards (norms, rules) including for the purposes of their harmonization with the similar internationally recognized and approved standards (norms, rules).

The Federal Law “**On Investment Activities in the Russian Federation in the Form of Capital Investment**” No. 39-FZ of February 25, 1999 links the provision of guarantees with the notion “priority investment project”. Article 15 of the Law states that in case of entry into force of new federal laws and normative legal act of the Russian Federation, that change the amount of customs import duties (with the exception of special duties protecting economic interests of the Russian Federation in the sphere of foreign trade in accordance with the legislation of the Russian Federation), federal taxes (with the exception of excise duties, value added tax for the goods produced in the territory the Russian Federation) and contributions to state extra budgetary funds (with the exception of contributions to the Pension fund of the Russian Federation), or which amend the existing federal laws and other normative legal acts of the Russian Federation thus increasing the overall tax burden on investor’s activities to implement the priority investment project in the territory the Russian Federation or installing a regime of limitations and prohibitions on capital investments in the territory of the Russian Federation in comparison with the overall tax burden and regime that was operational in accordance with the federal laws and other normative legal acts of the Russian Federation as of the day of beginning of financing such priority investment project, such federal laws and other norm-setting legal acts of the Russian Federation and all the amendments to the existing federal laws and normative legal acts shall not be applied to the investor during the project’s payback period but no longer than seven years from the date of beginning of financing such priority investment project provided that the goods imported to the customs territory of the Russian Federation by this investor are used exclusively for the purposes of implementation of this investment project.

The federal law No.160-ФЗ “**On Foreign Investments in the Russian Federation**” of July 7, 1999 also links together the provision of guarantees with the implementation of the so-called priority investment projects (this notion includes the scale of project, foreign investors share; in some cases it refers to concrete branches of economy).

Article 9 stipulates that in case of entry into force of new federal laws and other normative legal acts of the Russian Federation, which amend the amount of customs duties (with the exception of customs duties protecting economic interests of the Russian Federation in the

sphere of foreign trade in accordance with the legislation of the Russian Federation), federal taxes (with the exception of excise duties, value added tax for the goods produced in the territory the Russian Federation) and contributions to state extra budgetary funds (with the exception of contributions to the Pension Fund of the Russian Federation), or which amend the existing federal laws and other normative legal acts of the Russian Federation thus increasing the overall tax burden on investor's activities to implement the priority investment project in the territory the Russian Federation or installing a regime of limitations and prohibitions on capital investments in the territory of the Russian Federation in comparison with the overall tax burden and regime that was operational in accordance with the federal laws and other normative legal acts of the Russian Federation as of the day of beginning of financing such priority investment project, such federal laws and other norm-setting legal acts of the Russian Federation and all the amendments to the existing federal laws and normative legal acts shall not be applicable to the foreign investor or commercial organization with foreign capital during their project's payback period but no longer than seven years from the date of beginning of financing such priority investment project through foreign investments. The guarantee is provided on the condition that all the goods imported by the foreign investor to the Russian Federation shall be used exclusively for the purposes of implementation of such investment projects.

Differentiation of investment projects' payback periods depending on their types is provided in the arrangements by the government of the Russian Federation.

Guarantees of stability shall cover both commercial organizations with foreign capital if the share (shares) of foreign investors in the authorized (statutory) capital is more than 25 percent, and commercial organizations with foreign capital that are implementing priority investment projects regardless of share (shares) of foreign investors in of the authorized (statutory) capital of such organizations.

In exceptional cases when foreign investor or commercial organization with foreign capital implement priority investment projects in the field of industrial production or development of transport or other type of infrastructure with the overall amount of foreign investments not less than 1 billion roubles (or its equivalent in foreign exchange at the rate by the Central Bank of the Russian Federation as of the day of entry into force of the Federal Law "On Foreign Investments in the Russian Federation") with the pay-back period exceeding seven years, the government of the Russian Federation may take a decision to extend the period for stabilization regime for the above foreign investor and commercial organization with foreign capital.

Guarantees of legal stability regime shall not cover the amendments to the legislative acts of the Russian Federation or newly adopted federal laws and normative legal acts of the Russian Federation designed to protect political structure, virtues, health, rights and legitimate interests of other persons or that ensure defensive capabilities and security of the country.

In doing so the government of the Russian Federation:

- sets out the criteria for evaluating the negative effects of new rules of collecting import customs duties, federal taxes and contributions to the state extra budgetary funds, limitations and prohibitions regime for capital investments in the territory the Russian Federation for foreign investors who implement priority investment projects in the territory of the Russian Federation;
- sets out registration procedure for the priority investment projects;
- exercises control over investors' compliance with their liabilities when implementing priority investment projects.

If the foreign investor and commercial organization with foreign capital fail to meet their investment liabilities, they lose all the stability guarantees provided under the Law “On Foreign Investments in the Russian Federation”. The amount of money that was not paid under such concessions shall be reimbursed in accordance with the effective legislation of the Russian Federation.

4.4. Regulation of property relations of civil character

4.4.1. General provisions

The Civil legislation of the Russian Federation shapes out the legal status of participants of civil relations, origins and procedures of private property right and other rights to things, exclusive intellectual rights (intellectual property), regulates contractual and other obligations, property and related non-property rights, which are based on equality, autonomy of will and property of their participants. Civil and legal persons are participants to these relations regulated by the civil law. The Russian Federation, subjects of the Russian Federation and municipal bodies may also participate in relations regulated by the civil legislation.

Civil legislation regulates relations between individuals engaged in entrepreneurial activities or relations with their participation. Entrepreneurial activity is defined as an individual activity of a duly registered person undertaken at one’s own risk with the aim of obtaining regular profits from using property or by selling goods, work or provision of services.

Civil legislation is not applied to property rights based on administrative or other kind of subordination between the parties e.g. fiscal or any other financial or administrative relations, unless legislation provides otherwise.

In accordance with the Constitution of the Russian Federation the civil legislation is in the hands of the Russian Federation.

Civil legislation consists of **the Civil Code of the Russian Federation** and other federal laws based on this code. At the same time civil legislation norms of other laws shall be in line with the above Code.

Decrees by the president of the Russian Federation may also regulate civil relations but they shall not contradict with the Civil Code of the Russian Federation and other federal laws. On the basis and in execution of the Civil Code of the Russian Federation and other laws, the government of the Russian Federation has the right to enact rulings incorporating civil legislation norms. If a decree by the president of the Russian Federation or a ruling by the government of the Russian Federation contradicts the above code or any other law, the latter shall prevail. In cases and within limits provided for in the Code and other laws and normative acts, ministries and the federal executive agencies may issue acts incorporating civil legislation norms.

Rules set out by the civil legislation shall also be applicable to relations with the participation of foreign citizens, stateless persons and foreign legal entities unless the federal legislation provides otherwise.

4.4.2. Licensing of activities

A legal entity may undertake certain types of activities only on the basis of a special permission (license).

In accordance with the federal law No. 128-Φ3 “On Licensing of Activities” of August 8, 2001 and other federal laws supplementing it, *the following types of activities related to the fuel and energy complex are subject for licensing:*

- running of pipeline transportation;
- running of oil-and-gas producing enterprises;
- processing of oil and gas and derived products;
- transportation of oil, gas and derived products through main pipelines;
- storage of oil, gas and derived products;
- gas pipeline network maintenance.

Licensing of activities related to geological exploration and exploitation of subsoil reserves is regulated by the Decree of the government of the Russian Federation No. 775 “On Adoption of Regulations on Licensing of Activities Related to Geological Exploration and Exploitation of subsoil reserves” of July 31, 1995. Licensing of activities related to transportation, storage, processing and sales of oil, gas and derived products is regulated by the decree of the government of the Russian Federation No. 637 of August 28, 2002.

4.4.3 Registration of legal entities

State registration of legal entities in the Russian Federation is regulated by the Federal Law No. 129-ФЗ “On State Registration of Legal Entities” of Aug. 8, 2001 and its amendments introduced by the federal law No. 76-ФЗ of June 23, 2003. From July 1, 2002 till March 9, 2004 and in line with the decree of the government of the Russian Federation No. 319 “On Federal Executive Agency in Charge of State Registration of Legal Entities” of May 17, 2002 the Ministry of Taxes and Levies of the Russian Federation has been acting as a federal executive agency in charge of state registration of legal entities on the basis of “one window” principal. As of March 9, 2004 the Federal tax service of the Ministry of Finance took over.

4.4.4 Forms of incorporation of commercial organizations

The civil legislation of the Russian Federation recognizes the following forms of incorporation of commercial organizations:

- full partnership;
- limited partnership;
- limited liability company;
- additional responsibility company;
- joint-stock company;
- production cooperatives;
- state and municipal unitary enterprises.

Legal status of the above enterprises, rights and liabilities of their participants, procedures of establishment, activity, reorganization and liquidation procedures, generation and use of assets of such organizations, rights and liabilities of their founders (participants) and management basics are defined by the following laws:

- Civil Code of the Russian Federation;
- Federal Law No. 14-ФЗ “On Limited Liability Companies” of February 8, 1998;
- Federal Law No. 208-ФЗ “On Joint-Stock Companies” of December 26, 1995;
- Federal law No. 161-ФЗ “On State and Municipal Unitary Enterprises” of November 14, 2002.

4.4.5. Forms of ownership

The Civil Code of the Russian Federation recognizes private, state, municipal and other forms of property in the Russian Federation.

Property may belong to physical and legal entities (including foreign ones), as well as to the Russian Federation, subjects of the Russian Federation and municipal bodies.

4.4.6. Ownership of natural resources

The owner shall have the right for a free possession, use and disposal of natural resources to the extent provided for by the federal legislation without detriment to the environment and violation of rights and legitimate interests of other parties.

Possession, use and disposal of *land* are regulated in accordance with the **Land Code of the Russian Federation**. The latter also sets out the land rights of foreign citizens, states persons and foreign legal entities. The Code provides the following:

- foreign citizens, stateless persons and foreign legal entities may not own land in border regions specified by the president of the Russian Federation in accordance with the federal legislation on the State Border of the Russian Federation or other specifically identified territories of the Russian Federation in accordance with the federal laws;
- foreign citizens, stateless persons may rent land parcels in the territory of the Russian Federation unless otherwise provided by the Code;
- foreign citizens, stateless persons and foreign legal entities may only buy land parcels as property at a charge provided for by the Code;
- foreign citizens, stateless persons and foreign legal entities may acquire land parcels for the purposes of construction as provided for by the Code;
- foreign citizens, stateless persons and foreign legal entities who own buildings, structures and edifices erected at an alien plot of land shall have a priority right to buy that plot of land as provided for by the Code. The president of the Russian Federation has the right to identify those buildings, structures and edifices that are exempt from this rule;
- foreign citizens, stateless persons and foreign legal entities who own buildings, structures and edifices shall have the right to acquire land parcels as property as provided for in the Code.

The Federal Law No.101-Φ3 “**On Turnover of Agricultural Lands**” of July 24, 2002 provides that foreign citizens, foreign legal and reduce, stateless persons, as well as legal entities where foreign citizens, foreign legal entities, stateless persons have a more than 50 percent share in the authorized capital, may only rent agricultural lands.

4.4.7 Privatization

State or municipal property may be transferred to persons and legal entities as provided for in the law on privatization of state and municipal property.

When privatizing state and municipal property, the provisions of the Civil Code of the Russian Federation on acquisition and termination of probative rights shall be applied only if the law on privatization does not provide otherwise.

The Federal Law No. 178-Φ3 “**On Privatization of State and Municipal Property**” of December 21, 2001 is the framework law that regulates privatization in the Russian Federation. It was supplemented and amended by the Federal Law No. 29-Φ3 of February 27, 2003.

This federal law does not cover the following major relations that arise in case of alienation of:

- lands with the exception of land parcels where immovable property is located, including property complexes;

- natural resources;
- state reserves;
- state and municipal property located outside the territory of the Russian Federation;
- state and municipal property in cases provided for by the international treaties of the Russian Federation;
- property of state and municipal unitary enterprises, state and municipal agencies in their operating and economic control;
- state and municipal property under a judicial act.

Property related to objects of civil law with prohibited turnover as well as exclusive state and municipal property shall not be subject to privatization.

The major principles of privatization of state and municipal property are the following:

1. Privatization of state and municipal property is based on recognition of equality and open character of activities by state and local self-government agencies.
2. State and municipal property shall only be transferred to physical and (or) legal entity on a requited basis.
3. Local self-government agencies may privatize municipal property on their own.

And physical and legal entities with the exception of state and municipal unitary enterprises, state and municipal agencies, and legal entities where the share of the Russian Federation, subjects of the Russian Federation and municipal bodies exceeds 25 %, have the right to buy state and municipal property.

When privatising state and municipal property, all limitations on participation of certain categories of physical and legal entities in civil relations designed to protect political structure, virtues, health, rights and legitimate interests of other persons or ensure defensive capacities and security of the country shall be observed.

Limited liability companies may not buy shares they put up for privatisation.

The decree of the government of the Russian Federation No. 605-p of April 26, 2002 vests functions of selling privatised federal property in the name of the government of the Russian Federation in the Russian fund of federal property. As of March 9, 2004 these functions are given to the Federal Agency for Managing the Federal Property under the RF Ministry of Economic Development and Trade..

The government of the Russian Federation annually adopts a forward plan (programme) of federal property privatization which lists federal state unitary enterprises, shares of open joint- stock companies and other federal property which is to be privatized that year. The forward plan (programme) provides characteristics of the privatized federal property and the planned date of its privatization.

Shares of “Gazprom” open joint-stock company, “Unified Energy Systems” Russian energy and electrification joint-stock company and other federal state unitary enterprises constituting natural monopolies in the field of railroad transportation and administered by a federal executive body in charge of railroad transportation management are included in the forward plan (programme) on the basis of a federal law. The Presidential Decree No 933 of August 8, 2003 took railroads and railroad transport assets off the list of entities the privatisation of which was forbidden.

State authorities of the constituent entities of the Russian Federation and local self-government agencies work out schedules for privatising property of entities of the Russian Federation and municipal property on their own.

The following procedures are applied when privatising state and municipal property:

- transformation of a unitary enterprise into an open joint-stock company;
- auction sales of state and municipal property;
- specialized auction sales of open joint-stock companies' shares;
- tender sales state and municipal property;
- sales of state-owned shares of open joint-stock companies outside the territory of the Russian Federation;
- sales of open joint-stock companies' shares at the securities market through a dealer;
- sales of open joined-stock companies' shares by means of state offering;
- no-value-declared sales of municipal and state property;
- contribution of the state or municipal property to the authorized capital of open joint-stock companies;
- sales of open joint-stock companies' shares on the results of their trust management.

Paragraph 3 of Article 13 of the Federal law provides that property complexes of federal unitary enterprises and federally-owned shares of open joined-stock companies with the balance-sheet value of assets exceeding five million minimum earnings (MROT)⁵ as of the last balance sheet date as well as property that satisfies other criteria set out by the government of the Russian Federation may be privatized as follows:

- by transforming a unitary enterprise into an open joint-stock company;
- through auction sales;
- through specialized auction sales;
- through sales of state-owned shares of open joint-stock companies outside the territory of the Russian Federation;
- by contributing federal property to the authorized capital of open joint - stock companies in accordance with the normative legal acts by the President Russian Federation.

Property that does not meet the criteria set out in Article 3, paragraph 3 of the Federal Law may be privatized as follows:

- by transforming a unitary enterprise into an open joined-stock company;
- through auction sales;
- through specialized auction sales;
- through a tender;
- by contributing shares to the authorized capital of an open joined stock company.

The provision on auction sales of state or municipal property was adopted by the degree of the government of the Russian Federation No. 585 of Aug. 12, 2002.

The sale of state-owned shares of open joint stock companies outside the territory of the Russian Federation may also be performed according to the procedure established by the Federal Law, Article 22, taking into account the requirements of RF legislation concerning the stock market and peculiarities of the legislation of the foreign state where such sale is performed.

The shares of open joint stock companies may be sold via an organizer of trade on the stock market (trade organizer). The sale of shares of open joint stock companies via a trade

⁵ As of October 1, 2003, the minimum earning (MROT) is equal to 600 rubles per month. (Federal Law No. 127-Ф3 "On the Amendments to the Federal Law "On the Minimum Earnings"" of October 1, 2003).

organizer is performed in accordance with the rules established by the trade organizer. Brokers may be hired to sell the shares of open joint stock companies via a trade organizer in accordance with the procedure determined by the Government of the Russian Federation. The terms and conditions of brokerage contracts regarding the sale of open joint stock companies via the trade organizer should contain a provision requiring the sale of the said shares at a price that cannot be lower than the asking price.

The national currency of the Russian Federation is recognized as legal tender in the sale of state and municipal property. In case state property is sold outside the territory of the Russian Federation, national currencies of other states may be used as legal tender.

The transfer of state or municipal property to creditors as deposit for the borrowings of the Russian Federation, subjects of the Russian Federation and municipalities, or, equally, the exchange of state or municipal property for privately-owned property is not permitted, excepting cases specified in the Federal Law.

To ensure the country's defence posture and national security, protect morality, health, rights and legitimate interests of the citizens of the Russian Federation, the Government of the Russian Federation and the authorities of subjects of the Russian Federation may choose to exercise the special right of the Russian Federation and subjects of the Russian Federation, respectively, to participate in the management of open joint stock companies (hereinafter, special right ("golden share")). The decision to exercise the special right ("golden share") may be made in the privatisation of property complexes of unitary enterprises or in making the decision to exempt an open joint stock company from the list of strategic joint stock companies regardless of the number of shares owned by the state.

The Russian Federation and subjects of the Russian Federation may not exercise the special right ("golden share") with regard to one and the same open joint stock company simultaneously. The subjects of the Russian Federation may not exercise the special right ("golden share") with regard to an open joint stock company created through the restructuring of a federal state unitary enterprise at a time when the shares of this company are federally owned.

The special right ("golden share") is exercised from the moment when 75% of shares of the said open joint stock company cease to be owned by the state. The decision to discontinue the exercise of the special right ("golden share") is made, respectively, by the Government of the Russian Federation, the authorities of the subjects of the Russian Federation (that decided to exercise the special right ("golden share")). The special right ("golden share") is effective until the decision is made to discontinue it. The special right ("golden share") is not subject to exchange for the shares of an open joint stock company with regard to which the decision has been made to exercise the said right.

Provisions pertaining to the regime established for foreign investors in privatisation are contained in Federal Law No. 3297-1 of July 14, 1992 **On Closed Administrative-Territorial Formation**. Article 8 of this act elaborates the peculiarities of privatisation and other transactions with immovable property located within a closed administrative-territorial formation. Participation in the privatisation of immovable property that is state- or municipally owned and located on the territory of a closed administrative-territorial formation and in transactions involving it is limited to the citizens of the Russian Federation permanently residing on the said territory and legal persons located and registered on the said territory. The participation of other individuals and legal persons in such transactions is permitted subject to the decision by local self-government bodies of the closed administrative-territorial formation agreed with bodies of state authority of subjects of the Russian Federation and federal bodies of executive authority whose jurisdiction covers the

enterprise and / or facilities whose industry profile determined the creation of the closed administrative-territorial formation. Organizations with foreign investments may be created on the territory of a closed administrative-territorial formation subject to decision by bodies of local self-government agreed with the Government of the Russian Federation.

Privatisation in the electricity sector calls for compliance with the provisions of Federal Law No. 74-FZ of 07.05.1998 **On Peculiarities of Disposal of Shares of Russian Joint Stock Company of Energy and Electrification Unified Energy System of Russia** and Shares of Other Federally Owned Joint Stock Companies of the Electricity Sector.

Foreign governments, international organizations, foreign legal persons and their affiliated Russian legal persons and foreign natural persons may own up to 25 percent of all types of shares of the Unified Energy System of Russia.⁶

It is recommended to the Government of the Russian Federation in Article 40 of the Federal Law on Joint Stock Companies to maintain such limitation on the actual number of shares of the Unified Energy System of Russia owned by foreign governments, international organizations, foreign legal persons, their affiliated Russian legal persons, and foreign natural persons.

The participation of foreign investors in the privatisation of RJSC Gazprom is regulated by:

- Presidential Decree No. 529 of 28.05.1997 On the Procedure of Circulation of Shares of Russian Joint Stock Company Gazprom During the Period in Which the Shares of Russian Joint Stock Company Gazprom are Formalized as Federal Property;
- Presidential Decree No. 943 of 10.08.1998 On the Conditions of Sale of Shares of Open Joint Stock Company Gazprom, which provides for the following:
 - When selling 5 percent of shares of open joint stock company Gazprom through tender(s) and/or through commercial tender(s) with investment conditions involving Russian and foreign bidders, the Government of the Russian Federation should envision the inclusion in the sale contracts of the said shares, published simultaneously with the advisories of tender(s) and / or commercial tender(s) with investment conditions, the obligations of buyers who are foreign bidders not to alienate them and not to use them as a basic asset for the issue and placement among foreign bidders (residents and non-residents) of securities and (or) other financial instruments, including depository notes, within 5 years of the moment of the acquisition of these shares;
 - In recognizing as a winner of the tender and / or commercial tender with investment conditions for the sale of shares, envisioned in para. 1 of the said Decree, of OAO Gazprom, of a foreign bidder (recognized as such according to para. 2, Presidential Decree No. 529 of May 28, 1997, On the Procedure of Circulation of Shares of Russian Joint Stock Company Gazprom During the Period in Which the Shares of Russian Joint Stock Company Gazprom are Formalized as Federal Property), the maximum allowed proportion of foreign participants in the charter capital of OAO Gazprom is increased by the share of the foreign participants as of the fact of the completed transaction, but may

⁶ Pursuant to March 26, 2003 Federal Law on the *Specifics of Power Sector Functioning in Transition and on Amending Certain Legislative Acts of the RF and Nullifying Certain Legislative Acts of the RF in view of the Adoption of the Federal Law on the Power Sector*, Federal Law No. 74-FZ on the *Specifics of Disposing of UES of Russia Shares*, dated May 1998, will be null and void effective January 1, 2005.

not exceed a total of 14 percent of all shares. The Decree sets out the procedure for foreign participants who are winners of the auction and / or commercial tender as to how to obtain permission to acquire OAO Gazprom stock and transport the acquired shares from the Russian Federation with a view to keeping them only.

4.4.8. Mortgage

In the Russian Federation, the mortgage of land parcels, enterprises, buildings, structures, and other immovable property (hypothecation) is regulated by Federal Law No. 102-FZ of 16.07.1998 **On Hypothecation (Mortgage of Immovable Property)**. General rules found in the **Civil Code of the Russian Federation** apply to mortgage of immovable property in cases where this Code or the Law on Hypothecation do not set out other rules.

According to a mortgage agreement, immovable property can be mortgaged that is indicated in para. 1, Article 130 of the Civil Code of the Russian Federation (immovable things: land parcels, natural resource parcels, separate water objects, and all that is firmly connected with land, i.e. objects whose movement is impossible without disproportionate harm to their use, including forests, perennial plantings, buildings and structures, airships and ocean-going vessels, inland waterway vessels, outer-space objects), the rights to which are registered according to the procedure established for the state registration of immovable property rights.

According to Federal Law No. 2395-1 On Sub soils of 21.02.1992, Article 17.1, the right to use a subsoil parcel(s) obtained by a legal person in line with the established procedure may not be transferred to a third person, including by way of assignment of rights established by civil legislation, excepting cases specified in the said Law or other federal laws.

Sub soils within the boundaries of the Russian Federation, including underground space and minerals contained in the sub soils, energy and other resources are state property.

Subsoil parcels may not be objects of purchase, sale, gift, inheritance, deposit, pledge or be alienated otherwise. Subsoil use rights may be alienated or transferred from one person to another in the measure in which their turnover is permitted under federal laws.

According to the licensing agreement, minerals extracted from underground and other resources may be federal state property, property of subjects of the Russian Federation, municipal, private and other types of property.

According to Federal Law **On Production Sharing Agreements** No. 225-FZ of 20.12.1995, Article 16, the investor may, with the consent of the state, use the property and ownership rights in his possession as a pledge for its obligations under agreements concluded in connection with the implementation of the production-sharing agreement, in compliance with the requirements of the civil legislation of the Russian Federation.

4.4.9 Insolvency (bankruptcy)

In compliance with the Civil Code of the Russian Federation, Federal Law No. 127-FZ of 26.10.2002 **On Insolvency (Bankruptcy)** sets out grounds for recognizing a debtor as insolvent (bankrupt), regulates the procedure and conditions to implement insolvency (bankruptcy) prevention measures, the order and conditions for implementing bankruptcy procedures and other relations ensuing from the inability of the debtor to fully comply with creditors' requirements. The Federal Law applies to all legal persons, excepting state-funded enterprises, institutions, political parties and religious organizations.

Court rulings of other states on insolvency (bankruptcy) are recognized on the territory of the Russian Federation in compliance with international treaties of the Russian Federation.

In the absence of an international treaty of the Russian Federation, the court rulings of other states on insolvency (bankruptcy) are recognized on the territory of the Russian Federation based on the principle of reciprocity, unless federal law provides otherwise.

Pursuant to the Federal Law, **RF Government Resolution No. 855 of 30.11.2002** was adopted, **On the Authorized and Regulatory Agency in Bankruptcy Cases and Bankruptcy Procedures**.

According to RF Government Resolution No. 100 of 14.02.2003 On the Authorized Agency in Bankruptcy Cases and Bankruptcy Procedures Overseeing Self-Regulated Organizations of Bankruptcy Commissioners, the Government of the Russian Federation appoints the Russian Federal Service for Financial Rehabilitation and Bankruptcy as the authorized body presenting the claim for obligatory payments and RF claims for monetary liabilities in bankruptcy litigation and bankruptcy procedures. From March 3, 2003 the Ministry of Justice of the Russian Federation was appointed as the regulatory body overseeing the operation of self-regulated organizations of bankruptcy commissioners.

Federal Law No. 122-FZ of 24.06.1999 **On Peculiarities of Insolvency (Bankruptcy) of Subjects of Natural Monopolies in the Fuel and Energy Sector** is applied in the part that does not contradict Federal Law No. 127-FZ of 26.10.2002 and ceases to be in force on January 1, 2005.

4.4.10. Securities.

Federal Law No. 39-FZ of 22.04.1996 On the Securities Market regulates relations ensuing from the issuing and turnover of securities regardless of the type of issuer, as well as the peculiarities of creation and operation of professional securities market actors. According to the Federal Law, securities issued by foreign issuers are permitted for circulation or initial placement on the securities market of the Russian Federation following the registration of the issuance prospectus for these securities with the Federal Securities Market Commission.

In public placement or circulation of issued securities, it is prohibited to pledge the advantage in securities acquisition of one potential owner compared to other owners. This provision does not apply in the following cases:

- In case of issuance of government securities;
- In case shareholders of joint stock companies are granted the priority right to buy out the new securities issue in the quantity proportionate to the number of shares they hold at the moment when the issue decision is made;
- In case the issuer imposes restrictions on the acquisition of securities by non-residents.

Federal Law No. 136-FZ of 29.07.1998 **On Peculiarities of Issuance and Circulation of State and Municipal Securities** sets out:

- The procedure to issue state or municipal securities and execution of the liabilities of the Russian Federation, subjects of the Russian Federation and municipalities;
- The procedure for the issuance of state and municipal securities and peculiarities of their circulation;
- The procedure for disclosure of information by the issuers of the said securities in the part not regulated by the legislation of the Russian Federation;

- Legal underpinnings of the participation of the Russian Federation, a subject of the Russian Federation and a municipality in relations ensuing from the issuance of state and municipal securities.

Federal Law No. 46-FZ of 05.03.1999 **On the Protection of Rights and Legitimate Interests of Investors on the Securities Market** regulates relations pertaining to the protection of the rights and legitimate interests of natural and legal persons investing into securities and determines the procedure for compensatory payments and other forms of compensation for the damages incurred by investors-natural persons as a result of illegal activities of issuers and other securities market actors on the securities market.

Federal Law No. 117-FZ of 23.06.1999 **On the Protection of Competition in the Financial Services Market** regulates relations affecting competition on the securities market, the banking services market, the insurance services market and other financial services markets, relating to the protection of competition on the financial services market.

The Law also applies in cases where the actions and agreements taken and concluded by residents of the Russian Federation outside the territory of the Russian Federation lead or may lead to limited competition on the financial services market in the Russian Federation.

4.4.11. Immunity of the State

According to the Civil Code of the Russian Federation (Part One), Article 127, the responsibilities of the Russian Federation and subjects of the Russian Federation in relations, regulated by civil legislation, involving foreign legal persons, individuals and states are determined by the Law on the Immunity of the State and Its Property. This federal law has not been enacted yet.

Federal Law No. 225-FZ of 30.12.1995 On Production Sharing Agreements, Article 23 provides that production sharing agreements concluded with foreign individuals and foreign legal persons may envision, in compliance with the legislation of the Russian Federation, the renunciation by the state of any judicial immunity, immunity with regard to preliminary claim security and execution of the court or arbitration decision.

The Budget Code of the Russian Federation No. 145-FZ of 31.07.1998, Article 239 provides for the immunity of budgets which constitutes a legal regime where penalties can be charged on public budgetary funds only based on a judicial act containing:

- Compensation of underpaid funding, in case the amount claimed was included in the budget expenditure approved through the legislative process;
- Compensation of loss incurred by a natural or legal person as a result of illegal actions (inaction) of state bodies, local self-government bodies or officials of these bodies, including as a result of the adoption of acts by state bodies or local self-government bodies that are out of line with the law or another legal instrument.

4.4.12. Subsoil use

The main legislative act of the Russian Federation regulating relations ensuing from geological examination, use and protection of subsoil on the territory of the Russian Federation, its continental shelf, as well as from the use of waste produced by mining and related processing industrial facilities, turf, sapropels and other specific mineral resources, including underground waters, salt brines and salt lake and sea gulf bittern is **Federal Law No. 2395-1 of 21.02.1992 On Subsoil**. It is effective on the entire territory of the Russian Federation and regulates relations ensuing from the use of subsoil on the continental shelf of

the Russian Federation in accordance with federal legislative acts pertaining to the continental shelf and the norms of international law.

Laws and other regulatory acts of subjects of the Russian Federation may not contradict this Law. In case of such a contradiction between the laws and other regulatory acts of subjects of the Russian Federation and federal laws regulating relations ensuing from the use of natural resources, this Law and other federal laws prevail.

Relations pertaining to the use and protection of land, water, flora, fauna and air ensuing from the use of subsoil are regulated by relevant legislation of the Russian Federation and legislation of the subjects of the Russian Federation.

Specific relations pertaining to the geological examination and extraction of individual types of mineral materials, as well as disposal of radioactive materials and toxic waste may be regulated not only by this Law, but also by other federal laws in compliance with the principles and provisions set out in this Law.

Subsoil use relations involving foreign legal and natural persons are regulated by this Law, other federal laws and other regulatory acts of the Russian Federation.

Peculiarities of subsoil use relations based on production sharing are set out in the Federal Law on Production Sharing Agreements.

Subsoil within the territory of the Russian Federation, including underground space and minerals, energy and other resources contained in the subsoil are state property. Ownership, use and management of subsoil are in the joint jurisdiction of the Russian Federation and subjects of the Russian Federation.

Parcels of subsoil may not be objects of purchase, sale, gift, inheritance, deposit, pledge or be alienated in any other form. Subsoil use rights may be alienated or transferred from one person to another in the measure in which their circulation is permitted by federal laws.

According to licensing agreements, minerals and other resources extracted from the subsoil may be in state ownership, ownership of the subjects of the Russian Federation, municipal, private and other forms of ownership.

Ownership, use and management of the state subsoil fund within the territory of the Russian Federation in the interests of the peoples residing in corresponding areas and all the peoples of the Russian Federation are implemented jointly by the Russian Federation and the subjects of the Russian Federation.

The competence of the authorities of the Russian Federation in the regulation of subsoil use relations includes:

- Development and improvement of Russian legislation relating to the subsoil;
- Determination and implementation of federal policy with regard to the use of the subsoil;
- Establishing a general order for the use and protection of the subsoil;
- Creation and maintenance of the consolidated federal and territorial databases with geological data on the subsoil;
- State expert evaluation of information on the prospected mineral reserves;
- Compiling, jointly with the subjects of the Russian Federation, regional lists of minerals categorized as common, as well as allocation of federal, regional and local

subsoil parcels, compiling lists of subsoil parcels the right to use which may be granted based on PSA conditions;

- Compiling the state list of reserves of minerals; state registration of subsoil parcels used in the extraction of minerals;
- Management of the subsoil of the continental shelf of the Russian Federation;
- Restrictions on the use of subsoil in individual areas to ensure national security and protect the natural environment;
- Jointly with the subjects of the Russian Federation, managing the state subsoil, excepting parcels under the exclusive jurisdiction of the Russian Federation;
- Setting the amount and procedure to charge for geological information on subsoil, as well as approbation of PSAs.
- Co-ordination of research and development involving the use of the subsoil;
- Protection of the rights of subsoil users and interests of the citizens of the Russian Federation;
- Resolution of disputes involving subsoil use among subjects of the Russian Federation;
- Conclusion of international treaties of the Russian Federation on geological examination, use and protection of the subsoil;
- State oversight of the geological examination, rational use and protection of the subsoil and setting the procedure for its implementation;
- Conclusion of production sharing agreements in using parcels of the subsoil.

The implementation of the overall federal subsoil use policy in the Russian Federation is the responsibility of a federal body for managing the state fund of subsoil and its territorial sub-bodies, as agreed with the subjects of the Russian Federation.

The Russian Federation may delegate individual powers of regulation of subsoil use relations to the subjects of the Russian Federation.

The competence of the authorities of the subjects of the Russian Federation in the regulation of subsoil use relations in their respective territories includes:

- Development and upgrading of laws and other regulatory acts of the subjects of the Russian Federation relating to the subsoil;
- Participation in the development and implementation of state programmes of geological examination and development of the mineral and raw material base of the Russian Federation;
- Development and implementation of territorial programmes of development and use of the mineral and raw material base;
- Participation in the state expert evaluation of information on the prospected mineral reserves and other characteristics of subsoil, defining their value or hazard level;
- Compiling territorial lists of reserves and cadastres of deposits and manifestations of minerals and registration of subsoil parcels used for the construction of underground facilities not connected with the extraction of minerals;

- In conjunction with the Russian Federation, managing the consolidated state subsoil fund in their respective territories and allocation jointly with the Russian Federation of subsoil parcels of federal, regional and local significance, preparation, jointly with the Russian Federation, of lists of subsoil parcels, the right to use which may be granted on the basis of production sharing agreements;
- Setting specific amounts of charges for the use of the subsoil upon request of territorial bodies of state subsoil fund management;
- Defining the procedure of using the subsoil for the purposes of developing deposits of common minerals and subsoil parcels of local significance;
- Protection of the interests of small peoples, subsoil users' rights and the interests citizens, dispute resolution in subsoil use issues;
- Licensing types of activities relating to the use of subsoil parcels of regional and local significance;
- Participation of subjects of the Russian Federation in PSA's in using subsoil parcels;
- Defining the conditions and procedure for the use of mineral deposits;
- State oversight of geological examination, protection and rational use of the subsoil in accordance with the established procedure.

The competence of local self-government bodies of districts and cities in the regulation of sub soil use relations includes:

- Participation in addressing questions pertaining to compliance with socio-economic and environmental interests of the population of the territory in licensing the subsoil and allocation of land parcels;
- Development of the mineral resource base for local industrial enterprises;
- Issuing licenses for the development of deposits of common minerals in accordance with the established procedure;
- Suspension of works relating to the subsoil use on land parcels in case of the violation of the Law of the Russian Federation On the Subsoil, Article 18;
- Oversight over the use and protection of the subsoil in the extraction of common minerals;
- Restrictions on the use of subsoil parcels on the territories of inhabited areas, suburban areas, industrial facilities, transport and communications infrastructure in case such use may result in human life and health hazard or damage industrial facilities or the natural environment.

The subsoil is licensed for the purposes of:

- Regional geological prospecting;
- Geological examination including the search for and evaluation of mineral deposits;
- Prospecting and extraction of minerals, including the use of mining waste and related processing industries' waste;
- Construction and operation of underground facilities not connected with the extraction of minerals;

- Formation of specially protected geological entities of scientific, cultural, aesthetic, recreational or other value.

The subsoil may be licensed out for geological examination (search and prospecting) and extraction of minerals at the same time. In this case, the extraction may proceed both in the process of geological examination and right upon its completion.

According to the license for the use of the subsoil for the extraction of minerals, a subsoil parcel is granted to the user in the form of a mining allotment – a geometrised subsoil block.

The subsoil user which has obtained a mining allotment enjoys the exclusive right to engage in the subsoil use within its boundaries in compliance with the license. Any activities relating to the subsoil use within the boundaries of a mining allotment may be carried out only with the consent of the subsoil user to whom the latter has been granted.

The use of individual subsoil parcels may be subject to restriction or ban for the purposes of national security and protection of the natural environment.

The use of the subsoil on the territories of inhabited localities, suburban areas, industrial facilities, transport and communications infrastructure may be partially or fully banned in cases where such use may result in human life or health hazard or damage industrial facilities or the natural environment.

The use of the subsoil in specially protected areas is subject to requirements imposed by the status of such areas.

Subsoil users may be subjects of entrepreneurial activities, including members of an ordinary partnership, foreign citizens, legal persons, unless federal law includes restrictions on the licensing of subsoil use rights.

Subsoil users based on PSAs may be citizens of the Russian Federation, foreign citizens, legal persons and associations of legal persons created through joint operation agreements (ordinary partnership agreements) with no legal-person status provided the partners within such associations bear joint and several liability with regard to obligations ensuing from production sharing agreements.

Where radioactive minerals are extracted and radioactive materials, toxic and other hazardous waste are disposed of, subsoil users can only be legal persons registered on the territory of the Russian Federation and having permits (licenses), issued by an entity authorized by the federal body of executive authority, for the extraction and use of radioactive materials, toxic and other hazardous waste.

The rights and duties of subsoil users become effective as of the moment of the state registration of the license for the use of subsoil parcels. In case of licensing the use of the subsoil under a PSA, they become effective as of the moment when such agreement goes into effect.

Subsoil parcels are licensed for a limited period of time or without a time limit. Subsoil parcels are licensed for a limited period of time for the purposes of:

- Geological examination for a period of up to 5 years;
- Extraction of minerals for a period until exhaustion of the mineral deposit calculated based on the feasibility study of the mineral deposit development ensuring the rational use and protection of the subsoil;
- Extraction of underground waters for a period of up to 25 years;

- Extraction of minerals based on a short-term right to use subsoil parcels in accordance with the Federal Law On the Subsoil, Article 21.1 for a period of up to 1 year.

Time limitations may be absent in licensing subsoil parcels used for the construction and operation of underground facilities not connected with the extraction of minerals, construction and operation of underground facilities connected with waste disposal, construction and operation of oil and gas storage tanks, and for the formation of specially protected geological entities and for other purposes.

The period of use of a subsoil parcel may be extended on the initiative of the subsoil user subject to compliance with the conditions specified in the license for subsoil use and the need to finalize the development of a mineral deposit or to implement liquidation measures. The procedure for extending the period of subsoil parcel use under a PSA is determined by the said agreement. The periods of use of subsoil parcels are calculated from the moment of state registration of licenses for the use of these subsoil parcels.

Licensing of the subsoil is codified through a special state permit in the form of a license. The allocation of a subsoil parcel under a PSA is codified through a license for the subsoil use certifying the right to use the said subsoil parcel under the PSA.

A license is a document certifying the right of its owner to use a subsoil parcel within certain boundaries in line with the purpose stated therein within a set period of time and in compliance by the owner with all the conditions agreed in advance. A license certifies the right to perform geological examination of the subsoil, develop mineral deposits, utilize waste from mining and related processing industries and use the subsoil for purposes not connected with the extraction of minerals. A license may be issued for several types of subsoil use.

The decision on holding tenders and auctions for the right to use subsoil parcels, the determination of conditions for holding them with regard to each subsoil parcel or a group of subsoil parcels, as well as the decision on endorsing the results of such tenders or auctions are made by bodies issuing the right to use subsoil parcels. The decision to endorse the result of the tender or auction for the right to use a subsoil parcel is made within 30 days of the moment of tender or auction.

It is prohibited or illegitimate for state authorities and any economic operators (subsoil users) to perform any actions aimed at:

- Limiting, in contradiction to the conditions of the tender or auction, access to participation for legal persons and individuals that are willing to acquire subsoil use rights;
- Refusing to issue licenses for tender or auction winners as well as licenses for subsoil use under a PSA;
- Substitution of tenders and auctions for direct negotiations, excepting cases provided for in the Law of the Russian Federation On the Subsoil and federal laws;
- Discrimination against subsoil users creating structures competing with economic operators holding dominant positions in subsoil use;
- Discrimination against subsoil users in providing access to transport facilities and infrastructure.

The right to subsoil parcel use is transferred to another subject of entrepreneurial activity in the following cases:

- Reorganization of the legal person of the subsoil user;
- Discontinuing of operation of the legal person of the subsoil user;
- Legal person of the subsoil user acting as founder of a new legal person created with a view to continuing the activities on the allocated subsoil parcel in accordance with the license for the subsoil parcel use;
- Business operator acquiring, according to the established procedure set out in the Federal Law On Insolvency (Bankruptcy), the property of the bankrupt enterprise (subsoil user) provided that the buyer of the property is a legal person created in compliance with the legislation of the Russian Federation and meets the qualification requirements applying to subsoil users.

In case the right to subsoil parcel use is transferred, the license for the use of a subsoil parcel is subject to review. In this case, the conditions for the use of subsoil parcel set out in the previous license is not subject to revision.

A refusal to reissue a license for subsoil parcel use may be challenged in court.

The right to use subsoil parcel(s) acquired by a legal person according to the established procedure may not be transferred to third persons, including by way of assignment of rights ensured by civil legislation, excepting cases envisioned in the RF Law On the Subsoil or other federal laws.

The license for the use of subsoil parcels obtained by a legal person according to the established procedure may not be transferred to third persons, including for use.

The right to subsoil use discontinues:

- Upon expiry of the validity period specified in the license;
- Renunciation by the license owner of the right to subsoil use;
- In case of a certain event (if it is stipulated in the license) the occurrence of which entails the discontinuing of the right to subsoil use;
- In case the license is reissued with violated conditions.

The right to subsoil use may be discontinued ahead of expiry date in the following cases:

- Emergence of immediate danger for the lives and health of the people working or residing in the area of works relating to subsoil use;
- Breach of important licensing conditions by the subsoil user;
- Systematic violation by the subsoil user of established rules of subsoil use;
- Emergencies (natural disasters, war, etc.);
- In case the subsoil user has not started the use of the subsoil on the promised scale within a period established in the license;
- Liquidation of the enterprise or another economic operator to which the subsoil has been licensed;
- On the initiative of the license owner;
- Failure of the subsoil user to present reporting documents required by the Russian federal legislation on the subsoil.

In case the subsoil user disagrees with the decision to discontinue, suspend or restrict the right to subsoil use, the user may challenge it through administrative means or court.

In case of subsoil use under a PSA, the right to subsoil use may be discontinued, suspended or restricted under the terms and conditions of, and according to the procedure envisioned in, the said agreement.

The Federal Law On the Subsoil lays down the main requirements relating to the rational use and protection of the subsoil and provides that in case these requirements are not met, the right to subsoil use may be restricted, suspended or discontinued.

Mineral-producing enterprises and underground facilities not connected with the extraction of natural resources are subject to liquidation or conservation upon expiry of the license validity period or if the use of the subsoil ends ahead of schedule.

Before the completion of liquidation or conservation, the subsoil user bears the responsibility assigned by legislation.

In case of a full or partial liquidation or conservation of an enterprise or underground structure, mine openings and drill wells should be brought in a state ensuring safety for human life and health, protection of the environment, buildings and structures, and in case of conservation also security of the deposit, mine openings and drill wells for the entire period of conservation.

To ensure conditions for rational comprehensive use of the subsoil, set the prices for the use of the subsoil and demarcate the licensed subsoil parcels, the reserves of minerals in proved deposits are subject to state expert evaluation.

The licensing of the subsoil for the extraction of minerals is permitted only following the state expert evaluation of their reserves.

The conclusion of the state expert evaluation regarding the industrial significance of the proved mineral reserves is a ground for their inclusion in the government register.

Compensation is a principle of subsoil use. The payment system employed in subsoil use is set out in the RF Law On the Subsoil. In addition, subsoil users pay other taxes and charges according to the RF legislation governing taxes and charges.

The new draft RF Law On the Subsoil is being prepared by the Government. It is planned to finalise this work in 2004.

Federal Law No. 187-FZ of 30.11.1995 On the Continental Shelf of the Russian Federation determines the status of the continental shelf of the Russian Federation, the sovereign rights and jurisdiction of the Russian Federation on its continental shelf, and their implementation in accordance with the Constitution of the Russian Federation, commonly accepted principles and norms of international law, and international treaties of the Russian Federation.

The Russian Federation exercises the following on the continental shelf:

1. The sovereign rights for the purposes of prospecting of the continental shelf and development of its mineral and biological resources. These rights are exclusive in the sense that if the Russian Federation does not engage in the prospecting of the continental shelf and does not develop its mineral and biological resources, no one can do the same without consent of the Russian Federation.
2. Exclusive right to permit and regulate drilling works on the continental shelf for any purposes.

3. The exclusive right to construct and permit and regulate the creation, operation and use of artificial islands, installations and structures. The Russian Federation exercises jurisdiction over such artificial islands, installations and structures, including jurisdiction with regard to customs, fiscal, sanitary and immigration laws and rules, as well as laws and rules pertaining to security.
4. Jurisdiction over:
 - Maritime research;
 - Protection and conservation of maritime environment in the context of prospecting and development of mineral resources, harvesting biological resources, disposal of waste and other materials;
 - Laying and operation of underwater cables and pipelines of the Russian Federation.

The competence of federal authorities on the continental shelf pertaining to fuel and energy issues includes:

- Development and improvement of RF legislation with regard to the continental shelf and operations thereon;
- Co-ordination of the activities of federal authorities with regard to the continental shelf and operations on it, protection of legitimate rights and interests of the Russian Federation on the continental shelf and protection of its mineral resources;
- Determining the strategy of research, search, prospecting and development of mineral resources, protection and preservation of the maritime environment, mineral resources based on the federal strategy, programmes and plans incorporating the conclusions of state expert evaluation, as well as specially incorporating the economic interests of small indigenous peoples and ethnic communities of the North and Far East of the Russian Federation and population permanently residing in littoral areas adjacent to the sea coast of the Russian Federation. Federal programmes and plans of prospecting and development of mineral resources are drafted with the involvement of bodies of executive power of the subjects of the Russian Federation in case such programmes and plans envision the use of littoral infrastructure of concerned subjects of the Russian Federation;
- Establishing the procedure for the use of mineral resources, including the licensing procedure, and development of relevant standards (norms and rules);
- Establishing the procedure of holding tenders (auctions) for the right to use parcels of the continental shelf and determining the winner of the tender (auction);
- Oversight over rational use of mineral resources and their protection;
- State mining surveillance;
- Registration of works on research, prospecting and development of mineral resources; drafting the federal balance of mineral reserves; federal register of continental shelf parcels used for examination, prospecting and development of mineral resources;
- Conclusion of production-sharing agreements;

- Imposing restrictions and special conditions on the use of the seabed and its subsoil on individual parcels of the continental shelf in the context of projected development of mineral resources;
- Regulations and organization of resource and maritime scientific research;
- Declaring individual areas of the continental shelf closed for maritime scientific research by foreign states, natural and legal persons of the Russian Federation, natural and legal persons of foreign states and competent international organizations due to conducting (or planning to conduct) in the said areas of works relating to prospecting and development of mineral resources, with notification of the coordinates of closed areas through *Notifications for Seafarers*;
- Setting a payment system, determining the amounts, conditions and procedure of charging fees for the use of parcels of the continental shelf for the purposes of search and prospecting;
- Regulation of creation, operation and use of artificial islands, installations and structures for the purposes of examination, search, prospecting and development of mineral resources, for other purposes and for the purposes of holding resource and maritime scientific research;
- Regulation and definition of conditions for laying underwater cables and pipelines used for the prospecting and development of mineral resources or for the operation of artificial islands, installations and structures, as well as cable and pipelines running into the territory of the Russian Federation;
- Defining the route and conditions for laying underwater cables and pipelines on the continental shelf;
- Regulation of drilling works on the continental shelf for any purposes;
- Conducting state environmental expert examination, state environmental oversight and state monitoring of the condition of the continental shelf;
- Maintaining the Russian State Data Bank on the condition of the continental shelf and the condition of its mineral resources;
- Establishing the legal regime in the areas of environmental emergencies and environmental distress; ensuring urgent relief efforts following accidents leading to pollution with oil and substances other than oil;
- Setting environmental standards and norms defining the content of pollutants in waste and other materials slated for disposal on the continental shelf, the list of hazardous substances, waste and other materials the disposal of which on the continental shelf is prohibited, regulation and oversight of the disposal of waste and other materials;
- Ensuring the fulfilment of measures aimed at protecting the continental shelf, its mineral resources, suppressing the violation of Federal Law and international treaties of the Russian Federation, and bringing to justice of persons guilty of illegal activities;
- Dispute resolution with regard to the continental shelf and operations on it;
- Conclusion and implementation of international treaties of the Russian Federation with regard to the continental shelf and operations on it.

Parcels of the continental shelf may be licensed to natural and legal persons of the Russian Federation and natural and legal persons of foreign states, as well as associations of the said legal persons (partnerships) created on the basis of a joint operation agreement and having no legal-person status, that are parties to a production-sharing agreement, provided that the partners within such association bear joint and several responsibility with regard to the obligations ensuing from the production-sharing agreement.

Parcels are licensed for the following purposes:

- Regional geological examination of the continental shelf for the purposes of evaluating the prospects of ore and oil/gas content in large regions of the continental shelf;
- Search for mineral resources;
- Prospecting and development of mineral resources;
- Concurrent search, prospecting and development of mineral resources;
- Construction and operation of underground installations not connected with the prospecting and development of mineral resources;
- Collection of mineral, paleontological and other geological collection items.

The licensing of parcels to users is determined by economic interests of the Russian Federation and proceeds in such a way that *the priority rights, with all other equal conditions, are granted to users that use the capacities of Russian industry to the utmost.*

In the interest of security and development of industry and energy sector of the Russian Federation, based on the request of concerned federal body of executive authority, *restrictions may be imposed on the participation of foreign users in tenders (auctions) for search, prospecting and development of mineral resources on individual parcels, as well as holding tenders (auctions) with the participation of Russian users only.*

The procedure and conditions of holding tenders (auctions) for the right to use parcels, grounds for refusal of participation in the tender (auction), content of the license for regional geological examination of the continental shelf, search, prospecting and development of mineral resources, period of time for which the said licenses are issued, rights and obligations of parcel users, requirements for safe conduct of works, grounds for discontinuing the rights to parcel use, including ahead-of-schedule discontinuing of this right, anti-monopoly requirements and conditions of production-sharing are regulated by federal laws applying to the continental shelf and operations on it.

For regional geological examination of the continental shelf, search, prospecting and development of mineral resources licenses are issued. The license may include additional conditions, complying with federal laws and applying to the continental shelf and operations thereon, for the use infrastructure facilities on the territories of subjects of the Russian Federation in areas where licenses are effective or in adjacent parcels, taking into account the economic interests of littoral subjects of the Russian Federation.

Fees for the use of ports, lands, buildings, structures, means of transportation (including pipelines) and other infrastructure objects are set in accordance with the legislation of the Russian Federation.

The right to parcel use may not be transferred by parcel users to third persons by way of reassignment of rights provided for in the civil legislation of the Russian Federation.

Parcel users must:

- Conduct technological, hydro-technical, sanitary and other measures, as well as fulfill international norms and standards, laws and rules of the Russian Federation concerning the protection of maritime environment, mineral and biological resources;
- Regularly contact the coast services of the Russian Federation and, in case necessary equipment is available, provide data on meteorological and hydrological observations to the closest radio-meteorological centre of the Russian Federation within major international synoptical periods, in accordance with standard procedures of the World Meteorological Organizations.

The Law provides for *additional obligations for foreign users*:

- Conduct regional geological examination, search, prospecting and development of mineral resources only in the presence of an official from the bodies of protection of the continental shelf and under his supervision;
- Ensure the free-of-charge passage of officials of bodies of protection to the location of works and back and use of radio communications devices, as well as bear the costs of the stay, accommodation and full equipment of officials of bodies of protection on par with their own command (managerial) staff.

Artificial islands, installations and structures can be created on the continental shelf by:

- Federal bodies of executive authority and bodies of executive authority of subjects of the Russian Federation, natural and legal persons of the Russian Federation, as well as other persons that are investors according to the Federal Law On Production-Sharing Agreements;
- Foreign states, their natural and legal persons, other persons that are investors according to the Federal Law On Production-Sharing Agreements, competent international organizations;
- Other persons that are investors according to the Federal Law On Production-Sharing Agreements.

The procedure for submission, consideration and evaluation of applications for the creation of artificial islands, installations and structures on the continental shelf and the decision-making procedure with regard to them are determined by the Federal Law and international treaties of the Russian Federation.

A permit for the creation of artificial islands, installations and structures may be refused in case of the following:

- A threat to the security of the Russian Federation occurs;
- The creation of artificial islands, installations and structures is incompatible with the requirements pertaining to the protection of mineral or biological resources;
- Artificial islands, installations and structures are oriented at reserves, preserves, wildlife areas and other specially protected natural areas of the continental shelf that are important for the preservation, reproduction and migration of valuable kinds of biological resources;
- Artificial islands, installations and structures have direct significance for regional geological examination of the continental shelf, search, prospecting and development of mineral resources or harvesting of biological resources;

- Information provided in the application is out of line with the purposes and goals of the creation of artificial islands, installations and structures, or obligations to the Russian Federation exist that have not been fulfilled, ensuing from the works conducted by the applicants earlier.

Applicants that have obtained a permit to create artificial islands, installations and structures have the right to own artificial islands, installations and structures and use them in accordance with the issued permit. The transfer of artificial islands, installations and structures to other persons contrary to the issued permit is prohibited.

Russian and foreign applicants may lay cables and pipelines on the continental shelf.

A specially authorized federal body in geology and subsoil use processes applications for the laying of underwater cables and pipelines, coordinates the projected route of the underwater cables and pipelines with the specially authorized federal bodies and submits to the Government of the Russian Federation the conclusion on the possible laying of underwater cables and pipelines. In cases where underwater cables and pipelines are used for the prospecting and development of mineral resources or for the operation of artificial islands, installations and structures, or run into the territory of the Russian Federation, the specially authorized federal body in geology and subsoil use processes applications for the laying of underwater cables and pipelines, coordinates the conditions and the projected route with relevant federal bodies of executive authority of the Russian Federation and subjects of the Russian Federation, and submits to the Government of the Russian Federation an opinion on the possibility and conditions governing the issuance of a permit for the laying of such underwater cables and pipelines or a notification of the refusal to issue such a permit.

The underwater cables and pipelines that have been laid are to be reported to the specially authorized federal body in defence for publication in the *Notifications for Seafarers*. Such underwater cables and pipelines are subject to international protection in accordance with the norms of international law.

State environmental expert evaluation on the continental shelf:

- Is an obligatory measure to protect mineral and biological resources and precedes the fulfilment of the federal strategy, programmes and plans;
- Is performed by the specially authorized federal body in the protection of the environment and natural resources according to a procedure laid down in the legislation of the Russian Federation.

All types of economic activity on the continental shelf, regardless of their estimated cost, are subject to the state environmental expert evaluation. All types of economic activity on the continental shelf may be performed only provided there is a positive opinion of the state environmental expert evaluation.

The main principles of economic relations in the use of mineral resources are compensation for use, liability for violations of requirements for economic activities and financial support of examination, reproduction and protection of mineral resources.

Payments for the use of the continental shelf are set by the Federal Law, as well as the legislation of the Russian Federation governing taxation. Payments for the use of mineral resources of the continental shelf are made by natural and legal persons of the Russian Federation and natural and legal persons of foreign states regardless of the form of ownership, as well as associations of these legal persons created on the basis of a joint operation agreement and having no legal-person status who are parties to PSAs.

The system of fees for the use of mineral resources and for the disposal of waste and other materials on the continental shelf includes:

- Fees for participation in the tender (auction) and issuance of licenses for the use of mineral resources;
- Fees for geological information on mineral resources;
- Fees for the use of mineral resources;
- Fee for the issuance of permits for the disposal of waste and other materials.

In addition, users pay taxes and charges set in accordance with the legislation of the Russian Federation on taxes and charges, and make other payments required by the legislation of the Russian Federation.

Disputes between natural persons, legal persons, natural and legal persons concerning the exercise of their rights and obligations on the continental shelf are resolved through administrative means or through courts of the Russian Federation.

Disputes between the Russian Federation and foreign states concerning the exercise of their rights and obligations on the continental shelf are resolved through amicable means in accordance with international treaties of the Russian Federation and the norms of international law.

Disputes between the state and the investor concerning the use of the continental shelf under a PSA are resolved in accordance with the provisions of such agreements.

Federal Law No. 191-FZ on the *Exclusive Economic Zone*, dated December 17, 1998, defines the status of the RF exclusive economic zone, the sovereign rights and jurisdiction of the RF in regard of its exclusive economic zone and their exercising in accordance with the RF Constitution, generally accepted principles and rules of international law and international agreements of the RF.

In its exclusive economic zone, the Russian Federation exercises:

- sovereign rights for the purpose of exploration, development, production and preservation of living and non-living resources and their management, as well as in regard of other activities involving economic exploration and development of the exclusive economic zone;
- sovereign rights with a view to explore the seabed and the subsoil thereof and develop mineral and other non-living resources. Geological studies of, prospecting for, exploration and development of mineral and other non-living resources of the seabed and the subsoil thereof must be performed in accordance with the RF Subsoil Law, RF Continental Shelf Law and other Federal Laws applicable to the exclusive economic zone and activities therein;
- the exclusive right to issue permits for, and regulate, drilling operations on the seabed and in the subsoil thereof for any purposes. Drilling operations for any purposes shall be conducted in accordance with the Federal Law on the RF Continental Shelf;
- the exclusive right to construct and to issue permits for, and regulate, the creation, operation and utilization of artificial islands, installations and structures. The RF has jurisdiction over such man-made islands, installations and structures, including the jurisdiction in terms of customs, fiscal, sanitary, immigration and safety laws and rules. Formation, operations and use of

artificial islands, installations and structures in the exclusive economic zone shall be in accordance with the Federal Law of the RF Continental Shelf;

- and has jurisdiction over:

a) marine research;

b) protection and preservation of the marine environment from any pollutions;

c) laying and operations of RF subsea cables and pipelines. Laying of subsea cables and pipelines of foreign countries in the exclusive economic zone shall be in compliance with the Federal Law of the RF Continental Shelf.

In the exclusive economic zone, all states enjoy the freedom of navigation, flying and laying subsea cables and pipelines, as well as other internationally lawful sea uses relating to the operation of vessels, aircraft and subsea cables and pipelines.

Such freedoms are exercised subject to compliance with this Federal Law and international agreements of the Russian Federation, as well as to the protection and preservation of the marine environment, living and non-living resources in the exclusive economic zone.

Federal Law No. 48-FZ of April 22, 2003 stipulates that non-living resource studies, prospecting, exploration and development may be performed by RF individuals and legal entities, foreign individuals and legal entities, foreign countries and competent international organizations based on a license for non-living resource studies, prospecting, exploration and development to be obtained from the specially authorized federal executive authority in charge of geology and subsoil uses.

The treatment granted to foreign individuals and legal entities, foreign countries and competent international organizations shall not be less favorable than those granted to RF individuals and legal entities.

Tidal, current and wind energy generation may be performed by RF individuals and legal entities, foreign individuals and legal entities and competent international organizations based on a license for tidal, current and wind energy generation to be obtained from the dedicated federal executive authority.

All business and other operations in the exclusive economic zone shall be subject to a government environmental expert review irrespective of their cost estimates.

The key principles of economic relationships involved in living and non-living resource uses include compensation for use, financial support of studies, reproduction and protection of the marine environment, living and non-living resources, and liability for breaches of business terms and conditions.

Disputes between individuals, legal entities, and individuals and legal entities arising in connection with their rights and obligations in the exclusive economic zone shall be resolved in RF courts.

Disputes between the RF and foreign countries arising in connection with their rights and obligations in the exclusive economic zone shall be resolved amicably in accordance with RF international agreements and rules of international law.

4.4.13. Taxation system

The main legislative act governing taxes and charges is the **Tax Code of the Russian Federation (Parts One and Two)**.

Part One of the Tax Code of the Russian Federation determines the legal status of the participants of relations regulated by the legislation on taxes and charges, determines the

procedure for litigation concerning tax violations, the types of taxes and charges in the Russian Federation, general conditions for setting taxes and charges, the rights and duties of taxpayers and charge payers, and regulates relations arising in the process of tax oversight, challenging actions of tax bodies, actions (or inaction) of their officials and bringing to justice for tax violations.

Tax and charges legislation incorporates the following main principles:

- Taxes and charges cannot be discriminatory and be used variably based on social, racial, ethnic, religious or other similar criteria;
- It is not permitted to set differentiated tax and charge rates or tax benefits depending on the form of ownership, nationality of natural persons or place of origin of capital;
- Taxes and charges should be economically justified and may not be arbitrary;
- It is prohibited to impose taxes and charges impeding the exercise by citizens of their constitutional rights;
- It is prohibited to impose taxes and charges that disrupt the single economic space of the Russian Federation and, in particular, restrict, directly or indirectly, the free movement within the territory of the Russian Federation of goods (works, services) and financial funds, or otherwise restrict or impede economic activities of individuals and organizations not forbidden by law;
- Taxes and charges of subjects of the Russian Federation, local taxes and charges are set, altered or abolished, respectively, through laws of subjects of the Russian Federation on taxes and charges and regulatory legal acts of representative bodies of local self-government on taxes and charges in accordance with the Code;
- In imposing taxes, all elements of taxation should be specified;
- Legislative acts pertaining to taxes and charges should be formulated in a way that allows the taxpayer to know exactly what taxes (charges), when and in what sequence he should pay;
- All unresolved doubts, contradictions and uncertainties of legislative acts on taxes and charges are interpreted in favour of the taxpayer (charge payer).

According to the Tax Code of the Russian Federation, Part One, 298 regulatory acts had been adopted additionally by March 2003.

The Tax Code of the Russian Federation (Part Two) No. 117-FZ of 05.08.2000 (as edited 24.07.2002) establishes specific types of taxes: value added tax (chapter 21), excises (chapter 22), personal income tax (chapter 23), consolidated social tax (chapter 24), organization profit tax (chapter 25), mineral production tax (chapter 26), sales tax (chapter 27), and transportation tax (chapter 28).

In addition, a number of laws are in effect regarding taxation pertaining to the foundations of the tax system, the structure of tax bodies and methodologies of tax calculation (see Annex No.9).

Federal Law of the Russian Federation of June 6, 2003 put into effect chapter 26.4 of the Tax Code, "Taxation System in the Implementation of Production Sharing Agreements," establishing a special taxation regime employed in the implementation of agreements signed in accordance with Federal Law No. 225-FZ of 30.12.1995 On Production-Sharing Agreements. The conditions are determined the presence of which is needed in order to

implement the said special taxation regime. A list of documents is defined that are submitted to tax authorities by the taxpayer exercising the right to implement the special tax regime.

The said special tax regime provides for the substitution of the payment of the entirety of taxes and charges prescribed by the legislation of the Russian Federation on taxes and charges for sharing the produced product in accordance with the terms and conditions of the agreement, excepting taxes and charges the payment of which is required by the newly enacted chapter 26.4 of the Tax Code of the Russian Federation.

Some peculiarities of the implementation of the said special tax regime have also been established:

- Establishing the tax base, calculation and payment of the mineral production tax;
- Establishing the tax base, calculation and payment of the organization profit tax;
- Payment of the value added tax;
- submission of tax declarations;
- registration of taxpayers;
- field tax checks.

4.4.14. Natural monopolies

Federal Law No. 147-FZ of 17.08.1995 On Natural Monopolies sets out the legal base of Russian policy with regard to natural monopolies and is aimed at achieving a balance of interests of consumers and subjects of natural monopolies ensuring the availability of the sold goods for consumers and efficient operation of the subjects of natural monopolies.

The law applies to relations which arise on the commodity markets of the Russian Federation and which involve subjects of natural monopolies, consumers, federal bodies of executive authority, bodies of executive authority of the subjects of the Russian Federation and bodies of local self-government.

The regulation of the activities of subjects of natural monopolies, prescribed by law, may not be implemented in areas of activity that do not relate to natural monopolies, excepting cases provided for by federal laws.

The Federal Law regulates the activities of the subjects of natural monopolies in the following areas:

- transportation of oil and petroleum products through trunk pipelines;
- transportation of natural gas through pipelines;
- electricity and heat transmission;
- railway transportation;
- transport terminal, port and airport services;
- services of commonly available telecommunications and postal communications.

Agencies regulating natural monopolies may employ the following methods to regulate the activities of subjects of natural monopolies:

- price regulation through determination (setting) of prices (tariffs) or their ceiling;
- identifying consumers eligible for obligatory service and (or) setting the minimum level of service to them in case it is impossible to fully meet the need for the

commodity produced (sold) by a subject of the natural monopoly, taking into account the need to protect the rights and legitimate interests of citizens, ensure the security of the state and protect the environment and cultural values.

The right of access to the network of Russian trunk pipelines and terminals in seaports when exporting oil outside the customs zone of the Russian Federation is granted to organizations engaged in the production of oil and registered by the established procedure, as well as organizations that are main partnerships in relation to organizations producing oil, in proportion to the volumes of produced oil fed into the network of trunk pipelines assuming 100 percent capacity of the trunk pipelines (based on their technical characteristics).

Tariffs of electricity and heat supplied by commercial organizations regardless of their organizational-legal forms are subject to state regulation. The main document in this area is the Federal Law On State Regulation of Electricity and Heat Tariffs in the Russian Federation (its provisions are covered in the further sections of this study).

A significant number of legislative acts have been adopted pursuant to this Federal Law (see Annex No. 6).

4.4.15. State Regulation of Foreign Trade Activity

The foundations of state regulation of foreign trade activity, the procedure of its implementation by Russian and foreign persons, the rights, duties and liability of bodies of state authority of the subjects of the Russian Federation in the area of foreign trade activity are determined by Federal Law No. 157-FZ of 13.10.1995 **On State Regulation of Foreign Trade Activity** (currently, the Government of the Russian Federation has prepared a draft federal law On the Foundations of State Regulation of Foreign Trade Activity which reflects the norms and rules of the WTO).

The state foreign trade policy is implemented by way of economic and administrative methods of foreign trade regulation.

State foreign trade policy is implemented by way of customs tariff regulation (using import and export customs tariffs) and non-tariff regulation (in particular, through quotas and licensing) of foreign trade activity.

Other methods of state regulation of foreign trade activity by way of interference and imposing various restrictions by bodies of state authority of the Russian Federation and bodies of state authority of the subjects of the Russian Federation are not permitted.

Legal, economic and organizational foundations of customs are stipulated in the **Customs Code of the Russian Federation**, a new version of which was adopted by Federal Law No. 61-FZ of May 28, 2003. The new version of the Customs Code will go into effect on January 1, 2004.

The new version of the Code determines the principles of movement of goods and vehicles across the customs border of Russia and implementation of procedures (customs clearance, payments, oversight).

Customs regimes fall into main, economic, completing and special regimes. Main customs regimes include production for domestic consumption, export and transit. Economic regimes include processing within the customs zone, processing for domestic consumption, processing outside the customs zone, temporary import, customs warehousing. Completing regimes include re-import, re-export, destruction and abandonment to the state. Special customs regimes include temporary import, duty-free commerce, displacement of supplies, and other special customs regimes.

Special procedures include movement of vehicles, movement of goods by natural persons, movement of goods by way of international postal packages, movement of goods by individual categories of foreign individuals, and movement of goods by pipeline and power lines.

The new version of the Code is a step towards international integration of the Russian Federation, the customs legislation of the Russian Federation is brought in line with international norms. This will facilitate the accession of Russia to the WTO. It also incorporates the provisions of the new version of the International Convention on Facilitation and Harmonization of Customs Procedures.

The new version of the Code mainly contains direct-action norms, which ensures direct regulation of legal relations in the area of customs by the Code itself (due to the lack of such norms in the 1993 Code, there are currently about 3,000 by-laws, letters, explanation and other documents adopted mainly by the State Customs Committee of the Russian Federation). This ensures stability and predictability of customs rules and uniform practice of their implementation across the territory of Russia.

The period of customs clearance of goods has been reduced from 10 to 3 days, the list of documents needed for customs clearance is clearly defined. Customs procedures have been significantly simplified, which will also facilitate the acceleration of customs clearance. Thus, there is a possibility for advance declaration, electronic submission of documents, etc. The period of transfer of goods to importers will be reduced, which will cut the expenses of participants of foreign economic activity ensuing from the warehousing of goods at customs terminals and downtime of vehicles.

The new version of the Customs Code preserves and significantly liberalizes the customs regime for temporary import allowing the foreign investor to be legally exempt from customs duties when importing into Russia goods of main production forms transferred to the charter capital. With regard to such goods, that mainly include technological equipment, provided that they are not property of Russian persons using them within the customs zone of the Russian Federation, temporary import is permitted with partial exemption from customs duties and taxes for a period of 34 months.

Customs tariff regulation. The procedure of formation and application of the customs tariff of the Russian Federation – an instrument of trade policy and state regulation of the domestic market of goods of the Russian Federation in its interaction with the world market - as well as rules of imposing duties on goods in their movement across the customs border of the Russian Federation are set out in RF Law **On the Customs Tariff** No. 5003-1 of 21.05.1993 which is currently under revision.

The customs tariff of the Russian Federation (approved by Government Resolution No. 830 of 30.11.2001 **On the Customs Tariff of the Russian Federation and the Goods Nomenclature Used in Foreign Economic Activity**) is a list of customs tariff rates applying to goods transported across the customs border of the Russian Federation and systematized in accordance with the Goods Nomenclature of Foreign Economic Activity (approved by RF Government Resolution No. 830 of 30.11.2001).

The customs tariff rates are uniform and not subject to alteration depending on the persons moving the goods across the customs border of the Russian Federation, type of transaction and other factors, excepting cases provided in the said Law. Import customs duty rates are set by the Government of the Russian Federation within the limits prescribed by the Law. Export customs tariff rates and the list of goods to which they apply are set by the Government of the Russian Federation.

With regard to the commodity classified as goods position 2709 in the Goods Nomenclature (crude oil), export customs tariff rates are set in the following way.

The Government of the Russian Federation monitors prices of Urals crude oil on the international petroleum markets (Mediterranean and Rotterdam) for the purposes of calculating the average price within the monitoring period.

Monitoring period for oil prices on international petroleum markets means every two calendar months, beginning with November 2001.

A calendar year includes six monitoring periods.

Export customs duty rates are set for a period of two calendar months.

The new export customs duty rate for crude oil is set by the Government of the Russian Federation with reference to the average price of Urals crude oil on the international petroleum markets (Mediterranean and Rotterdam) during the most recent monitoring period and goes into effect as of the 1 day of the second calendar month following the completion of the monitoring period.

The decisions of the Government of the Russian Federation on changing the export customs duty rate for crude oil should be published in one of the official publications of the Russian Federation not later than 10 days before they become effective.

The export customs duty rates for crude oil set by the Government of the Russian Federation should not exceed the amount of the ceiling duty rate calculated as follows:

- where the average price of Urals crude oil, formed over the monitoring period, on the international petroleum markets (Mediterranean and Rotterdam) of up to and including US\$109.5 per tonne – 0%;
- where the average price of Urals crude oil on the international petroleum markets (Mediterranean and Rotterdam) exceeds the level of US\$109.5 per tonne but not exceeding and including US\$182.5 per tonne – not more than 35% of the difference between the average price of such oil formed over the monitoring period in US dollars per tonne and US\$109.5;
- where the average price of Urals crude oil formed on the international petroleum markets (Mediterranean and Rotterdam) over the monitoring period exceeds US\$182.5 per tonne – not more than US\$25.53 and 40% of the difference between the average price of such oil formed over the monitoring period in US dollars per tonne and US\$182.5.

Non-tariff regulation. According to the Federal Law On State Regulation of Foreign Economic Activity, exports from the Russian Federation and imports into the Russian Federation are not subject to quantitative restrictions.

Quantitative restrictions on exports and imports may be imposed in exceptional cases by the Government of the Russian Federation with a view to:

1. ensuring national security of the Russian Federation;
2. fulfilment of international obligations of the Russian Federation taking stock of the situation on the domestic commodity market;
3. protecting the domestic market of the Russian Federation.

The imposing of quantitative restrictions on exports takes account of the fulfilment by the Russian Federation of its obligations under agreements concluded in accordance with the

Federal Law On Production-Sharing Agreements, in the part concerning supplies for the exports of mineral materials that are the property of the investor in accordance with the terms and conditions of the said agreements.

The resolutions of the Government of the Russian Federation on imposing quantitative restrictions on exports and imports are adopted and officially published not later than three months before such restrictions go into effect.

The distribution of quotas and issuance of licenses in setting quantitative restrictions is performed, as a rule, through tender or auction or in the course of the actual realization of export and/or import transactions until the consolidated quota is met and the priority right is granted to producing organizations.

The procedure of holding a tender or auction is established by the Government of the Russian Federation (RF Government Resolution No. 1299 of 31.10.1996 On the Procedure of Holding Tenders and Auctions to Sell Quotas When Imposing Quantitative Restrictions and Licensing of Exports and Imports of Goods (Works, Services) in the Russian Federation of 31.10.1996 along with the Provision on the Procedure of Holding Tenders and Auctions to Sell Export and Import Quotas When Quantitative Restrictions Are Imposed by the Government of the Russian Federation, the Provision on the Procedure of Licensing Exports and Imports of Goods (Works, Services) in the Russian Federation, and the Provision on the Inter-Agency Commission Charged with the Organization and Holding of Tenders and Auctions to Sell Export and Import Quotas).

The procedure of imposing and implementation of special protective, compensatory and anti-dumping measures is set by Federal Law No. 63-FZ of 14.04.1998 **On Measures to Protect Economic Interests of the Russian Federation in the Conduct of Foreign Trade in Goods**. The Government of the Russian Federation has now prepared a draft federal law on special protective, anti-dumping and compensatory measures in goods imports.

4.4.16. Government procurement

Basic legal and economic principles and procedure of the formation, placement and execution, on a contractual basis, of orders for the procurement and supply of goods, works and services for federal state needs by enterprises, organizations and institutions, regardless of the form of ownership, located on the territory of the Russian Federation are set out in Federal Law No. 60- FZ of 13.12.1994 **On Procurement of Products for Federal State Needs**.

Products for federal state needs are supplied for the following purposes:

- creation and maintenance of state material reserves of the Russian Federation;
- maintenance of the necessary level of defense capability and security of the Russian Federation;
- ensuring export supplies of products for the fulfillment of international economic, including monetary, obligations of the Russian Federation;
- implementation of federal targeted programmes.

To arrange the implementation of federal targeted programmes and to secure supplies of products for federal state needs, the RF Government endorses state customers. Federal bodies of executive authority, federal state-funded enterprises or state institutions can act as state customers.

State orders are placed with enterprises, organisations and institutions (suppliers) by way of concluding state contracts-in-writing by state customers.

It is not permitted, as the state contract-in-writing is under implementation, to acquire foreign products, excepting cases where the production of similar types of products in the Russian Federation is impossible or economically inexpedient.

State customers ensure, proceeding from the interests of the state, the placement of orders for the supplies of products for federal state needs through open and (or) closed tenders and auctions.

Relations arising between the organizer of the tender (state customer) and participants of the tender (suppliers (contractors)) in the course of the tender for the placement of orders for the supplies of goods, works and services for state needs are regulated by the Federal Law No. 97-FZ of 06.05.1999 On Tenders for the Placement of Orders for Supplies of Goods, Works and Services for State Needs.

Foreign suppliers (contractors) of goods (works, services) may participate in a tender in case the production of goods (works, services) for state needs is absent in the Russian Federation or is economically inexpedient.

4.4.17. Retaliatory restrictions (retortions)

The Code of Civil Procedure of the Russian Federation, Article 398 provides that the RF Government may impose retaliatory restrictions with regard to foreign persons of the states in whose courts the same restrictions apply to the procedural rights of Russian citizens and organizations.

According to the Code of Arbitration Procedure of the Russian Federation, Article 254, the Russian Government may impose retaliatory restrictions (retortions) with regard to foreign persons of those foreign states where restrictions are in effect with regard to Russian organizations and citizens.

According to the Civil Code of the Russian Federation, Article 1194, the Russian Government may impose retaliatory restrictions (retortions) with regard to property and personal non-property rights of citizens and legal persons of those states where special restrictions on the property and personal non-property rights are in effect with regard to Russian citizens and legal persons.

According to the Federal Law on State Regulation of Foreign Trade Activity, Article 40, the Russian Government may introduce restrictions on foreign trade in goods, services and intellectual property (retaliation measures) in case a foreign state:

- fails to fulfil obligations with regard to the Russian Federation under international treaties;
- implements measures infringing on the economic interests of the Russian Federation, subjects of the Russian Federation, municipalities of the Russian Federation or Russian persons or political interests of the Russian Federation;
- fails to provide adequate effective protection of legitimate interests of Russian persons in this state;
- does not take reasonable actions to fight unlawful acts of natural and legal persons of that state in the Russian territory.

According to the Federal Law On the Customs Tariff, Article 8, special duties are imposed by way of retaliatory measure in response to discriminatory or other actions, detrimental for the interests of the Russian Federation, by other states or their associations.

4.4.18. Competition and anti-monopoly activity

RSFSR Law No. 948-1 of 22.03.1991 *On Competition and Restriction of Monopoly Activity on Commodity Markets* determines the organizational and legal grounds for prevention and suppressing of abuse of domination by monopolies, collusion among economic operators limiting competition, bad faith competition on the commodity markets in the Russian Federation, limitation of competition by federal bodies of executive authority, bodies of state authority of subjects of the Russian Federation, bodies of local self-government, other bodies or organizations charged with the functions or rights of the said bodies of authority, oversight over economic concentration.

The Law applies in cases where actions and agreements performed and concluded, respectively, by the said persons outside the territory of the Russian Federation lead or may lead to limited competition or entail other negative consequences on the markets in the Russian Federation.

Pursuant to this Law, RF Government Resolution No. 154 On the List of Economic Operators Wielding a Share of More than 35 Percent on the Market for Particular Goods of 19.02.1996.

4.4.19. Environment

Federal Law No. 7-FZ of 10.01.2002 **On the Protection of the Environment** defines the legal base of public policy in the area of environmental protection ensuring a balanced mode of addressing socio-economic issues, preserving a favourable environment, biological diversity and natural resources with a view to meeting the needs of this and future generations, strengthening the rule of law in environmental protection and ensuring environmental security. The Law regulates relations arising in the course of economic and other activities entailing an effect on the natural environment as the main component of the environment, forming the foundation of life on Earth, within the territory of the Russian Federation, as well as on the continental shelf and within the exclusive economic zone of the Russian Federation.

Federal Law No. 49-FZ On Areas of Traditional Nature Management of Indigenous Small Peoples of the North, Siberia and the Far East of the Russian Federation of 07.05.2001 establishes legal grounds of formation, protection and use of areas of traditional nature management of indigenous small peoples of the North, Siberia and the Far East of the Russian Federation allowing them to engage in traditional ways of nature management and traditional lifestyles on those territories.

Federal Law No. 174-FZ On Environmental Expert Evaluation of 23.11.1995 regulates relations in the area of environmental expert evaluation which means the establishment of whether the projected economic or other activities correspond to environmental requirements and definition of admissibility of the sale of the object of environmental expert evaluation for the purposes of preventing possible negative effects of these activities on the natural environment and related social, economic and other repercussions from the sale of the object of environmental expert evaluation.

Objects of state environmental expert evaluation on the federal level include, in particular, feasibility studies and projects of construction, reconstruction, expansion, technical re-equipment, conservation and liquidation of organizations and other economic operators in the Russian Federation and other projects, regardless of their estimated cost, institutional jurisdiction and forms of ownership, whose implementation may affect the natural environment within the territory of two or more subjects of the Russian Federation, *including documentation concerning the creation by citizens or legal persons of the Russian*

Federation, with the participation of foreign citizens and foreign legal persons, of organizations the volume of foreign investment into which exceeds US\$500,000.

Objects of state expert evaluation on the level of subjects of the Russian Federation include, in particular, feasibility studies and projects of construction, reconstruction, expansion, technical re-equipment, conservation and liquidation of organizations and other economic operators, regardless of their estimated cost, institutional jurisdiction and forms of ownership, located on the territory of the concerned subject of the Russian Federation, excepting economic operators in the jurisdiction of the Russian Federation, *including documentation concerning the creation by citizens or legal persons of the Russian Federation, with the participation of foreign citizens and foreign legal persons, of organizations the volume of foreign investment into which does not exceed US\$500,000.*

The legal foundations for the use and protection of water objects are defined in the ***Water Code of the Russian Federation No. 167-FZ of 16.11.1995.***

The legal foundations for the rational use, protection and reproduction of forests and enhancement of their ecological and resource potential are defined in the ***Forest Code of the Russian Federation No.22-FZ of 29.01.1997.***

The Federal Law No. 33-FZ of 14.03.1995 On Specially Protected Natural Territories regulates relations in the area of organization, protection and use of specially protected natural territories for the purposes of preserving unique and typical natural complexes and sites, notable natural formations, flora and fauna representatives and their gene pool, examining natural processes in the biosphere, tracking changes in their condition, and delivering ecological education to the public.

4.4.20. Status of foreign citizens.

Federal Law No. 115-FZ of 25.07.2002 ***On the Legal Status of Foreign Citizens in the Russian Federation*** determines the legal status of foreign citizens in the Russian Federation and regulates relations between foreign citizens on the one hand and bodies of state authority, bodies of local self-government, officials of the said bodies, on the other hand, arising in connection with the stay of foreign citizens in the Russian Federation and their work, entrepreneurial or other activities on the territory of the Russian Federation.

According to this Law, foreign citizens enjoy rights and bear duties in the Russian Federation on par with the citizens of the Russian Federation, excepting cases specified in federal law.

A temporary residence permit may be issued to a foreign citizen within the limits of a quota approved by the Government of the Russian Federation. The validity period of the temporary residence permit is three years.

The quota governing the issuance of temporary residence permits for foreign citizens is annually approved by the Russian Government upon proposals of executive bodies of state authority of subjects of the Russian Federation taking account of the demographic situation in the concerned subject of the Russian Federation and the capacity of the concerned subject of the Russian Federation in accommodating foreign citizens.

A temporary residence permit may be issued to a foreign citizen in a number of cases, beyond the Russian Government-approved quota, including where the foreign citizens will invest into the RF an amount established by the RF Government.

A permanent residence permit may be issued for a foreign citizen upon his application within the validity period of the temporary residence permit provided there are legitimate grounds thereto.

A foreign citizen may not:

- be employed in public or municipal service;
- be a crew member on a vessel under the National Flag of the Russian Federation, according to restrictions provided in the RF Code of Merchant Navigation;
- be a crew member on an RF warship or another vessel operated for non-commercial purposes, as well as an airship of state or experimental aviation;
- be a commander of a civil aircraft;
- be employed at facilities and organizations the activities of which are connected with ensuring the security of the RF. The list of such facilities and organizations is approved by the Russian Government;
- engage in other activities and hold other offices access to which for foreign citizens is restricted by federal law.

The procedure governing access for foreign citizens to holding leading offices in organizations in whose charter capital over 50 percent of shares belongs to the RF is established by the Russian Government.

4.4.21. Foreign-exchange regulation and foreign-exchange oversight

[TRANSLATION TO BE INCLUDED]

4.4.22. Accounting and audit

RF legislation on accounting consists of the Federal Law No. 129-FZ of 21.11.1996 **On Accounting** setting a uniform legal and methodological base for the organization and maintenance of accounting in the RF, other federal laws, presidential decrees and RF Government resolutions.

The law applies to all organizations located on the territory of the Russian Federation, as well as subsidiaries and representations of foreign organizations, unless otherwise prescribed by international treaties of the Russian Federation.

Citizens engaged in entrepreneurial activities without forming a legal person keep their books in compliance with the procedure established by RF tax legislation. General methodological guidance for accounting in the Russian Federation is provided by the Russian Government.

Guided by the RF legislation on accounting, regulatory acts of bodies regulating accounting practices, organizations shape their accounting policies independently, based on their structure, industry profile and other peculiarities of their activities.

The following main requirements have been stipulated by legislation for accounting:

1. accounting is denominated in the RF national currency – roubles.
2. Property owned by an organization is recorded separately from the property of other legal persons held by the same organization.

3. Accounting records are kept by the organization continuously for the time of its existence as a legal person.
4. An organization keeps accounts of property, liabilities and economic transactions by way of double entry on interconnected accounting records included in the work plan of accounting records.
5. Data of analytical recording should correspond to circularization and balance on synthetic accounting records.
6. All economic transactions and stocktaking results are subject to timely registration on accounting records without any omissions or exceptions.
7. Current expenditure on production and capital investment is recorded separately.

RF Government Resolution No. 283 of 06.03.1998 On the Approval of the Programme of Reform of Accounting in Conformity with International Accounting Standards,” endorsed a programme to reform accounting in conformity with the internationally accepted accounting standards.

The main goal of reforming the system of accounting is bringing the national accounting system in conformity with the requirements of the market economy and internationally accepted accounting standards.

Audit. Federal Law No. 119-FZ of 07.08.2001 On Audit Activities defines the legal parameters of regulation of audit activities in the RF. Audit activities are performed in accordance with this Law and other federal laws, adopted pursuant thereto, regulating relations arising in the audit activities.

The Federal Law defines the legal status of the auditor, auditing organization, the rights and duties of auditing organizations and individual auditors, the rights and duties of persons under audit and (or) persons that signed a contract of auditing services.

The Law provides for cases where the audit is obligatory. Obligatory audit is the annual obligatory audit of accounting and financial records of an organization or individual entrepreneur. The Law establishes criteria for the obligatory audit.

The Federal Law sets out general requirements for the rules and standards of auditing.

The Law introduced guarantees of audit independence.

The Federal Law envisages measures to control the quality of work performed by auditing organizations and individual auditors.

RF Government Resolution No. 80 On Questions of State Regulation of Auditing Activities in the RF of 06.02.2002 appointed the Ministry of Finance as the authorized federal body of executive authority responsible for state regulation of auditing activities in the RF.

4.4.23. The RF Stabilisation Fund

[TRANSLATION TO BE INCLUDED]

4.5. Development prospects for the legislative framework governing the investment regime in the fuel and energy sector.

The development of new legislation and improvement of effective legislation in the Russian Federation are performed pursuant to the crucial provisions of fundamental federal documents: the Programme of Socio-Economic Development of the RF for the Medium Term (2003-2005), annual presidential addresses to the RF Federal Assembly, the Energy Strategy of Russia Until 2020 etc.

In the area of investment legislation, the development of a new **federal law on investment activity** is scheduled to be completed in the nearest future which, presumably, will apply to both Russian and foreign investment, both at the pre-investment stage and the stage of investment project operation, and take stock of international expertise in improving investment regimes.

Concurrently, the completion of work on federal draft laws on concession agreements and on the subsoil is expected.

4.6. List of main laws regulating investment activity in the Russian Federation

1. Constitution of the Russian Federation, 12.12.1993.
2. Federal Law No. 101-FZ of 15.07.1995, On International Agreements of the Russian Federation.
3. Code of Civil Procedure of the Russian Federation.
4. Federal Law No. 160-FZ of 09.07.1999, On Foreign Investment in the Russian Federation.
5. Federal Law No. 39-FZ of 25.02.1999, On Investment Activity in the Russian Federation in the Form of Capital Investment.
6. RSFSR Law No. 1488-1 of 26.06.1991, On Investment Activity in the RSFSR.
7. Federal Law No. 225-FZ of 30.12.1995, On Production Sharing Agreements (in the version of Federal Laws No. 19-FZ of 07.01.1999 and No. 75-FZ of 18.06.2001).
8. Federal Law No. 128-FZ of 08.08.2001, On Licensing Individual Types of Activity.
9. Federal Law No. 129-FZ of 08.08.2001, On State Registration of Legal Persons.
10. Federal Law No. 14-FZ of 08.02.1998, On Limited Liability Companies.
11. Federal Law No. 208-FZ of 26.12.1995, On Joint-Stock Companies.
12. Federal Law No. 161-FZ of 14.11.2002, On State and Municipal Unitary Enterprises.
13. Federal Law No. 7-FZ of 12.01.1996, On Non-Commercial Organizations.
14. Federal Law No. 82-FZ of 19.05.1995, On Societal Associations.
15. Land Code of the Russian Federation.
16. Federal Law No. 101-FZ of 24.07.2002, On the Turnover of Agricultural Lands.
17. Federal Law No. 178-FZ of 21.12.2001, On the Privatization of State and Municipal Property.
18. RF Law No. 3297-1 of 14.07.1992, On Closed Administrative-Territorial Formations.
19. Federal Law No. 102-FZ of 16.07.1998, On Hypothecation (Mortgage of Immovable Property).

20. Federal Law No. 127-FZ of 26.10.2002, On Insolvency (Bankruptcy).
21. Federal Law No. 122-FZ of 24.06.1999, On Peculiarities of Insolvency (Bankruptcy) of Subjects of Natural Monopolies of the Fuel and Energy Sector.
22. Federal Law No. 39-FZ of 22.04.1996, On the Securities Market.
23. Federal Law No. 136-FZ of 29.07.1998, On Peculiarities of the Issuance and Turnover of State and Municipal Securities.
24. Federal Law No. 46-FZ of 05.03.1999, On the Protection of Rights and Legitimate Interests of Investors on the Securities Market.
25. Federal Law No. 117-FZ of 23.06.1999, On the Protection of Competition on the Financial Services Market.
26. Federal Law No. 2395-1 of 21.02.1992, On the Subsoil.
27. Federal Law No. 187-FZ of 30.11.1995, On the Continental Shelf of the Russian Federation.
28. Federal Law of 17.12.1998, On the Exclusive Economic Zone of the Russian Federation.
29. Tax Code of the Russian Federation (Parts One and Two).
30. Federal Law No. 41-FZ of 14.04.1995 (version of 11.02.1999), On State Regulation of Tariffs on Electricity and Heat in the Russian Federation.
31. Federal Law No. 147-FZ of 17.08.1995, On Natural Monopolies.
32. RF Law No. 5003-1 of 21.05.1993, On the Customs Tariff.
33. Federal Law No. 165-FZ of 08.12.2003, On Special Protection, Antidumping and Countervailing Measures when Importing Goods.
34. Federal Law No. 60-FZ of 13.12.1994, On Supplies of Products for Federal State Needs.
35. Federal Law No. 97-FZ of 06.05.1999, On Tenders for Placement of Orders for Supplies of Goods, Works and Services for State Needs.
36. Federal Law No. 157-FZ of 13.10.1995, On State Regulation of Foreign Trade Activity.
37. RSFSR Law No. 948-1 of 22.03.1991, On Competition and Restriction of Monopoly Activity on Commodity Markets.
38. Federal Law No. 7-FZ of 10.01.2002, On the Protection of the Environment.
39. Federal Law No. 49-FZ of 07.05.2001, On Territories of Traditional Nature Management of Small Indigenous Peoples of the North, Siberia and the Far East of the RF.
40. Federal Law No. 174-FZ of 23.11.1995, On Environmental Expert Evaluation.
41. Federal Law No. 167-FZ of 16.11.1995, Water Code of the RF.
42. Federal Law No. 22 of 29.01.1997, Forest Code of the RF.
43. Federal Law No. 22-FZ of 14.03.1995, On Specially Protected Natural Areas.
44. Federal Law No. 115-FZ of 25.07.2002, On the Legal Status of Foreign Citizens in the RF.

45. Federal Law No. 173-FZ of 10.12.2003, On Foreign Exchange Regulation and Foreign Exchange Controls.
46. Federal Law No. 86-FZ of 10.07.2002, On the Central Bank of the RF (Bank of Russia)
47. Federal Law No. 129-FZ of 21.11.1996, On Accounting.
48. Federal Law No. 119-FZ of 07.08.2001, On Auditing Activity.
49. Federal Law No. 61-FZ of 28.05.2003, Customs Code of the Russian Federation.
50. Federal Law No. 35-FZ of 26.03.2003 On the Power Sector
51. Federal Law No. 36-FZ of 26.03.2003 On Specifics of Power Sector Operations in Transition and on Amending Certain Legislative Acts of the RF and Nullifying Certain Legislative Acts of the RF due to the Adoption of the Federal Law on the Power Sector.
52. The Ruling of the Government No 19 of 19.01.2004 On establishing the Rules for Obtaining Approvals of Power Sector Natural Monopoly Investment Programs.
53. The Ruling of the Government No 643 of 24.10.2003 On the Rules of the Wholesale Electricity Market for the Transitional Period.
54. The Ruling of the Government No 109 of 26.02.2004 On Electricity and Heat Tariffs in the Russian Federation.

4.7. Non-conforming measures maintained by the contracting parties with regard to investment

The following amendment needs to be done to the notification regarding Federal Law dated 7 May 1998 No 74-FZ on Special Features of Transactions Involving Shares of the Russian Joint Stock Society of Energy and Electrification “United Energy System of Russia” and of other Electric Energy Joint Stock Societies in Federal Ownership (Phase Out): ‘According to the Federal Law No. 36-FZ of 26.03.2003 On Specifics of Power Sector Operations in Transition and on Amending Certain Legislative Acts of the RF and Nullifying Certain Legislative Acts of the RF due to the Adoption of the Federal Law on the Power Sector, this Law ceases to apply as of January 1, 2005.’

COUNTRY: THE RUSSIAN FEDERATION**MEASURES**

Land Code of the Russian Federation No. 136-FZ dated 25 October 2001, Articles 15(3), 22(1), 28(5), 35(5).

Federal Law No. 137-FZ dated 25 October, 2001, “On the Implementation of the Land Code of the Russian Federation”, Article 5, Article 8.

SECTOR

National economy.

LEVEL OF GOVERNMENT

Federal.

DESCRIPTION

Foreign citizens, persons without citizenship and foreign legal entities are not entitled to the right to own land acreage in areas located in proximity to borders, the list of which is established by the President of the Russian Federation in accordance with the federal legislation on the State Border of the Russian Federation, as well as in other specially defined territories of the Russian Federation in accordance with federal legislation.

Foreign citizens, persons without citizenship and foreign legal entities may acquire the right to own land acreage in exchange for a payment only, the amount of which is determined in accordance with the Land Code.

Foreign citizens, persons without citizenship and foreign legal entities, who own buildings, edifices, facilities located on a land acreage owned by others, are entitled to the right of first call on buying or renting the land acreage, subject to rules and procedures established by the Land Code, however, the President of the Russian Federation may establish a list of buildings, edifices, facilities, to which this rule does not apply.

PHASE-OUT

Not envisaged.

OTHER EXCEPTIONS

Until the establishment by the President of the Russian Federation of a list of areas in proximity of borders, the transfer of land acreage located in such areas to the ownership of foreign citizens, persons without citizenship and foreign legal entities, is not permitted.

Until the enacting of the federal law on transactions with agricultural land, foreign citizens, persons without citizenship and foreign legal entities may be in possession of and use agricultural land acreage as tenants only.

Article 3 of the regulation entitled “Rules for the sale of land acreage upon the privatization of state and municipal enterprises, upon expansion(s) and addition(s) via construction to such enterprises, as well as of acreage let to citizens and their associations for entrepreneurial activities” (approved by Decree No. 631 of the President of the Russian Federation dated 14 June 1992), which stipulated that any natural person(s) and legal entity(ies), including foreign ones, could buy such acreage in accordance with the Rules, as long as they qualified for the status of buyers in accordance with the Law of the Russian Soviet Federal Socialist Republic (RSFSR) “On the privatization of state and

municipal enterprises in RSFSR”, has been abolished in compliance with Decree No. 485 of the President of the Russian Federation, dated 16 May 1997.

COUNTRY: THE RUSSIAN FEDERATION**MEASURES**

Resolution of the Council of Ministers – the Government of the Russian Federation No 531, On Regularization in the Russian Federation of the Construction Facilities Financed by the State Foreign Currency Reserves and by State Foreign Investment Loans, dated 8 June 1993, Clause 2.

SECTOR

National economy.

LEVEL OF GOVERNMENT

Federal.

DESCRIPTION

In cases when, as a result of contractual competition (tenders), the construction of the above facilities is awarded to a foreign company, contracts shall envisage maximum use of equipment and materials produced in the Russian Federation, as well as implementation of at least 30 percent of the total project work and services by Russian organizations.

PHASE-OUT

Not envisaged.

OTHER EXCEPTIONS

None.

COUNTRY: THE RUSSIAN FEDERATION**MEASURES**

Decree No 529 of the President of the Russian Federation on the Procedure for Transactions in Shares of the Russian Joint Stock Company "Gazprom" for the Duration of the Period of Retaining of the Shares of the Russian Joint Stock Company "Gazprom" in Federal Ownership of 28 May 1997.

SECTOR

National economy.

LEVEL OF GOVERNMENT

Federal.

DESCRIPTION

The aggregate holdings of foreign shareholders in the Authorized Capital of RJSC "Gazprom" shall be limited to 9% for the period of duration of the privatization of the Russian Joint Stock Company "Gazprom".

PHASE-OUT

Not envisaged.

OTHER EXCEPTIONS

A special procedure for the acquisition of RJSC "Gazprom" shares on securities markets, export and transfer thereof by non-residents has been established.

COUNTRY: THE RUSSIAN FEDERATION**MEASURES**

Decree No. 943 dated 10 August 1998 of the President of the Russian Federation on the Terms and Conditions for the Sale of Shares of “Gazprom” Open Joint Stock Society (pursuant to the new edition of Decree of the President of the Russian Federation No. 1316 dated 31 October 1998).

SECTOR

National economy.

LEVEL OF GOVERNMENT

Federal.

DESCRIPTION

The Government of the Russian Federation, regarding the sale of 5% of the shares of “Gazprom” Open Joint Stock Society at an auction and/or via a commercial competition wherein conditions for investment commitments have been put forward, with the participation of Russian and foreign participants, shall ensure the inclusion in draft contracts for the sale of such shares of commitments by buyers who are foreign participants, for a term of five years from the date of the acquisition of the shares, not to dispose of shares and not to use them as basic assets for emitting and placing with foreign participants (both residents and non-residents) of securities and/or other financial instruments, including depositary notes.

In the event a foreign participant is recognized as a winner of an auction and/or commercial competition wherein conditions for investment commitments have been put forward, the maximum allowable stake of foreign participants in the Statutory Capital of OJSS Gazprom shall be increased by the de-facto contract shares allocated to that foreign participant, but may not, in its aggregate, exceed 14% of shares.

PHASE-OUT

Not envisaged.

OTHER EXCEPTIONS

A procedure has been established for foreign participants - winners of an auction and/or commercial competition, for the issuing of licenses to acquire shares of OJSS Gazprom and for exporting of the acquired shares from the Russian Federation exclusively for purposes of safekeeping.

COUNTRY: THE RUSSIAN FEDERATION**MEASURES**

Federal Law dated 7 May 1998 No 74-FZ on Special Features of Transactions Involving Shares of the Russian Joint Stock Society of Energy and Electrification “United Energy System of Russia” and of other Electric Energy Joint Stock Societies in Federal Ownership.

SECTOR

National economy.

LEVEL OF GOVERNMENT

Federal.

DESCRIPTION

Up to 25% of all types of shares of the Russian Joint Stock Company of Energy and Electrification “United Energy System of Russia” may be owned by foreign countries, international organizations, foreign legal persons, as well as their affiliated Russian legal persons, and foreign natural persons.

The Government of the Russian Federation, pursuant to Article 40 of the Federal Law on Joint Stock Companies, shall ensure that this restriction persists by taking into consideration the actual numbers of shares of the Russian Joint Stock Company of Energy and Electrification “United Energy System of Russia” owned by foreign countries, international organizations, foreign legal persons, as well as their affiliated Russian legal persons, and foreign natural persons.

PHASE-OUT

According to the Federal Law No. 36-FZ of 26.03.2003 On Specifics of Power Sector Operations in Transition and on Amending Certain Legislative Acts of the RF and Nullifying Certain Legislative Acts of the RF due to the Adoption of the Federal Law on the Power Sector, this Law ceases to apply as of January 1, 2005.

OTHER EXCEPTIONS

None.

COUNTRY: THE RUSSIAN FEDERATION**MEASURES**

Federal Law No 39 “On Securities Market” of 22 April 1996, Article 16 (paragraph 14) and Article 24 (paragraph 7).

SECTOR

National Economy.

LEVEL OF GOVERNMENT

Federal.

DESCRIPTION

Securities issued by foreign emitters are eligible for transactions or initial offering on the securities market of the Russian Federation after registration of the emission prospectus for such securities by the Federal Commission on the Securities Market.

It is prohibited, while making public offers or conducting transactions in emitted securities, to give preference to a potential buyer as compared to others.

This provision does not apply in the following instances:

- 1) When emitting Government bonds and securities;
- 2) When according to shareholders of joint stock companies a priority right to purchase new emissions of shares, proportionately to the quantity of shares they own at the time when a decision on a new emission is made;
- 3) When an emitter introduces restrictions on acquisition of securities by non-residents.

PHASE-OUT

No plans at present.

OTHER EXCEPTIONS

None.

COUNTRY: THE RUSSIAN FEDERATION**MEASURES**

Federal Law No 187 On the Continental Shelf of the Russian Federation of 30 November 1995, Articles 7, 8, 17(12), 18, 20(4), 23, 27, 28 and 35.

SECTOR

Mineral resources.

LEVEL OF GOVERNMENT

Federal.

DESCRIPTION

In order to ensure security and the development of the Russian industry and energy sector, upon a request by the relevant Federal executive authority, restrictions may be imposed on the participation of foreign natural or legal persons in tenders (auctions) for prospecting, exploration and development of mineral resources on certain territories, as well as tenders (auctions) with the exclusive participation of Russian natural or legal persons may be held.

Foreign natural or legal persons may carry out regional geological studies, prospecting, exploration and development of mineral resources; establish and use artificial isles, installations and structures on the continental shelf; carry out marine research; dispose of waste and other materials on the continental shelf only with the permission of the authorized agencies and in the presence of their officers.

In all cases, foreign applicants must provide to the officers of the Russian agencies free return passage to the location where the work is performed, the use of communication equipment, as well as carry all costs of their full board and lodging at a level identical to that of their own senior (executive) personnel, ensure their access to all premises and facilities, to all data and samples obtained in the course of such research; provide access to the research results to the international community via national or international channels.

In order to obtain a permit for such research, foreign applicants shall submit via diplomatic channels at least six months prior to the proposed date for the start of the scientific marine research an application to the federal agency specifically authorized for such cases, and the agency shall issue a permit or deny it for good reasons.

PHASE-OUT

The Federal Assembly of the Russian Federation at present is considering a bill "On amendments to the Continental Shelf Law".

OTHER EXCEPTIONS

None.

COUNTRY: THE RUSSIAN FEDERATION**MEASURES**

Federal Law No 174 “On Environmental Assessment” dated 23 November 1995, Articles 7(2) and 11(7).

SECTOR

National Economy.

LEVEL OF GOVERNMENT

Federal.

DESCRIPTION

A specifically authorized Federal government agency in the area of environmental assessment shall have the right:

- To use the services of foreign scientists and foreign experts in carrying out a State environmental assessment, subject to procedures established by the legislation of the Russian Federation, except for environmental assessments of objects for which data are subject to State, commercial and/or other professional confidentiality protected by law.
- Mandatory state environmental assessment at the level of the federal government shall be conducted for: feasibility studies and projects for the construction, reconstruction, expansion, technical modernisation, mothballing and liquidation of organizations and other economic entities of the Russian Federation, as well as other projects regardless of their estimated cost, sector affiliation and type of ownership, the implementation of which may affect the natural environment on the territory of at least two subjects of the Russian Federation, including documents concerning the establishment of organizations by citizens or legal persons of the Russian Federation with the participation of foreign citizens or foreign legal persons, wherein foreign investments exceed 500,000 USD.

PHASE-OUT

No plans at present.

OTHER EXCEPTIONS

None.

COUNTRY: THE RUSSIAN FEDERATIONMEASURES

Decree No 1928 of the President of the Russian Federation “On Private Investments in the Russian Federation” of 17 September 1994, paragraphs (1) and (3).

SECTOR

National Economy.

LEVEL OF GOVERNMENT

Federal.

DESCRIPTION

The Government of the Russian Federation is authorized to earmark annually capital resources for financing highly efficient investment projects developed with the participation of commercial organizations, provided that the resources are assigned on a competitive basis. In doing so, the Government of the Russian Federation has the right to impose additional conditions for projects wherein participation of foreign investments is foreseen.

PHASE-OUT

No plans at present.

OTHER EXCEPTIONS

None.

5. OIL AND GAS SECTOR

5.1. Status of the Russian Oil and Gas Sector

5.1.1. Crude Oil Production

Russian crude oil production peaked in the second half of the 1980's when more than 500 MMTA was produced annually, with an all-time high of 569.5 MMTA reached in 1987 and 1988. Following the collapse of the USSR, the scope of exploration and development drilling began to shrink dramatically, which was accompanied by a deterioration of the current explored reserves. By the 1990's, crude oil production in Russia fell by more than 1.5 times, stabilizing at about 300 MMTA. Virtually no new oil fields were brought on line at that time. The growth of world oil prices in 1999-2003, plus the reduction of lifting costs as a result of the devaluated Rouble, contributed to an increased investment by Russian oil companies in crude oil production (idle well repairs and new drilling) and a pickup of crude oil production in the RF. During 2000-2001, crude oil production in Russia grew by about 7%, in 2002 – by 9.2% and in 2003 – by 11.1%. The 2003 annual production of crude oil with gas condensate totaled 422 MMTA.

Pursuant to the Energy Strategy, crude oil production will reach 445 to 490 MMTA by 2010, and 450 to 520 MMTA by 2020 (see Table 5.1).

Table 5.1. Russian crude oil production development and forecast, MMTA

Year	1990	1992	1998	1999	2000	2001	2002	2002	2010 (fore- cast)	2020 (fore- cast)
Crude oil, incl. gas condensate	516	400	303	305	324	348	380	422	445-490	450- 520

Source: Russian Energy Strategy for the Period until 2020; RF State Statistical Committee, Russian Statistical Yearbook, 2003, Moscow

Production is the largest in the Urals Federal District (66.5% of the total Russian volumes in 2002), including the Khanty-Mansy Autonomous District (KMAD) (53.2% of the total Russian volumes) and in the Volga Federal District (22%).

There are 3,000 oil fields in the RF with 149,000 oil wells 34,000 (23%) of which are mothballed.

Crude oil reserves have been recorded in 40 RF administrative subdivisions, of which 35 are oil-producing. The Knanty-Mansy Autonomous District is of the greatest significance with over 50% of explored reserves and 46% of preliminarily estimated reserves. Large reserves are located in the Yamalo-Nenetsky Autonomous District (YNAD), Nenetsky Autonomous District (NAD) and the Republic of Tatarstan. The Republics of Komi, Bashkortostan and Udmurtia, Perm, Orenburg, Samara and Tomsk Oblasts have less sizeable reserves.

The status of the crude oil production in Russia is characterized by *the deterioration of reserves in both developed fields (because of the intense depletion of recoverable reserves) and new fields being put into commercial operation*. Primarily, this is the result of a dramatic decline in exploration which began in 1992. By 2002, discovered oil reserves had decreased by 13% in Russia and by 17.5% in West Siberia. Incremental reserves result mainly from discoveries of small new fields that are characterized by worse natural conditions and are in remote geographic locations from key users, as well as from reassessment of deposits already discovered. Deterioration of the quality of existing reserves

is due to their massive and frequently uneven depletion, dramatic reduction of their concentration in new fields and lower flow rates at newly developed reserves.

Such deterioration is evidenced by a reduction of average producing well recovery rates from 11.6 tons in 1990 to 8.3 in 2002, increased watering of the production exceeding on the average 80% and a decrease in flowing operations from 12% of total production in 1990 to 8% in 2002. In the past years, the share of low-yield and scavenger reserves increased from 36% to 55% of the nation's discovered reserves.

One of the problems faced by the Russian oil industry consists in a **reduced rate of reserve replacement**. In 2002, the rate of crude oil and gas condensate reserve additions was at 260 MMT, or 68% of production volumes. On the whole, over 800 MMT has not been replaced thus far. Between 1990 and 2002, wildcat drilling dropped from 5.2 MM m to 1.1 MM m, or by a factor of 4.7, while production drilling fell from 32.7 MM m to 8.6 MM m, or by a factor of 3.8.

The year 2003 saw an improved oil reserve replacement pattern. Discovered reserve additions in 2003 were estimated at 400 MMT, or 95% of production volumes. Nonetheless, by an estimate of the Russian Natural Resource Ministry, before steady operations of the fuel and energy complex can be achieved, reserves should grow 1.5 times faster than production volumes.

Stimulated production is gradually gaining ground. In 1995-2000, it grew twofold from 13.1MMT to 26.3 MMT.

Discovered reserve deterioration in key oil producing regions and shortages of funds to go ahead with large projects in new areas have increasingly called for developing small fields with moderate reserves located within developed oil and gas provinces.

Pursuant to the Energy Strategy, the most important objective of the oil industry will continue to include achieving the requisite structural pattern of reserves, as well as smooth and gradual production growth to result in steady volumes in the long term. In this connection, a provision is made for intensified exploration and higher oil recovery factors.

During this period, oil production will be developed in both traditional oil producing regions (West Siberia, Volga Region and North Caucasus) and new oil and gas provinces: in Arctic Europe (Timan-Pechora and offshore in the Barents Sea), East Siberia and the Sakha Republic (Yakutia) with 50-80 MMT in 2020, in the Far East (offshore Sakhalin production will reach 25-26 MMT by 2010), and in the Russian sector of the Caspian Sea

5.1.2. Oil industry infrastructure: pipelines/ports/terminals

The continental location of the Russian Federation makes pipelines a dominant feature. The present-day oil pipeline network in Russia includes the following pipeline routes:

- North-Western (Almetievsk–Nizhny Novgorod–Ryazan–Moscow; Nizhny Novgorod–Yaroslavl–Kirishi, and also the Baltic pipeline system (Yaroslavl–Primorsk), connecting Timan-Pechora and West Siberia oil and gas provinces to the oil port on the Baltic sea);
- *Druzhba* (Samara–Unecha–Mozyr–Brest; Mozyr–Brody–Uzhgorod; Unecha–Polotsk–Ventspils);
- Western (Ust-Balyk–Kurgan–Ufa–Almetievsk; Nizhnevartovsk–Kurgan–Samara; Surgut–NizhnyNovgorod–Polotsk);
- Eastern (Alexandrovskoye–Andjero–Sudjensk–Krasnoyarsk–Irkutsk);
- Southern (Ust-Balyk–Omsk–Pavlodar);

- South-Western (Samara–Lisichansk–Kremenchug–Kherson; Samara–Tikhoretsk–Novorossiysk; Tikhoretsk–Tuapse).

The pipeline system is characterized by a great deal of overlapping, especially in the central, European part. It connects 17 countries, including the FSU countries. Oil exports to Eastern Europe are shipped through the *Druzhba* Crude Oil Pipeline System. Oil shipments to Northern Europe (Finland, the Netherlands, UK and Belgium) are chiefly made via Primorsk and Ventspils, Latvia, Gdansk, Poland, and Butinge, Lithuania, as well as Estonian oil terminals. Mediterranean shipments are channeled via the Russian ports of Novorossiysk and Tuapse, as well as the Ukrainian port of Odessa.

Shipped via Novorossiysk is crude oil moved from Kazakhstan through the crude oil pipeline system of Caspian Pipeline Consortium (CPC).

Shipped via Russian ports in 2003 was 44% of Russian crude oil exports. Exports shipped via Ukrainian ports totaled 2.3%. The *Druzhba* Crude Oil Pipeline System remained in 2003 the main transit trunkline, moving 53% of crude oil export volumes from the RF. A portion of oil was shipped by rail.

In 2002, the Russian oil pipeline network moved 385.5 MMT of oil cargoes, including 359.8 MMT of crude and 25.7 MMT of product. In 1995, a total of 308.8 MMT of oil cargoes was shipped, including 287.9 MMT of crude and 20.9 MMT of product. At this point in time, *rehabilitation and further advancement of trunk pipelines* are an urgent task because of the insufficient technical capability of trunk pipelines and port facilities and tank farms, *inter alia*, in terms of crude and product inlets, storage capacity, transport of oil and quality maintenance of oil in transit to the user, as well as infrastructure deficiencies in East Siberia and the Far East. Bosphorus capacity bottlenecks hold back increased crude oil exports.

A big problem of pipelines is that the fixed assets are worn-out: in 2000, the service age of 73% of all Russian trunk pipelines exceeded 20 years with 41% having reached more than 30 years in service as compared to the design life of 33 years.

Russian oil pipelines are managed by *Transneft* Joint Stock Company (JSC) which has also the right to coordinate the operations of all Russian ports through which oil exports are shipped by Russian companies. The State owns 75% of the authorized capital of this company (100% of the voting shares). *Transneft* uses monthly shipment schedules approved by the Central Dispatch Office of the RF Energy Ministry (now – the RF Ministry of Industry and Energy). Ninety-nine percent of Russian oil production is moved via *Transneft* trunk pipelines. In 2002 they were 48,000 km long and had a diameter ranging from 400 to 1,220 mm, with the 800 to 1,220 mm trunklines accounting for more than 50% of the length. Pumping is done by 393 pump stations. Twenty percent of the operating oil pipelines are located in Western Siberia. In 2003 *Transneft* transported nearly 400 MMT of oil.

Trunk line movements of oil products are the responsibility of *Transnefteprodukt* JSC. The product line system is more than 20,000 km long and includes about 15,000 km of trunk lines. *Transnefteprodukt* plans for the near future include increasing the product share of the RF transportation market, first to 25% and then to 40%. Such plans could be made possible to implement due to an expansion of the product trunk line network and construction of new product trunk lines to the Baltic and Black Seas where marine export terminals will be built.

Oil products are stored at 267 tank farms located both in Russia and neighbouring countries (Ukraine, Belarus, Latvia and Kazakhstan), and over 100 pump and storage stations with a total tankage of about 5 MM m³, as well as at several thousands gas-filling stations.

The plans to improve the mix and diversify the geography of Fuel & Energy Complex (F&EC) exports contained in the Energy Strategy call for the development of new transportation technologies and timely formation of transportation systems in new oil producing regions, as well as the priority advancement of infrastructure complexes to support export shipments of crude and products, including promising new routes.

5.1.3. Processing of crude oil and gas condensate

Russia has 28 refineries of various capacity, most of which are part of vertically integrated companies (VICs), and several specialized lube plants that make lubricants, additives and special oils. During the 1990's, crude oil throughput at refineries and engine fuel production decreased almost twofold, and there was an almost sevenfold drop in hard wax production. The decline in refining was caused by a decreased domestic demand due to the falling industrial output paralleled by reduced oil production and greater oil export shipments.

Nowadays refining industry is gradually accelerating and increasing capacity utilization. In 2003, the average industry capacity utilization was about 67% (57% in 2000) as compared to the economic design level of 80-85%. However, the majority of refineries are disadvantaged in terms of their age: 10 refineries date back to pre-World War II period, nine were commissioned between 1950 and 1960, and four were built during 1969-1980. Typical of oil refining is an extremely high level of fixed asset wear – 47% by the end of 2002.

Since 1999, the RF has displayed a steady growth of refining output (see Fig. 5.1). In 1999, Russian refineries (including *Gazprom* (gas-processing) plants, and mini-refineries) processed 169 MMT of crude oil and gas condensate, whereas in 2003 - 190 MMT. The level of 1990 (298 MMT) has still not been reached. Pursuant to the Energy Strategy, refining output may reach 190-200 MMT in 2010 and 190-215 MMT in 2020.

In 2003, motor gasoline, diesel fuel and heavy fuel oil production was on the rise (see Fig. 5.2 for major refined product developments in 1999-2000), with high-octane motor gasoline production displaying a 10% increase and low-sulphur diesel fuel gaining a larger share of diesel output.

Fig. 5.1. RF oil refining (MMT)

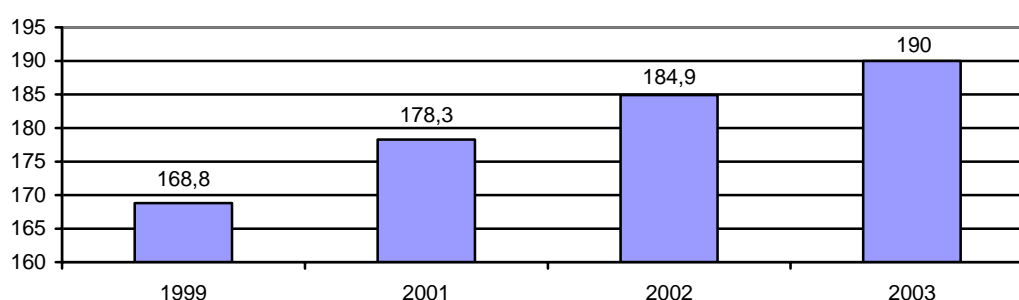
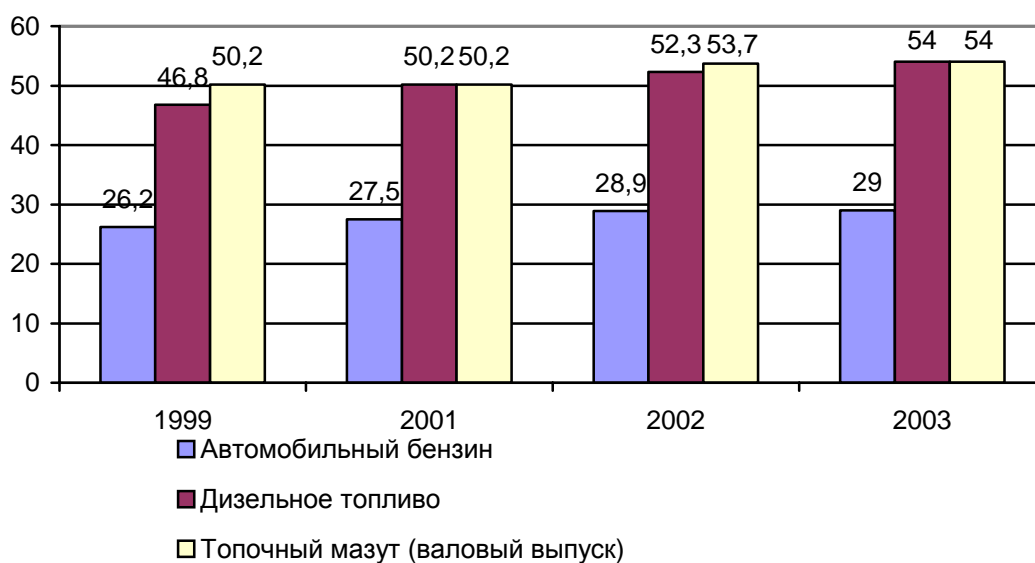


Fig. 5.3. Major oil products output at the largest refineries

Blue – automotive gasoline, red- diesel, yellow- fuel oil

However, the “depth of refining” and the light products yield at Russian refineries remain worse than in the majority of European countries. In particular, depth of refining in the RF averaged 70.3% in 2003. During the period until 2005, new plant and equipment is expected to be brought on line to enhance the depth of refining, with a total capacity of 30 MMT, plus 15 MMT of capacity to improve product quality, with similar targets for 2006-2010, equalling approximately 10 MMT and 9 MMT, respectively. In addition, 15.5 MMT of primary refining capacity is expected to be built up and running before 2005. The Energy Strategy envisages that by 2020 engine fuel (motor gasoline, diesel fuel, and aviation kerosene) output may reach 115-135 MMT, and light products yield will increase from 54% in 2002 to 66-68%.

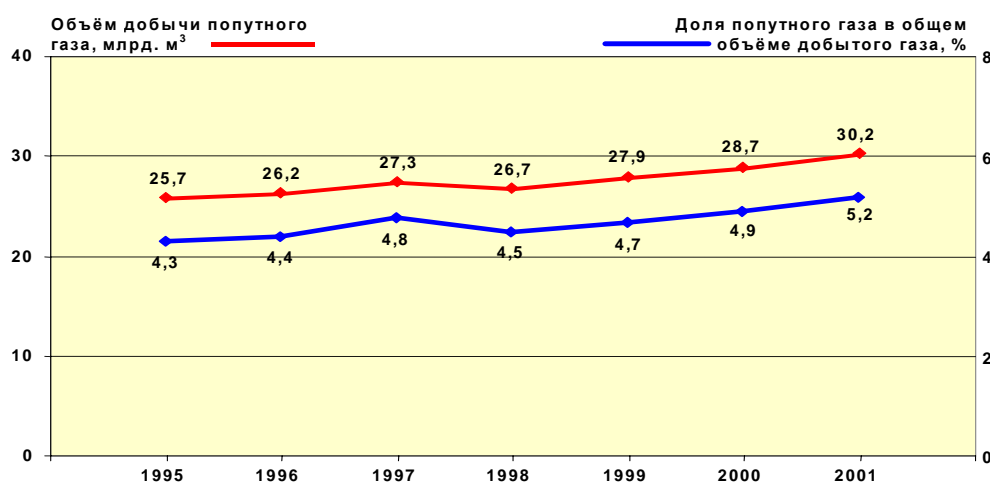
Rehabilitation and total revamp of the refining industry enabling depth of refining to reach 75% in 2010 and 80-85% in 2020, accompanied by a dramatic improvement of product quality, is a top priority envisioned by the Energy Strategy. It is proposed to pass legislation governing quality requirements for products made and consumed, enabling improvements in the state of the environment and expanding the export potential.

An important prospective area of oil refining includes advancing petrochemistry which turns out products with values drastically exceeding those of refinery products. It is expected that by 2010 the gas feedstock needs of petrochemistry will grow by a factor of 2 to 2.5 against the 2002 levels.

5.1.4. Associated gas and its uses

Over the past few years, associated gas production and its share in the RF aggregate gas production have grown (see Fig. 5.3), reaching 39 billion m³ and 6.3% in 2003, respectively.

Fig. 5.3. RF associated gas production



Red line – associated gas production, billion cubic meters,
 blue line – share of associated gas in total gas production, percent

The key associated gas production area is Tyumen Oblast (about 80% of total production). Oil companies are major producers of associated gas, accounting for more than 92%. About 4% of associated gas is produced by *Gazprom*. The share of independent producers is expected to increase in the future.

Associated gas utilization presently averages over 80%. Forty-five percent of associated gas is processed into marketable products, another 35% is burnt at power plants, and 20% is used in the field or flared.

5.1.5. Consumption and internal market

The share of crude oil and gas condensate in the pattern of primary fuel and energy resources consumption has increased from 34.5% in 1999 to 37.2% in 2001. In 2001, the domestic market absorbed 50.5% of oil resources. The economic recovery that began in 1999-2000 resulted in a slow but steady growth of demand for oil: by 3.2% in 2000 and 3.7% in 2001. A further increase in domestic demand for crude and products is expected in the wake of the anticipated economic growth in Russia and her industrial and agricultural capability build-up.

The past years have seen a trend towards a reduced share of Russia's traditional crude and product users, i.e. the industry and power generation, in the total consumption (oil products dropped versus other fuels used, for example, by power plants and boiler-houses from 10% in the early 1990's to 5% in 1999, with the main reason being conversion of power plants and industrial facilities to gas); the share of automotive transport is on the rise. The light product end of the barrel in total refining output is rising while fuel oil is on the decline. Reduced process energy intensity, larger investment in oil refining and a greater light product yield at domestic refineries, as well as improved product quality, are bound to result in a 35.8% to 50.1% product consumption growth by 2020, depending on the economic development path the RF will follow.

Since 1995, Russia has been implementing a crude and product price liberalization process⁷, resulting in a narrower gap between domestic and international prices. For example, in December 2003, the average weighted refinery price for motor gasoline type A-92, net of excise and VAT and converted to US dollars at the CB rate, was US \$216 per ton versus US \$267 per ton for Prem Uni FOB Mediterranean. Adding a total of US \$52 in VAT (@20%) and excise would make both prices even closer – US \$268 and US \$267, respectively.

As of 1998, the RF Government has introduced “balance targets”, i.e. requirements regarding compulsory deliveries of crude and some products to the domestic market. Such “balance targets” are a temporary vehicle to protect the domestic market⁸. They were based on anticipated refinery demand and requirements. Compulsory volumes were determined on a quarterly basis by the RF Energy Ministry (now –the RF Ministry for Industry and Energy) and the RF Ministry for Economic Development and Trade.

On the whole, in 2003, the effective demand for main types of products in RF regions was fully met. At the same time, the uneven allotment of oil reserves and refining capability across the country, underdeveloped infrastructure, harsh natural and climatic conditions in some Russian regions, lack of funds to develop local resources and other reasons bring forth disproportionate fuel supply issues in some regions, which sometimes means insufficient fuel deliveries to a number of remote areas.

5.1.6. Crude & product exports/imports

Crude oil exports in 1999-2003 increased from 134.5 MMT to 223.5 MMT (see Table 5.2).

Table 5.2. Russian crude oil exports, MMT

	2000	2001	2002	2003
Total exports	145	161	187	223.5
To “far-abroad” countries	128	138	155	186.4
To CIS countries	17	23	32	37.1

Source: RF State Statistical Committee. Russian Statistical Yearbook, 2003, Moscow; Russia’s Social and Economic Situation, No. 1, 2004.

The largest importers of Russian oil include Germany, Italy, Netherlands, Poland and Ukraine.

The Energy Strategy assumes that, depending on the world economy development scenarios and growth rate, oil price levels, various international project prospects and other factors, Russian crude exports may fluctuate from 150 MMTA to 310 MMTA by 2010-2020. CIS countries are expected to demonstrate a growing demand for Russian crude, which calls for the utilization of refining capacities purchased by Russian companies in such countries. Crude exports to the European countries may total 150-160 MMTA.

In 2003, *Yukos* and *LUKOIL* were oil export volume leaders accounting for 20% and 19% of total oil exports, respectively, followed by *Surgutneftegaz* and *TNK* with 13% and 10%, respectively. About 19 MMT of crude oil was transited from the CIS including 16 MMT from Kazakhstan and 2.6 MMT from Azerbaijan.

⁷ Refinery product selling prices are calculated using the following formula:

$P_A + VAT = P_0 + A + 0.2P_A = 1.2(P_0 + A)$, where P_0 is the sum of production costs and a refinery margin, VAT is value added tax, P_A is the sum of production costs and a margin including excise, A is the excise rate.

Wholesale and retail prices broken down by RF region are regularly published, in particular as an attachment to the *Mintop* monthly magazine published by the Central Dispatch Office of the RF Energy Ministry (now, Energy and Industry Ministry of the RF). It also includes the RIA TEK product index

⁸ The RF Government cancelled compulsory delivery assignments for light products effective November 2000 and for heating oil effective March 2001

Since 1995 Russia has been implementing an oil export liberalization process. This has translated into the renunciation of “special exporters” and tariff benefits for a number of companies and regions, and provision of pipeline access in proportion to production volumes. Today the government does not restrict companies’ access to export pipelines, unless such companies are in arrears with tax payments to the Federal budget.

Most of the Russian crude exports reach the client via the territories of other countries. Transit rates and fees are governed by contracts between companies and intergovernmental agreements between the transit countries. Coordination of transit rates is generally the responsibility of *Transneft*.

In 2003, product exports amounted to about 78.4 MMT (with 74.9 MMT destined for “far abroad”) of which fuel oil accounted for 50%. The key importers of Russian products include the Netherlands, Switzerland, Italy and the UK. About 60% of fuel oil exports and one fourth of motor gasoline is shipped abroad through *Transnefteprodukt* product lines.

Russian product exports are expected to decrease – possibly to 30-50 MMT by 2020. The reasons include the high cost of their delivery to international markets (primarily, in the case of motor gasoline and diesel fuel) and the reduction of quantities available for export of others (straight-run gasoline) as a result of the rapidly growing domestic demand for such products.

In its turn, Russia imports oil (10 MMT in 2003) and fuel oil (0.9 KT) from the CIS countries.

5.2. Status of the Russian gas industry

5.2.1. Gas production

Russia is endowed with one third of the world’s explored gas reserves and is producing about one fourth of the world’s gas production.

The rapid growth of gas production between the late 1970’s and early 1990’s (from 80 billion m³ to 640 billion m³) resulted from the discovery of unique fields in Western Siberia. In 1991, gas production in Russia reached an all-time high of 643 billion m³ (against 815 billion m³ in the USSR) and varied from 571 billion m³ in 1997 to 618 billion m³ in 1993, of which natural gas (non-associated gas) production accounted for 544-588 billion m³. The general trend towards reduced natural gas production in 1999-2001 was due to a new field commissioning slippage caused by investment shortfalls and continued production from fields with declining output. In 2001, RF gas production accounted for 46% (in 2000, for about 48%) of the key fuel and energy types converted to fuel equivalent. In 2002, gas production in the RF picked up to 594.9 billion m³, or 102.4% of the 2001 level.

The years 2002 and 2003 were critical for the Russian gas industry as it managed to step up production by 2.5% in 2002 and 4.2% in 2003 to 620 BCM. In 2002, gas production in the RF accounted for 45% of main fuels and energy resources converted to **fuel equivalent**

Pursuant to the Energy Strategy, gas production in the RF would total 680-730 billion m³ by 2020 (see Table 5.3). Forecasts include alternative scenarios depending on the economic situation, pricing policy optimisation and attraction of massive investment needed to implement new gas field development projects.

Table 5.3. Russian gas production development and forecasts, billion m³

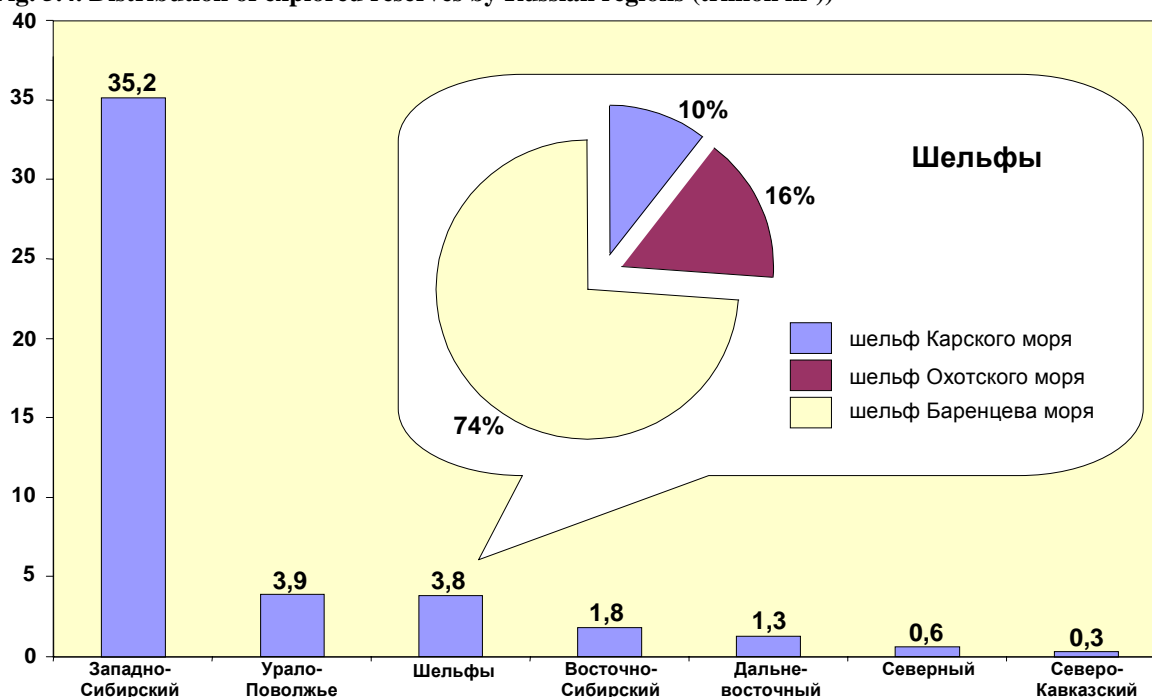
	1990	1995	2000	2001	2002	2003	2005 (forecast)	2010 (forecast)	2020 (forecast)
Natural gas	641	595	584	581	595	620	610-615	636-665	680-730
including									
Non-associated gas	601	570	555	551	563	581
Associated gas	40	25	29	30	32	39

Source: RF State Statistical Committee. Russian Statistical Yearbook, 2003, Moscow, page 361; The Russian Energy Strategy for the Period until 2020.

Production is underway in the North Western, Southern, Volga, Urals, Siberian and Far Eastern Federal Districts. The major fields in Western Siberia bear the brunt of the current production (about 85%), but they are largely depleted: Medvezhye, Urengoy and Yamburg Fields are 78%, 67% and 46% depleted, respectively.

Current explored reserves of Russian gas were estimated at 46.9 trillion m³ as of early 2002, and the gas resources tagged for development are rated at over 127 trillion m³.

Fig. 5.4 depicts the distribution of explored reserves by Russian regions.

Fig. 5.4. Distribution of explored reserves by Russian regions (trillion m³)

From left: West Siberia, Ural-Volga, continental shelf (blowout: blue – Kara Sea 10%, red Sea of Okhotsk 16%, yellow Barents Sea 74%), East Siberia, Far East, North, North-Caucasia.

While explored reserves are adequate, the rate of additions was extremely low during the 1990's. In the second half of the 1990's gas reserve increments were two to three times below the production level. The situation is being improved gradually. In 2001 gas reserve increments totaled 634 billion m³, or 109% of production. In 2003 though the gas reserve increments went down to 560 billion m³, or 93% of production

In Russia, there are sufficient large gas reserves of regional and local significance situated in major gas consuming regions. European Russia alone has about 185 small natural gas fields (smaller than 40 billion m³) with aggregate reserves of approximately 420 billion m³.

The key future gas-producing region in the nation for the period under review will continue to be the Yamalo-Nenetsky Autonomous District, where 72% of all Russian reserves are concentrated, and in particular the Nadym-Pur-Tazovsky District (Western Siberia). Commencing in 2007, the Yamal Peninsula and offshore areas of Russia's northern seas will become a long-term strategic priority region to supply the necessary gas volumes. Particular attention will be paid to support the development of the Eastern gas producing areas [Kovyktinskoye field in Irkutsk Oblast and the fields in the Sakha Republic (Yakutia), Sakhalin, etc.].

5.2.2 *Gas industry infrastructure: trunk and distribution gas pipelines*

The RF trunk pipelines are part of the Russian Unified Gas Supply System (UGS) which is administrated by Gazprom (OAO *Gazprom* has 17 subsidiaries that operate trunk gas pipelines leasing them from the owner). The length of *Gazprom's* trunk gas pipelines and branches is about 150,000 km. Over 62% of gas pipelines have a diameter between 1,220 mm and 1,420 mm. More than 20 trunk gas pipelines with total design throughput capacity of 578 billion m³ per annum originate in the Nadym-Pur-Tazovsky District.

The Unified Gas Supply System (UGSS) includes 254 compressor stations with total installed compression power about 42.6 MM kW and more than 3,600 gas distributing (pressure regulation and reduction) stations that supply gas into gas distribution systems. Gas distribution systems are low and medium pressure gas pipeline systems that supply gas to retail users. The total length of the gas distribution systems is about 500,000 km; such networks provide services to approximately 260 gas distribution companies.

The average age of trunk gas pipelines is nearing 22 years; 15% having passed their depreciation (design) life (33 years) and 64% have been in service for 10-32 years. The high-pressure gas pipeline system of Gazprom is in a better shape than the low-pressure gas pipelines owned by low-budget regional or local companies. The wear and tear of individual gas distribution systems is up to 80% and even more. Over 5,000 km of distribution gas pipelines have been in service for more than 40 years. In this context, rehabilitation of existing trunk pipelines is an important priority.

In addition to the rehabilitation of existing trunk gas pipelines, the key priorities of developing the gas trunk line systems include the following:

- Zapoliarnoye-Urengoy gas pipeline system;
- Northern Tyumen Oblast trunk gas pipeline;
- Yamal-Europe gas pipeline;
- Russia-Turky gas pipeline (Blue Stream);
- Pochinki-Izobilnoye–Stavropol underground gas storage gas pipeline;
- TransBalkan gas pipeline expansion;
- Eastern Siberia-Far East gas pipeline system formation; and
- North European gas pipeline.

To mitigate seasonal fluctuations and emergencies, a underground gas storage (UGS) system is used in addition to the UGSS accumulating capability. The sole UGS owner is *Gazprom* that uses 22 such facilities: 16 in depleted gas and gas condensate fields and six in salt caverns. In 2002, UGS injection totaled 46 billion m³ and withdrawal was 39.1 billion m³. Also, *Gazprom* has access to gas storage facilities abroad and plans to expand the UGS system in the areas of main flows of Russian gas. A Russian/German joint venture in which *Gazprom* has an interest owns **Reden** the largest subsoil gas storage facility in Western Europe.

5.2.3. *Gas processing*

Gas processing in Russia includes cleaning, drying, compression and stripping of both natural (non-associated) and associated gas and turns out such products as dry stripped gas, broad hydrocarbon fraction, liquefied hydrocarbon gases (LPG), and stabilized natural gasoline.

Liquefied hydrocarbon gases separated from associated gas, broad hydrocarbon fraction separated from stabilized condensate and crude are produced at 12 gas processing plants (44.7% of total output of such products, including at five Gazprom plants - 33.9%), 19 oil refineries (27.1%), and four petrochemical plants (28.1%). The 2001 gross liquefied hydrocarbon gas output amounted to 7.3 MMT, including 6.4 MMT of marketable products obtained from the conditioning of primary materials.

Natural gas liquefaction processes are not yet in use in the Russian Federation.

The Energy Strategy envisages to increase gas-processing throughput more than twofold. Switching gas use from fuel to feedstock, which should stimulate the deployment of more value added processes, is an important priority of the government energy policy. There are plans to expand the production of helium, sulphur, polyethylene, and, international market conditions permitting, methanol. The expected larger production share of natural gas rich in higher hydrocarbons (ethane, propane, butane, etc.) would contribute to expanding the role of petrochemistry.

The Energy Strategy contemplates that Russia may emerge a player on the global markets for LNG and synthetic motor fuel beyond 2010.

5.2.4. *Gas consumption*

Since 1998 the size of the domestic gas market in the RF has been stable and tends to display a certain growth (1.6-1.7% per annum). Annually, the Russian Federation consumes over 70% of the total national gas production. Russian users received 360.7 billion m³ of gas in 2001 and 370 billion m³ in 2002. On the average, natural gas accounts for about 45-50% of the Russian primary fuel and energy resource input, and the share of gas consumption amounts to approximately 65.5% in the aggregate use of fuel at thermal power plants. Such excessive focus on gas is to a substantial extent caused by the distorted price ratios of substitutable energy resources, including low domestic natural gas prices compared to prices of other fuel and energy resources.

Natural gas supply is available in 52% of the Russian settlements, including almost 60% of towns and 23% of rural settlements. Natural and liquefied gas supply is available to about 75% of the settlements.

The key gas consumer in Russia is power generation (nearly 40% of domestic gas consumption). Demand for gas of power companies is constantly on the rise, primarily as a result of low gas prices. Such a wasteful gas consumption pattern is typical for other types of gas consumers, too, whose processes are much more gas-intensive than their foreign counterparts. Considerable quantities of gas (up to 21% of domestic gas consumption) are used in the residential and commercial sector (the municipal infrastructure and the population).

Wholesale prices are approved by resolution of the Federal Energy Commission (FEC) (currently, Federal Tariff Service of the RF Ministry for Economic Development and Trade) for each RF subdivision. According to *Gazprom*, the average selling price for gas was RUR 641 (US \$20.4) per 1,000 m³ in 2002 and RUR 877 (US \$28.6) per 1,000 m³ in 2003. On

May 29, 2003, the RF Government approved natural monopoly tariff ceilings for 2004. In the case of gas, these equal 20%.

Gas distributor tariffs are calculated in accordance with the FEC tariff methodology. As of November 1, 2002, tariffs ranged from RUR 1.6 to RUR 129 per 1,000 m³, averaging RUR 54.2 per 1,000 m³. The amount of tariff averages 8.3% of the wholesale price.

Residential consumers pay for natural gas at retail prices established by regional energy commissions. Retail prices range from RUR 132 to RUR 2,400, averaging RUR 505.7 per 1,000 m³, depending on the region and natural gas uses.

Tariffs for gas transportation by independent producers through main gas pipelines to domestic consumers are established by the RF FEC (currently, Federal Tariff Service of the RF Ministry for Economic Development and Trade), amounting to RUR 13.8 per 1,000 m³ per 100 km.

The anticipated optimisation of the fuel and energy resource use pattern should reduce the share of gas in primary energy resources consumption to 46.9-44.8% in 2020.

5.2.5. Gas exports/imports

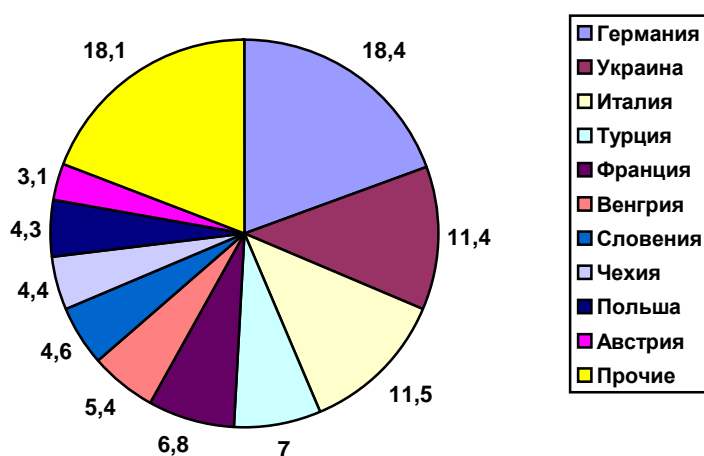
Russia has for years been the world's largest supplier of natural gas, accounting for one fourth of global natural gas exports (Cf. Table 5.4). Gas shipments beyond the limits of the FSU are made by *Gazexport*, a wholly owned subsidiary of *Gazprom* established 30 years ago. *Gazexport* is currently supplying gas to 20 countries in Central and Western Europe. A total of over 2.5 ??? m³ of gas has been shipped abroad over the entire export history of *Gazexport* and its Soviet predecessor. By various estimates, *Gazprom* meets between 20% to 40% of the gas requirements of Central and Western Europe. The largest users of Russian gas include Germany (18.4% of exports), Italy (11.5%) and France (6.8%). The distribution of Russian gas exports among European countries (except the CIS) in 2003 is shown in Fig. 5.5

Table 5.4. RF gas exports, billion m³

Year	2000	2001	2002	2003
Total gas exports, billion m ³	194	181	175	189
Of which				
to "far-abroad" countries	134	132	134	142
to CIS countries	60	49	51	47

Source: RF State Statistical Committee. Russian Statistical Yearbook, 2003, Moscow; Russia's Social and Economic Situation, No. 1, 2004.

Fig. 5.5. Geographical Distribution of Gas Exports from RF in 2003 (%)



Pursuant to the Energy Strategy, Russian gas exports are expected to grow to 275-280 billion m³ by 2020, which is nearly 60% more than the level of 2003. Gas exports to Western and Central Europe may amount to 160-165 billion m³ in 2020.

Historically, the Russian gas industry has been tied to one market only, i.e. Europe. At the present time, Russia's position as a natural gas exporter to the EU is aggravated by the policies of greater competition and internal gas market liberalization pursued in the EU, which seek to lower gas prices and diversify supplies. For Russia, all this may mean lower revenues from gas exports to EU countries, potential problems with entering into long-term gas supply contracts and higher risks associated to long-term investments in new gas deposits. At this point in time, long-term contracts are the cornerstone of Gazprom's export policy, assuring return of investments, because the capital intensity and longer project paybacks in the gas industry require that risks be shared between gas producers and users. To keep Russian gas competitive, new contracts have been signed recently, including those for gas deliveries to the UK. Implementation of the Blue Stream Project and expansion of the TransBalkan pipeline will enable future shipments of 30 billion m³ to Turkey. CIS and West European energy markets will continue to be the key buyers of Russian gas, but the size and growing demand of the gas market in the Pacific call for an eastward shift of the gas industry. Diversifying by starting exports to Asia and the Pacific may strengthen Gazprom's export positions, and direct gas sales to large end-users in the EU may have a similar impact.

Gazprom gas exports transit 14 countries. Ninety-five percent of Russian gas reaches the consumer through the territories of third countries, with two thirds of the traded volumes transiting three or more countries. Russian natural gas shipments to Western Europe are channeled through the territories of Ukraine and Belarus. Payment problems and unauthorized taking of gas from Russian pipelines became the main reasons for Gazprom's diversification of export routes and the creation of new ones in the North and South. This applies to the Blue Stream system and the proposed North European gas pipeline on the Baltic seabed.

As a fee for transit of natural gas through Ukraine, Belarus and Moldova, *Gazprom* supplies gas to such countries. In consideration of transit services Ukraine received 26 BCM, Belarus 10.2 BCM and Moldova 1.5 BCM

It was planned to ship about 48 billion m³ from Kazakhstan and Turkmenistan through Russia westward in 2003. The key transit route was the Central Asia-Centre gas pipeline. Tariff for gas shipments beyond the borders of the Russian Federation and member-states of the Customs Union Agreements equals \$0.92/1,000 m³/100 km.

Natural gas imports from Central Asian countries (Turkmenistan, Kazakhstan and Uzbekistan) are important for supplying gas to Southern Russia. Gas imports are usually purchased and resold on the Russian market by Gazprom entities, but in the future independent companies may increase their role in gas import purchases and supplies to Russian users. Natural gas imports to Russia totaled 12.5 billion m³ in 2000, 3.7 billion m³ in 2001, and 3.4 billion m³ in 2002. According to the Energy Strategy, one of the policy priorities of the government in the gas industry includes government support of mutually advantageous long-term contracts for natural gas imports, enabling own resource savings and enhanced reliability of gas supplies to Russian, CIS and “far abroad” users.

Liquefied hydrocarbon gas exports (555,000 t in 2001 and 880,000 t in 2002) include such oil and gas processing products as propane, butane and their mixtures. Deep-cut processing petrochemical exports exceeded 60,000 per month and continue to grow, consisting mainly of rubber and baseline petrochemical products such as butyl alcohol, glycols, ethylene oxide, toluene, styrene, acetone, polystyrene, etc.

5.3. Issues relating to the development of new oil and gas areas, including shelf

The subsoil licensing programmes and terms and conditions in the Russian Federation for the period until 2020 should provide for expanded mineral and primary material resource base replenishment: additions should increase oil reserves by 7.5-10 billion tons and gas reserves by about 11.2-18.8 trillion m³. New territories and offshore areas in Russia will account for 60-70% of such additions.

Russia has the world's largest continental shelf totalling 6.2 million km², accounting for 21% of the world's ocean and sea shelf area.

In practical terms, field development on the Russian continental shelf is just beginning. The initial recoverable hydrocarbon resources on the Russian shelf amount to 100 billion tons of fuel equivalent, including 16 billion tons of crude oil and over 82 trillion m³ of gas. About 66.5% are located in the shelf of northern seas. In-place aggregate hydrocarbon resources of the Russian shelf are poorly explored, with the extent of exploration in most areas ranging from 9% to 12% (only Baltic Sea oil reserves are 14% explored and Caspian shelf gas reserves are almost 20% explored).

To date, several dozens of fields have been discovered, including such gas giants as Shtokmanovskoye, Rusanovskoye, Leningradskoye in Northern Arctic, several large oil fields on the shelf northeast of Sakhalin, in the Pechora Sea, in the Baltic Sea and in the Russian sector of the Caspian Sea. So far, the only offshore producing fields have been Sakhalin 2 and a field being developed by Lukoil 22 km away from Kaliningrad. As has been mentioned, one of the long-term priority projects enabling significant diversification of Russian gas exports includes the North European gas pipeline and development of reserves to support its operations. In this connection, front-end development will include Nadym-Pur-Tazovskoye fields to be followed by Yamal, Obsko-Tazoskoye and Shtokmanovskoye fields.

Another long-term project is to develop the Yamal reserves to support the operating Yamal-Europe gas pipeline. Its first line was put into operation in 1999 but for it to achieve the design capacity of 33 BCMA several compressor stations will need to be constructed. The

timeline to go ahead with launching a second phase of the project will be determined as EU additional natural gas needs build up

5.4. Government regulation of the oil and gas industry: fiscal policies

Oil and gas industry

Taxation is an important instrument of government regulation of the oil industry.

The following taxes, levies and compulsory fees are exacted in the oil and gas sector of the fuel and energy complex:

- corporate profit tax;
- value added tax (VAT);
- mineral extraction tax;
- excise tax;
- customs duties;
- uniform social tax;
- securities trading tax;
- corporate asset tax;
- water facilities use tax;
- forestry tax;
- transportation tax;
- land tax;
- municipal police and fire-fighter tax;
- advertisement tax; and
- mandatory pension insurance premiums.

The subsoil use tax reform currently underway provides for the introduction of a three-component tax system to include the following:

- profit tax;
- mineral extraction tax; and
- additional income tax (exacting in favour of the state that part of the differential rent which is derived from operations of facilities located in a better natural environment that other subsoil users do not have).

The first two components of the system became effective on January 1, 2002 by virtue of Chapters 25 and 26 of the RF Tax Code. Work on the third component is still underway.

The novelty in terms of profit tax included the introduction of a lower tax rate of 24% instead of the previous rate of 35%, with the simultaneous renunciation of all profit tax benefits, including the investment benefit. Such benefit previously enabled companies to reduce the tax base to 50% of its amount provided that such tax-exempt funds were used for investment. Profit tax distribution among different budget levels is as follows: 7.5% goes into the federal budget, 14.5% in the budgets of RF subdivisions, and 2% in local budgets. Legislative bodies of RF subjects have the right to reduce the tax rate payable to budgets of subjects of RF to 10.5% for certain taxpayer groups.

The base rate of minerals extraction tax which has replaced minerals replenishment tax, subsoil use fees and, partially, excise equals RUR 347 per ton of crude oil produced (effective January 1, 2004). Commencing January 2007, in lieu of the existing rate, a specific *ad valorem* rate is expected to be introduced at 16.5% of the cost of crude oil produced and at 17.5% of the cost of gas produced. A special oil pricing formula is used

with a set of indicators including Urals per barrel prices and adjusting coefficients to equalize the difference between Brent and Urals developments.

Effective January 1, 2004, VAT has been reduced from 20% to 18% and sales tax cancelled.

The state also regulates natural monopoly transportation tariffs and oil & gas sector prices for preferential user groups, sets “balance targets” for domestic deliveries of crude and products, as well as the amounts of export quotas.

Pursuant to RF Government Decree No. 13 of 15.01.2004 customs duty rates for crude and product exports are as follows (as of 1.02.2004): \$33.9 per ton for crude oil and crude bitumen products, and \$30.5 per ton for light and middle distillates, as well as gas oil (diesel fuel) and liquid fuels.

There is no excise fee for oil. The excise rates as of 1.01.2004 for selected oil products are as follows: up to RUR 2,460 per ton for motor gasoline with octane ratings ≤ 80 ; RUR 3,360 per ton for motor gasoline with other octane ratings; RUR 1000 per ton for diesel fuel, and RUR 2732 per ton for engine oils.

Transneft tariffs are regulated by the FEC and export oil pipeline access is controlled by the RF Government Commission for the Utilization of Trunk Crude Oil and Gas Pipelines and Oil Product Pipelines, established in November 2000. The underlying tariff methodology is based on an estimated cost model, such that the tariff charged enables receipt of assumed revenues with due account of value components (including profit and tax). Effective January 1999, a two-level tariff was introduced for Transneft to take into account both the shipped volumes (in tons) and the cargo turnover (t/km). The tariff is revised from time to time. In 2004, *Transneft* mainline tariff ranges from RUR 2.68 to 8.14 per 100 T per 1 km depending on destination and transshipment/loading/redelivery tariff from RUR 26.7 to 4,987.82 per 100 T.

Effective January 1, 2002, RF FEC Resolution No. 74/8 of 2001 established an oil product tariff for Transnefteprodukt, amounting to 0.7 of the rate for moving oil products by rail on similar routes.

A specific tariff for gas market players is a minerals production tax established for 2004 at RUR 107 per 1,000 m³. Gas excise was replaced in 2004 with an export duty amounting to 30% of the value of gas exports.

The export customs duty for such oil and gas products as propane, butane and their mixtures – ethylene, propylene, butylenes, butadiene -was established effective February 1, 2004 by RF Government Decree of January 15, 2004 at \$30.5 per ton.

In 2004, the RF will continue to finalize the tax reform. The key reforming areas include the following: resolving the issue of reducing the uniform social tax; streamlining tax administration; property tax systematizing; imposing additional surplus tax for fuel exporters in the event of high world prices; and introducing differentiated minerals production tax rates taking account of recovery rates, depletion factors and other field/deposit parameters.

5.5. Government regulation of the oil and gas sector: pricing and antimonopoly policies

The Federal Energy Commission of the Russian Federation (FEC of Russia) (from March 2004 – the Federal Tariff Commission of the Ministry of Economic Development and Trade).

The Federal Energy Commission of the Russian Federation was established by RF Presidential Decree No. 1194, *The Federal Energy Commission of the Russian Federation*, dated November 29, 1995. By virtue of the RF Presidential Decree and the Federal Law “On Government Control of Tariffs in the Russian Federation”, the FEC has been acting as an executive authority of the RF from 1995 to 2004.

The FEC was the main vehicle for government control of natural monopolies in the fuel and energy complex in accordance with the Federal Law on Natural Monopolies. *The key areas of the FEC’s responsibility* include the following:

- regulation and control of monopolies in the field of crude and product movements through trunk pipelines and gas pipeline transportation. Since 2001, (by Presidential Decree No. 1091 of September 4, 2001) the authority of the FEC also includes regulation of natural monopolies in the field of transportation, which was the responsibility of the Ministry for Antimonopoly Policies. Therefore, the FEC’s regulating authority covered virtually all major gas, crude and product transportation routes within the Russian Federation. The FEC regulated tariffs and cost of services rendered by natural monopolies in the power generation sector, gas industry, and crude and product pipeline transportation, such that their levels make monopoly goods/services affordable to users, on the one hand, and enable monopolies to transact business, on the other hand;
- regulation of wholesale prices for natural gas sold to gas distributors and prices for gas sold directly to end users, as well as of marketing surcharges to the wholesale price for natural gas sold to end users (other than the residential sector) by gas distributors. The FEC also regulates prices for domestic sales of associates and dry stripped gas by Gazprom, Rosneft-Sakhalinmorneftegaz, Kamchatgazprom, Jakutgazprom and ALROSA-Gaz and their affiliates.

RF Ministry for Antimonopoly Policies and Support of Entrepreneurship (MAP) (from March 2004 – The Federal Anti-monopoly Service under the Russian Government).

Until 2004 the RF Ministry for Antimonopoly Policies and Support of Entrepreneurship operated in accordance with the Regulation of the Ministry of the Russian Federation for Antimonopoly Policies and Support of Entrepreneurship as approved by RF Government Decree No. 793 of July 1999.

According to the Regulation, “the MAP is a federal executive authority to implement government policies and regulation in the fields of prevention, restriction and suppression of monopolistic activities, unfair competition; development of entrepreneurship and competition on mercantile markets; exercise of control over compliance with the laws of the Russian Federation on consumer rights protection and advertisement, on natural monopoly control and regulation in communications and transportation”.

The MAP exercised control over compliance with the requirements of the antimonopoly laws of the Russian Federation, including those relating to the creation, merger and joining of commercial amalgamations (unions and associations), liquidation and separation of government and municipal unitary companies, as well as acquisition of stock (shares) in the charter capital of commercial entities; makes recommendations on regulating investment and innovation activities of small businesses carried out for the account of extra-budgetary funds.

5.6. Oil and gas market organization

Key market players

Oil industry

Vertically integrated companies

As of early 2004, the oil sector of the Russian fuel and energy complex included 10 large vertically integrated companies which comprised entities with Russian, foreign and mixed capital. *Gazprom* is also producing oil on a regular basis.

Transneft and Transnefteprodukt hold the monopoly in pipeline transportation.

Total production of oil and gas condensate by 10 Russian vertically integrated oil companies in 2003 amounted to 383 MMT, or 90.8% of the total oil and gas condensate production level in Russia, including 80.7 MMT (21.1%) by *Yukos*, 79 MMT (20.6%) by *Lukoil*, 54.0 MMT (14.1%) by *Surgutneftegaz*, 43.0 MMT (11.2%) by *Tyumenskaya Neftyanaya Kompaniya* (TNK), 31.4 MMT (8.2%) by *Sibneft*, 24.7 MMT (6.4%) by *Tatneft*, 19.6 MMT (5.1%) by *Rosneft*, 18.1 MMT (4.7%) by *Slavneft*, and 12.0 MMT (3.1%) by *Bashneft*. Commencing in 2002, a new company, *Russneft*, has been striving to take the 11th position on this list. Its oil production totaled 2 MMT in 2003. In addition, *Gazprom* produced 11 MMT. Thus, other oil producers, *Gazprom* inclusive, accounted for 9.2% of the total oil and gas condensate production (39 MMT).

The history of present-day Russian vertically integrated companies started a little more than 10 years ago. The first vertically integrated company in Russia was the *Lukoil* concern established in 1991.

In 1992, in the wake of RF Presidential Decree No. 1403, *Privatisation in the Oil Industry*, a rapid process got underway to replace the government monopoly on oil and gas operations with a new model envisaging operations of private oil and gas companies with a share of government capital that were based on market principles and were guided by commercial interests and economic efficiency.

The model was established in a new industry organization: independent vertically integrated companies and a government-owned pipeline system accessible to each oil producer on an equal footing.

By late 1995, the drastic restructuring of the oil and gas sector of the fuel and energy complex was virtually complete, absorbing 300 ex-government associations.

At present, VIC privatisation, mergers, takeovers and consolidation are continuing in the industry. In particular, the 74.95% government block of shares in *Slavneft* was sold at an auction in December 2002. A *Yukos/Sibneft* merger was officially announced on April 22, 2003. Later though the deal was annulled. Foreign companies displayed interest in the assets of Russian VIC's: in early 2003 *TNK* struck a deal with *British Petroleum*, selling 50% of its assets.

Rosneft is one of the two companies wholly owned by the government. Its reserves include over 1.3 billion tons of oil and 1.6 trillion m³ of gas. The company operates 176 fields, systematically building up its oil and gas production and raising its processing output by 10-15% a year. *Rosneft* is the leader in terms of profit and tax paid per ton of oil.

Another company wholly owned by the government is OJSC *Zarubezhneft*. Its priority areas are exploration and operations of oil and gas fields abroad; engineering, construction and operations of refineries and pipelines; equipment export and import transactions, etc. (RF President Decree No. 137 of February 3, 2004).

By now, other VIC's have been privatised although the federal government continues to keep a relatively large share in them. The administrations of oil-producing republics also hold considerable blocks of shares in VIC's (the government share in oil industry ownership now averages slightly over 30%, although the extent of Russian oil company privatization varies from region to region). In particular, the authorities of the Bashkortostan and Tatarstan Republics have a large interest in the oil and gas sector.

Russian VIC's account for the following percentages in RF oil refining: Lukoil – 18.1%, Yukos – 16.3%, Surgutneftegaz – 8.1%, TNK – 7.6%, Sibneft – 7.3%, Slavneft – 6.2%, Rosneft – 5.1%, Gazprom – 2.7%, and Sidanco – 2.5%.

Russian VIC's own large explored reserves of oil and gas, which makes them considerably more competitive and provides excellent opportunities for building up their export capabilities. In particular, as of 2000 Lukoil had 3,344 MMT of oil reserves (A+B+C), Yukos 2,607 MMT, Surgutneftegaz 1,504 MMT, and Rosneft 1,573 MMT.

Therefore, Lukoil, Yukos, Surgutneftegaz, and TNK-BP are the largest VIC's in the Russian oil sector.

The rapid growth of Russian VIC's is based on an expanding export potential, investments in the refining industry and a trading network in Western Europe, the United States and Asia, as well as on a favourable oil market environment. Five Russian VIC's are among the world's 50 largest energy companies. For example, the companies of the Lukoil group in 2002 operated, traded and engaged in financial/investment activities in 32 countries on four continents. The expansion of its own trading and refining facilities enables Lukoil to build up product exports (40% growth in 2001) and sell its oil production through deliveries to its own refineries abroad (6.4 MMT in 2001).

By a *Megatrustoil* estimate, net profits of major Russian vertically integrated companies based on the 2003 results equaled US \$13 billion. However, their consolidated contribution to the budget was twice as large, about US \$26 billion. In other words, each ton of oil produced yielded over US \$60 to the state. In 2003, *Gazprom* contributed RUR 280.2 billion, 12% up against the previous year.

Small and medium non-integrated producers

Presently, there are more than 150 small and medium sized non-integrated producers in Russia. They largely specialize in “squeezing” oil out of depleted fields and marginally economic wells, developing low-output areas.

AssoNeft, an association of small and medium oil producers, was set up in 1994 to represent corporate interests of such companies with government authorities, public organizations and the mass media. It now joins around 70 companies.

Some small oil and gas producers are companies with foreign and mixed capital. Many partners of Russian companies legally treated as “offshore” are, in effect, Russian companies registered offshore, which enables them to avail themselves of the regime guaranteed under Russian laws to companies with a foreign interest.

Trunk crude oil pipeline system and the product pipeline system

The trunk crude oil pipeline system controlled by Transneft and the product pipeline system administrated by Transnefteprodukt are government-owned natural monopolies. Government control is exercised through the establishment of prices/tariffs for transportation service, allocation of export pipeline access, and endorsement of the amount of investment in oil pipelines.

Transneft was established in accordance with RF Presidential Decree No. 1403 of November 17, 1992 and Council of Ministers Decree No. 810 of August 14, 1993. The RF Government appoints the company's Board of Directors composed of the Transneft President, three Government representatives (from the RF Ministry of Economic Development and Growth, Energy Ministry, Government Property Ministry, and Ministry for Antimonopoly Policies⁹) and three General Directors of the largest oil pipeline companies. Transneft performs the centralized management of oil shipments and movements through trunk oil pipelines, emergency management, oil measurements and exercises control over process discipline. The company includes 10 oil pipeline companies.

Transnefteprodukt also develops a unitary investment strategy for the purposes of retooling and advancement of the RF product pipeline system.

Several VIC's currently have pipeline construction projects but private pipelines are virtually non-existent in Russia at this point in time. Russian laws allow any legal entity or even individual businessman to construct oil pipelines but any pipeline so constructed will automatically fall under the operation of the Natural Monopolies Law and therefore the government will allocate access rights and set tariffs, which is not acceptable to companies.

Gas industry

The key gas producers include Gazprom together with its subsidiaries and dependent companies (about 90% of gas production, over 60% of explored gas reserves in Russia, and 70% of gas field development licenses); gas producers independent of Gazprom but participating in the Unified Gas Supply System; and gas producers participating in regional gas supply systems.

Gazprom. The high degree of Gazprom's gas production monopoly is largely caused by the concentration of gas reserves in individual large fields for which Gazprom holds development licenses, and the fact that independent producers do not have their own gas pipelines. From 1998 through 2001, Gazprom's gas production tended to decline, with the rate of such decline being higher than the industry average, due to the depletion of main fields and lack of investment to bring new capacities on line. However, in 2002 the situation started to change: Gazprom increased production to 522 billion m³, and to 540 billion m³ in 2003. In accordance with the Energy Strategy, Gazprom's gas production will rise by 2020 to 580-590 billion m³, or by 7-9% compared to the 2003 level.

On June 17, 2003, it was announced that Gazprom formed Achimgaz, its first joint venture (JV) with a foreign company (BASF Group's Wintershall of Germany) to produce gas. It will develop the Achim reservoirs of the Urengoy Field. If successful, the Achimgaz model can be used by the Western partners of Gazprom interested in joint gas production in Russia. At the same time, the market is generally characterized by a number of processes relating to the likely reduction of Gazprom's share in future gas production as a result of the potential restructuring of this monopoly, setting the stage for the emergence and operation of independent producers.

Gazprom owns a gas transportation system, a gas flow dispatching control system, and a subsurface gas storage system.

⁹ Effective April 9, 2004, the RF Industry and Energy Ministry, the Federal Property Agency under the RF Ministry for Economic Development and Trade, and the Federal Antimonopoly Service of the RF Government, respectively.

Gazprom's involvement in foreign operations is very high. One third of its gas production is exported. In 2003, in addition to 43 billion m³ shipped to the CIS, Gazprom exported 133 billion m³ to 19 European countries, meeting about 30% of demand in the region.

To be able to export and ship such large volumes of gas, Gazprom established a broad network of joint ventures, covering its numerous trading partner countries.

The Energy Strategy envisages considerable diversification of gas exports, including without limitation enlargement of the Asia and Pacific share of Russian gas exports to 15% and a parallel increase in the Asia and Pacific share of Russian oil exports to 30% versus 3% at this point in time.

Independent producers. Independent producers include VIC's and other gas producing companies.

In 2003, vertically integrated oil companies produced 40.5 BCM including both natural and associated gas. The leading producers were *Surgutneftegaz*, *Rosneft* and *LUKOIL*. Natural gas production by other gas producers in 2003 stood at 39.6 BCM. Consequently, independent companies in Russia produced more than 80 BCM of gas in 2003, accounting for 13% of the total Russian production.

Independent gas producers encounter the following problems: the pipeline network status, gas tariff levels, gas export rights, procedures for transportation fee payment to *Gazprom*, terms of participation in emergent market mechanisms (gas exchange, etc.).

Independent gas production volumes are expected to grow substantially before 2020: to 105-115 BCM in 2010 (17% of total Russian production) and 140-150 BCM (20%) in 2020.

In December 2001, gas producers other than *Gazprom* established an Independent Gas Producer Alliance. The allied gas reserves of its members are estimated at 2.5 BCM. The objectives of the Alliance include resolution of general issues, representation and protection of their interests at all government levels; creation of an information infrastructure; and promotion of their interests on international markets.

Gas distribution sector. The gas distribution sector plays an important role in the gas supply chain. There are over 260 gas distributors in Russia, operating medium and low-pressure gas pipelines and catering for the needs of medium, small and several large gas users. The dominant position in supplying gas to Russian users is held by *Mezhregiongaz* (MRG), a dedicated trading/intermediary subsidiary of *Gazprom*, established to make gas shipments and collect payment for them. MRG purchases gas from *Gazprom* and other companies and ships it to gas distributing stations where it sells it to distributors or end-users.

Independent trading companies. The share of independent traders in gas sales is small. Some of them are affiliated or operated under joint operations agreements with *Gazprom*.

On October 23, 2003, the first gas exchange trading took place in the Russian Federation, organized by the Inter-Regional Oil and Gas Exchange. Sold at the exchange was 40 BCM of gas. Independent producers may now choose how to sell gas, i.e. either through *Mezhregiongaz*, a *Gazprom* subsidiary, or directly at the exchange.

5.7 Gas industry restructuring

5.7.1 Independent and foreign company access to trunk oil and gas pipelines

To enable non-discriminatory access to trunk oil and gas pipelines and terminals and safeguard the interests of the state, energy resource producers and users, a Commission of the RF Government for the Utilization of Trunk Crude Oil and Gas Pipelines and Oil

Product Pipelines was set up in November 2000. Pursuant to RF Government Decree No. 209, *Regulation of Access to the Trunk Crude Oil Pipelines, Oil Product Pipelines and Terminals in Seaports for Moving Crude Oil and Products beyond the Limits of the Customs Territory of the Russian Federation*, dated February 28, 1995 [the sentence is not finished in the original Russian text - Secretariat].

By virtue of Law No. 126-FZ of August 8, 2001, the Natural Monopolies Law was amended to regulate oil producer access to trunk pipelines and seaport terminals for moving oil beyond the borders of the Russian Federation. Access to the “pipe” is provided in proportion to oil production injected into the trunk pipeline system.

Those companies which do not inject export crude volumes into pipelines on schedule are “penalized” for such shortages in the form of their share in future total exports being reduced by 35% of the shortage.

By RF Presidential Decree No. 1333, *Converting the State Gas Concern “Gazprom” to the Russian Joint Stock Company (RJSC) “Gazprom”*, dated November 5, 1992, RJSC Gazprom (currently OAO Gazprom) was made responsible for ensuring any producer’s access to the national gas transportation system “in proportion to its gas volumes produced within the Russian Federation subject to compliance with the uniform price regulator”.

Access of independent producers to the Gazprom gas transportation system is governed by the Federal Law on Gas Supplies in the Russian Federation and the Regulation on Ensuring Access of Independent Entities to the Gazprom Gas Transportation System, as approved by RF Government Decree No. 858 of July 14, 1997 (as amended by RF Government Decrees Nos. 1275, 843 and 334 dated November 20, 1999, November 2, 2000 and May 3, 2001, respectively). Pursuant to the said Decree, “any entity within the Russian Federation shall have non-discriminatory access to the Gazprom gas transportation system for gas shipments”. The Regulation specifies that “independent entities have the right to use the gas transportation system - but not in excess of the available capacity anticipated thereby for the shipment period”. Gazprom decides whether to provide access subject to compliance with agreed terms or refuse to enter into an agreement in a substantiated manner. Access applicants have the right to appeal against such refusal of service to the Commission of the RF Government for the Utilization of Trunk Crude Oil and Gas Pipelines and Oil Product Pipelines.

The key issues regarding access to the gas transportation system include the following: absence of public information on available capacity in the system; discretionary provision of access; and absence of objective economic incentives for system development for the benefit of independent gas producers.

Residual access issues, low domestic prices and a virtual impossibility to export gas do not motivate independent producers or oil companies to invest in the development of the gas transportation system. Potential refusal of access to the gas transportation system considerably increases project risks of independent gas producers and restricts their willingness to implement projects boosting gas production.

5.7.2. Oil and gas industry privatisation experience and outcome

Privatisation of the Russian oil and gas sector began in 1992 in the wake of the Subsoil Law, although subsoil area licensing had been practiced prior to 1992. The new licensing procedure under the Licensing Procedure Regulation adopted by the RF Supreme Soviet also in 1992 only confirmed the established rules for subsoil uses. As a result, during *the first phase of privatisation (1992)* rights to use the subsoil were transferred free of charge to staffs, ensuring continuity in terms of the subsoil areas in business use. Businesses sought to

obtain licenses before their conversion into joint stock companies, i.e. prior to the actual privatisation that began in the middle of 1993 when 80% of licenses were provided free of charge for oil and gas fields, including large and unique ones (for a term of 20 years, i.e. until 2013). Still in effect, such licenses did not contain any material terms and conditions of subsoil use, other than sheer generalities, thus contributing to the lack of control over field development.

The second phase of privatisation (1993-1995) was characterized by the transfer of the controlling block of shares in the majority of privatised businesses to “outside” shareholders. Given the fact that the charter capital of companies was denominated in the prices in effect as of July 1, 1991, it was substantially undervalued in comparison with the prices in effect at the time of privatisation.

Typical of both the first and the second privatisation phases, state interests were neglected. The state did not receive any revenues in the form of licensing fees or bonuses because the Subsoil Law provided for free reissue of licenses in the event of “a change in the organizational and legal form of the corporate user of the subsoil”. In addition, the deficient definition of title to extracted minerals enabled private ownership of production with government-owned subsoil areas remaining as government property.

The third privatisation phase was accompanied by a considerable redivision of property. Private property (owned by open joint stock companies following the second phase) was transferred for long-term (20-25 years) use, and operative management to a limited number of individuals and legal entities that joined into close joint stock companies (AOZT, TOO, OOO, ZAO, etc.). The organization and legal form of such companies often included joint ventures with a foreign interest registered in offshore areas with tax benefits. According to some schemes, privatisation took the form of purchasing controlling blocks of shares and converting the corporate subsoil user to a subsidiary whose production sales and profit distribution functions were passed to the parent company.

Privatisation in the oil and gas sector is still underway, exemplified by the auction sale of the government block of shares in Slavneft in December 2002. For more details on mechanism of privatisation see chapter 4.4.7.

Oil industry

The most promising oil companies were privatised through the so-called “deposit” auctions, which consisted in a transfer of a part of government blocks of shares as a security deposit to banks or the companies themselves in exchange for a loan. Foreign individuals and legal entities, including legal entities with a foreign interest in the charter capital amounting to 25% or more, were allowed to take part in such auctions.

The key outcome of conversion to joint stock companies and privatisation in the oil and refining industries was the formation of vertically integrated companies operating on a “from-well-to-gas-filling-station” basis, competitive on international markets and supplying oil products to RF regions.

Gas industry

Gazprom. By virtue of RF Presidential Decree No. 1333 of November 5, 1992, the Government of the Russian Federation was directed to establish the Russian Joint Stock Company (RJSC) “Gazprom” on the basis of the State Gas Concern “Gazprom”. RJSC Gazprom became the legal successor of the property rights and obligations of the State Gas Concern “Gazprom”, including its rights to use land, the subsoil and natural resources, as well as the rights and obligations under the agreements entered into by the Concern. RJSC

Gazprom included 46 companies and associations engaged in gas production, transportation, storage and deliveries. Yakutgazprom and Norilskgazprom, which were part of the Gazprom Concern but did not have connections to the trunk gas pipelines of the unified gas supply system emerged as independent companies. The controlling blocks of 21 subsidiary joint stock companies formed on the basis of R&D associations, institutes and construction companies were contributed to the charter capital of RJSC Gazprom.

At the time of conversion into a joint stock company, all Gazprom shares were held by the Russian Federation and were to be further privatised, except 40% reserved as federal property for three years. Pursuant to the Decree, up to 15% of RJSC Gazprom shares were sold on beneficial terms to the employees and managers of the companies included in RJSC Gazprom, and at least 20% to RF nationals in exchange for privatisation vouchers. The Government represented by the Federal Property Agency under the RF Ministry for Economic Development and Trade (previously, RF Property Ministry) now owns 37.3% of *Gazprom* shares, another 0.9% belongs to *Rosgazificatsiya*, a government-owned company, and 15.11% is controlled by *Gazprom* itself through subsidiaries.

Foreign holdings in *Gazprom* are limited by a 14% quota and foreigners need to seek Government authorizations for each sale of shares. At this point in time, foreign shareholders own 11.5% of the Company's equity, including 6.5% of shares controlled by *Ruhrgas AG* and *E.ON*, both of Germany.

Gas distribution. Prior to the privatisation, gas distributors (companies engaged in the construction of gas distribution networks and gas business operations) were part of the Russian State Company for Gasification and Gas Supply "Rosstroigazifikatsiya". At the time of JSC conversion, they were not included in RJSC (currently OAO) Gazprom and converted to JSC independently of Gazprom.

In the past years, gas distributors have become much more dependent on Gazprom. To be able to achieve one of its strategic objectives on the domestic market, i.e. create a unitary technological complex "from well to burner", Gazprom, acting through affiliates, has been consistently purchasing gas distributor share blocks since 1998. In May 2000, to consolidate gas distributor management, a dedicated holding entity, Regiongazholding, was formed with a charter capital to which the shares of many gas distributors were contributed. The purpose of Regiongazholding is to make gas distribution a profitable business under its control, capable of generating income for Gazprom in the future. Today, Regiongazholding directly or indirectly controls up to 70% of gas distributors. Strengthening control over gas distributors, on the one hand, contributed to the stabilization of their financial position and resulted in stronger monopolistic trends on the gas market.

5.7.3. *Structural development of the oil and gas sector*

The Energy Strategy sets forth oil and gas sector development goals and objectives that will determine the structural development of the sector. Implementation of sweeping economic reforms seeking to improve transparency, create equal conditions for competition in all economic sectors and enhance efficiency of corporate governance will facilitate an attractive investment climate in the energy sector. Its institutional changes will be aimed at improving the efficiency of operations and the quality of goods and services and ensuring energy security of the nation.

Structural policy priorities in the oil and gas sector include the following:

- creating a competitive environment in the gas industry; stabilizing independent oil and gas producers' operating conditions;

- improving the quality of government regulations and advancement of corporate governance systems;
- creating efficient government property management systems and strengthening antimonopoly regulation of natural monopolies;
- optimising the mix of various economic forms;
- providing incentives for the use of primary energy resource for deep chemical processing; and
- optimising the proportions between centralized and decentralized energy supplies to users; furthering open and competitive energy markets.

Natural monopoly regulation. Natural monopoly regulation in the energy sector is and will continue to be an important function of the state until 2020. The Energy Strategy provides for a continued reform of the gas industry through separation of natural monopolistic and potentially competitive business activities and subsequent development of competition in such sectors to reduce operating expenses and ensure complete organizational and financial transparency of their operations.

Oil industry. Oil industry development primarily seeks to optimise all elements of government economic policies (tax policy, subsoil use regulation, support of small and medium oil business). The aim is to achieve a more streamlined oil production pattern, fair competition on the domestic crude and product market, equal operating conditions for all market players, and the adoption of stable and transparent rules for pipeline utilization and access to refining capacity. A critical government policy priority includes encouraging investment of oil companies' excess capital in investment deficient economic sectors, supporting refinery sector development, and rejecting short-term administrative regulation of the oil market in favour of long-term government policy mechanisms.

Gas industry.

The Energy Strategy sets forth priority areas for future restructuring: increasing transparency of *Gazprom* finance and business based on separate accounting of costs by activity type; improving internal gas trade, including gas network debottlenecking; and gradual transition to an effective domestic gas market.

The RF Mid-Term Social and Economic Development Program (for 2003-2005) stipulates that the main objective of gas sector development includes efficient supplies of natural gas to industries and households and performance of gas export shipment obligations.

The main government policy framework for gas sector development will be as follows:

- enhancing economic efficiency and transparency of the gas industry, and improving quality of services rendered to gas consumer;
- setting the optimum price for gas reflecting its quality as feedstock and fuel;
- increasing efficiency of gas consumption;
- expanded supply of gas, inter alia, by creating an environment for efficient development of independent gas producers and broader use of associated petroleum gas;
- improved government control of the gas sector with ensuring its predictability and regulation;
- enabling sectoral players to adapt to the changing business environment;
- ensuring non-discriminatory conditions for gas sector companies
- improving government antimonopoly regulation;
- enabling conditions for gas network advancement;

- protection of socially disadvantaged consumers.

The key conditions for competitive market development in the mid-term comprise pricing policy measures creating incentives for the influx of capital, including profit reinvestment in gas production, transportation and distribution in combination with the actions to ensure non-discriminatory relationships for all market players, especially in regard of gas transportation terms and conditions. To this end, based on the need to cover reasonable operating expenses and investment costs, average increases in regulated gas prices will be forecasted. This mechanism is already up and running. By resolution of the RF Government, gas prices for 2004 have been raised by 20%. The average wholesale gas price in 2004 (taking account of its sales patterns for individual consumer groups and sales geography) will be RUR 825 per 1,000 m³.

The Energy Strategy mentions that the requisite investment growth would require raising gas prices to US \$40-41 per 1,000 m³ by 2006 and to US \$ 59-64 per 1,000 in 2010 (excluding VAT, gas transportation costs and supply/marketing service costs).

With a view to develop market-based relationships in the gas sector, a philosophy will be adopted to determine the content and sequence of measures aimed at advancing the gas market. Currently, there are several versions of such philosophy. For example, the one proposed by the RF Ministry for Economic Development and Trade provides for unbundling of a gas transportation company and a central dispatching office from Gazprom and their placement under direct government control with subsequent unbundling of Gazprom into independent trading companies created on the basis of gas producing entities. *Gazprom* has come up with its own vision of reform. Proposals to reform Gazprom are scheduled to be reviewed by the RF Government in June 2004.

5.8. Prospects for foreign investment in the oil and gas sector

5.8.1. Investment requirements

Pursuant to the proposed Energy Strategy, the investment policy for the fuel and energy complex seeks to resolve *two objectives: investment buildup and restructuring*.

By estimates contained in the Energy Strategy, oil and gas sector investment requirements until 2020 will be as follows:

Oil industry: about US \$230-240 billion. The funding source will be oil company equity and investor capital;

Gas industry: from US \$170 to US \$200 billion (including US \$35 billion to implement a programme for the development of East Siberian and Far Eastern gas reserves and up to US \$70 billion to develop the Yamal Peninsula fields). The core of such requirements will include investments by Gazprom and independent gas producers.

As has been noted above, F&EC investment will largely come from the private sector. Direct government support in the form of all level budget funding will be confined to strategic or socially significant projects. It will be rendered through target programme mechanisms: federal target programmes, primarily *Energy Efficient Economy*.

New trunk pipeline construction would be funded with loans and investor capital subject to producer guarantees regarding corresponding gas, crude and product shipments.

5.8.2. Potential to invest

Various regimes of subsoil use, including Production Sharing Agreements (PSA) and concession agreements entered into between the government and private investors, both foreign and domestic, will be a significant vehicle of the government investment policy.

One should bear in mind that the PSA regime is not an alternative to the national tax regime but an instrument to enable development of fields with unclear income prospects.

It is envisaged in the near future to adopt a law on concession agreements, providing that the government may grant exclusive rights to the private investor (both Russian and foreign) to use the government and municipal property, which is the subject matter of the agreement between the government as the owner and such private investor. The transfer of rights will be against compensation and for a specific term, including the possibility of long-term concessions. The law will also stipulate the mechanism to determine the value of the rights so transferred and an arrangement for the distribution of concession payments, and the concession purposes, which allows for a balance of the parties' interests. The law will include grand fathering provisions and other government guarantees. It is expected that this draft law will be studied by the Duma in 2004.

In view of Russia's forthcoming admission to the WTO and related modifications of terms of domestic market protection, internationally accepted legal (compensatory and antidumping) mechanisms for protecting the domestic industry will be put in place. On a parallel track, a system of arrangements (incorporating WTO requirements) will be implemented to support the exportation of primarily deep cut products, which should encourage energy resource exporters to invest in such businesses, as well as stimulate exports and providing services in the energy sectors of other countries.

Highly attractive for investment are Russian oil infrastructure companies displaying stability of cash flows and high profitability. The Energy Strategy provides for the development of the following new and existing oil transportation routes:

- North Baltic route: The Baltic Pipeline System capable of moving 42 MMTA with capacity expansion to 62 MMTA by 2006; construction of a new pipeline system for oil exports to be handled in the Kola Peninsula (up to 120 MMTA);
- Caspian/Black Sea/Mediterranean route: Expanding the capacity of the Atyrau-Samara pipeline to 25-30 MMTA and that of oil terminals in Novorossiysk and Tuapse to 59 MMTA; CPC to achieve its design capacity (67 MMTA);
- Central European destinations: Interconnecting the *Druzhba* and *Adria* pipeline systems to move Russian and CIS crudes to the port of Omishal (Croatia);
- East Siberian route: Constructing an oil pipeline network enabling Russian entry to Asian and Pacific markets with a throughput capacity of up to 80 MMTA to connect Angarsk to Nakhodka and branch off a line to China (Dacin);
- Far East destinations: Constructing an oil pipeline network for transportation of Sakhalin oil.

The Strategy also envisions the construction of a crude and product pipeline network with outlets in Novorossiysk and Primorsk.

The Arctic Sea Route associated with the development and market deliveries of oil production from the Northern part of the Yamalo-Nenetsky Autonomous District, the Komi Republic, and Arkhangelsk Oblast may become an important transportation corridor.

The key export pipeline projects here include the Blue Stream, Yamal-Europe, North European Gas Pipeline, and a gas pipeline system in Eastern Siberia and the Far East. Such projects are expected to facilitate the development of new gas industry centers in Eastern Siberia and the Far East and bring the gas resources of Krasnoyarsk Krai, Irkutsk Oblast, the Sakha Republic (Yakutia) and the Sakhalin Island into a unified gas transportation system

that would help to meet the natural gas requirements of Russian users and to implement Asia and the Pacific export gas projects in the most efficient way.

An important strategic objective of *Gazprom* is to reduce the dependency of Russian gas exports to Europe on the currently transited countries lying between Russia and European consumers.

During 2002-2005 and until 2010, it is planned to retool the oil industry, upgrade the main stock of drilling and field equipment, and improve -recovery plant and equipment, primarily drilling rigs of various types, jack-pumps of varied output, and production X-trees.

Achieving the forecasted growth rate requires sizable investment in the Russian oil production industry. Investment attractiveness of the oil industry, primarily VIC's, will depend on an improved transparency of such companies, more efficient corporate governance, good business diversification enabling mitigation of such companies' market exposure, as well as VIC's territorial diversification policies.

Small investors may find small field development attractive because such fields do not require massive investment in additional exploration and development; they are usually at early stages of development, characterized by low current operating expenses. In addition, in some regions (the Republic of Tatarstan), efficient uses of residual reserves are a government priority supported by local authorities (certain tax benefits are envisioned to be introduced).

Federal programmes envisaging significant government assistance to the fuel and energy complex will play an important role in the long run. Three RF federal target programmes will continue to be implemented in the oil and gas sector: *Energy Efficient Economy for 2002-2005 and until 2010*; *Environment and Natural Resources in Russia (2002-2010)*; *Russian Transportation System Rehabilitation (2002-2010)*

5.8.3. Oil and gas projects with a foreign interest

Sakhalin-1 is an offshore development project in North-Eastern Sakhalin. The project agreement was executed in June 1995 and came into force in June 1996, but production never started. The project operator is Exxon Neftegaz Limited. The project participants include ExxonMobil (30%); Sakhalin Oil & Gas Development (30%), a Japanese investment company; ONG (20%) of India and Rosneft (20%) of Russia. The total project investment is estimated at US \$15.2 billion. Brought on line in the field was *Yastreb*, the world's largest onshore drill rig which started drilling of the unique horizontal holes to the *Chaivo* offshore fields.

Sakhalin-2 is the first of the operating PSA projects. The project agreement was signed in June 1994 and implementation began in 1999. The project operator is the Sakhalin Energy Investment Company Ltd. Shell (55%), Mitsui (25%) and Mitsubishi (20%) participate in the project. The project includes the development of fields with the aggregate estimated recoverable reserves of crude oil and condensate amounting to 140 MMT and 408 billion m³ of natural gas. Project investment may total over US \$8 billion. Commercial production started in 1999. In 2003, about 1.5 MMT was produced. All production is exported. By 2005-2006, the key industrial infrastructure should be built with a design capacity of 8.5 MMTA of crude and 19 billion m³ of gas per year.

Today, Sakhalin 1 and Sakhalin 2 are largest investment ventures in the RF. Investment in both projects reached US \$3 billion in 2003. In 2004, proposed investment is about US \$4 billion.

As of June 2003, more than 6,000 agreements were entered into for the projects with a total amount exceeding US \$5 billion, which provided for a considerable work scope to be performed by Russian contractors, as well as for supplies of Russian-made materials and equipments.

Khariaga project. The Khariaga project includes the development of the 2nd and 3rd units of the Khariaga Field located within the Nenetsky Autonomous District in Arkhangelsk Oblast. The project agreement came into force on January 1, 1999, and commercial production began in October 1999. The Khariaga project operator is Total of France. Other participants include Lukoil and Norsk Hydro. Commercial production began in 1999.

Caspian Pipeline Consortium (CPC). A \$2.6 billion crude oil pipeline which is 1,580 km long and connects the Tengiz Field in Kazakhstan to the Novorossiysk terminal was commissioned in November 2001. Initially, the pipeline throughput capacity will be 28 MMTA with plans to expand it to 67 MMTA in the future. The CPC project (its participants include three governments and 10 companies representing seven countries) is unique because it is a shipper-owned pipeline.

Development of the Shtokmanskoye Gas Condensate Field. The Shtokmanskoye Gas Condensate Field is located 547 km offshore from the Kola Peninsula in the Barents Sea. ZAO Rosshelf holds the license to develop the field. The explored reserves total 3.2 trillion m³ of gas and 31 MMT of condensate. Commercial gas production may commence in 2006. The initial production should equal 30 billion m³ per annum with a subsequent threefold increase in this number. Total investment will amount to \$20 billion. The cost of developing an offshore gas production complex in the Barents Sea and four sub sea gas pipelines with an aggregate length of 600 km alone will reach \$14 billion. About 30% of total investment would be drawn from the project participants and the balance would be foreign bank loans. Fifty percent of the charter capital of Shtokman Energy, the project operator, would belong to Conoco (USA), Total (France), Hydro Norsk (Norway) and Fortum (Finland). The other half would be shared between Gazprom and Rosshelf. The investment split between Gazprom and Rosshelf will be 60% to 40%, respectively.

6. COAL INDUSTRY

6.1. Coal industry status

Russia is at the top of the list of the countries in the world in terms of in-place coal resources and ranks sixth in coal production. Russia's share in world coal production is 5%, and in coal exports the Russian Federation ranks eighth.

In 2003 coal production in Russia amounted to 275 million tons. In 2002 the share of coal amounted to 11.5% in the structure of primary energy resources (see Table 6.1).

One-hundred and ten underground mines and 129 open-pit mines ("technical units") are operational in the Russian coal industry, with overall annual production capacity of nearly 281.5 million tons (including 106.2 million tons at underground mines and 175,3 million tons at open-pit mines), as well as 40 coal enrichment factories with a capacity of 119 million tons. The value of the main assets for coal production and processing as of January 1, 2002 was 80.7 billion roubles (at 2001 prices), out of which 42.5% were machines and equipment.

Table 6.1. Production of coal in the RF (million tons)

	1990	2000	2001	2002	2003
Coal production, total	395	258	270	256	275
including					
Black coal	257	172	187	182	196
including					
coking coal	91	62	66	64	69
anthracite	27	10	10	9	...
Brown coal	138	86	83	74	79

Source: RF State Statistical Committee. *Russian Statistical Yearbook, 2003, Moscow; Russia's Social and Economic Situation, No. 12, 2003*

In Russia, the split between underground and open cut coal mining in 2002 was 33.6% to 66.4% (versus 44% to 56% in 1990).

During 1990-2002, the percentage of mechanized underground coal mining increased from 83% to 96%. About 40% of coal was processed and dressed.

Coal is a traditional Russian export. About 25% of total coal mining was exported in 2003.

In 2003, bituminous coal exports totaled 62.1 MMT including 52.3 MMT to "far abroad" countries and 9.8 MMT to the CIS. In addition, coke and semi-coke exports stood at 3.6 MMT including 1.5 MMT to "far abroad" countries.

Russia is a coal importer as well. In 2003, imports equalled 25 million tons. The main suppliers of coal to the Russian Federation are Kazakhstan and the Ukraine.

Domestic coal supply pattern in 2003 looked as follows: 50.7% was burnt by power plants; 19.1% used for coking purposes; and 13.9 supplied to households and the agro-industrial complex.

As a result of the restructuring, more than 93% of the unprofitable, unpromising and dangerous from the viewpoint of geological mining conditions enterprises have ceased coal production, 188 mines are in a state of liquidation, and at 153 mines the technical liquidation has been by-and-large completed.

Private property has been institutionalised and market relations have been established in the coal industry. During the period of restructuring, more than 500 enterprises in the industry have been “corporatised” and privatised. The majority of these enterprises became part of 60 major joint-stock companies and holdings via reverse split equity stake consolidation.

The involvement of private owners in the management of the coal companies has generally had a positive effect on the joint-stock companies’ health – labour productivity in the industry during the last 6 years has increased by 75%, marketing and economic-financial activities have become more dynamic. As a result, coal mining increased by 20% and coal export grew more than twofold.

6.2. Industry development prospects

Compared to other fuel and energy sectors, the coal industry of Russia is endowed with the richest resource base. Total “balance” coal reserves in Russia are estimated at more than 200 billion tons (12% of world reserves), 105 billion tons of which are well explored and constitute the reserve base of the industry in Russia. The in-place coal resources are estimated at 4,450 billion tons (30% of world resources).

The industrial-grade (economic) deposits of steam coal at operating enterprises are estimated at 14.6 billion tons, 44% of which are hard grades of coal and 56% are brown coal. The industrial reserves of coking coal are estimated at 3.7 billion tons, more than half of which are high-grade valuable coal. At the same time, more than 80% (up to 3 billion tons) of coking coal industrial-grade reserves are concentrated in the Kuznetsk Basin.

Most of the known “balance” reserves (up to 80%) are located in East and West Siberia. Almost 60% of these deposits are suitable for open-pit production. The easiest to extract hard grades of coal are concentrated in the Kuznetsk Basin, and those of brown coal - in the Kansk-Achinsk Basin. Only 10% of “balance” coal reserves are located in the European part of Russia.

In addition to coal, Russian coal deposits also contain considerable reserves of methane, which are estimated at 17.5 billion cubic meters (within the developed coal basins).

The Energy Strategy provides for increased coal mining in the best-case scenario to 300-330 MMT in 2010 and to 400-430 MMT in 2020, and in moderate and worst-case scenarios to 270-310 MMT in 2010 and 300-375 MMT in 2020. The main coal consumers will be electricity generation (70%) and households and coking coals will largely be used by metallurgy. The share of coal in the expense part of the Russian fuel and energy balance will rise from 19% to 20% during 2000-2020. Coal exports are forecast to grow to 70-80% by 2020. A larger export capability will result from improved coal quality, productivity, Russian port throughput and vessel capacity.

As a result of fast-track gas price increases and stabilized coal prices, the gas and energy coal price ratio (in fuel equivalent) will rise from 0.62/1 in 2002 to 1/1 in 2006 and 1.4/1 in 2010 and will equal 1.6-2/1 during 2010-2020. Only this pricing ratio may enable the planned sector development.

The main areas of coal mining will be the Kuznetsk and the Kansk-Achinsk coal basins. Coal mining at deposits in East Siberia, Buriatiya, Pechora, East Donets Basin, the Far East and Yakutia will have inter-regional importance.

The increase of the share of coal produced at open-pit mines to 75%-80% to 2020 will be the main trend in the improvement of the technology for coal production.

According to the Energy Strategy, the industry will evolve in 3 stages during the period until 2020:

The period from 2003 to 2005 would be a stage for the completion of privatisation, improvement of the finances of the coal industry entities, implementation of measures for social and environmental rehabilitation of mining towns and settlements with state support.

The period from 2006 to 2010 should witness an increase in the competitiveness of coal in relation to natural gas as a result of the realization of a targeted state pricing policy, as well as the technological rehabilitation and intensification of production.

The period from 2011 to 2020 would be a period of radical change in technology and economic efficiency of coal production as a result of the shift of the bulk of production to the new facilities outfitted with new generation technologies, the development of high-quality end products, including at coal-chemical, power and coal-metallurgical complexes.

The volume of investments into the coal industry could reach \$20 billion (funds of investors, private coal companies and the federal budget).

A drastic improvement of coal quality is anticipated to be achieved, *inter alia*, by converting the coal industry to the international coal quality assurance system.

It is also expected that the capacity of such ports as Vostochnii, Vanino, Ust-Luga, Murmansk will increase, and that the capacity of railways westward would expand by 70 million tons per year. It has been found expedient to resume work on coal slurry pipelines.

Drastic improvements of coal quality will be achieved by converting the coal sector to the international coal quality assurance system, which will serve to consolidate the export capability of the sector.

7. THE ELECTRIC POWER INDUSTRY OF THE RUSSIAN FEDERATION

7.1. Production structure of the power industry

7.1.1 *Generating facilities*

Structure of generating capacities

The electric power industry of the Russian Federation is one of the largest power systems in the world. At the end of 2002 the total installed capacity of all Russian power stations constituted 214.9 million kW (see Table 7.1), including thermal – 147.3 million kW (68.6%), hydro – 44.8 million kW (20.8%), and nuclear – 22.7 million kW (10.6%).

The main generating facilities of the Russian power industry are located at the power plants of Holding RAO «EES Rossii» (RJSC “UES of Russia”, 72.4% of installed capacity). *UES of Russia* accounted for 71% of the total national electricity generation in 2003.

The single generating company created on the basis of all NPP of the country – the State concern “Rosenergoatom” - has considerable capacities (10.6%). Other generating facilities belong to the power plants and generating sets of industrial enterprises and other organizations. At the beginning of 2002, a total of 590 electric power stations (with capacity 5 MW or more) operated in the electric power industry, including 324 TPP and 86 HPP that are part of RJSC UES of Russia.

Table 7.1. Installed capacity at power plants at the end of 2002, million kW

	Total	Including.		
		TPP	HPP	NPP
Total in the Russian Federation	214.9	147.3	44.8	22.7
Including:				
Power plants of Holding RJSC UES of Russia	155.6	121.1	34.5	-
Power plants of State concern “Rosenergoatom”	22.7	-	-	22.7

Source: RJSC UES of Russia, RF State Statistical Committee. *Russian Statistical Yearbook, 2003, Moscow.*

Thermal power plants

General use thermal power plants operating on organic fuel (gas, coal, fuel oil, peat, etc.) that mainly use steam turbines are the most advanced and most widely used in the Russian electric power industry. The role of diesel power plants (DPP) is mainly limited to use in agriculture and transport, despite their large numbers. Thermal power plants that do not use fuel (geothermal power plants and other types) have a very limited local role.

The largest TPP operating on gas is the Surgutskaya GRES-2 (4.8 million kW), and the largest one operating on coal is the Reftinskaya GRES (3.8 million kW). The largest Russian TPPs also include the Surgutskaya GRES-1 and the Kostromskaya GRES, which are gas-fired TPPs with a capacity exceeding 3 million kW each.

Russia has retained its world leadership in the cogeneration at thermal power plants equipped with power-and-heat equipment (CHP and others). In 2001 electricity produced in power-and-heat mode at TPP constituted 32.7% (173 billion kWh) of the total produced by Holding RJSC UES of Russia at TPPs.

The largest combined power-and-heat facilities are located at the TPPs of RJSC UES of Russia. In 2000, their total installed electric capacity at CHPs constituted 50.8% and the thermal capacity – 84.8% of these types of facilities at the thermal power plants of RJSC UES of Russia.

Hydropower plants

The Russian Federation is endowed with a generous hydroelectric potential that provides good opportunities for the development of hydropower. About 9% of the world hydro resources are concentrated on its territory. Russia ranks second in the world after the People's Republic of China with regard to its hydropower endowment.

The gross theoretical hydropower and energy potential of Russia constitutes 2,900 billion kWh annually, i.e. 170 thousand kWh per 1 km² of territory.

The technically attainable level of using hydropower resources in Russia is estimated at 1,670 billion kWh of annual output. However, its prevailing part is located in the remote eastern regions of the country, where the huge hydro resources of Angara, Yenisei, Ob, Irtysh, Keya, Vitim and other rivers are concentrated. The natural settings of these rivers allow the construction of powerful HPP.

The economic potential, i.e. the part of hydropower resources that are feasible to be used in practical terms, has been determined to be 850 billion kWh throughout Russia. The economic hydropower resources of the European part of Russia are the ones that are the most developed (46.8% are in use). The development of the hydropower resources of Siberia is much less advanced and is equal to 21.7% of the available economic resources there. In the Far East, the development of the hydropower resources is even lower and constitutes only 3.8% of the available resources.

The largest stations are 6 HPP with electric capacity exceeding 2 million kW each; the total capacity of these HPP is 25,581 million kW.

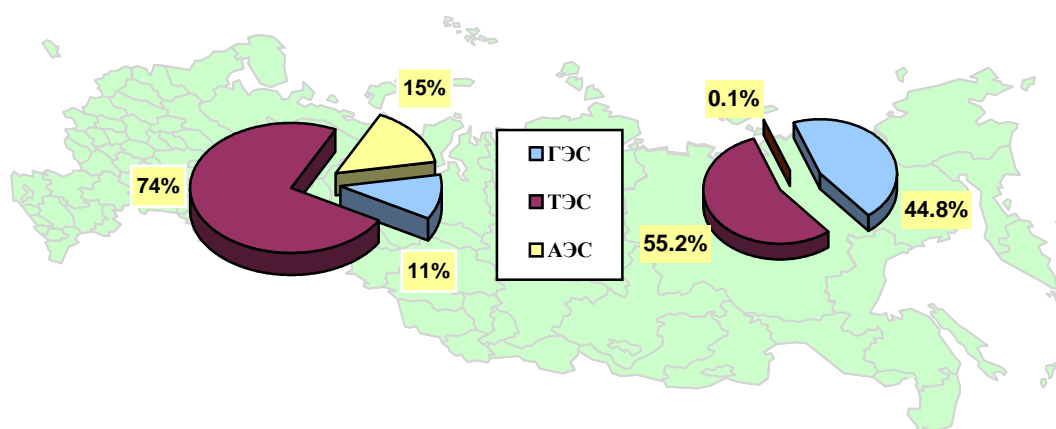
Nuclear power plants

The nuclear power sub-sector is represented in Russia by 10 NPP with a capacity of approximately 22.2 million kW (more than 10% of the capacity of the power stations). In 2003, these plants produced 150 billion kWh of electricity, i.e. about 16% of all electricity generated in Russia (see details in Section 8 of this report).

Territorial distribution of generating facilities

The main generating facilities of power stations in the Russian Federation are located in the European part of the country (including Ural) – 72% of total installed capacity (see Figure 7.1).

Figure 7.1. Generating facilities by location



Source: RJSC UES of Russia

Blue – hydro, red – thermal, yellow- nuclear.

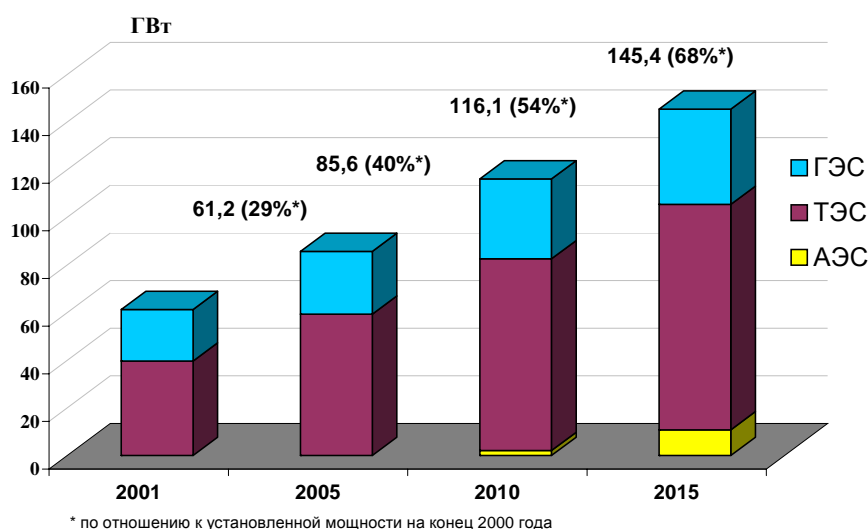
Technical condition of generating facilities

The inadequate financing of capital requirements of the power industry enterprises that prevailed during the 90^s in Russia, along with the *de-facto* subsidizing of consumers of fuel and energy by the energy sector enterprises, by supplying to them cheap fuel and power, resulted in escalating problems related to the insufficient replacement of production facilities.

The available capacity¹⁰ at power stations of general use does not exceed today 163.5 million kW as a result of the physical wear and tear of the equipment in the power sector of Russia, while actual load is up to 140.0 million kW. The available capacity at the power stations of RJSC UES of Russia on January 1, 2001, stood at 116.2 million kW.

The amount of equipment with expired service life¹¹ is rapidly increasing. By 2001, the service life had expired for 30% of steam turbines at TPP (total capacity 39.6 million kW, see Table 7.2). In case no new facilities are commissioned, the service life of 45% of steam turbines at TPP with total capacity 59.3 million kW would be over by the end of 2005, by 2010 – 62% of steam turbines at TPP or 80.5 million kW, and by 2015 – 72% of steam turbines, or 94,6 million kW. The service life of turbines at HPP with total capacity of 21.6 million kW, i.e. 50% of installed capacity at HPPs, has already expired at present.

Figure 7.2. Projections of generating equipment vintage at power stations in Russia until 2020 (in million kW)



Source: RJSC UES of Russia. Blue – HPP, red – thermal plants, yellow – nuclear plants.

¹⁰ Available capacity equals installed (nameplate) capacity, minus capacity not capable of carrying a load (a.k.a. “capacity gap”).

¹¹ “Service life” is the minimum duration of reliable service, i.e. a period during which no equipment breakdown will occur.

7.1.2. Unified power system of Russia (UES of Russia) and electrical grid

UES of Russia

The development of the power industry in the USSR and Russia was based on the gradual interconnection and introduction of parallel mode of operation of regional power systems, leading to the emergence of interregional unified power systems and their integration in the Unified Electric (Power) System (UES).

At present, UES of Russia is the largest highly automated amalgamation of power stations and grid in the world, integrated by a common mode of operation and unified centralized dispatch. The emergence of such a form of power sector structure and management allowed energy resources to be used in a more rational way and to increase the efficiency and the reliability of power supply in the country.

The management of such a large, synchronously operating entity that stretches 7,000 km from west to east and more than 3,000 km north to south is an extremely complicated engineering task that has no analogues in the world. Over 40 years of operation of the UES, tremendous experience in reliable and efficient supply of high quality power to customers has been accumulated.

Six out of the seven Interconnected Power Systems (IPS), i.e. the IPS of Center, Middle Volga, Ural, Northwest, North Caucasia and Siberia, operate in parallel as parts of UES of Russia. The IPS of the East (which includes 4 regional power systems in the Far East) operates independently from the IPS of Siberia. Out of 74 regional power systems, 69 operate as parts of UES of Russia.

More than 40 years of experience demonstrated that the establishment of an integrated power system is an irrefutable achievement of Russian power engineering, despite of the relative limitations of grid ties between the European part of Russia and Siberia and between Siberia and the Far East. It makes possible considerable savings in terms of lower costs as a result of the efficient management of power flows, and enhances the reliability of power supply in the country.

Operational management and dispatch of UES of Russia

The operational management and dispatch of UES of Russia is carried out within a multi-tier hierarchical system including: Central dispatch and control department (CDC) of UES of Russia; Seven regional unified dispatch and control departments (UDC); Central dispatch units of regional power systems; Dispatch units for controlling power stations and grid enterprises; Maintenance and repair teams (brigades).

The highest body of operations and dispatch control, CDC of UES of Russia, provides together with the UDCs and the dispatch services of regional power systems long-term and short-term planning of operation modes, control of actual operating modes and automatic control of normal and emergency modes of operation, collection of operational statistical information on power supply and demand balances, capacity, fuel, hydro resources and the status of major equipment items in UES of Russia. A new entity (System Operator – CDC of UES of Russia) is currently being established on the basis of the CDC and the UDCs, in order to preserve the complex dispatch hierarchy during the restructuring of the power industry in Russia (see below).

Power grid

The power grid of the Russian Federation is divided into backbone (main) and distribution grid. The main grid provides a reliable outlet for power generated at large stations, supply

power to the substations of distribution grid and large customers, handle intersystem events resulting from the joint operation of interconnected power systems that are part of UES of Russia, and deals with exports to the power systems of neighbouring countries and the parallel operation with the power systems of CIS and the Baltic countries.

The length of transmission lines of all voltage classes in the Russian Federation is 2,647.8 thousand km.

RJSC UES of Russia owns most of the main power grid in Russia.

High voltage transmission lines (HVL, voltage ≥ 220 kV) constitute the backbone grid of UES and are operated by the zonal enterprises of RJSC UES of Russia, i.e. the intersystem power grid. As the case stands, the HVL grid in the European part of UES emerged mainly on the basis of 500-750 kV transmission lines, while in the Asian part the development of a 500 kV grid proceeded simultaneously with the introduction of 1,150 kV lines.

The total length of the power grid lines (electric circuits) listed as assets by RJSC UES of Russia rated at 220 kV or higher stands at more than 44 thousand km (total 330 transmission lines), including: more than 42.5 thousand km in the 330-1,150 kV range, i.e. 82.3% of the total length of HVL in this voltage range in the Russian Federation. Most of the 220 kV lines are listed as assets of regional power systems (there are 101.6 thousand km of such transmission lines in the Russian Federation).

The main equipment items installed on the power grid facilities have been designed primarily during the 70's of the last century and their parameters are inferior in comparison to present-day technical solutions. They require periodic repairs, the volume of which is increasing as equipment vintage progresses.

The wear and tear of the fixed assets of RJSC UES of Russia grid constituted, according to figures dating to December 1, 2001, 40.5% on the average, including substation equipment – 63.4%, buildings and structures – 23.2%, and high voltage transmission lines – 36%.

A large amount of work has to be carried out over the next few years to upgrade the power grid, so that the long-term reliability and operational efficiency of UES of Russia could be assured, and also in order to prevent overall system failures (blackouts), including blackouts caused by the failure of a number of transformers and reactors, main switches, etc.

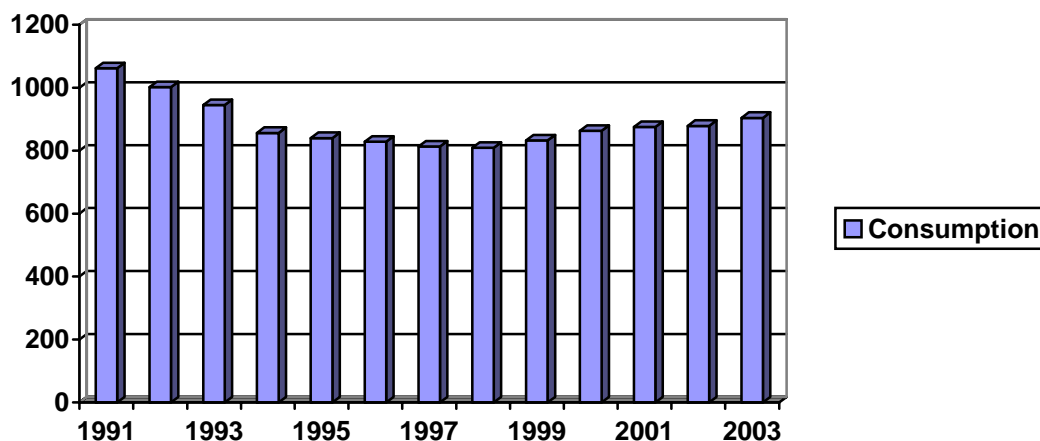
To assure the application of uniform rules of access and use of the power grid infrastructure, as well as to maintain the control of the State over the infrastructure during the reform of the Russian power industry (see below), a **Federal Network Company** was created. This company should assure the continuous operation, technical upgrading and development of all power grids in the country that are important within the entire grid system.

7.2. Production and consumption of electricity and heat

7.2.1. Electric energy

Electricity consumption

With economic growth in Russia, the nation's power consumption is on the rise (see Figure 7.3).

Figure 7.3. Electricity consumption in the Russian Federation (billion kWh)

Source: RJSC UES of Russia, RF Minenergo

One of the main trends over the last few years is the change in the structure of net power deliveries, wherein the share of non-industrial consumption (city infrastructure, residential, commercial, transport and communications) and some industrial consumption (construction material, food and beverages) is growing at the expense of the other branches of industry (see Table 7.2).

However, the power market continues to be dominated by industrial consumers, who use about 49% of total electricity supply, including fuel industries (12%), non-ferrous metallurgy (9%), ferrous metallurgy (7.1%), engineering (6.5%), chemicals and petrochemicals (5.4%).

Table 7.2. Composition and structure of the customers of RJSC UES of Russia in 2001-2002

	Electric power industry			
	2001		2002	
	Billion, kWh	Share, %	Billion, kWh	Share, %
Industry	284,6	49	283,5	48,9
Including:				
Fuel industry	68.6	12	69.4	12.0
Ferrous metallurgy	42.3	7	41.1	7.1
Non-ferrous metallurgy	52.2	9	52.4	9.0
Chemical and petrochemical industry	33.2	6	31.2	5.4
Engineering industry and metal working	39.2	7	37.6	6.5
Wood-working, wood-pulp and paper industry	10.5	2	10.3	1.8
Building materials industry	12.1	2	12.1	2.1
Light industry	4.6	1	4.4	0.8
Food industry	7.7	1	8.3	1.4
Other industries	14.2	2	16.7	2.8
Agriculture	21.5	4	19.6	3.4

Forestry	0.3	0	Absent	Absent
Transport and communication	62.4	11	66.4	11.5
Construction	5.0	1	5.3	0.9
City infrastructure and commercial facilities	79.0	14	80.9	14.0
Residential	44.9	8	46.3	8.0
Other branches	80,4	14	77,8	13,3
Total	578.0	100	579.8	100
Including:				
Enterprises and establishments financed by the federal budget	18.7	3	15.8	3.0
Enterprises and establishments financed by local budgets	26.0	4	24.0	4.0
Wholesale enterprises-resellers	94.0	16	92.2	16

Source: RJSC UES of Russia

According to the Energy Strategy, further growth of electricity consumption is expected in Russia. The energy strategy proceeds from the premise that production and consumption have to grow as an indispensable precondition for economic development and improving the standard of living of the population. In particular, the demand-side part of long-term energy balances takes into consideration the continuing growth of the electricity intensity of GDP, whereby power demand rate of growth is expected to outstrip total energy demand growth rate by a factor of 1.07-1.1, due to increasing use of electric machinery and devices, primarily in industry, but also in agriculture and at home.

Electricity production

In 2003, the growth of electricity production was due to increased output at nuclear and thermal power plants. Electricity generation at these plants constituted accordingly 150 billion kWh and 607 billion kWh. Output at hydropower stations declined due to lower levels of water in reservoirs by 11.0 billion kWh (6.3%) and stood at 157 billion kWh. As a result, the share of NPPs increased in the structure of power generation in comparison with 2002 from 15.9 to 16.4%, the share of TPPs increased from 65.7 to 66.3%, while the share of HPPs fell from 18.4 to 17.2%.

Based on forecasts of electricity demand under a high-growth scenario for the economy, (optimistic scenario 2), total power production may increase by 2010 more than 1.2 times in comparison with 2000 (up to 1,070 billion kWh), and 1.6 times by 2020 (up to 1,365 billion kWh). In case the economy grows at a slower rate (moderate scenario 1), power output would be accordingly 1,015 and 1,215 billion kWh (see Table 7.3).

The Energy Strategy foresees an improvement in the structure of electricity production in terms of accelerated development of nuclear power plants leading to growing electricity generation at NPPs, and the better use of the hydropower potential, primarily as a result of the expected completion of facilities where construction has already begun. Therefore, the share of electricity produced at NPPs would be increasing in overall electricity production from the different types of generating facilities shown in Table 7.4.

Table 7.3. Dynamics and structure of electricity production in the Russian Federation
(billion kWh)

	2002	2003	2005		2010		2015		2020	
			Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2
Electricity production Total	891	915	930	935	1015	1070	1110	12051	215	1365
TPP	585	607	609	612	662	690	716	744	791	852
HPP	164	157	162	163	173	180	184	195	194	215
<i>NPP</i>	<i>142</i>	<i>150</i>	<i>157</i>	<i>161</i>	<i>180</i>	<i>200</i>	<i>210</i>	<i>266</i>	<i>230</i>	<i>300</i>

Source: RF State Statistical Committee. Russian Statistical Yearbook, 2003, Moscow; Russia's Social and Economic Situation, 2003, Energy Strategy of Russia until 2020.

7.2.2. Heat

Considerable volumes of heat are supplied to customers in Russia by district heating enterprises (cf. details in Section 9 of this report).

7.3. Fuel supply to the power industry

7.3.1. Consumption structure by fuel type

The share of gas remains high in the structure of fuel consumed by the Russian power plants. For example, the share of gas in overall fuel input increased in 2001 by 2.3%. The share of coal decreased by 1.3% in comparison with 2000. Natural gas consumption grew in absolute terms by 3.6 billion m³, while coal consumption declined by 2 million t (see Table 7.4).

Table 7.4. Fuel consumption by type of fuel in the Russian power sector

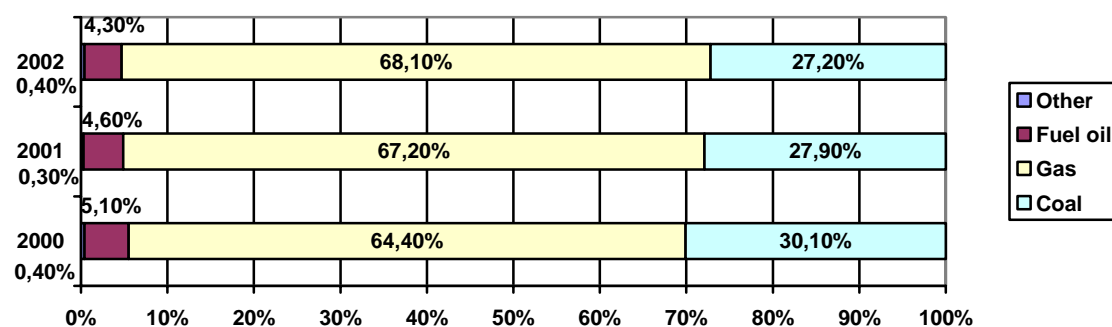
	Unit	2000	2001
Electric power industry - total	Million tce	280.0	283.4
Coal	Million t	150.3	148.3
Furnace fuel oil	Million t	10.9	11.2
Gas	Billion m ³	156.0	159.6
Including at power plants and boiler rooms of RF Ministry of energy*)	Million tce	243.2	245.1
Coal	Million t	131.5	128.6
Furnace fuel oil	Million t	9.7	8.6
Gas	Billion m ³	136.2	140.6

* - Except fuel consumption at power plants of industrial customers (industrial generation sets, etc.)

Source: RF Ministry of Energy

Gas tends to crowd out other types of boiler and furnace fuels, and this is particularly evident at the power plants of RJSU UES of Russia. For example, in 2002 the share of gas in overall fuel consumption increased by 4.2% (to 68.1% of total fuel consumption by RJSU UES of Russia) and reached 132.4 billion m³. The share of coal decreased in comparison to 2000 by 11.7% and constituted 27.2%, and that of fuel oil – by 17.7% (4.3%, cf. Figure 7.4).

Figure 7.4. Fuel consumption by type at power plants of RJSC UES of Russia in 2000-2002

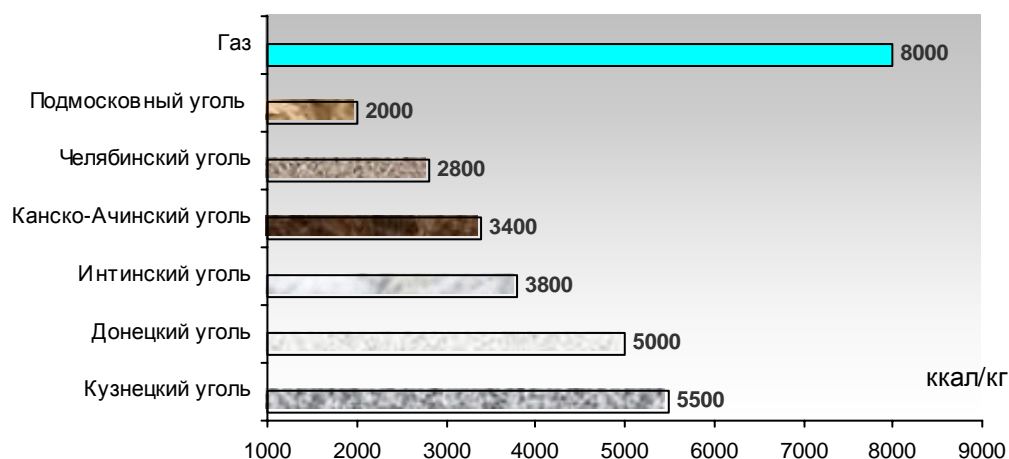


Source: RJSC UES of Russia.

In 2002, a total of 237.8 million tce was used for the production of electricity and heat at the power plants and boiler rooms of RJSC UES of Russia, as compared to 245.1 million tce in 2001 (cf. Table 7.4).

Coal delivered to the power industry is mostly low-grade, and the supply of enriched coal to the power industry continues to be an outstanding issue (cf. Figure 7.5). A combination of the high calorific value of, and the low prices for, gas contributes significantly to the low competitiveness of coals.

Figure 7.5. Comparative heat value of main kinds of fuel used at TPP in the European part of Russia



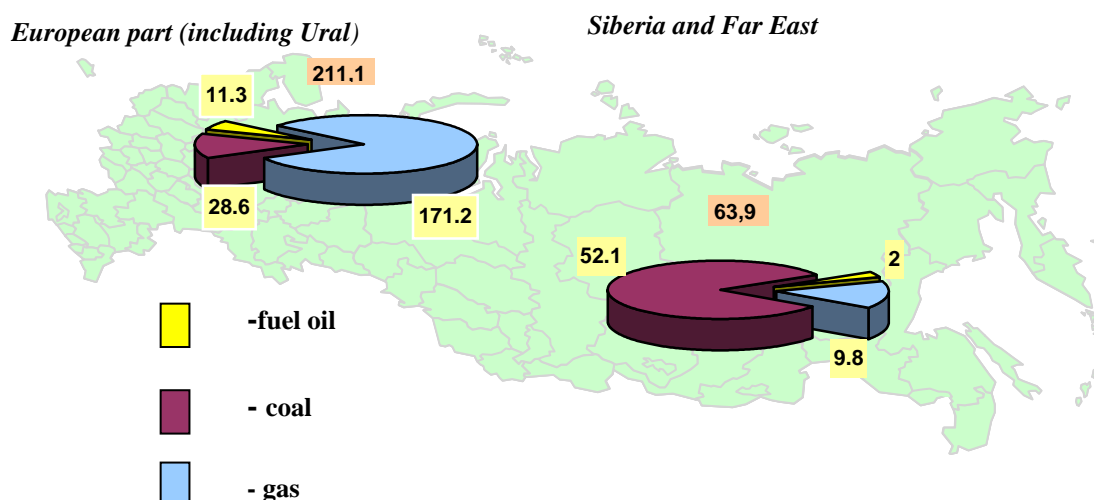
From top: gas, Moscow basin coal, Chelyabinsk basin coal, Kans-Achinsk basin coal, Itin basin coal, Donetsk basin coal, Kuznetsk basin coal (kcal/kg).

Source: RJSC UES of Russia

7.3.2. Territorial breakdown of fuel consumption

The geographic pattern of coal- and gas-fired power plants location is the main driver of the structure of fuel consumption by region. In 2001, the share of gas in the structure of total fuel inputs to TPPs in the European part of the country constituted more than 80% of fuel consumption in this region (cf. Figure 7.6). As opposed to that, coal has a dominant role in the fuel balance of TPPs in the Siberian and Far East regions (its share exceeds 80% there).

Figure 7.6. Structure of fuel consumption at TPP in Russia (in million tce)



Source: RJSC UES of Russia.

7.3.3 Fuel prices

The prices for main kinds of boiler-furnace fuel (except coal) increased in 2002 (see Table 7.5).

**Table 7.5. Average prices for purchased boiler-furnace fuel in 2001
(at the end of the period in roubles per ton, for gas – per thousand m³)**

	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter	Change, base 1 st quarter 2002, %
1 thousand m ³ of gas	665	697	807	819	23,1
1 t of fuel oil	1874	2689	3588	3123	16,6
1 t of power station coal (“steam coal”)	605	586	575	547	-9,0
1 t of brown coal	424	353	430	387	-9,1

Source: RF State Statistical Committee. Russian Statistical Yearbook, 2003

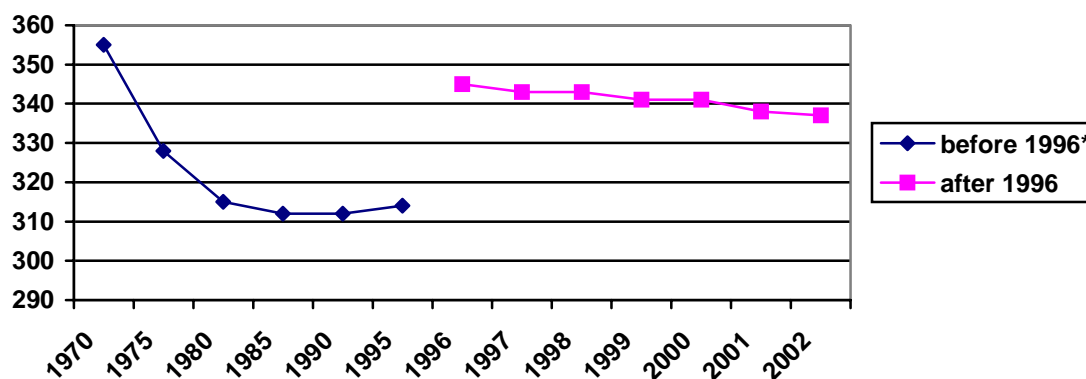
At present, the structure of prices for boiler-furnace fuel in Russia does not correspond to their consumer value or to the typical structure of prices on world markets. Considerable disproportions in fuel prices persist. The best quality fuel (natural gas) costs, as already mentioned before, much less than coal, a circumstance that has a negative impact on the economic efficiency of power generation at coal-fired plants in comparison with gas-fired power plants.

An important long-term issue in the power sector and generally the energy industry of Russia is the gradual change of patterns of TPP fuel supply, wherein the natural gas share in fuel deliveries to the power industry should be reduced, given the high export potential of natural gas and its relatively limited reserves as compared to coal. The Energy Strategy foresees a change of fuel consumption patterns at TPPs, i.e. a reduction of the share of gas and correspondingly the increase of the share of coal by 2020. The relative shares of gas and coal in the fuel balance of thermal power plants in the future will be determined by the price ratio on gas and coal markets. The best price differential between gas and coal is a factor of 1.6 to 2, which makes coal-fired thermo power plants competitive.

7.3.4. Efficiency of fuel use at power plants

The improvement of power generation mix, the increase of generation in power-and-heat mode, and the implementation of measures aiming at improving the efficiency of operations at TPP will allow to increase the efficiency of fuel use at TPP every year. Data on the dynamics of fuel efficiency use at general purpose TPPs for the period 1970 - 2000 are presented in Figure 7.7.

Figure 7.7. Coal equivalent fuel rate at general use power stations (g/kWh)



* - A new methodology for determining coal equivalent input per kWh of supplied electricity and Gcal of supplied heat was introduced in 1996. Blue line – until 1996, red line – since 1996.

Source: “Russian statistical yearbook”, Goscomstat of Russia, 2002.

Pursuant to the Energy Strategy, specific fuel equivalent consumption for power generation will drop to 310 g of fuel equivalent per kWh in 2010 and to 280 g in 2020.

7.4. State control of tariffs in the power industry of Russia

State control of tariffs for electricity and heat (in its current form) was introduced in Russia in 1991 in the process of the economy’s transition to market.

The economic, organizational and legal grounds of State control were defined by Federal Law No 41-FL “On State control of tariffs for electricity and heat in the Russian Federation” adopted on April 14, 1995. In accordance with the Law, government regulation of prices is achieved through the introduction of economically justified prices for power and heat and/or their ceilings on an annual basis before the State Duma adopts a proposed federal budget in the first reading. In doing so, such prices cannot be in effect for less than one year and become effective from the beginning of the year. The Law stipulates that *state regulation of tariffs for electricity and heat is carried out on three levels: Federal, regional and municipal.*

The authority on State tariff regulation in the power industry of the Russian Federation rests at Federal level with the Federal Energy Commission of Russian Federation (“FEC Rossii”) (now – the Federal Tariff Service under the Ministry of Economic Development and Trade), which is authorized:

1. To implement State control on the Federal wholesale electricity (power) market – FOREM.
2. To keep records in the register of FOREM market subjects.

3. To draw up and to approve the power output and supply balance within the framework of UES of Russia for FOREM subjects. This balance is the ground for concluding contracts on FOREM.
4. To establish tariffs for electricity supply valid for FOREM suppliers [JSC-power plants, Federal power plants, NPPs and surplus power suppliers (JSC-energo)]. In addition, "FEC Rossii" has the right to establish the tariff for heat for Federal power stations that supply heat from off-takes on their turbines.
5. To establish power tariffs for electricity delivered from FOREM to its customers (JSC-energo short on power and large customers listed on FOREM). The calculation of tariffs for electricity suppliers to FOREM and electricity customers of FOREM is carried out in the manner established by the "Temporary methodological instructions on formation and application of double-rate tariffs on the Federal (all-Russian) wholesale electricity (power) market (FOREM)" No 76, as approved by the board of directors of "FEC Rossii" on 6 May 1997. The "cost+" method is used for FOREM suppliers, i.e. the value listed in the tariff is the sum of economically justified expenditures and profit. The tariffs for electricity customers of FOREM must be calculated observing a balance of FOREM's collectibles and payables (the total cost of electricity purchased from FOREM must equal the value of sales of all FOREM suppliers).
6. To determine the procedure for economic justification and to approve the amount of subscription fees for services rendered by RJSC UES of Russia for the organizing, the functioning and the development of UES of Russia (including investments), the amount of subscription fees for services rendered by the State Concern "Rosenergoatom" for the development and the assurance of the operational safety at nuclear power plants. The services of RJSC UES of Russia are used by all power supply entities within UES of Russia, regardless of the fact whether they are sellers or buyers of electricity on FOREM, as well as by all customers listed in due course of procedure on FOREM. The cost of the services of RJSC UES of Russia can be included in the cost of the products of the entities that use these services.
7. To carry out work related to the development of methods of tariff regulation of the power industry in the Russian Federation, including the development of tariff regulation instructions (fees for services, etc.) on regional level, as well as to control their application, to consider and to decide on conflicts between the regional energy commissions (REC) and the regulated entities.

Regulated entities have the right to file an application with "FEC Rossii", requesting an amendment to the tariffs, provided at least one of the following circumstances exists:

- inflation rates are above 2% per month on the average for Russia;
- a revision of the terms and conditions of the tariff agreement on wages in the industry has occurred;
- a change has occurred in the roster and/or the rates of taxes and mandatory withholdings and payments, as mandated by legal acts of the Russian Federation and the subjects of the Russian Federation;
- the interest rate for long-term credits on the domestic market quoted by the Central Bank of the Russian Federation and commercial banks has changed by more than 3%;
- in case of *force majeure* circumstances.

New tasks were assigned to “FEC Rossii” in connection with the new stage of electric power industry reform and the expected emergence of free trade in electric energy:

- Regulation of fees charged for the operational-technological management services provided by the System Operator;
- Regulation of fees for services provided by the Trade System Administrator (TSA) of the wholesale electricity market;
- Regulation of fees for services provided by the Federal Network Company;
- Establishment of maximum prices for power on the free trade market for electricity.

At the *regional level*, tariff regulation is carried out by the regional energy commissions which establish the tariffs for electricity and heat supplied by energy supply entities to different groups of customers located on the territory of the relevant subjects of the Russian Federation, on the basis of justifications and calculations prepared by JSC-energo.

In accordance with RF Government Decree No. 236 of April 2, 2002, in setting prices for power supply companies, the regulator of an RF subdivision shall also be guided by regional specifics such as:

- changes in the fuel mix, volumes and prices involved in power and heat generation, caused, *inter alia*, by natural factors;
- changes in power volumes purchased and supplied to consumers, caused, *inter alia*, by putting consumers on the federal wholesale electricity market and switching over to their own sources of heat;
- economically unjustified checks on price increases during previous regulation periods.

In accordance to Federal Law 154-FL “On general principles of organizing the self-government institutions in the Russian Federation” adopted on 28 September 1995, the regulation of enterprises of electricity, heat, gas and water supply and water removal that are owned by municipalities, is carried out by the self-government institutions. The competence of these self-government institutions includes *on municipal level* mainly small municipal (urban) enterprises that resell electricity and heat.

At the moment, transparent rules for setting tariffs do not exist at most of the municipalities, while regulation itself is often biased by the political status of the day. All of this significantly increases investment risks in the communal power sector. Besides, the self-government institutions can’t provide any guarantees to potential investors on tariff regulations, since according to legislation the competence on setting tariffs is transferred to the subject of the Federation in cases where a municipal enterprise is replaced by a private management company. The existing practice of subsidizing municipal energy infrastructure at the expense of budgets poses additional barriers to the entry of private investors and private management companies to the communal energy sector. Payments under tariffs valid for the population cover only part of the cost of housing and communal services; the rest of the municipal infrastructure expenses are covered by the government budgets at all levels (on the average at a 50:50 ratio). The problem of non payments persists in full: in 2002 collection rates were 90% for residential consumers and 86% for budget-financed dues.

7.5. Price policy on electricity markets

The most serious problems related to pricing policy are the relatively low tariffs for power and heat, coupled with extremely low efficiency of energy use, the large-scale cross subsidizing, and the deficiencies of the mechanics of State regulation of tariffs.

A comparative graph of electricity prices evolution in Russia from 1992 to 2002 in rouble (left scale, red line) and dollar denomination (right scale, green line) is illustrated in Figures 7 and 8.

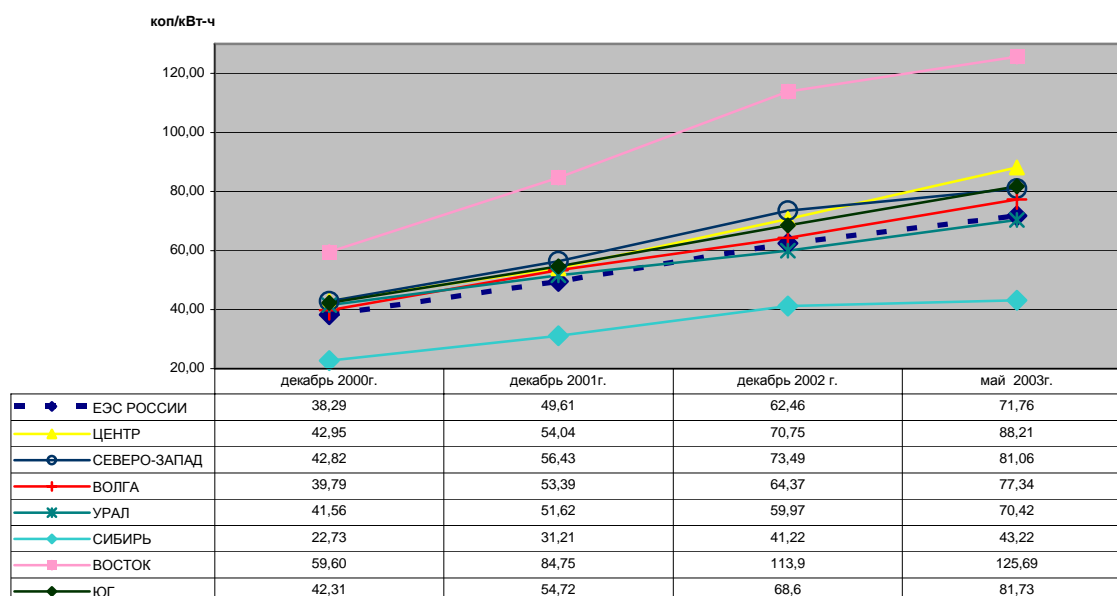
Figure 7.8. Electricity prices (average tariff rate) in Russia (cents per kWh, 1998 rouble denomination accounted for)



Source: RJSC UES of Russia. Green line – right hand scale.

Electricity prices on retail markets in the European part of the country are near the average value of tariffs on the entire Russian electricity market; in Siberia they are substantially lower, while in the Far East they are considerably higher (see Figure 7.9.).

Figure 7.9. Average tariffs on retail electricity markets, December 2000 - May 2003



Left column from top: dotted blue line – UES of Russia, yellow – Center, dark blue – Northwest, red – Volga, green – Ural, light blue – Siberia, purple – East, dark grey – South.

Captions: December 2000 December 2001 December 2002 May 2003

Source: RJSC UES of Russia.

Negative trends in the economy bottomed out in 1999 and growth of industrial production began, leading to **growth of energy consumption that has emerged as an established trend**. At the same time, **the low efficiency of energy use by consumers in comparison with the developed countries is a problem** (see Figure 7.10).

Figure 7.10. Specific energy input in some industries (kWh per ton of output)



Captions: purple – bauxite, rose – aluminum, blue – ammonia, dark purple – electric furnace steel, green – yellow phosphorus.

Columns from left: Russia, USA, Japan.

Source: RJSC UES of Russia.

The observed **growth of electricity consumption so far does not run in parallel with discernible advances in applying energy saving technologies**. The electricity intensity of the Russian economy continues to rise, already exceeding by 20th the level observed in the late 80's of the 20th century, while low tariffs do not stimulate consumers to rationally use energy and result in excessive demand for energy resources.

The massive scale of cross-subsidies to the population, budget organizations and agricultural entities at the expense of industrial customers continues to be a serious problem for the power industry. It results in relatively higher tariffs for electricity and heat for industrial customers in Russia¹².

During the recent years, the scale of cross subsidizing (the ratio of residential power tariff to the tariff for electricity for industrial customers) has decreased.

Despite these positive trends in the reduction of the scale of cross-subsidizing, the ratio of tariffs are still far off from the ratio between the actual cost of electricity for various groups of customers. The Government has issued a number of decrees aiming at the gradual phase-out of cross-subsidizing in the power industry and driving the residential tariffs up to the level of its actual cost. The most recent such document is Decree of the Government of the RF No. 226 dated April 2, 2002 “On pricing of electricity and heat” the task of which is to change the practice of state regulation of tariffs for electricity and heat. The Decree approved “Principles of pricing of electricity and heat in the Russian Federation”. The Decree prohibits the introduction of preferential tariffs for particular customers without determining the sources and mechanisms for reimbursing the cost of such tariff preferences.

At present, the regional regulatory bodies continue to hold onto policies of setting tariffs for agricultural producers and budget organizations at a low level. Up to this day, the *de-facto*

¹² Cross-subsidizing is the subsidizing of certain categories of customers (residential, budget organizations and agricultural customers) by means of increasing the tariffs valid for another group of customers.

average tariffs valid for residential customers, agricultural producers, some industries that turn out products for the agriculture, and budget organizations supplied by many power systems (JSC-energo) turn out often to be much lower than the tariffs set by the Regional Electricity Commissions (REC) due to a number of preferences (discount tariffs) introduced without pointing out a source for their reimbursement. RECs, when taking regulatory action on tariffs, do not always account for the reduction of real income experienced by the JSC-energo upon granting privileges to residential customers, while the Federal, regional and local government bodies don't allocate the funds needed to compensate the JSC-energo for the shortfall in their revenue that has resulted from the granting of preferences in accordance with current legislation.

For example in 2002 the *de-facto* average annualised tariff for residential customers (with preferences accounted for) constituted 48.77 kopeck/kWh, while for large industrial customers it was 64,85 kopeck/kWh. In this case, just the amount of preferences extended to the population for electricity that have not been reimbursed is estimated at 14.0 billion roubles for the year.

Thus, the industry continues to carry the burden of cross-subsidizing, which prompts large customers to quit the retail market serviced by JSC-energo and head for the existing regulated wholesale market – FOREM (see item 7.8.4).

The Energy Strategy seeks to discontinue cross subsidies and introduce differentiated prices depending of daily and seasonal load schedules accepted in international practices. In addition, discounts are envisaged for power intensive consumers. The average electricity price for all categories

7.6. Export of electricity

The power systems of Belarus, Estonia, Latvia, Lithuania, Georgia, Azerbaijan, Kazakhstan, Ukraine, Moldova and Mongolia operate in parallel with UES of Russia. The power systems of the Central Asian countries – Uzbekistan, Kirghizstan, Turkmenistan and Tajikistan - operate in parallel with UES of Russia via the power system of Kazakhstan. The power system of Finland, which is part of the interconnected power systems of the Nordic countries (NORDEL) operates in parallel but asynchronously with UES of Russia (a DC link exists to the city Vyborg). Some electricity is supplied by the grid of UES of Russia to separate regions of Norway and China.

Electricity exports are a priority for the Russian power industry and are considered to be an important source of revenue.

Electricity exports from Russia (taking into account power supplied by concern “Rosenergoatom” and other producers outside RJSC UES of Russia) in 2003 were 20.9 billion kWh; the value of exports was \$415 million, approximately 2% of production (see Table 7.6).

Table 7.6. Electricity exports from the Russian Federation

	1998	2000	2001	2002	2003
	CIS countries				
Billion kWh	12,9	9,1	10,2	8,0	8,2
Млн. долл.	348	153	158	155	85
	Non-CIS countries				
Billion kWh	7,2	6	9,6	10,0	12,7

Million US\$	170	102	152	188	330
	Total				
Billion kWh	20,1	15,1	19,8	18	20,9
Million US\$	518	255	310	343	415

Source: RF State Statistical Committee. Russian Statistical Yearbook, 2003, Moscow; Russia's Social and Economic Situation, January, 2004.

“Far abroad” countries are the main buyers of Russian electricity (72.5% in 2003). The share of CIS importers of Russian electricity is decreasing. In 1998-2003, the CIS share dropped from 64% to 40% and supplies almost halved.

¾ of electricity goes to Finland. In 2000, RJSC Nordic Oy, an affiliate trading company of CJSC «Inter RAO EES», was registered in Finland for the purpose of Russian power sales on the Nordic markets via the power exchange “NordPool”, as well as directly to end customers. New contracts will be entered into for electricity exports via the Vyborg DC facility, with prices tied to the prices on the “NordPool” exchange. At the end of 2002, the construction of the third 400 kW line linking Vyborg (Russia) to Kyumi (Finland) was completed. The completion of this project allowed to increase the transmission capacity of the interstate transmission line from 1.0 to 1.4 million kW (by 40%) and to put unit No. 1 at the North West CHP in synchronous mode of operation with the power system of Finland.

In 2002 electricity exports to Finland constituted 7.5 billion kWh.

The largest electricity exporter is RJSC UES of Russia. It's share of export deliveries is more than 90%.

The possibilities for expanding electricity exports to “far abroad” countries are constrained by the technical parameters of the transmission lines. With respect to the “far abroad”, it is foreseen to increase exports of Russian power on favourable competitive terms, in particular, Russian suppliers acting as domestic suppliers on foreign markets, including participation of Russian companies in trade on the electricity exchanges, and in the more distant future – also competitive electricity sales in these countries. To build up technical capabilities and secure political support, the establishment of strategic alliances with foreign partners has begun. The feasibility of purchasing power in “transit” countries for resale is being studied. Joint trading companies are being created to supply electricity supplies to the corresponding foreign markets. Electricity exports to the local markets of foreign countries are growing, via a net of affiliated companies. For example, RJSC UES of Russia established for this purpose 100% owned company (CJSC «Inter RAO EES»), which has already established its own affiliates in the Ukraine and in Finland.

Electricity exports to the “near abroad” (CIS countries) are limited by low demand by solvent customers in these countries and debts for the electricity exported earlier.

In the course of the restructuring of Russia's power sector reorganization of foreign economic activities is considered to be very important. In 1997, *Inter RAO EES* was established as co-ownership of *RJSC UES of Russia* (60% of shares) and the *Rosenergoatom* Concern (40% of shares). In the beginning, the company ensured collection of power bills owed by CIS countries. It began to get involved in international trading only in 2003. The company documents state the strategic objective of *Inter RAO EES* is to become one of the leading Russian companies in the field of international electricity trade.

An important line of *UES of Russia* business is to secure energy integration of CIS countries and reinstate the unitary energy space within the CIS territories. To this end, *UES of Russia*

has started purchasing assets abroad. Generating capacities are being purchased in Georgia and Armenia. Plans are under implementation in regard of other CIS countries, as well as East European and Central Asian countries.

The Energy Strategy considers the development of electricity exports a strategic task. The document points out the need for active support by the State of greater electricity exports, including such measures as the simplification of customs clearing procedures, the harmonization and synchronization of the Russian wholesale electricity market with the rules and technical requirements adopted in the European Union (UCTE). Taking into account the general trend to liberalization and demonopolization of the wholesale markets of electricity (capacity) and the principles of the reform of the electric power sector in Russia, the functions of control and regulation of the State in the sphere of electricity export will consist in the assurance of non-discriminatory access of producers to the export sections, the organization and carrying out of antidumping and antimonopoly procedures within the framework of the current legislation of the Russian Federation.

The energy strategy foresees the organization of parallel operation of UES of Russia and the power systems of the European countries that should provide access to Russia on equal terms to the electricity markets of Europe, assure the development of trade relations, the realization of significant economies of scale, the attainment of a new level of quality in the cooperation in the power sector. Given all this, it is expected that demand for Russian electricity in Europe will grow to 20-35 billion kW by 2010 and up to 30-75 billion kWh by 2020.

7.7. Problems of electric power industry development

According to the Energy Strategy, in case the economy grows at a fast rate, total generation of electricity should substantially increase.

To reliably meet the forecast electricity demand when at the same time the stock of obsolete equipment at power plants is rapidly growing, it would be necessary to commission new generation capacity at a faster rate than the rate of growth of the stock of total generation capacity.

The replacement of main generation assets at power plants and the growth of the stock of installed generating capacity will be achieved by technical upgrades and rehabilitation of power plants, as well as by new construction.

In this process, the development of the power industry in Russia will be directed towards the following *strategic objectives*:

- Reliability assurance of power supply to the economy and the population of the country in accordance to the standards for reliability of electricity supply and quality of power;
- Preserving the unity and development of UES in the country, its integration with other power grids on the Eurasian continent;
- Improving the efficiency of operation and assuring the development of the power sector on the basis of new and modern technologies;
- Reducing the negative environmental impact.

7.7.1. Development of generating facilities

The need to develop new facilities. To be able to provide for the forecast levels of electricity and heat *consumption* under the “optimistic” and “favourable” scenarios, generating facilities at the power plants in Russia (taking into account replacement and upgrades) would have to be commissioned during 2003-2020 in the order of 177 million

kW, including 11,2 million kW at HPP and pumped storage plants, 23 million kW at NPP and 143 million kW at TPP (including 31,5 million kW gas turbine cogeneration plants and gas turbine plants). Generally, there are the good prospects in the country for developing new advanced technologies. However, the shortage of investments, the degrading of the technical capabilities and potential of the domestic power engineering industry over the last decade pose barriers on the way to their implementation.

Territorial breakdown of newly commissioned facilities. The development of the power sector during the period under consideration will, according to the Energy strategy, proceed from the following economically justified priorities when making decisions about the location of generating facilities:

- in the European part of Russia - technical upgrades of gas-fired TPP with substitution of steam injected gas turbines for steam turbines and maximum development of NPP;
- in Siberia – development of coal-fired TPP and hydroelectric plants;
- in the Far East – development of HPP, gas-fired CHP in large cities.

Thermal power plants. Thermal power plants will remain the backbone of the power industry in Russia for entire time span under consideration. Their relative share in installed capacity will remain unchanged at 60-70%.

The need to radically change fuel supply patterns to thermal power plants in the European regions of the country and the more stringent environmental requirements necessitate the quick introduction of advanced scientific and technical solutions and new technologies in the power industry. The steam-injected gas turbine, gas turbine superstructures at steam turbine units and gas turbines with waste heat recovery are such future technologies for gas-fired power plants.

At power plants operating on solid fuel, it would be expedient to use clean coal combustion technologies (such as) fluidised bed, as well as to introduce facilities operating on supercritical steam. In the more distant future, it may be possible to deploy coal gasification technology and use the gas obtained from coal in steam-injected turbines.

The shift from steam turbine to steam-injected gas turbine at gas-fired TPP and later at coal-fired plants will allow to improve power plants efficiency to 60+%. The construction of new coal-fired units with supercritical steam parameters will also considerably increase the thermal efficiency of coal-fired plants, (to 45-46%). This will allow to reduce significantly the specific fuel consumption for power generation at TPP operating on solid fuel (to 310 tce/kWh in 2010 and 280 tce/kWh in 2020) and will help restrain the growth of fuel consumption at TPP.

At CHPs, small highly efficient steam-injected gas turbine and gas turbine plants designed to service small distributed heat loads would play a growing role, in particular by transforming large district heating boiler rooms into mini-CHP.

Nuclear power plants. The resources of uranium available in Russia and the capacity of the nuclear power engineering infrastructure are adequate to service a 4-fold increase of existing capacity at NPPs. Upon the expiration of their design life span, some thermal power plants in the European part of Russia may be substituted by NPPs. According to the Energy Strategy, power generation at NPP should increase under the “optimistic” and “favourable” scenarios for the Russian economy to 300 billion kWh in 2020, and in case of moderate economic growth – up to 230 billion kWh (see Section 8 of this report).

Hydroelectric power stations. The hydropower resources of Russia are of a magnitude comparable to the current output of all power plants in the country. Given the tight supply and demand balance on organic fuel markets and the expected significant growth of prices for such fuel, it is necessary to develop the hydropower sector at full pace. However, the spatial patterns of the hydropower resources in the country constitute a major challenge: most of them are located in the East of the country, while electricity demand is higher in the West of Russia. With this in mind, the feasible output of HPP under the “optimistic” and “favourable” scenarios may increase up to 180 billion kWh in 2010 and up to 215 billion kWh in 2020, with further increase up to 350 billion kWh as a result of the construction of new HPP. The hydropower sector will be mainly developed in Siberia and the Far East, in practice enabling thermal power plants in these regions to operate in base load mode.

7.7.2 Development of the power grid of UES of Russia

The assurance of stable and reliable parallel operation of the power plants, systems and interconnected systems within UES of Russia is vital for the development of the power industry in Russia. Such a mode of operation will allow to reduce the need for generating facilities and to save capital, permit the efficient use of fuel and other energy resources in different regions of the country with due consideration of environmental requirements, and enable the efficient and reliable functioning of competitive power markets.

The grid backbone until 2020 will continue to consist of 500-750 kV transmission lines. , A total of 25-35 thousand km of ≥ 330 kV transmission lines are expected to be built until 2020

7.7.3 Development of UES of Russia and investments

Substantial investment will be required for developing Russia’s power sector. According to a forecast contained in the Energy Strategy, US \$120-170 billion will be invested in the power sector during the term of the Strategy, including US \$100-140 billion in the construction and rehabilitation of generating capacities, of which US \$25-35 billion will be spent on nuclear power plants and US \$20-35 billion on power networks. The sources of investment will include the following:

- thermo generating companies: companies’ equity, debt and share capital;
- hydro generating companies with a government interest: in addition to the above sources, investment funds may be formed with hydro power plants’ income;
- federal network company and system operator: the centralized investment component of transmission and network tariffs.

7.8. Organizational structure of the electric power industry and its evolution

7.8.1 General features of the power industry restructuring carried out in 1992

RF Federal Law No. 35-FZ on the Power Sector, dated March 26, 2003, states that the government investment policy in the power sector seeks to ensure its sustained development and envisages drawing investment in all power sector segments and stricter government control over investment efficiency of natural monopolies. The government investment policy in the power sector will seek to draw investment by promoting a favorable investment climate, creating stable conditions for entrepreneurship, ensuring inviolability of private property and free movements of goods and services, securing economic rates of return on investment in power sector areas in which government regulation of prices/tariffs is used, protecting and supporting Russian generators; using innovative instruments to attract investment, and creating economic incentives for the introduction of highly efficient technologies in the power sector, *inter alia*, with a view to advance small and unconventional sources of energy.

The former vertically integrated structure of the State-controlled power industry underwent considerable changes as a result of restructuring carried out in 1992.

The bulk of the power industry in the country was amalgamated within a single holding company – the Russian Joint Stock Company of Energy and Electrification (RAO “EES Rossii”, RJSC UES of Russia). The authorized (charter) capital of UES of Russia was made up by the shares of the joint stock companies created on the basis of large thermal power plants (capacity ≥ 1 million kW), as well as hydroelectric plants with a capacity ≥ 500 thousand kW (a total of 30 joint stock companies), and in some cases - all the assets of large power plants. Also included in the authorized capital were most high voltage transmission lines that form the Unified power grid of the Russian Federation, the central and regional united dispatch directorates, the research and design (R&D) organizations, and part of the shares of the regional joint stock companies of energy and electrification (JSC-energo) established on the basis of regional power systems. Two regional power systems – OJSC “Irkutskenergo” and the Production Association of Energy and Electrification (PAEE) “Tatenergo” - did not become part of RJSC UES of Russia. As the case was, OJSC “Irkutskenergo” became a joint stock company independently. PAEE “Tatenergo” remained State property and received the status of State unitary enterprise.

At present, 74 power systems (JSC-energo), including 72 JSC-energo that are part of the RJSC UES of Russia, as well as OJSC “Irkutskenergo” and the PAEE “Tatenergo” operate on the territory of the Russian Federation.

Most JSC-energos operate within seven Interconnected Power Systems (IPS): six operating in parallel (IPS of Centre, Middle Volga, Ural, Northwest, North Caucasian and the Siberian IPS), and IPS of the East, operating separately from the IPS of Siberia. Some JSC-energos (for example, Sakhalinenergo, Taimyrenenergo, Magadanenergo, Kamchatskenergo) are isolated (island mode) power systems.

Till recently Nuclear power plants in the Russian Federation fell under the authority of the Ministry on atomic energy of the Russian Federation (Minatom of Russia). By RF President Decree of March 9, 2004, the Ministry was transformed into a Federal Nuclear Power Agency of the RF Industry and Energy Ministry

Centralized government control of 10 nuclear power plants (22.2 billion kW) is carried out through the single generating company – concern “Rosenergoatom” since April 1, 2002.

7.8.2. RAO “EES Rossii” (RJSC “UES of Russia”)

General characteristics

The Russian joint stock company for energy and electrification “UES of Russia” was established by Presidential Decree No923 on August 15, 1992, as an industry-wide holding company with broad competence in providing reliable supply of electricity and heat to the businesses and the population, centralized management of Unified power system of Russia (UES of Russia), carrying out investment programmes in the power industry, etc.

RJSC UES of Russia is one of the largest Russian companies in terms of sales. Most of the sales revenues of the enterprises of RJSC UES of Russia are proceeds from electricity sales: for JSC-energo – 77.2%, for JSC-power plants – 95.2%. In 2002, the total sales revenues on products, work and services rendered by JSC-energo and JSC-power plants belonging to the holding stood at 512.06 billion roubles, and gross profit was 38.7 billion roubles. *UES of Russia's* share of installed capacity and electricity generation is 70%.

RJSC UES of Russia is the largest holding in Russia in terms of payroll. The average number of personnel in the entities of the holding in 2002 was 631.87 thousand, out of which 13.2

thousand in the subdivisions of the head company of the holding (including the territorial subdivisions).

UES of Russia's investment in the Russian power grid facilities in 2003 grew by 31%, amounting to about RUR 79 billion. A total of 2,033,000 kW of capacity was brought on line in 2003, a threefold increase against the 2002 level. Two hydroelectric units (185,000 kW each) at Bureiskaya Hydro Power Plant and a second block at the Nizhnevartovsk Power Plant (800,000 kW) were put into operation.

The establishment of a single holding structure in the power industry allowed to keep its manageability. During a difficult transitional period, in the absence of the necessary legal base, faced by complete abandoning of State (budget) financing, high inflation and a severe crisis of non-payments, this approach allowed reasonably reliable power supply to the country to be maintained. A helpful factor was the preservation of a centralized hierarchical system of operative-technological control of the modes of operation of the united power system of Russia after the disintegration of UPS of the USSR on national power systems.

Structure of RAO "EES Rossii" (RJSC UES of Russia)

RAO "EES Rossii" is functioning structurally in the form of Company, Holding and Group (see Figure 7.11).

Figure 7.11. Structure of RAO "EES Rossii"

OJSC RAO "EES Rossii"	Holding RAO "EES Rossii"	Group RAO "EES Rossii"
Executive management	OJSC "System operator – Central dispatching Directorate of UES of Russia	
Affiliates, representative offices	7 unified dispatching department of power grids (CDU)	
Representative offices of OJSC RAO "EES Rossii" on management of joint stock companies	OJSC "Federal grid company of UES Territorial separate subdivisions- intersystem electrical grids (IEN)	
Regional enterprises of technical supervision	Breakdown of JSC-energo and JSC-power plants by affiliated representative offices and interconnected power systems	
Power plants Nizhegorodskaya HPP Saratovskaya HPP	Centerenergo (20 JSC-energo, 5 JSC-power plants, 2 power plants under construction) Sevzapenergo (8 JSC-energo, 4 JSC-power plants, 1 power plant under construction) Volgaenergo (8 JSC-energo, 2 JSC-power plants)	
Construction entities of UES	Yuzhenergo (11 JSC-energo, 7 JSC-power plants, 4 power plants under construction) Siberiaenergo (10 JSC-energo, 5 JSC-power plants)	
Affiliates of OJSC RAO "EES Rossii" in CIS countries	Vostokenergo (7 JSC-energo, 5 JSC-power plants, 2 power plants under construction)	
Resorts, printing houses etc.	CJSC "CDR FOREM" (until the spin-off of ATS) CJSC "Inter RAO EES" Managing power companies:	

	Far East power management company Caucasian power management company Northern power management company Middle Volga interregional power management company Ural power management company Management company "Volzhsky hydroelectric cascade"	Management companies - scientific-technical centers R&D organizations Construction and servicing organizations Organizations not specific to the power sector
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RAO "EES Rossii" (RJSC UES of Russia) is the head (mother) company; it includes affiliates, representative offices and other separate structural subdivisions.

RJSC UES of Russia includes the head company itself and its "daughters" and affiliates (D&A):

- energy and electrification open joint stock companies – regional power systems (JSC-energo);
- power plants - open joint stock companies of power stations (JSC-power plants);
- OJSC "SO-CDU of UES" (central dispatch directorate);
- OJSC «FNC of UES»;
- CJSC "Center on contracts and settlements (CAS) FOREM", established jointly by RJSC UES of Russia (80% of shares) and SC "Rosenergoatom" (20% of shares) to carry out the functions of the FOREM trade system operator. In 2002, the founders sold their shares to the new operator of the electricity market, the non-commercial partnership "Administrator of the trade system" (ATS);
- CJSC «Inter RAO EES» (60% of shares - UES Russi and 40% of shares - "Rosenergoatom");
- Power management companies;
- Power plants under construction.

UES of Russia holds shares of 239 joint stock companies including 72 AO-Energos, 36 AO-Power Plants, the Central Dispatch Officer of *UES of Russia*, 57 research and design institutes, nine commercial banks, *Energogarant* Insurance Company and 64 other joint stock companies engaged in industrial, construction, procurement, information and other lines of business.

The RJSC UES of Russia Group consists of the Holding and all "daughter" and affiliated companies, including R&D entities, as well construction, servicing and repair organizations and entities that are not specific to the power sector.

RJSC UES of Russia Assets

RJSC UES of Russia owns shares in 251 companies and manages its assets along corporate procedures, as well as under budget regulations of expenses, both within RJSC UES of Russia itself and its "daughters" and affiliated joint stock companies.

In 2002 RJSC UES of Russia also listed as its assets. the backbone transmission lines and ≥ 220 kV substations which form the unified grid of the Russian Federation; the property used for operative dispatch and control of power generation and transmission (except the property transferred to the authorized capital of OJSC «FNC of UPS» and OJSC "SO-CDU of UPS"¹³), 3 hydropower stations (HPP) with capacity ≥ 300 million kW, 5 State regional

¹³ Up to 70% of the property related to the grid was transferred by RJSC "EES Rossii" to OJSC "FNC of UPS" in 2002, the remainder will be transferred to this company in 2003. The property used for operational-dispatch and control of power generation and transmission was practically transferred in full to OJSC «SO-CDU of UPS» in 2002.

power plants (GRES) with capacity $\geq 1,000$ million kW, shares in the capital of power plants under construction, etc.

RJSC UES of Russia is also a shareholder in 73 regional joint stock energy and electrification companies (JSC-energo) and 41 joint stock companies – power plants (JSC-power plant), including 9 power plants under construction, 6 energy management companies, 57 R&D institutes and other infrastructure companies.

The stock of RJSC UES of Russia

RJSC UES of Russia is one of the largest Russian joint stock companies. The controlling block of shares is property of the State (see Table 7.9. and Figure 7.12).

The stock of RJSC UES of Russia on December 31, 2002 constituted 21.558 billion roubles, divided into 43,116,903,368 shares with face value of 50 kopeck, including 41,041,753,984 common and 2,075,149,384 preferential shares.

In the course of the first emission, 139,989,946 shares were issued, and another 42,976,913,422 shares were emitted in the course of the second emission in 1995.

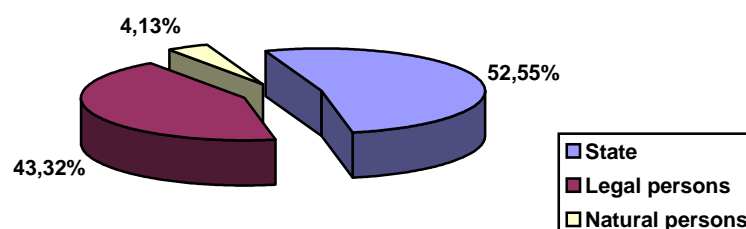
The State owns 22,657,866,385 shares, or 52.55% of all issued shares. There are 363,286 stockholders that own shares in the Holding.

Table 7.9. Largest shareholders of RJSC UES of Russia (as of December 31, 2002)

	Share in authorized capital, %
RF Ministry of property relations	52.5498
Non-commercial partnership «National Depository Center» (nominal holder)	11.5762
ING Depository/CJSC "ING Bank (Eurasia)" (nominal holder)	10.8547
Closed joint stock company «Depository-Clearing Company» (nominal holder)	6.7075
OOO "Deutsche Bank" (nominal holder)	6.4350

Source: RJSC UES of Russia.

Figure 7.12. Structure of the stock of RJSC UES of Russia (as of December 31, 2002)



Source: RJSC UES of Russia.

Blue – State, red – legal entities and nominal holders, yellow - natural persons

In addition to the government, other shareholders of UES of Russia include *Gazprom* (about 10%), *MDM Bank* (about 6%), *Bazovy Element*, an aluminum maker (about 8%) and *YUKOS* (estimated 5%).

7.8.3. Restrictions on asset privatisation in the Russian power industry

A number of legislative restrictions are imposed on changes to the property structure in the Russian power industry, including:

1. Federal law No 74-FL adopted on May 7, 1998 “On special features of transactions with shares of the Russian joint stock company of energy and electrification “Unified energy system of Russia” and shares of other joint stock companies in the power industry that are Federal property”. The Law established that:
 - 51% of the shares of RJSC UES of Russia must be retained in Federal ownership. Sale and other methods of disposal, as well as the use as a collateral of shares of RJSC UES of Russia and shares of other joint stock companies in the power industry that are Federal property within the prescribed quotas, can be carried out only on the basis of a Federal law;
 - 33% of the voting rights on shares in RJSC UES of Russia that are Federal property may be transferred to subjects of the Russian Federation, proportionately to electricity consumption by the RF subjects;
 - Maximum 25% of all types of shares in RJSC UES of Russia may be owned by foreign States, international organizations, foreign legal entities and their affiliated Russian legal entities, as well as by foreign natural persons.

Pursuant to Federal Law No. 36-FZ on *Specifics of Power Sector Operations in Transition and on Amending Certain Legislative Acts of the RF and Nullifying Certain Legislative Acts of the RF due to the Adoption of the Federal Law on the Power Sector*, dated March 26, 2003, Federal Law No. 74-FZ on *Specifics of Disposing of the Shares of the Energy Sector and Electrification Russian Joint Stock Company “Unified Energy System of Russia”, as well as the Shares of other Federally-Owned Power Sector Joint Stock Companies*, dated May 7, 1998, will be null and void effective January 1, 2005

2. Decree of the Government of the Russian Federation No 784 adopted on July 17, 1998 “On a list of joint stock companies producing products (goods, services) of strategic importance for the national security of the State, the shares of which are fixed Federal property and cannot be sold before the expiration of the term” approved a list of joint stock companies that produce products (goods, services) that are of strategic importance for the national security of the State; their shares, which are fixed Federal property, cannot be sold before the expiration of the term. In accordance with this list, 51% of the shares of RJSC UES of Russia and 40% of the shares of OJSC “Irkutskenergo” were declared “fixed” Federal property.
3. Federal law No 178-FL adopted on December 21, 2001 “On privatization of State and municipal property” regulates the procedure of privatising State and municipal property, in particular, the procedure for sale of shares of RJSC UES of Russia that are owned by the State. According this law, the Government of RF, in pursuit of a coherent State privatisation policy, must submit to the President of the RF for approval proposals on listings of strategic enterprises and joint stock companies, in particular open joint stock companies wherein shares are Federal property and wherein the participation of the Russian Federation in the management assures the strategic interests of State, the defence capabilities and the security of the State, the

protection of morality, health, the rights and legal interests of the citizens of the RF, as well as proposals on changes to these listings concerning:

- The composition of Federal State-owned “unitary” listed as strategic, in particular for their consequent privatisation (their transformation into open joint stock companies);
- The necessity and the degree of the participation of the Russian Federation in open joint stock companies listed as strategic joint stock companies, in particular for subsequent privatisation of shares of such joint stock companies.

The Government of the Russian Federation approves annually an indicative plan (programme) of privatisation of Federal property, which contains information on the features of Federal property earmarked for privatisation, and the expected time frame of privatisation. Shares of strategic joint stock companies and strategic enterprises may be included in the indicative plan (programme) for privatisation of Federal property only after the President of the RF decides to reduce the participation of the Russian Federation in the management of strategic joint stock companies, or to exclude the relevant enterprises from the lists of strategic enterprises. At the same time, the shares of RJSC UES of Russia (as well as of OJSC “Gasprom”) can be included in this indicative plan (programme) of privatisation of Federal property by a separate Federal law.

7.8.4. Development of wholesale electricity trade

The initial restructuring of the power industry, carried out in the process of establishing RJSC UES of Russia in 1992, has become, in spite of its incomplete implementation, the first step to the creation of competitive power industry structure in Russia. The foundation was laid for the formation of structurally separate generating companies on the basis of individual large electric power stations. A system of interregional wholesale trade in electricity, the Federal (all-Russia) wholesale market of electricity and power (FOREM) was established on the basis of such plants.

The subjects of FOREM are legal entities (see Figure 7.13):

- That carry out sale and purchase of electricity and power – “Federal level” TPP and HPP, joint stock companies of energy and electrification and other power supply organizations, as well as separate large electricity consumers (participants of FOREM);
- That provide services to FOREM (OJSC «SO-CDU of UPS», CJSC “CAS of FOREM”, RJSC UES of Russia, SC “Concern Rosenergoatom”).

Figure 7.13. Composition of subjects, sellers and buyers on FOREM



Source: RJSC UES of Russia.

Government of the Russian Federation

FEC of Russia

Releases lists
of FOREM Subjects

Installs tariffs for
sellers and buyers on FOREM

RAO "EES Rossii" OJSC "System operator – CDU of UES" CJSC "CAS of FOREM" State concern "Rosenergoatom (REA)" (9 NPP) Enterprises of Minatom of Russia – 2 subjects Thermal power plants – 12 subjects Regional suppliers – 1 subject Large customers – 22 subjects JSC-energo – 71 subjects Surplus JSC-energo – 4 subjects Balanced JSC-energo (purchase-sale) – 8 subjects AO-energo short on supply – 59 subjects	FOREM sellers NPP + REA (43.9% of supplies to FOREM) GRES (30.5%) HPP (19.5%) Surplus JSC-energo (6%) Others (0.1%)	FOREM buyers RF buyers (95% of purchases on FOREM) Export from FOREM (5%)
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FOREM functions via a system of contractual relations between a great number of its participants (subjects) related to each other by the unity of the technology, transmission, distribution and consumption of electricity in UES of Russia.

More than 140 organizations took part in FOREM in 2002 (Figure 7.13).

The suppliers of electricity and power supplied in 2002 298.6 billion kWh of electricity at an average output tariff 327.63 roubles/MWh totally, valued at 117.4 billion roubles.

The largest sellers at FOREM are NPP and GRES – correspondingly 43,9 and 30,5% of the total volume of supplies to FOREM.

In 2002, 289.963 billion kWh of electricity was sold to buyers on FOREM. Out of them, 275.747 billion kWh (95%) was supplied to Russian buyers, and the remainder was exported.

Electricity sales via FOREM constitute about 41% of total sales in UES of Russia.

In essence, FOREM is not a market for electricity. It is a modicum for sale and purchase of electricity (capacity) and services, which are carried out by its subjects within UES of Russia on terms and conditions regulated by the State. FEC of Russia sets individual tariff for each power plant on FOREM, taking into account its need in covering planned expenses and making a profit, and wholesale tariffs for electricity buyers, as well as the fees charged for rendering general system (network) services. The tariffs, which do not change during the entire period of setting particular levels under the tariff regulations, do not reflect changes in current conditions of electricity production and demand.

A large part of the generating capacity in the country has not been reassigned to a regime of wholesale trade and continues to operate within regional power systems. The resulting contradictions between the economic interests of new the subjects of wholesale trade – the power plants of FOREM and JSC-energo – became an obstacle for efficiently managing the modes of operation of UES of Russia. The regional power systems are interested, first of all, in loading their own capacities (often more costly) and minimizing electricity purchases and payments to electricity suppliers outside a given region. This results in sub optimal system load management. When extra capacity is available, sub-economic load distribution between electricity producers takes place, instead of selecting the best facilities for continuous operation and switching non-efficient facilities off. Up to now, the power plants of RJSC UES of Russia, which are generally more efficient, have a lower load factor than the power plants of regional power systems. As a result, fuel input for electricity production is not minimized.

FOREM, the activity of which is exclusively built on cost-plus mechanics of pricing, functions with insufficient efficiency and does not allow to realize the full economic benefits of the partial restructuring of the Russian power industry.

At the same time, the set-up of FOREM has some positive impact, by providing stability during a complex period of transition to market economy in Russia. The removal of large hydro and thermal plants from the regional power systems allowed to provide electricity by means of FOREM supplies to electricity-deficient regions of the country via the interconnecting transmission lines. In addition, a transfer in regime of wholesale trade of the largest generating facilities of the country with coming out of these facilities and interconnecting grid from the regional power systems created the initial structural prerequisites for development of competitive wholesale electricity market in Russia, where the power stations (generating companies) will be able to participate in selling 5-15% of their produce at market prices.

The Ruling of the Government No 643 of 24.10.2003 established the rules of the wholesale electricity market for the transitional period.

7.9. Plans of further reformation of electric power industry

7.9.1. Goals and tasks of reform

In accordance with the RF Midterm Social and Economic Development Program (2003-2005), the key objective of the government policy in reforming the power sector consists in resource-based and infrastructure support of social development of the economy with a parallel increase in the efficiency of the sector.

The main tasks of the power sector reform are as follows:

- formation of an efficient electricity market based on competitive pricing, vendor selection, non-discrimination of any its *bona fide* players and covering those Russian regions in which such market formation is technically feasible and economically useful;
- creation of an efficient mechanism to reduce both generation, transmission and dispatching costs and consumption costs through increased efficiency of energy uses;
- creation of an attractive investment climate in the power sector and attraction of requisite investment in obsolete capacity replacement and generating capacity additions, as well as rehabilitation and restructuring of the sector;
- phasing out of cross subsidies between various consumer groups to make electricity accessible, *inter alia*, by putting in place a system to support low-income consumer groups;
- provision of incentives to save power in all economic sectors;
- maintenance and improvement of the unitary power sector infrastructure including mainline networks and dispatching control systems.

Consequently, Russian energy sector reforms and UES of Russia restructuring will result in the formation of a competitive electricity market, increased energy company capitalization, greater investment attractiveness, a slower energy price growth and subsequent reduction of energy prices, which will provide a powerful incentive for economic development and improvement of the social situation of the population.

7.9.2 Preparatory stage of the power industry reform

The active phase of Russia's power industry reform began in 2000.

The initial concept and provisional contours for the implementation of the power industry reform were set by Decree of the Government of RF No 526 "On reform of the power industry in the Russian Federation", which approved the Main directives of power industry reform, and Decree of the Government of RF No. 1040-r, which approved a Plan of measures for the first phase of the power industry reform in the Russian Federation.

Various options for reforming Russia's power industry, their advantages and shortcomings have been under discussion since that time.

The following initial steps for Russia's power industry reform were carried out during 2001-2002:

- 1) The "Trade system Administrator of the wholesale electricity market of UES" (ATS) was established in November 2001 as a non-commercial partnership. RJSC UES of Russia became one of the ATS founders and obtained 50% of the votes in the Supervisory Board. Other founding parties include "Rosenergoatom", some Federal power plants and regional power systems, a number of large power consumers. In

early 2003, the shares in FOREM belonging to RJSC UES of Russia and concern “Rosenergoatom” were sold to ATS, and all commercial operator functions of both the regulated (FOREM) and competitive (“5-15%” market) sectors of the wholesale electricity market were assigned to the trade system administrator (ATS).

- 2) The Commission of the Government of RF on reform of the power industry in Russia was established on December 17, 2001 by Government Decree No. 873.
- 3) A single generating company was created on April 2002 on the bases of concern “Rosenergoatom” and ten Russian NPPs.
- 4) The Federal Grid Company (OJSC "FNC of UES") and the System Operator of UES (OJSC “SO-CDU of UES”) were established in June 2002 as 100% affiliates of RJSC UES of Russia”. The grid assets that belonged to RJSC was assigned to JSC “FNC of UES”. It is planned that in the future FNC will control the United national electrical grid (UNN), which will also include the main grid belonging to JSC-energo. The criteria for assigning a transmission line to UNN were established by Government Decree No. 881 adopted on 21 December 2001. JSC “SO-CDU of UES”, which carries out the functions of operational and dispatch control in the industry, was created on the basis of the Central Dispatch Directorate of RJSC UES of Russia (CDU) and the Unified dispatching control departments (UDU). Work is underway to include the regional dispatch control offices in OJSC “SO-CDU of UES”, and upon its completion the vertical dimension of dispatch control will be established in full from Federal level down to the level of the regions.
- 5) Government Decree No.226 adopted in April 2002 “On pricing of electricity and heat” approved “Basis of pricing of electricity and heat in the Russian Federation”. These new basis of pricing incorporate important changes in existing practices of State regulation of electricity and heat tariffs, which make the Russian rules and principles of regulation similar to accepted international standards.
- 6) The packet of law projects on electric power industry reformation was introduced in RF Federal Assembly by the Statement of RF Government Chairman in April 26, 2002 (see chapter 7.9.3).
- 7) In compliance to Government Decree No.1072 and Decision of Board of Directors of RJSC UES of Russia dated 27 July 2000, the Board of Directors of RJSC began the implementation of the preparatory stage of transforming the JSC-energo’s, i.e. one of the most important aspects of the power industry reform. The following measures were carried out:
 - Stock-taking and State registration of property rights on immovable property, right to use plots of land by RJSC UES of Russia and JSC-energo. Stock-taking involved 235 thousand facilities;
 - technological survey of power industry enterprises;
 - implementation of a system of separate accounting of expenses by type of activity branch and affiliated joint stock companies, isolation of non-core kinds of activity and discontinuing of the participation of branches and affiliates in such activities;
 - finance clean-up, implementation of cost management programmes, stock-taking of accounts payable and accounts receivable of the power industry etc.

The Board of Directors of RJSC UES of Russia approved in March 2002 the basic alternative for the restructuring of JSC-energo, which foresees the set-up of joint stock companies and the proportional allocation of their shares between their shareholders.

- 8) A meeting of the Commission on reform of the Russian power industry at the Government of the RF was held in 2002. It discussed and approved the criteria and the principles of setting up wholesale generating companies (WGC). Among the most important criteria are the minimization of possibilities for manipulation of prices at the wholesale electricity market by the WGC (in order to avoid the emergence of local monopolies in electricity production), and the provision of equal economic terms and conditions at the start-up of WGC operations. Taking these criteria into consideration, the Ministry of economic development and trade of RF introduced in the Government of RF a draft Decree on the set-up of generating companies at the wholesale electricity market, including the list and the structure of 10 WGC that are being established on the basis of Federal power plants, as well as of some large power plants that belong to JSC-energo.

Thus, the key political decisions on the reform of the power industry have been prepared and adopted (or prepared for adoption), and the first significant steps in their implementation have been made during 2001-2002.

7.9.3. Functioning of the power industry during the period of transition

The preparatory stage of the reform of the power industry, in particular of RJSC UES of Russia, was in fact completed with the adoption and going into effect on 1 April 2003 of a package of laws that form the legislative base of the power industry reform. The new stage of the reform has started.

The package of legislative acts on power industry reform includes the following Federal laws:

- FL "On power industry" as the key regulatory legal act setting forth the regulatory framework to govern relationships in the power sector;
- FL "On special features of power industry operations during the period of transition , on amendments to some legislative acts of the Russian Federation, and on declaring some legislative acts of the Russian Federation null and void due to the adoption of Federal law " On power industry";
- FL "On amendments and additions to Federal law "On State regulation of tariffs for electricity and heat in the Russian Federation";
- FL "On amendments and additions to Federal law "On natural monopolies" providing a clearer definition of natural monopoly activities;
- FL "On amendments and additions to Chapter Two of the Civil Code of the Russian Federation" that has amended regulation of relationships between electricity suppliers and users per Electricity Supply Agreements;
- FL "On amendments and additions to Federal law "On energy saving".

These laws outlined the main contours and the principles of future power industry operations in an environment of competition and strictly regulated State interference in business, and in particular:

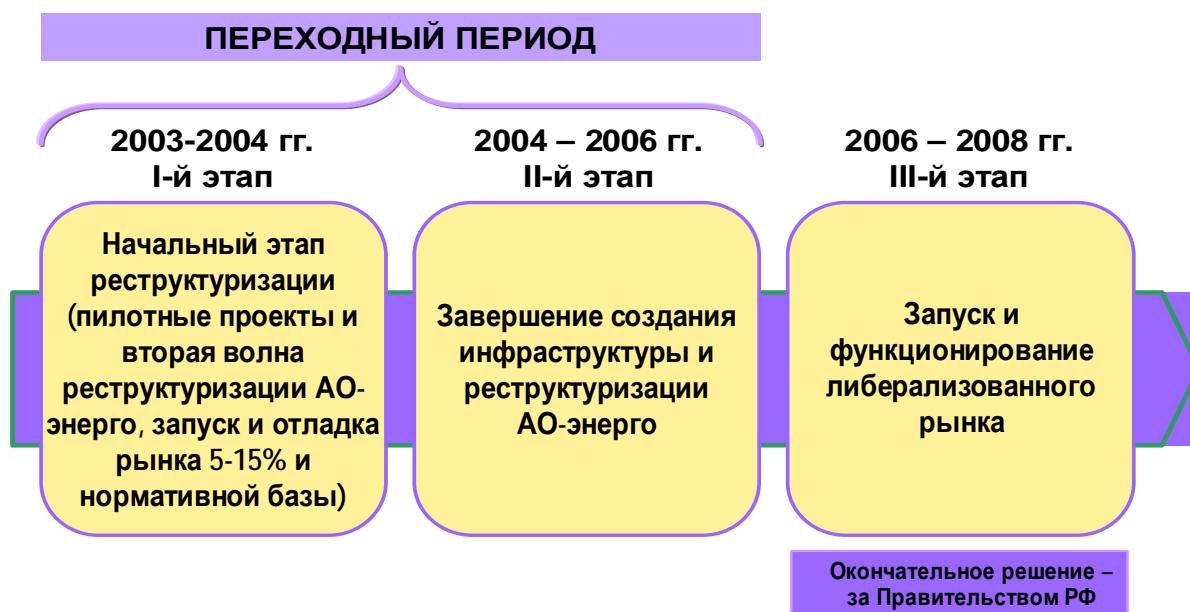
- Provided guarantees for reliable power supply to customers, shareholder rights and the interests of the State;
- Defined a path to the establishment of a full-fledged electricity market with free pricing;
- Regulated the process of the set-up of new power industry structure, including the set-up of infrastructure entities and market participants;
- Determined the distinct features of State regulation of the electricity market;

- Fixed down the unbundling of potentially competitive (generation and sale) and natural monopoly (transmission, distribution and dispatch) kinds of activity.

The series of laws reforming the power sector is supplemented with numerous decrees and directives of the RF Government that update and register the provisions of the key laws (Rules of the Wholesale Electricity Market/Power in Transition – RF Government Decree No 643 of October 24, 2003); Regulation on Including Power Grid Facilities in the Unitary National (All-Russian) Power Grid and on Maintaining a Register of Power Grid Facilities Included in the Unitary National (All-Russian) Power Grid – RF Government Decree No. 648 of October 28, 2003; List of Services Enabling the Functioning and Development of the Russian Unified Energy System – RF Government Decree No. 792 of December 30, 2003; Rules for Obtaining Approvals of Power Sector Natural Monopoly Investment Programs – RF Government Decree No. 19 of January 19, 2004; RF Power and Heat Pricing Basics and Rules of Government Regulation and Application of Heat and Power Tariffs in the RF – RF Government Decree No. 109 of February 26, 2004; Directive on Forming Wholesale Electricity Market Generating Companies – Government Directive No. 1254-p of September 1, 2003, Program for Changing the Government-Regulated Prices in the Power Sector – Government Directive No. 1754-p of December 1, 2003; Directive on Establishing Inter-Regional Main Network Companies – Government Directive No. 1939-p of December 29, 2003, etc. All told, the Government must adopt 50 decrees until 2005 to support the progress of reform.

To spell out in more precise terms the time frame and the essence of the stages of power industry reform, as derived from the adoption of the package of legislative acts on power industry reform, a more detailed discourse was required of the issues related to operations and the steps to power industry reform during the transition period. To this end, RF Government Directive No. 865-PC of June 27, 2003, approved an Action Plan to Reform the Power Sector in 2003-2005. For this purpose, a “*Concept of OJSC RJSC’s UES of Russia strategy for 2003-2008 (a.k.a. «5+5» Concept)*” was developed. *This concept was adopted by the RJSC UES of Russia Board of Directors in 2003.* The updated stages of reform according to the «5+5» Concept are presented on Figure 7.16. It should be noted that estimates about the time frame for the completion of the process of power industry reform are just indications, since the lawmakers assigned the authority and the responsibility on making a decision about the full-scale start-up of a competitive electricity market to the Government of RF, which will define the time frame for market start-up only after the new trade system and its participants are completely ready to begin operations.

Figure 7.14 Stages of power industry reform in Russia

**TRANSITIONAL PERIOD**

2003-2003 1 st stage	2004-2006 2 nd stage	2006-2008 3 rd stage
Initial stage of restructuring (pilot projects and the second wave of restructuring JSC-energo, start-up and debottlenecking of the 5-15% market and normative base)	Completion of the establishment of infrastructure and the restructuring of JSC-energo	Start-up and liberalized market operations

In compliance to the legal requirements to the process of power industry reform installed from the moment of enacting the Law “On power industry” (i.e. from the moment of its official publication), and until the rules on the wholesale market approved by Government take effect (i.e. not earlier than July 2005), the power industry will operate in a *transitional period* environment. This period is needed to adjust the market mechanics of business in the power industry and to assure a gradual transition from the existing system based on administrative regulation to the establishment of a competitive environment.

During this transitional period, work will be carried out in preparation of the power industry complex for operation in a new competitive environment that assumes the introduction of changes to the industry in the following main directions:

(1) Transition from vertically integrated energy companies to unbundled kinds of activity

A phased process is foreseen of unbundling the vertically integrated JSC-energo and moving to separately carrying out various types of activity.

By January 1, 2005, when according to the legislation owing at the same time assets used for carrying out natural monopoly and potentially competitive kinds of activity (e.g. electricity generation and purchase-sale) will be prohibited, all kinds of activity within regional JSC-energo companies must be assigned to independent entities that are expected to be set up as a result of the restructuring of such companies. In such a way, the organizational split will be implemented of power generation, transmission and sale,

dispatch and maintenance and repairs, as well as non-core kinds of activity. The system of merging all kinds of business within a single vertically integrated company will be replaced by a system of merging various types of activities within a managing company.

Further down the road, by the end of the transition period (i.e. not earlier than July 1, 2005), the unbundling of activities within affiliated entities or groups of entities will be carried out.

(2) Transition to a new mode of rendering electricity transmission and operative-dispatch control services

The rules that determine the mode of rendering electricity transmission and operative-dispatching control services become effective simultaneously with the Law “On power industry”. This will allow, even before the start-up of the competitive electricity market, to iron out all main issues related to the independent functioning of the entities of the technological infrastructure of wholesale market (the grid companies and the System operator), and their interaction with other entities in the power industry that will participate in the future competitive market (e.g., mode of delivery of services, regulation of fees and mode of payments for services, contractual relations, etc.).

(3) Introduction on the wholesale market of a system combining free pricing and regulated tariffs

Before the Law «On power industry» (regulating business transactions on the wholesale and retail power market) takes effect, the wholesale and retail power markets will operate under the rules of the wholesale power market for the transition period, as approved by the Government.

The quantity of electric energy, which may be sold at free prices by each supplier – subject of the wholesale market, will be determined by the Government of RF.

Tariff regulation during the transition period will be carried out in compliance to the current Federal law «On State regulation of tariffs...» No 41-FL adopted on 14 April 1995, while the rules of the Law “On power industry” will apply to cases not regulated by this law. The manner of tariff regulation has been amended in compliance to new legislation on power industry reform. Now the Government of RF will annually set ceiling electricity tariffs before the adoption of the budget. To protect the interests of the population (residential customers), separate ceiling prices will be set for this category of consumers.

(4) Completion of the process of establishing new participants in the power industry business

The process of establishing the organizational and asset structure of new participants in the power industry business will be completed within the transition period. For example, the participation of the Russian Federation in the authorized capital of entities that manage the single national electrical grid (FNC) and in the System Operator (currently they are 100%-owned affiliated joint stock companies of RJSC UES of Russia) should be increased to at least 52% before the transition period of reform is over (before the wholesale market rules approved by the Government take effect). Until such participation is assured in the authorized capital of FNC and SO, the disposal of FNC an System Operator shares and (or) their assets (except monetary funds) that have been contributed to their authorized capital, is prohibited.

In the more distant future, the Russian Federation will increase its participation in the authorized capital of these companies by any legal means, up to at least 75% plus one voting share. The increase of its share may be achieved, inter alia, by reducing its anticipation in generating companies, except hydropower generating companies. With respect to

hydropower generating companies, the legislation introduced the following restriction: In the process of the reform of RJSU UES of Russia, the reduction of the participation of the Russian Federation in the authorized capital (where such participation exceeds 50%), is not permissible in the instances of:

- Joint stock companies, which are owners or otherwise on the basis of Federal laws are in possession of hydropower plants that were commissioned before the Federal law “On electric power industry” took effect;
- Entities (or successor of their rights), relatively to which the said joint stock companies are affiliates (“daughters”).

Upon establishment of generating companies on the basis of power plants commissioned prior to the date when the Federal Law “On power industry” took effect, it is prohibited to include in the assets of any of the said companies generating equipment constituting 35% or more of the installed generating capacity within the price zone of the wholesale market.

The Trade System Administrator, set up by the participants in the market as a non-commercial entity, will not only perform the functions of a trade system operator itself (organization of trade at the wholesale electricity market, assuring settlements for supplied electricity and services rendered to the participants of wholesale market, etc.), but also act as a coordinating center for the development of the competitive wholesale electricity market (drawing and developing the wholesale electricity market rules, rules compliance control, placing orders for the soft- and hardware infrastructure of the wholesale market, development and introduction of a system of guarantees and settlements on the wholesale market, etc.). An equal representation of suppliers and buyers in the Supervisory Board of the wholesale market Trade System Administrator must be achieved by July 1, 2005. A Coordinating Council on wholesale market operations will be established with the Trade System Administrator, to control the organization of trade on the wholesale market. Representatives of the executive and legislative branches of the government will be members of the Coordinating Council.

(5) Substitution of free pricing mechanics for tariff regulations

Upon the end of the transition period, the rules of the Law «On power industry» that determine the mode of functioning of the wholesale and retail markets will take effect.

Since that moment, the mechanics of spot trade in electricity will be at work on the wholesale market. The basis of this mechanics is the auctioning of price bids of electricity suppliers and buyers that would result in the discovery of equilibrium prices within the price zones (the borders of the zones are defined by the Government); these prices will be used purchasing and selling electricity, and the power plant load factors will be determined.

In addition to spot trade, a direct contract market will operate, wherein electricity sale prices will be determined by the parties of the bilateral contracts (independently of the set equilibrium price).

When the transition period is over, the plan calls for sale of electricity on retail markets to be carried out at prices formed by supply and demand.

Tariff regulation will be kept in the power industry inasmuch as it is part of the regulating of the activity of natural monopolies (the Federal Grid Company and the System Operator). Government regulation will continue in the following areas:

- prices (tariffs) for electricity and heat supplied where competition is absent;
- prices (tariffs) for services rendered to assure system reliability;

- prices (tariffs) for the services of the trade system administrator;
- prices (tariffs) for heat;
- fees for hook-ups to the electrical grid;
- price mark-ups by “guaranteeing suppliers”.

In addition, regulation of ceiling (maximum) and/or floor (minimum) prices for electricity and prices (fees) for capacity will be carried out in cases where market participants use monopoly power and the pricing situation requires the interference of the State on the market.

(6) Restrictions on the rights of owners of electric grid facilities

The authority and the rights of the Federal Grid Company to carry out transactions and manage the facilities that are part of the unified national electrical grid will be definitely established upon the end of the transition period. Instruments will be enacted to limit the rights of the owners of the electric grid facilities that are part of the unified national electrical grid. From that moment on, contracting for electricity transmission via facilities that are part of the unified national electrical grid (regardless whose property the facilities are) will be done by the Federal Grid Company. Besides, the owners of such facilities will not have the right to execute particular transactions (decommissioning) involving the assets without the consent of FGC, except in cases where FGC has violated the terms and conditions of contracts for the use of the facilities within the single national grid as determined by the Government of RF, and in other cases foreseen by the Government of RF. In such case(s), a compensation is guaranteed to the owners of the facilities. Its amount must be identical to the amount they could receive, if they were to operate the assets themselves, less any operational expenses incurred in connection with the operation of the assets by the entity that manages the unified national all-Russian grid.

(7) Set-up of mechanics assuring reliable power supply to customers upon competitive market start-up

The set-up of a system of guaranteed supply will help assure the rights of electricity consumers to reliable power supply. This system will be established by the entities that will have the status of “guaranteeing supplier”; their task would be to provide electricity supplies to any person that has applied for such supply.

Besides, a mechanism will be established for providing guarantees by using budget funds on obligations on payment for electricity, for the purposes of assuring reliable and uninterrupted power supply to particular groups of customers serviced by guaranteeing suppliers (these groups will include economically most vulnerable consumers, as well as consumers who need power supply for national security reasons).

7.9.4. Main stages and elements of the overall plan for power industry reform

Stage I. Initial phase of restructuring – pilot projects (2003 – beginning of 2005):

During this stage, the following is planned:

1. Start-up of the transitional wholesale electricity market, wherein sellers and buyers of electricity will be able to sell 5-15% of power produced/purchased at unregulated prices («5-15%» market);
2. Possible testing of the full-scale competitive market model in a region (2004);
3. Completion of the full hierarchy of the services of the System Operator – from regional dispatch departments to CDU of UES of Russia.

4. Commencement of the establishment of wholesale generating companies on the basis of assets belonging to RJSC UES of Russia.
5. Establishment of interregional grid companies (INT) and assignment of the assets belonging to the main grids of JSC-energo to INT, or acquisition by OJSC «FSC of UES» of the main grid assets of JSC-energo (in case funds are available for such an acquisition).
6. Restructuring of pilot projects for the reform of JSC-energo, by unbundling various kinds of activity;
7. Commencement of the restructuring of second-tier JSC-energo;
8. Separation from RJSC UES of Russia of a number of fully fledged WGCs on the basis of thermal generating assets, including by swapping generating companies' shares for shares of RJSC UES of Russia.
9. Possible separation of OJSC "FNC of UES" from RJSC UES of Russia by means of RJSC UES of Russia restructuring.
10. Possible separation of some other fully-fledged companies.

Stage II. Completion of forming infrastructure and restructuring of JSC-energo (2005-2006):

During this stage, the following is planned:

1. Establishment of a Council on Reliability, charged, *inter alia*, with the task of coordinating the activities of the bodies participating in industry reform;
2. Restructuring of all other JSC-energo (except some isolated systems). In particular, regional generating companies (RGC) will be established on the basis of generation assets that remain in each JSC-energo after the allocation of power plants to WGC;
3. Possible start-up of a full-fledged competitive wholesale market within one or several interconnected power systems (IPS) – 2005;
4. Establishment of territorial generating companies (TGC) on the basis of interregional consolidation of RGC assets;
5. Establishment of interregional power distribution grid companies (IPDGC);
6. Completion of the establishment of wholesale generating companies (WGC);
7. Making a decision on restructuring OJSC RJSC UES of Russia involving the establishment of companies that have not been set up as a result of previous restructuring. The following companies will be established as a result of restructuring:
 - thermal WGC (which have not yet been separated from RJSC UES of Russia under the scheme involving the swap of shares in generating companies for RJSC UES of Russia shares);
 - 4 WGC crated on the basis of HPP;
 - the holding of Guaranteeing Suppliers, isolated JSC-energo, unconsolidated DNCs, other non-core and service assets of RJSC UES of Russia;
 - System Operator (OJSC "SO CDU of UES");
 - about 20 companies, each of them shareholder in a TGC;
 - IPDGC (one company).
8. Adoption of Decree of the Government of RF on market start-up, thus marking the end of the transition period of the reform of the Russian power industry.

Stage III. Fully liberalized market (2006-2008)

During this stage, the following is planned:

1. The liberalized wholesale and retail markets would begin operating;
2. The share of the State in the operator of the Unified national electrical grid, in the System Operator, would grow, and the share of the State in the wholesale and territorial generating companies would decrease, if expedient.

Thus, after the completion of all essential procedures for the restructuring of the holding by 2008, each shareholder in RJSC UES of Russia who owned shares before the restructuring, as long as he does not in the meantime acquire additional shares or sell his shares, will become a shareholder in all joint stock companies established in the process of restructuring OJSC RJSC UES of Russia.

The plan is to complete the main processes of power industry restructuring and establish thoroughly liberalized wholesale and retail electricity markets by 2008. By this year, major transformations expected to be undertaken by RJSC UES of Russia in 2006 (separating of companies from RJSC UES of Russia) should be over, including assuring the direct participation of the shareholders of RJSC UES of Russia in the separated companies. By 2008, the independence of most generating companies from each other should be achieved by means of reduction of the State holdings.

7.9.5. The target structure of the power industry in 2008

An important result of implementing the proposed reform in the power sector should be the beginning of regular functioning of a new wholesale electricity market. According to the government-approved reform plan, between 5 and 15% of total power generation in Russia must be sold on the new market. The new market got going on November 1, 2003 after the appointment of a Trading System Administrator (TSA), Chairman of the Board on the new wholesale electricity market. On a parallel track, a System Operator – Central Dispatching Office (SO-CDO) was formed on the basis of the UES of Russia's dispatching office. The SO-CDO must serve as a technical basis and infrastructure of the new market and provide uninterrupted dispatching of electricity supplies.

Between November 1, 2003 and February 2004, the number of players in the free sector of the wholesale electricity market grew from 14 to 70 including 10 players that are not part of UES of Russia's system.

As a result of Rosenergoatom's entry to the market in December 2003, trading instantly grew from 27 to 68 million kWh. Traded from November 2003 to February 10, 2004 was a total of 5.8 billion kWh.

Thus, commencing November 1, 2003, wholesale electricity trading has occurred in two FOREM sectors: the regulated sector where prices are set by the government, and the free one.

Regulated market players use a simplified payment mode, i.e. a one-component tariff in lieu of a two-component one (an electricity price plus a power fee)

In early 2004, the following regulated rates will be used: RUR 704.6 per 1,000 m³ in January, RUR 764.83 per 1,000 m³ in February and RUR 765.1 in March.

Another important area of reform relates to the formation of 10 wholesale generating companies (WGC) based on federal power plants managed by UES of Russia, which will serve as a basis for a Russian electricity market. RF Government Directive No. 1254-p of September 1, 2003, Composition of Generating Companies of the Wholesale Electricity Market, enabled UES of Russia to begin developing a WGC corporate mechanism. By an expert estimate, the proposed ten companies will account for about 40% of total power generation.

8. NUCLEAR POWER SECTOR

8.1. General characteristics

There are 30 nuclear power units currently operating in Russia at 10 NPPs with total installed capacity 22.2 million kW. Among them there are 14 power units with WWER reactors, 11 power units with RBMK reactors, 4 power units with EGP reactors of the Bilibinskaya NCHP type (channel water-graphite reactors) and 1 fast neutron unit – BN-600 (see Table 8.1.).

Table 8.1. Installed electric capacity at NPP in Russia, 2001

NPP	Type of reactor	Rated capacity, MW	Number of units
Balakovskaya	WWER-1000	4,000	4
Kalininskaya	WWER-1000	2,000	2
Kolskaya	WWER-440	1,760	4
Novovoronezhskaya	WWER-440	880	2
Beloyarstaya	WWER-1000	1,000	1
Kurskaya	BN-600	600	1
Smolenskaya	RBMK-1000	4,000	4
Bilibinskaya	RBMK-1000	3,000	3
Leningradskaya	EGP-6R	48	4
Volgodonskaya	RBMK-1000	4,000	4

Source: RF Minatom.

In 2002, NPP produced 142 billion kWh of electricity, or about 16% of total electricity generation in RF, at installed capacity load factor (ICLF) of 72%.

In the European part of Russia, where the overwhelming majority of NPPs are located, the share of NPP in overall electricity production is as high as 22%, and in particular, in the Northwest interconnected power system (IPS) - 41,4% and in the Central Chernozem (Black Earth) region – about 80%. NPPs provide power supply to 35 out of the 89 subjects of the Russian Federation.

Almost all operating power units at NPPs were constructed and commissioned during the period from 1971 to 1993. Out of this number, 12 first-generation power units with total electric capacity 5,8 million kW were designed and constructed before the publication of the main legislative documents on nuclear power engineering safety. They have been in operation on the average for 25 years. For such units, a programme is foreseen for phased upgrades and replacement of equipment with expired service life, with the objective of enhancing safety and extending service life by 10 years. Second-generation power units (17 power units with total electric capacity 15.5 million kW) were designed and built in compliance to standard safety requirements introduced in 1982 and 1988.

These units have been in operation on the average for 15 years. The first unit of Volgodonskaya (Rostovskaya) NPP fitted with a WWER-1000 reactor was commissioned in 2001. Four more similar units are expected to become operational within five years.

Russian-designed NPPs with a total capacity of 48 million kW have been constructed in various countries, including 22 million kW – in Russia, 13 million kW in CIS countries, 13 million kW in “far abroad” countries (Bulgaria, Hungary, Slovakia, the Czech Republic and Finland).

Electricity generated at NPPs in Russia is one of the most important sources of revenue for the industry. In addition to deliveries to users in the country, a considerable part of the generated power is exported to CIS, Nordic countries and East Europe. Exports of uranium and ready-to-use nuclear fuel are also an important source of funds. Despite the introduction of restrictions by some countries on the international uranium market, the share of such export sales in world sales of such kinds of products is about 25%. The annual volume of nuclear fuel exports to the “far abroad” is about \$300 million, and to CIS countries - \$70 million. The export of uranium enrichment services to western customers and the manufacturing of fuel rods for European NPPs also play an important role.

8.2. Prospects for the nuclear power sector

The increasing power demands in the economy of the country will to a large extent be met by growing power generation at nuclear power plants, which should increase in practical terms (in case the optimistic or the favourable development scenarios outlined in the draft Energy Strategy of Russia materialize) from 140 billion kW in 2002 to 195 billion kW in 2010 and up to 300 billion kW by 2020.

In addition, it is foreseen to increase the production of heat from nuclear energy sources to 30 million Gcal/year. In case the moderate scenario for the development of the economy emerges, electricity production at NPPs would be lower - 230 billion kW in 2020. The opportunity to additionally increase power output at NPP to 270 billion kW is linked to the construction of NPP–HPSPP (pumped storage power plants) arrays, the use of electricity for natural gas transportation via main pipelines, and the increase of heat production in regions where active and new NPP are located.

As a result, the share of electricity produced at NPP should increase in total output from 16% in 2000 to 23% by 2020 (in the European part – up to 32%).

To achieve these targets, it would be necessary to increase the capacity of nuclear power plants almost twice (new facilities should be commissioned at a rate of up to 2 GW per year).

Nuclear power engineering investment needs to 2020 would be \$25-35 billion and will be covered from tariff sources as well as by State budget funds, investment and financial sources participating on project financing terms with State guarantees.

The main directions for the development of nuclear power engineering are defined, apart from the «Energy strategy of Russia until 2020 r.», by the «Strategy of nuclear power engineering development in the first half of XXI century» and the Sub-programme «Safety and development of nuclear power engineering in the Russian Federation in 2002-2005 and thereafter to 2010» of the Federal target programme «Energy-efficient economy».

The main goals in developing the nuclear power engineering sector are the improvement of its efficiency and competitiveness, the reduction of the specific cost of replacing and adding facilities, while complying at the same time to the requirements of modern safety standards and rules.

Nuclear power plants that are State property and are part of the unified State generating company are expected to become full participants in the emerging competitive electricity market.

The above-mentioned targets for the development of the nuclear power engineering would control a moderate growth of tariffs for power generation from an initial level of 1.4 cent/kWh in 2003 to 2.4 cent/kWh by 2015, and that would provide an advantage over organic fuel-fired power stations.

Total reserves of natural uranium and accumulated reserves of recycled uranium are sufficient to provide fuel to the nuclear power sector within the prescribed development targets without any restriction, as well as in the more distant future.

The improvement of operational safety in the context of the modern nuclear power sector involves the modernization and the extension of the service life of active units, with their consequent substitution by new units.

The features that are inherent to the nuclear power sector are:

- The existence of a single complex (cycle): «fuel and raw material resources – energy production – waste handling»;
- The existence of sector-wide investment policy and the implementation of target programmes currently underway assure the stability, rehabilitation and improved efficiency of the available assets and the development of the nuclear fuel base, the production of nuclear energy and the facilities for processing and utilization of radioactive waste;
- The ability to carry out economically profitable complex projects involving sophisticated technology and meeting modern safety and power system reliability requirements, particularly involving innovative technologies;
- The opportunity to enter the communal (social) heat market by substituting for low-efficiency heat production;
- The existence of domestic power plant engineering and extensive construction capabilities.

Known and possible reserves of natural uranium, accumulated reserves of recycled uranium and existing capacities within the nuclear fuel cycle are sufficient to service the forecast development parameters of the nuclear power sector, provided, however, that an economically substantiated investment and foreign trade policy is in place. The long-term nuclear power engineering technology policy foresees the gradual introduction of new nuclear power technology (fast neutron “breeder” reactors), thus closing the nuclear fuel cycle by using uranium-plutonium fuel, an approach that will remove the restrictions on fuel and raw material availability.

8.3. Organizational structure of the nuclear power sector

Nuclear power plants in the Russian Federation fall under the jurisdiction of the Ministry of atomic energy of RF (Minatom of Russia). Centralized State control of nine out of the ten nuclear power plants was carried out until April 2002 by the State enterprise «Russian State concern on electricity and heat production at nuclear power plants» (concern «Rosenergoatom», established in 1992). Since April 1, 2002, the «Rosenergoatom» was transformed into a generating company. All 10 operating Russian NPPs, as well as the management of NPPs under construction and enterprises and organizations servicing NPPs, are part of the unified generating company – concern «Rosenergoatom». In this way, all facilities in the nuclear power sector of the Russian Federation are Federal property.

8.4. Nuclear power sector legislation

In addition to the Federal laws mentioned above («On closed administrative-territorial entity», «On subsurface», «On economic assessment», «On licensing particular kinds of activity» and «On environmental protection»), the following laws apply to the nuclear power sector:

1. Federal law No 5151-I adopted on June 10, 1993 «On certification of products and services».
2. Federal law No 68-FL adopted on December 21, 1994 «On protection of population and territories from emergency situations of natural and technical origin».
3. Federal law No 41-FL adopted on April 14, 1995 « On State regulation of tariffs for electricity and heat in the Russian Federation».

4. Federal law No 170-FL adopted on November 21, 1995 «On the use of nuclear energy».
5. Federal law No 3-FL adopted on January 9, 1996 «On radiation safety of the population».
6. Federal law No 29-FL adopted on April 03, 1996 «On financing of production and facilities involving radioactivity and nuclear danger of extreme hazard».
7. Federal law No 29-FL adopted on June 24, 1998 «On waste from production and consumption».
8. Federal law No 52-FL adopted on March 30, 1999 «On sanitary-epidemic well-being of the population».
9. Federal law No 92-FL adopted on July 10, 2001 «On special ecological programmes for rehabilitation of radioactively polluted areas of territory».
10. Federal law No 94-FL adopted on July 10, 2001 “On introduction of supplements to Federal law «On the use of nuclear energy».
11. Federal law No 7-FL adopted on January 10, 2002 «On environmental protection».

Some laws establish separate restriction related to the carrying out of economic activity in the nuclear power sector. Federal Law No 7-FL adopted on January 10, 2002. «**On environmental protection**», Article 48 introduces the following requirements for using radioactive substances and nuclear material:

1. Import to the Russian Federation of radioactive waste and nuclear material from foreign States for the purpose of their storage or burial, as well as submersion in water, conveyance of radioactive waste and/or nuclear material to outer space for burial, are prohibited, except in the cases listed in this Federal law.
2. Import to the Russian Federation from foreign States of used (irradiated) fuel rod assemblies of nuclear reactors for the purpose of temporary storage and/or processing is permissible in case a State environmental assessment and other State assessments pertinent to the relevant project have been carried out, and a general reduction of the risks of radioactive impact and improvement of environmental safety levels have been substantiated as (an expected) result of the implementation of the relevant project.
3. Import to the Russian Federation of used (irradiated) fuel rod assemblies for nuclear reactors shall be carried out on the basis of international agreements of RF. The import modality to the Russian Federation of irradiated fuel rod assemblies for nuclear reactors is established by the Government of RF proceeding from the basic principles of assuring the non-proliferation of nuclear weapons, environmental protection and the economic interests of RF, taking into account the priority right to return the radioactive waste resulting from the processing to the State of origin of the nuclear material or to guarantee their return».

Article 51 of this law prohibits the import of hazardous waste and radioactive waste to the Russian Federation for their burial or/and rendering harmless.

Federal law of the Russian Federation No 28-FL adopted on February 10, 1997 «**On the use of nuclear energy**» (as amended) requires that:

1. All nuclear material, radioactive waste-containing nuclear material intended for defence, nuclear power plants, radioactive sources and storage sites shall be Federal property.
2. Nuclear facilities and storage sites intended for defence shall also be Federal property, unless otherwise provided by a law.
3. Radioactive sources, radioactive substances and radioactive waste that does not contain nuclear materials, which are not intended for defense, may be Federal property, as well as property of subjects of RF, municipal property, in the manner prescribed by the law. Ownership of the said objects shall be transcribed in a title certificate issued in a manner defined by the Government of RF.
4. It is permissible to transfer nuclear material that is Federal property for use only to legal persons in possession of permits (licenses) issued by the State security regulation authorities for the right to carry out work in the area of using atomic energy, and on the basis of agreements with the State body that is specifically authorized for the purpose.
5. Radioactive substances and radioactive sources not intended for defense and used in medicine, scientific research and industry, may be owned by legal persons.

It should be noted that the legislation of RF on the nuclear power sector is the stage of formation, and therefore it may be further adjusted and improved in the future.

9. DISTRICT HEATING SECTOR

Russia is a country of severe cold climate, and for this reason the supply of heat to its population and industry is an important factor for the smooth functioning of the national economy and is considered to be one of the important national security issues.

The heat supply sector is not just one of the most socially important sectors of the economy, but also one of the most heat-intensive sectors of economy, with energy consumption amounting to nearly 40% of the energy resources used in the country; more than a half of these resources are used in the municipal utilities and the residential sectors.

Despite all of this, the heat supply sector, in contrast to other major fuel and energy sectors, does not have a uniform technical, structural-investment, organizational and economic policy. The centralized heating systems, including heating systems incorporated into JSC-energy, JSC-power plants and RJSC UES of Russia Holding, respectively, are the only ones that are relatively transparent.

Presently, no consolidated heat supply balance for the country is available. As a result, a whole number of ways and means of heat generation and consumption cannot be accounted for, and, therefore, are beyond any economic and energy assessment.

Nearly 72% of the total heat energy is generated at centralized sources (with output capacity exceeding 20 Gkal/h), the remaining 28% are produced at decentralized sources, including 18% - by autonomous and individual sources. In addition, a minor part of heat demand (about 4.5%) is met via waste heat utilization at technological facilities; the share of heat generated from renewable energy sources is exclusively small.

In Russia, the thermal power sector is interwoven with the heat sector, which means that the thermal power plants generate more than 60% of the electricity and almost 32% of heat consumed throughout the country; in practice, one third of the electricity generated by the thermal power plants is produced in cogeneration (heat and power) mode.

The efficiency of the general-purpose heat and power plants and a number of federal district power plants that supply large volumes of heat is largely contingent on the efficiency of operation of the centralized heating systems that these plants are a part of.

In addition to the above-mentioned combined heat and power plants and state district power plants, and the nuclear cogeneration power plants, there is a great number of so-called "industrial" combined heat and power plants and boiler rooms operating in urban areas and integrated into the industrial enterprises that they serve. These facilities supply the industries and the adjacent residential areas mainly with heat and electricity. A large number of boiler rooms are municipally owned. Some individual boiler rooms that are built-in in the houses they supply or attached thereto, are usually owned by the entities that own the buildings.

The centralized heat supply systems are local monopolies. The centralized heating systems in Russia generate 1.4 bln. Gkal annually in total. About 600 million Gkal of heat is annually generated by the 68 thousand public utility boiler rooms. About 70-95% of the housing stock in many large cities (with population exceeding 100 thousand people) are supplied by the centralized heating systems.

The structure of the fuel balance of the heat supply sector is characterized by the high share of gas (60%). This is followed by coal (27%) and liquid fuels (13%).

The organizations belonging to RJSC UES of Russia are the major heat suppliers. They carry out centralized heat supplies to more than 150 towns and villages in the Russian

Federation, providing nearly 40% of effective heat supplies to consumers of heat energy in the areas covered by centralized heat supply. Of the total volume of heat generated by the heat and power plants of RJSC UES of Russia, more than 93% are generated by the heat and power plants of the regional power grids. The remaining quantity of heat is generated by independent operators, typically by boiler rooms and heat and power plants belonging to industries and municipal heat supply enterprises.

“The Energy Strategy of Russia until 2020” mainly focuses on the issue of **upgrading heat supply and restructuring of the heat supply systems** in Russia. The *upgrading of the heat supply facilities and equipment* constitutes the most urgent problem. Nearly 50% of all public heat supply and utility networks need replacement, with at least 15% of them unfit to use. On the average, about 70 accidents are annually registered per 100 km of heat supply network. In addition to heat losses, more than ¼ of cubic kilometre of water is lost each year. About 82% of the heat supply network lines require major overhaul or replacement. The poor condition of the heat supply networks is attributed to the scarcity of funding, wear and tear of facilities and the heat supply lines, poor management.

The problems that have accumulated over the years in *the heat supply sector adversely affect the smooth operation not only of the residential and municipal facilities, but the entire fuel and energy complex of the country. For this reason, the solutions to these problems and the restructuring of the residential and municipal utility sector that are currently underway should be organizationally and economically related to the restructuring of RJSC UES of Russia and the transformation of the gas industry.*

A set of measures needs implementing to address the accumulated problems:

- **Improving the organizational, legal and regulatory framework:**
 - incorporation of the heat supply networks of the JSC-energos and the municipal heat supply networks in a single energy enterprise;
 - updating, expansion and, if needed, creation of a comprehensive regulatory framework to govern the process of addressing heat supply-related problems through the concerted efforts and means of all thermal energy producers;
 - creation of information and analytical data bases and organization of monitoring of all heat supply systems currently in operation to calculate actual costs of energy resources used for heating, with subsequent adjustments.
- **Development of new approaches to tariff regulation, demand-side management and promotion of market economy relations:**
 - Introduction of tariffs for heat with separate charges for capacity and energy, as well as differentiated tariffs depending on consumed quantity, season, duration of use in peak periods, and, most important of all, separately by townships (possibly also by specific sources);
 - Improving the efficiency of operation of energy sources and heat supply networks by reducing operating costs for the heat supply system as a whole, by attracting private investments, creating conditions conducive to making the heating sector attractive to business;
 - Ensuring demand-side management of heat demand by consumers’ resources and means;

- Promotion of market relations and restructuring of ownership, which should put heat generation structure on the track to decentralization and reduced dependency on JSC-energос.
- **Technical upgrading of the sector:**
 - Reconstruction, upgrading and expansion of currently operated systems of heat supply in order to ensure maximum use of cogeneration in producing energy and heat;
 - Use of up-to-date heat supply and district heating technologies, reduction of production costs for thermal energy by introducing gas turbine, steam-injected gas turbine, reciprocating gas-fired engine and gas-propeller heat and power plants of various capacity, thus reducing the operating window of gas-fired boilers currently in use to peak demand periods;
 - Measures aimed at improving the reliability of heat supply networks;
 - Providing back-up mobile and fixed capacities for each heat supply system and fuels reserves depending on the duration of the severe cold weather period and the absolute temperature readings.

The energy strategy of Russia, taking into account the severe climate of the country, regards *heat supply as one of the most important priorities of the state economic and energy policy*. Therefore, *the major task of management* is the creation of a system which could ensure the coordination of the activities of various public and private enterprises and organizations in the interests of the consumers. Once such a system is in place, the state should limit itself to the tasks of developing strategic directions for the heat sector, analysis of problems that may arise and ways of addressing such problems, and state supervision.

The energy strategy of Russia for the period until 2020 foresees an increase of heat supply in the country from 1,437 million Gkal in 2002 to 1,570-1,625 million Gkal in 2010, and up to 1,720-1,820 million Gkal in 2020.

The target levels for the development of heat supply call for substantial investment. The energy strategy assumes that the heat supply over 2003-2020 will require nearly \$70 billion in investment, which may be secured out of regional and municipal budgets, tariff revenues and investor funds.

10. RENEWABLE ENERGY AND LOCALLY USED FUELS

The renewable energy resources (renewables) are solar, wind, hydro, geothermal, biomass, low-grade heat of various media.

Regarding the volume of energy production based on renewables, Russia lags behind most of the European countries, the US, India, China by 10-15 years, even though in terms of research and development of new kinds of equipment for non-traditional energy national design bureaus and military industry enterprises are in leading positions.

The future of renewable energy is not determined by its ability to significantly substitute other kinds of fuels and energy in the overall energy balance, but by the role it would play due to its specific features during the transition to the energy industry of the future. *Renewable energy facilitates the solution of the following problems:*

- security of heat and energy supply to residential consumers and industries in areas of decentralized energy supply, first and foremost in the regions of the Extreme North and territories equated with it. The of supplies of fuel brought into these regions in Russia from elsewhere amounts to 7 million tons of oil products and more than 23 million tons of coal;
- providing guaranteed minimum of energy supply to residential consumers and industries in areas where centralized energy supply is available, but experience deficit of energy, thus preventing loss and damage caused by emergency and load management shut-outs;
- reduction of harmful emissions by energy installations in cities and settlements centers with adverse environmental situation, as well as in recreation and leisure areas used by the population.

The inexhaustibility and the environmental “purity” of these resources precondition the need of their intensive use.

According to estimates, the technical potential of the renewable energy resources amounts to about 4.6 billion tons of fuel equivalent per year, i.e. exceeds the consumption of all fuel and energy resources in Russia; however, the economic potential has been determined at 270 million tons of fuel equivalent per year, which amounts to a bit more than 25% of the annual consumption of fuel and energy resources in Russia. Currently the economic potential of the renewable energy resources has increased significantly due to the growth of prices on traditional fuels and the falling prices for equipment used for renewable energy (see Table 10.1).

Table 10.1. Resources of renewable energy in Russia (mtoe/year)

Resource	Gross potential	Technical potential	Economic potential
Small-scale hydro energy	360.4	124.6	65.2
Geothermal energy	*	*	115.0**
Biomass energy	$10 \cdot 10^3$	53	35
Wind energy	$2.6 \cdot 10^3$	2,000	10.0
Solar energy	$2.3 \cdot 10^6$	2,300	12.5
Low-grade heat	525	115	36
Total renewable energy	$2.34 \cdot 10^6$	4,593.0	273.5

* According to the estimates, geothermal energy resources in the upper 3 km layers of the crust amount to about 180 mtoe.

** The figure for economic resources includes resources to be developed first (thermal waters and para thermal springs using geo-circulation technologies).

Source: Draft «Guidelines for the Energy Strategy of Russia until 2020».

Solar and hydro energy are at the top of the technical potential of the renewable energy resources.

In the more distant future it is envisioned to *use primarily the following kinds of renewable energy*: wind, geothermal, solar, hydro energy of non-constrained river flows, biomass, low-grade heat (with heat pumps), that allow to generate mainly heat and electricity.

Resources of renewable energy are available in different quantities and combinations in virtually all parts of the country and can be used for both individual energy supply and energy supply to decentralized consumers or groups of such consumers, and in combination with centralized energy supply systems.

In spite of all the difficulties experienced in the process of creation of renewable energy production, the share of renewable energy production in electricity generation in 2001 amounted to about 0.5% of total generation or 4.2 billion kWh, and the volume of substituted organic fuels - about 1% of the total consumption of primary energy or about 10 million tce/year.

The estimates show that by 2010 about 1 million kW electricity and 1.2 million kW heating capacity based on renewable energy resources may be installed, which, however, will require state support.

Locally used fuels are in the first place peat and wood. Total reserves of peat on the territory of Russia are estimates at 162.7 billion tons of 40% moisture content peat. The regions of the European North, West Siberia, Urals and North-West are best-endowed with peat resources. In these regions the peat industry and the use of peat could have a notable role.

Peat is a natural resource the reserves of which can be replenished, given appropriate conditions. Annual additions of peat on swamps in Russia amount to 250 million tons (40% moisture).

Due to the low labour and energy intensity of fuel peat production, simplicity of transport schemes and short distances of transportation, on short distances peat continues to be competitive with other kinds of solid fuel that are carried in. Moreover peat is characterized by low sulphur and ash content, which results in low harmful emissions upon its combustion.

Electric power plants consumed 1.7 tons of peat in 2000.

Production of peat for fuel for the period until 2010 is forecast in the following areas of energy use:

- supplies to new heat and power plants with total capacity of 20-30 MW and boiler rooms in the northern regions with sufficient peat reserves that are short on energy – up to 4 million tons;
- expanded use of peat as local fuel by municipal utilities and households by increasing the production of lump peat to 3 million tons, rehabilitation and development of production of peat briquettes - up to 1 million tons.

Wood is one of the kinds of household fuels. Currently in the regions of Russia more than 5 million households heat up by wood. More than 50 million cubic meters of wood are needed for this purpose. Approximately 6 million cubic meters of wood are sold centrally by fuel supply enterprises of different forms of ownership. In order to eliminate the deficit

in the balance of wood used for fuel, it is necessary to maintain the existing wood stocking capacities and create new ones on the basis of forestry, timber and fuel enterprises.

In order to overcome the lagging of Russia regarding the scale of renewable energy use, conserve the reserves of depletable organic fuels for future generations, significantly improve energy supply to settlements of the constituent entities of the Russian Federation that are remote from energy networks, as well as improve the environment in the ecologically stressed regions, the draft «Energy Strategy of Russia until 2020» envisions the adoption of the following measures:

- elaboration and adoption of a Federal law «On renewable energy resources» and the corresponding regulations by the Government of the Russian Federation;
- provision of governmental support to the creation of inter-seasonal stocks of peat and wood fuels.