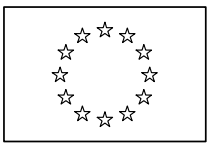

COMMISSION OF THE EUROPEAN COMMUNITIES

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COMMISSION STAFF WORKING PAPER

Energy Dialogue with Russia
Update on progress

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1. INTRODUCTION

1.1. The initiative

The EU-Russia Energy Dialogue has become a major element in bi-lateral EU-Russia relations since it was launched at the EU-Russia Summit of October 2000.

The short and medium term tasks for the Dialogue were established at the EU-Russia Summit of October 2001 and further issues were identified at the Russia-EU Summit of May 2002 *(reference annex 1)*. A third joint progress report from the two sole interlocutors was presented to the EU-Russia Summit of November 2002 and a detailed Commission Staff Working Paper[1] issued in the same month. Further progress was highlighted in the Commission Staff Working Paper of April 2003[2]

A number of significant results have recently been achieved both in the period leading up to the Rome EU-Russia Summit of 6th November 2003 and since then. The purpose of this report is to give a comprehensive overview of the progress achieved and noted in the joint report from the two interlocutors since the latest Commission staff working paper and to keep all parties, including the candidate countries, informed of the most recent developments in the Energy Dialogue.

1.2 The growing EU-Russia Energy interdependence.

The EU is Russia's largest trading partner, accounting for nearly 25% of Russia's imports and some 35% of her export trade. Russia's importance for the EU is also growing, as can be seen from the following table:

EU-Russia trade: 1999-2002 (million €uro)

Year	EU Exports	EU Imports
1999	14 727	25 977
2000	19 917	45 724
2001	27 961	47 686
2002	30 407	47 560

This growing relationship is particularly visible in the energy sector, where the mutual interdependence is most marked. Russia is today the single most important external supplier of natural gas to the EU, an importance that will increase following enlargement. In an EU of 25 Member states, Russia will account for some 50% of total gas imports or 25% of total gas consumption.

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1 Energy Dialogue with Russia – update on progress. SEC(2002) 1272 of 20.11.2002

2 Energy Dialogue with Russia – update on progress since the November 2002 Summit. SEC(2003) 473 of 15.04.2003

In the context of the EU-Russia Energy dialogue, both sides identified from the outset a potential of 70-80 bcm of incremental supply which could be made available from Russia to the EU. Indeed, according to the new Russian Energy Strategy, Russian gas exports to Europe (including South-East Europe and Turkey) could rise from around 127 bcm in 2002 to 160-165 bcm per year by 2020.

Russia is also becoming increasingly important for the EU as a source of crude oil and oil products. EU imports from Russia have increased steadily since 2000, both in absolute terms and in terms of market share. Crude oil imports from Russia have increased from 68.6 million tonnes in 2000 to 95.6 million tonnes in 2002 while over the same period imports of oil products from Russia have increased from 24.2 million tonnes to 29.3 million tonnes.

Russia's market share of EU-15 oil imports: 1999-2002

	1999	**2000**	**2001**	**2002**
Crude oil	14.99%	14.99%	17.81%	21.14%
Oil products	35.13%	34.58%	35.78%	36;03%
Total (crude & products	17.79%	17.58%	20.26%	23.41%
Total (in million tonnes)	89.0	92.7	109.2	124.9

In terms of the total EU consumption of crude oil and oil products, the market share of imports from Russia have risen from 14.5% in 2000 to nearly 19.7% in 2002.

This is underlined and reinforced by the number of recent investments by EU oil companies in Russia:

- The Sakhalin Energy Investment Company Ltd, in which Shell has a shareholding of 55%, announced[3] on 15th May 2003 that it had received shareholder approval to develop the second phase of its Sakhalin II project on the island of Sakhalin in Russia's far east. The first phase of this project has been producing oil since July 1999, exporting 10.77 million barrels in 2002. The decision of 15th May 2003, at a total cost of some $10 billion, involves the further development of the Piltun-Astokhskoye oil field (with associated gas), the development of the Lunskoye gas field and the construction of a liquefied natural gas (LNG) plant with a capacity of 9.6 million tonnes per year.
- BP announced[4] on 29th August 2003 that it had completed its deal, announced in February, to create TNK-BP, the world's tenth largest private sector producer of oil and gas.
- Shell announced, on 16th September 2003, that it had approved a budget of over $1 billion for the development of the Salym oil fields in Western Siberia, where it is in a 50-50 joint venture. The first oil from the West Salym field is expected at the end of 2005, with production forecast to peak at 120,000 barrels per day in 2009.
- Total announced[5] on 7th October 2003 that it had signed a joint venture with the Russian oil company Rosneft to explore and develop the Tuapse Depression, which is located a few kilometres from the Russian shore in the Black Sea.

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3 Shell news and library. "Russia's Sakhalin 2 project gets green light from shareholders". http://www.shell.com/home/Framework?siteId=home

4 BP Press Centre. Reference: http://www.bp.com/centres/press/index.asp

5 Total 2003 Press Releases. Reference: http://www.total.com/ho/en/library/press/index.htm

1.3 Recent developments

In May 2003 the Commission issued its Communication on "the development of energy policy for the enlarged EU, its neighbours and partner countries"[6] which highlighted the role of the EU-Russia Energy Dialogue in helping to achieve the policy objectives of enhancing the security of energy supplies of the European continent, strengthening the Internal Market of the enlarged European Union, supporting the modernisation of energy systems in partner countries and facilitating the realisation of major new energy infrastructure projects.

A first revision[7] of the Trans-European Energy Networks was approved on 26th June 2003. The new legislation identifies a number of electricity and gas infrastructure projects involving the Russian Federation, and highlights, as a priority project, the gas pipeline project linking the UK to the northern European continent and then on under the Baltic sea to Russia. According to this legislation, all priorities for action by the Community shall be compatible with sustainable development.

On 28th August 2003, the European Bank for Reconstruction and Development (EBRD) announced[8] that, together with a consortium of international banks, it was making a five year loan of $75 million to OAO AK Transnefteproduct (TNP), owner and operator of the Russian pipeline system for transporting oil products, to finance the modernisation of its network. TNP's network of 15,200 kilometres of pipelines in Russia is capable of handling 55 million tonnes of oil products per year, but over two-thirds of the pipelines have been in service for over 30 years.

At the World Climate Change Conference in Moscow on 30th September 2003, President Putin indicated that the Russian Government "is closely studying and examining this question [of ratifying of the Kyoto Protocol]… A decision will be made when this work is finished"[9]. On 2nd December 2003, President Putin's economic advisor Mr Illarionov was reported as indicating that Russia would not ratify the Protocol in its current form, although Russian Prime Minister Mr Kasyanov was subsequently quoted, during a visit to Japan on 16th December 2003, as saying that Russia "is preparing to ratify the Kyoto Protocol and assessing its impact on the economy in order to be totally confident that environmental problems will be solved".

On 9th October 2003, Moody's, the US credit rating agency, upgraded Russia to investment grade status.

When the Euro was launched, the issue was raised of whether a certain number of the energy contracts between Russian and European companies could perhaps, in the future, be denominated in Euros. Bearing in mind that the EU is Russia's main trading partner and her main energy export market, such a move would have the advantage of spreading the foreign exchange risks for the parties involved. With the positive progress of the EU-Russia Energy Dialogue and the recognition of the increasing interdependency in the energy sector, this issue has been raised again in discussions. While this is clearly an issue for suppliers and their clients,

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6 COM(2003) 262 final of 13.05.2003.

7 Decision 1229/2003/EC of the European Parliament and of the Council of 26 June 2003 laying down a series of guidelines for trans-European energy networks and repealing Decision No 1254/96/EC. Official Journal of the European Union, L 176 of 15.7.2003.

8 EBRD Press Release of 28th August 2003: "Russian oil products pipeline gets $75 million loan". Reference: http://www.ebrd.com/new/pressrel/2003/index.htm

9 Russian Presidential Press Service Reports. 30.09.2003. Reference: http://www.ln.mid.ru/bl.nsf/eng

rather than for the public authorities, President Putin has publicly confirmed that such a move is a possibility[10].

On the occasion of the 5th EU-Russia Industrialists Round Table in Moscow on 1st – 2nd December 2003, there was a clear acknowledgement that the energy sector is a top priority on the EU-Russia co-operation agenda as it "is the area of the greatest conjunction of economic and strategic interests of both sides". Recognising the necessity of substantially increasing the role of business in the Dialogue, there was also an agreement to establish, within the framework of the Industrialists Round Table, an "Energy Steering Group" of eminent leaders from the EU and Russian energy industries. It is foreseen that this body will become the nucleus and central co-ordinating body of a broader system of business participation in the Energy Dialogue *(reference the Joint Conclusions from the 5th EU-Russia Industrialists Round Table in annex 2 and in particular section 5 therein which is devoted to the Energy Dialogue).*

2. PROGRESS ON THE ISSUES IDENTIFIED

2.1 Integration of the energy markets.

2.1.1 Energy strategies.

The Russian Energy Strategy to 2020.

The latest Russian energy strategy to 2020 was approved by the Government in September 2003 (*reference annex 3*). This strategy clearly highlights the central role of energy for the development of the Russian economy and for Russia's "national security", with the energy sector accounting for 22% of Russian GDP, 30% of total industrial production and providing about half of the income of the federal budget. It identifies the main problems for the development of the Russian energy sector as:

- a persistent lack of investment;
- ageing capital stock, management deficiencies, inefficient equipment and a high equipment failure rate;
- price distortions and a lack of competition between different energy sources which has led to an excessive dependence on gas to the detriment of coal;
- lagging behind in availability of modern equipment and technologies;
- a heavy dependency on the hydrocarbons sector, extremely small use of renewables and an insufficient use of its nuclear potential;
- the persistent heavy impact of the energy sector on the environment.

It develops two scenarios, an "optimistic" one with an annual economic growth rate of 6%, vigorous economic reforms and an intensive liberalisation of prices resulting in the rapid creation of a competitive market, external gas prices are foreseen to be around $138 per thousand cubic metres in 2020 and oil prices to drop to $22 a barrel in 2004 before increasing to $25 a barrel in 2010 and $30 a barrel in 2020. A "moderate" scenario has annual economic growth at 4.3% per

10 Russian Presidential Press Service Reports. 13.10.2003. "Replies by Russian President Vladimir Putin to Journalists' Questions During Joint Press Conference with Federal Chancellor of the FRG Gerhard Schröder, Yekaterinburg, 9 October 2003". Reference: http://www.ln.mid.ru/bl.nsf/eng

year, external gas prices not increasing above $118.5 per thousand cubic metres and an underlying oil price of $18.5 a barrel in 2010 and 2020.

With respect to the internal consumption of different energies, the strategy foresees a reduction in the overdependence on gas, from the current level of over 50% to around 45% in 2020. The share of oil is expected to remain roughly constant at around 20%, while the share of solids is forecast to increase from around 15% to as much as 20%. The share of nuclear and hydro is expected to increase slightly, from 10% to 11%, but with nuclear becoming more important than hydro as the nuclear capacity is foreseen to double from the current 22.2 GW.

To achieve the change in balance between coal and gas, Russia foresees a change from the current situation where internal gas prices are considerably lower than internal coal prices to one where internal gas prices are higher. The strategy notes that, excluding VAT and distribution costs, but including transmission costs, it has been calculated that it would be necessary to raise internal gas prices up to $40-41 per thousand cubic metres by 2006 and $59-64 per thousand cubic metres by 2010 to ensure the required level of investments in the sector. However, while it also notes that the economic and social development plans require prices that lag behind these targets, it also recognises the importance of pursuing a policy of increasing gas prices within Russia step-by-step towards market prices.

The strategy notes that the energy intensity of Russia is 3.1 times that of the EU. It notes that this is not only due to climatic factors and the vast size of the Russian territory, but also the energy-intensive nature and a growing technological gap in some parts of Russia's industry, as well as the low energy prices which do not act as an incentive for saving energy.

Russia's energy policy objectives are defined as energy security, competitive markets and energy efficiency, state revenues from the energy sector, and the environment.

– The policy measures foreseen for enhancing energy security are the modernisation of energy capacities, new investment in energy production and transportation, and the creation of an effective monitoring system. The production targets Russia has set itself are:

	2002	**2010**	**2020**
Coal (tonnes)	253	310-330	375-430
Natural Gas (billion cubic metres)	595	635-665	680-730
Oil (tonnes)	379	445-490	450-520

– For competitive markets ands energy efficiency the policy measures foreseen include a structural change away from energy-intensive industries, technological measures for energy saving, economically feasible increases in domestic energy prices, the phasing out of cross-subsidisation, norms and regulations on energy efficiency, energy audits of companies and economic incentives for energy saving.

– Recognising the significant role of the revenue obtained from the energy sector for the state budget, the strategy emphasises the importance of accurate revenue forecasting and of ensuring effective state investment in the sector.

– With respect to the environment, the strategy concentrates on the necessity to avoid local pollution such as oil spills in vulnerable ecosystems, although the issue of atmospheric pollution is also addressed.

The strategy also concentrates on the regional and social policy aspects, given the challenge of ensuring adequate and regular supplies of energy across the entire country. It also recognises the importance foreign policy dimension of its energy policy, with a stress on increasing energy exports, encouraging mutually beneficial foreign investments to a reasonable extent and diversifying its markets.

The latest EU Energy and Transport Trends to 2030.

September 2003 also saw the publication by the Commission of the latest *European Energy and Transport Trends to 2030".*[11] The forecasts are calculated on the basis of a « business as usual » scenario, with the following assumptions:

- Continued economic modernisation, substantial technological progress and completion of the internal market;
- Existing policies on energy efficiency and renewables continue;
- the fuel efficiency agreement with the car industry is implemented;
- decisions on nuclear phase-out in certain Member states are implemented;
- No new policies to reduce greenhouse gas emissions are included;
- GDP growth is assumed to average 2.3%, as it has over the past 30 years;
- Oil prices decline from their high 2000 levels over the coming years but then gradually increase to a level in 2030 no higher than in 2000;
- Gas prices roughly follow oil prices, although gas import prices in Europe stay well below the oil price;
- Coal prices remain flat and well below those of oil and gas.

For the existing EU of 15 Member states, energy demand is forecast to grow by 18% between 2000 and 2030. Demand for renewables is forecast to grow by 74% (although only increasing its market share from 6% in 2000 to 9% in 2030), gas by 64%, oil by 3% and nuclear declining given the decision to phase-out in some Member states. Solid fuels are expected to decline to 2015 but then increase to slightly more than the level seen in 2000 by the year 2030.

Natural gas is expected to become the most important source for power generation, with solid fuels, oil and nuclear all losing market share. Although a significant growth in renewables is foreseen, they are still likely to fall well short of the indicative target of 22% of total Community electricity consumption for 2010, despite the expected rapid growth in wind generation.

With indigenous energy production peaking in 2005, net imports of fossil fuels rise by about two-thirds over the period 2000 to 2030. Overall energy import dependency increases from just under 50% in 2000 to 68% in 2030, with oil import dependency increasing from 75% to 90%, gas from 45% to 80% and solid fuels from 50% to 80%.

For the future EU of 25 Member states, energy demand is forecast to grow by 19% between 2000 and 2030. Demand for renewables is forecast to grow by 75% (although only increasing its market share from 6% in 2000 to 8.6% in 2030), gas by 66%, oil by 8% and nuclear declining

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11 European Energy and Transport Trends to 2030. Published by the European Commission's Directorate General for Energy and Transport. ISBN 92-894-4444-4. Copies may also been download from the following internet site: http://europa.eu.int/comm/dgs/energy_transport/figures/trends_2030/index_en.htm

given the decision to phase-out in some Member states. Solid fuels are expected to decline to 2015 but then increase to the level seen in 2000 by the year 2030.

With indigenous energy production falling, overall energy import dependency increases from 47% in 2000 to 67.5% in 2030, with oil import dependency increasing from 76% to 88%, gas from 50% to 81% and solid fuels from 30% to 66%.

The Round Table on Energy Strategies.

To follow the almost simultaneous publication of the two documents, a Round Table on Energy Strategies was held in Moscow on 17th October 2003 under the joint chairmanship of the Russian Federation and the Commission. Representatives of the authorities of the Russian Federation, the European Commission and the EU Presidency participated in this event, together with the Russian and European energy industries.

The exchange of views highlighted the recognition of the growing mutual energy interdependency and interest of pursuing policy convergence, industrial co-operation and the facilitation of investments, as well as the approximation of technical norms and standards in the energy sector to open up a truly continent-wide energy market. As noted in the conclusions of this Round Table (*reference annex 5)*, there was an agreement to co-operate closely together, in the framework of the Energy Dialogue, to promote the convergence of energy strategies and the development of energy markets.

It also became clear at this event that energy efficiency and energy savings has now become a major preoccupation for the Russian authorities. This offers a significant and important area for effective co-operation through a programme of transferring legislative and technical know-how, exchange of information on "best practices" and, via the Technology Centre in Moscow, technology transfer and investment facilitation.

The importance of taking into consideration research aspects in the context of the Energy Dialogue has been previously underlined at the meeting on 14th September 2001 between Commissioner Busquin and the Russian Research Minister Mr Dondukov, beyond the work of the International Science and Technology Centre (ISTC)[12]. It was agreed with the Russian counterparts in 2002 to implement research activities in the non-nuclear energy field although, in practice, research co-operation includes the nuclear field and the ITER project[13], which is designed to demonstrate the scientific and technological feasibility of fusion energy for peaceful purposes.

2.1.2. Electricity.

The interconnection of the Russian and continental EU electricity grids has been recognised as one of the projects of "common interest" at the EU-Russia Summit of October 2001. The full integration of the electricity markets will bring substantial benefits in terms of the development of a free competition, improvement of security of electricity supply and the creation of new opportunities for business cooperation in the electricity sectors of both Russia and the Member states of the EU.

12 Reference the ISTC web site: http://www.istc.ru/

13 Reference the ITER web site: http://www.iter.org/

In order for integrated markets to function in an acceptable, efficient and secure manner, a level playing field must be ensured. This requires that all parts of such a wider market are organised on the basis of equivalent basic rules with respect to the degree of market opening, giving equal access on the Russian market to EU companies as well as equal access on the EU market for Russian companies, as well as other important market rules such as regulation of network access and unbundling. Furthermore, environmental protection and safety standards for electricity production must be comparable, including the level of nuclear safety.

The meeting of Russian and EU electricity experts which took place in Brussels on 25th March 2003 permitted a first exchange of views on issues of market opening, non-nuclear environmental standards and issues related to accurate pricing. This laid the groundwork for the Round Table on Electricity which took place in Moscow on 16th October 2003 and which permitted a full and frank discussion between representatives from the Russian and EU electricity sectors.

Participants in the Round Table from the EU side included a representative of the Italian Presidency, the President of the Council of European Energy Regulators, the President of the Union for Co-ordination of Transmission of Electricity (UCTE), the Secretary General of EURELECRIC and senior representatives from the European Transmission System Operators (ETSO). The Russian side was also represented by Deputy Prime Minister Mr. Khristenko, the Chief Executive Officer of the Federal Grid Company of the UES, and high-level representatives from the Government of Russian Federation, Ministry for Foreign Affairs, Ministry for Energy, Ministry for Trade and Economic Development, Committees for Energy of the Federation Council and the State Duma, the Federal Energy Commission and from other Russian organizations.

As noted in the conclusions of this Round Table (*reference annex 4)*, participants urged that the Russian and EU electricity experts should submit a report of all relevant issues by mid-2004. Following this, a common strategy on a progressive integration of the European and Russian networks and electricity markets should be developed, including options for the conclusion of a formal agreement.

With respect to the technical challenges of interconnecting the two networks, Union for Co-ordination of Transmission of Electricity (UCTE) have carried out a pre-feasibility study[14] which was presented to their Annual General Assembly in May. On this occasion it was agreed to launch a broad technical feasibility study on the synchronous interconnection of CIS countries to the continental EU grid. The terms of reference are currently being prepared and it is anticipated that the study will take up to two years to complete.

2.1.3. Natural gas.

A major priority for the EU, besides that of creating a fully integrated internal energy market, is the challenge of ensuring the continued security of energy supplies into the future. In this respect, the main issue concerns ensuring that appropriate market conditions and, where necessary, incentives exist to ensure the construction of new gas production capacity and transportation infrastructures to supply the increasing demand within the EU, driven largely by the power generation sector. Russia is and will continue to be the principal supplier of natural gas to Europe. The development of new supply sources and the construction of pipelines to bring

14 The results of this study can be found on the website of UCTE at the following address: http://www.ucte.org/publications/library/e_default_2002.asp

the natural gas into the EU will require the investment of many billions of €uro. Such investments are necessarily capital intensive and long-term commitments that are often characterised by significant level of commercial and in some cases political or regulatory risk.

While the new Internal Gas Market Directive establishes the basic rules for the creation of a single EU market, these rules must be implemented in a way which provides both regulatory certainty as well as the regulatory environment that can encourage the necessary investments. In this context, the Commission has recognised the important role that has been played by long term gas contracts in the development of the European gas market by providing a risk sharing arrangement between producers and buyers, enabling in turn important new production and infrastructure projects to be undertaken. The continued existence of such contracts is as much in the interest of the EU as it is of the producers. The Commission, recognising their importance, has proposed the creation of a safety net, which is to be set up in the framework of the draft Directive for security of gas supply presently being considered by the Council. This safety net allows measures to be taken which are aimed at ensuring that an appropriate minimum share of new gas supply from external suppliers are based on long-term contracts.

While the Commission is convinced that the natural desire of a competitive company to secure long-term reliable and fair-priced supplies would ensure the continued existence of an amount of long-term contracts within the supply portfolio, it nevertheless believes that it is important to send the right signals to investors and to partner countries outside the EU.

Having said this, it is clear that long term gas contracts must necessarily respect the disappearance of boundaries within the EU. The strategies of commercialising natural gas have to be in line with the principles of a competitive and integrated EU market, and notably to competition rules as regards, amongst others, agreements containing restrictions as to the territories into which the buyer may resell its gas.

In this context, the Commission has been in discussions for some time with Gazprom and certain EU importers regarding territorial restriction clauses which exist in certain contracts and which prevent the purchaser from reselling the natural gas outside its principle supply area. On 6th October, considerable progress was achieved with the announcement by the Commission that a settlement had been reached with the Italian oil and gas company ENI and Gazprom on this subject (*reference annex 6*). At the same time, the Commission announced that it had closed its probe into the gas supply relationship between Gazprom and Gasunie of the Netherlands as it had verified that these contracts did not contain territorial sales restriction clauses.

While other contracts are under investigation, most prominently contracts with two companies in Austria and Germany, the Commission expressed, in October 2003 its confidence that an agreement will soon be found leading to the deletion of the contested clauses. This is a major success and will, if confirmed by the operators concerned, reinforce the necessary certainty and stability required for encouraging further investments in Russia.

A medium to long term objective must be the creation of a common regulatory space with Russia, based on the same principles and mechanisms, which would offer significantly enhanced business opportunities for all participants and lead to secure and efficient gas supplies across the European and Russian markets. In the context of the Energy Dialogue, the Commission will continue to work to ensure the integration of this objective into the discussions.

2.2. Projects of common interest.

The importance of new transportation routes for supplying additional quantities of Russian natural gas to an EU market was clearly recognised both in the eligible projects defined under the framework of the Trans-European Networks – Energy programme and in the projects of "common interest" identified at the EU-Russia Summit of October 2001. The recently published *"European Energy and Transport Trends to 2030"*[15] forecasts the demand for natural gas in an enlarged EU of 25 Member states to increase, in a business as usual scenario[16], from 376 Mtoe[17] in 2000 to 630 Mtoe by 2030, which is an increase of nearly 68%. At the same time, the indigenous production of natural gas is expected to decline by over 40%, from nearly 197 Mtoe in 2000 to 117 Mtoe, by 2030. As a result, the EU's dependence on external supplies of natural gas is projected to rise sharply, from 49.5% in the year 2000 to 81.4% by 2030. This almost translates into a tripling in the level of natural gas imports, from 186 Mtoe in the year 2000 to nearly 513 Mtoe in 2030.

In the light of this rising demand for natural gas from third countries, the question may arise whether sufficient gas will arrive on the European market. As of today, the demand for natural gas is matched by contracted supplies and this is true for the coming years. However, between 2005 and 2008, a gap between projected demand and contracted supplies will be opening up which, by 2020, will amount to approximately 130 bcm for the EU15 (no figures are available for EU25). While this is not unusual and does not create any particular concern, as gas supply contracts are usually concluded on a rolling basis in line with market developments, it does highlight the need for new contracts and, in the context of an expanding market, the need for new capacity and infrastructure.

Industry estimates suggest that investments amounting to several hundred billion of Euros will have to be raised to match demand and supply over the years to come. This enormous sum may also indicate that supply costs (production and transportation) are set to rise due to new fields, which may be more remote from the market and more difficult to develop.

Following the establishment of the guidelines for the trans-European energy networks by decisions[18] of the European Parliament and the Council, a Commission Decision of 16 November 2000[19] defined the specifications of the projects previously identified, including the following projects for bringing additional quantities of Russian gas to the EU market:

- A second transport axis from Russian resources to the EU via Belarus and Poland,
- the northern trans-European gas pipeline,

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15 European Energy and Transport Trends to 2030. Published by the European Commission's Directorate General for Energy and Transport. ISBN 92-894-4444-4. Copies may also been download from the following internet site: http://europa.eu.int/comm/dgs/energy_transport/figures/trends_2030/index_en.htm

16 The definition of a « business as usual » scenario can be found under section 2.1.1 above.

17 Mtoe = Million tonnes of oil equivalent.

18 Decision No 1254/96/EC of 5 June 1996 laying down a series of guidelines for trans-European energy networks (Official Journal of the European Communities, L 161 of 29.6.1996, page 147).
This was amended by Decision No 1047/97/EC of 29 May 1997 (Official Journal of the European Communities, L 152 of 11.6.1997, page 12) and Decision No 1741/1999/EC of 29 July 1999 (Official Journal of the European Communities, L 207 of 6.8.1999, page 1).

19 Commission Decision 2000/761/EC of 16th November 2000 defining the specifications of projects of common interest identified in the sector of the trans-European energy networks by Decision No 1254/96/EC of the European Parliament and of the Council. Official Journal of the European Communities, L 305 of 6.12.2000, page 22.

- increasing the capacity of the existing axis through Ukraine, Slovakia and the Czech Republic.

All of these projects were therefore eligible to receive EU financial assistance in conformity with the financial regulation governing the TENs programme[20].

The EU-Russia Summit of October 2001 also recognised the first two of these projects as being of "common interest" in the framework of the EU-Russia Energy Dialogue, along with the development of the Shtokman field in the Barents Sea.

In June 2003, the guidelines for the trans-European energy networks were revised in a Decision of the European Parliament and the Council,[21] and the Russia/Northern Europe/Baltic area was identified as one of the four priority pipeline axes for supplies of gas from third countries. This axis would link Russia to northern Germany, Denmark and the Baltic states, across northern Germany to the Netherlands and then on into the UK. In the context of EU enlargement, the Commission proposed, on 10th December 2003, a further revision[22], which would define this axis as consisting of:

- A new pipeline across the Baltic Sea from Russia to Germany and countries bordering the Baltic, and the networks related to the development of the Shtockmanovskoye gas field in the Barents Sea.
- The expansion / upgrading of the Yamal I gas pipeline from Russia to Germany via Belarus and Poland

In the context of the 2003 Call for Proposals, a request for Community financial assistance for a feasibility study for proposed Northern Trans-European gas pipeline was received in April 2003 and has recently been negotiated. This pipeline would transport Russian gas from Vyborg on Russia's Gulf of Finland coast under the Baltic Sea to northern Germany. Approximately 1,300 kilometres long, it is currently planned to have a capacity of between 20 and 30 billion cubic metres a year and has been estimated recently to have a total cost of some 5.43 billion €uro[23]. The feasibility study will include the preparation of the environmental impact assessment and technical studies, including the basic design of the pipeline, landfalls and the preparation of off-shore surveys. It thus covers the first phase of a conceptual study which will serve as the basis for the decisions on investment, final pipeline routing, landfalls and the selection of the compressor stations. The costs of the study are estimated at 6 Mio €, with a Community support of up to 3 Mio €. It should be completed by the end of 2005. This particular project has been recognised recently by a number of Member states and EU energy companies as being of strategic importance.

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20 Council Regulation No 2236/95 of 18 September 1995 laying down general rules for the granting of Community financial aid in the field of trans-European networks (Official Journal of the European Communities, L 228 of 23.09.1995, page 1), as amended by Regulation No 1655 of the European Parliament and of the Council of 19 July 1999, (Official Journal of the European Communities, L 197 of 29.07.1999, page 1).

21 Decision No 1229/2003/EC of the European Parliament and of the Council of 26 June 2003 laying down a series of guidelines for trans-European energy networks and repealing Decision No 1254/96/EC. Official Journal of the European Union L176 of 15.07.2003, page 11.

22 Proposal for a Decision of the European Parliament and the Council laying down guidelines for trans-European energy networks and repealing Decisions No 96/391/EC and No 1229/2003/EC. COM(2003) 742 of 10.12.2003.

23 6 billion US dollars - calculated at the rate of 1 USD = 1.105 €uros (2003 first semester exchange rate)

2.3 Possible expansion of the energy infrastructure projects of "common interest"

In addition to the interconnection of the electricity networks and the gas projects, the EU-Russia Summit of October 2001 also defined the connection of the Druzhba oil transmission system, through Belarus and Ukraine, with the Adria network as a project of "common interest". The first Joint Synthesis Report also made mention of the transit of North Caspian oil from Kazakhstan, through existing and newly-built Russian pipelines, and the future oil pipeline linking Burgas on the Bulgarian Black Sea coast to Alexandroupolis on the Greek Aegean coast.

In the light of the recent maritime accidents and the increasing density of traffic around the coasts of the EU, the Commission believes that a higher priority should be given to considering the alternative of transporting oil by pipelines, where this is economically and technically feasible, and compatible with sustainable development., It is important to ensure that the pipelines which already link the EU with Russia are not only fully utilised, but enhanced and extended where appropriate as an alternative to considering new maritime-based projects. In this context, it has been agreed with Russia to examine the possibility of expanding the list of agreed projects of "common interest" to include more oil pipeline infrastructures, bearing in mind the importance of ensuring a geographical balance between the different parts of Europe. Russian oil companies have indicated, on various occasions, the interest they would see in the further development of the pipeline network delivering oil to the EU.

While it is clear that these projects of "common interest", as well as the choice of routes, are the responsibility of the companies and countries involved, both the EU and Russia are concerned to ensure appropriate new links and projects are developed for security of supply reasons. Qualifying some projects as being of "common interest" could assist in facilitating their development.

2.4. Non-commercial risk guarantee fund

Experts were mandated to examine the projects defined in the October 2001 EU-Russia Summit as being of "common interest" and to come forward with ideas on how the realisation of these projects could be facilitated. Their report proposed the creation of a Guarantee Fund to insure against risks of non-enforcement of an international arbitral award granted in relation to a claim arising from a default by a private party or by a State in the performance of its obligations. Contributions to the Guarantee Fund could come from different sources such as the Russian Authorities and International Financial Institutions, as well as the private banking sector. It is however anticipated that this Fund should be neither financed by Community funds nor managed by the Commission.

The development of the financial mechanism linked to major energy production or transportation projects could, combined with the identification of some projects as being of "common interest", facilitate the development of such projects which will help to enhance the energy security of the EU. It would not be designed, in some way, to favour Russia over other important energy suppliers to the EU. It would be designed to facilitate the investments by European energy companies in Russia, bearing in mind the fairly widespread perception that there is an important level of non-commercial risk in investing in Russia compared to other, more mature, energy producers.

At the start of 2003, the European Bank for Reconstruction and Development (EBRD) carried out a comprehensive market test of the proposed scheme to determine the interest from the market players and to assist the Commission in refining the concept. Meetings were held with twelve major oil and gas companies with involvement in Russia, nearly all of whom were

European. The consensus was that most of the concerns that the companies had concerning Russia could only be progressed through a policy dialogue leading to reform. The importance of the EU-Russia Energy Dialogue was clearly recognised and highly valued in this context.

The concept of an investment guarantee mechanism was very much welcomed by the companies as a supplemental protection to cover projects until the implementation of reforms in Russia has been finalised. While the companies made clear that a guarantee mechanism could not be a substitute for an investor-friendly climate, there was a recognition that the proposed fund could assist in alleviating concerns related to the enforcement of contracts. It would provide companies with a real recourse with actual cash benefits in the event that their case was successful. It would strengthen the negotiating stance of the companies and provide an incentive to the Russian authorities to perform under the agreements signed.

The companies also indicated that more clarification and precision was need in the definition of the scheme, for example:

- whether the proposed fund should be enlarged to cope with multi-billion Euro projects or the list of projects of common interest expanded to include a number of smaller projects;
- clearer and predefined thresholds for eligibility were necessary;
- insolvency exclusion – a more precise definition of "genuine insolvency";
- an examination of the situation when public entities are involved;
- the possible use of the fund to cover cash flow or debt servicing when a dispute was ongoing rather than just compensate investors when the project was effectively dead.

The report concluded by underlining that "to most investors, the real value of the Fund lies in the political backing and attention provided by the EU-Russia partnership and the capital at risk in the Fund stemming from the initial contribution and the loss recovery mechanism;"

As a result of this initial favourable reception from the industry, the Commission requested, at the end of September 2003, a full feasibility study from the European Investment Fund (EIF) of the proposed Guarantee Fund. This study will:

- Assess the economic viability of the proposed scheme, as well as possible alternatives;
- Provide an in-depth and comprehensive analysis of its financial and technical feasibility;
- Propose a financial and operational outline for the guarantee fund, and its technical modalities. This should include identifying and validating the interest and extend of commitment of the necessary partners and stakeholders, and the political and financial support necessary;
- Define the steps to be taken, as well as the calendar, for the establishment, operation and supervision of such a fund.

The services of the EBRD will be closely involved in the study, specifically in further work to be carried out on with respect to their market test report highlighted above and taking advantage of the considerable practical legal expertise of the EBRD in operating in Russia.

A first interim report is expected before the end of 2003, with the final report being available in the spring of 2004.

2.5. Trade in nuclear materials

The trade in nuclear materials with Russia has constituted a bone of contention in relations between the EU and Russia now for many years. With Russia selling increasing quantities of natural uranium on to the market as well as offering uranium enrichment services at prices below those prevailing on the world market, the EURATOM Supply Agency adopted a policy in 1992 of diversifying supply sources in order to avoid an excessive dependence on the Newly Independent States. A first attempt at an agreement on trade in nuclear materials with Russia was unsuccessful and since 1994, the policy has been to stipulate that the share for European uranium enrichers should be maintained at around 80% of the European market. The principle of setting a limit was also confirmed for natural uranium.

Subsequent negotiations with Russia have been undertaken in the framework of the Partnership and Co-operation Agreement. However these have not been successful and the issue of trade in nuclear materials has remained unresolved.[24] The EURATOM Supply Agency therefore, using its sole right to conclude contracts and in order to ensure the long-term security of supply, has continued to apply the previous quantitative limits on imports.

Within the framework of the EU-Russia Energy Dialogue, Russia has repeatedly argued that the qualitative limitations in trade in nuclear materials between Russia and the EU were discriminatory and incompatible with respect to the rules of the World Trade Organisation. This was clearly underlined in the joint statement from the May 2002 Russia-EU Summit, where it was noted that "*The existing situation with respect to the import of nuclear materials to the EU Member states is a matter of concern for the Russian side*." Recognising, at the same time, that the operating environment for nuclear materials had changed significantly since the early 1990's, the Summit "*agreed, in accordance with Article 22 of the PCA and in the context of EU enlargement, to reach a mutually acceptable solution.*" [25]

Therefore, on 6th November 2002 the Commission adopted a proposal for a Council Decision giving directives to the Commission to negotiate a Co-operation Agreement between the European Atomic Energy Community and the Russian Federation in the field of trade in nuclear materials in the enlarged European Union. This proposal was discussed at length in the Council Working Group. On 17th November 2003 the Council adopted a Decision[26] authorising the Commission to negotiate a Co-operation Agreement between the European Atomic Energy Community and the Russian Federation, taking into account the necessity of ensuring that the interests of European consumers were protected and that the viability of the European industries concerned is maintained. The directives from the Council to the Commission for the negotiation of the agreement include:

- the scope of the Agreement (transfers of natural and enriched uranium, including fresh uranium elements and enrichment services for peaceful and non-explosive uses);
- the conditions that should apply to transfers of nuclear materials (application of nuclear safeguards, physical protection measures, rules for international transport and retransfer of nuclear materials);

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24 Under Article 22 of the PCA, the parties agree to take all the necessary measures to reach agreement on trade in nuclear materials by 1 January 1997.

25 EU-Russia Summit. Joint statement.
Relations with third countries – 2002. Press release: Nr 9424/02 (Press 171). (http://ue.eu.int/newsroom/)

26 2540th Council meeting on General Affairs – Brussels, 7.11.2003
General Affairs and External Relations – 2003. Press release: Nr 14486/03 (Press 319).
(http://ue.eu.int/newsroom/)

- the implementation of a mechanism to monitor market developments that should cover all the exchanges of nuclear materials between the Parties;
- and the implementation of a market safeguard mechanism.

The Agreement will take into account the future accession of the Russian Federation to the WTO and the negotiation of the Agreement will commence early in 2004.

2.6. Co-operation in the field of nuclear safeguards

Over the years, the European Commission has developed and implemented, in the context of the EURATOM Treaty, an internationally-recognised robust nuclear safeguards system based upon the verification of nuclear material accountancy by over 200 nuclear inspectors. Recognising the challenge of ensuring nuclear non-proliferation and preventing nuclear terrorism, this is a crucial area for enhanced co-operation between the Russian Federation and the European Commission.

In this context, the Commission's Joint Research Centre is providing valuable assistance to the Russian authorities in developing measurement equipment and providing training for technical specialists. These actions are being financed in the framework of the TACIS programme.

The Commission's nuclear safeguards specialists have recently been in preliminary discussions with their Russian counterparts in GOSATOMNADZOR, the Federal supervisory body responsible for regulating the use and security of both civil and military nuclear energy, and MINATOM, the Ministry of Atomic Energy, to draw up orientations for future co-operation.

Such activities might include:

- The establishment of inspection procedures for irradiated high-enriched uranium fuel used in naval vessels;
- The joint development of computer applications dedicated to the follow-up of containment of nuclear materials or other similar tools for data management in the field of safeguards;
- Joint training programmes:
    - for the Commission nuclear inspectors on the structure and functioning of the Russian VVER and RBMK-type reactors, bearing in mind the forthcoming enlargement and the existence of these types of reactors in some of the new Member states;
    - on physical protection as background education for the nuclear security inspectors and
    - on inspection procedures, for the Russian inspectors, on bulk-handling nuclear installations;
- Co-operation in nuclear security for existing nuclear installations and a programme of exchange of know-how through events such as seminars or round tables;
- Designing safeguards schemes for bulk-handling nuclear installations.

Starting from the beginning of 2004, the co-ordinated efforts of Commission's services should allow for the smooth development of the agreed actions for co-operation.

2.7. Maritime safety

It is vitally important to ensure the maximum possible environmental safety levels for the transportation of oil, both crude oil and oil products. As the accidents involving the *Erika* and *Prestige* have clearly underlined, it is necessary not only to address the overland pipeline network, but also the infrastructure and handling facilities at oil terminals and the resilience of the maritime tankers operating quite often in hazardous climatic and sea conditions.

Following the accident involving the Prestige, the Commission adopted a proposal for a regulation[27] aimed at speeding up the timetable for the phasing out of single-hull tankers that had been adopted in the framework of Erika I and also to ban the transport of heavy grades of oil in tankers bound for or leaving EU ports. A political agreement was rapidly reached in the Council on this proposal and Regulation 1726/2003[28] entered into force on 21st October 2003.

In parallel, the EU Ministers also agreed on an EU submission to the International Maritime Organisation (IMO) for the establishment of similar measures on a worldwide level as soon as possible through an amendment to the International Convention for the Prevention of Pollution from Ships (the MARPOL Convention). The IMO has reacted positively, by endorsing, at an extra session of its Marine Environment Protection Committee (MEPC) that took place on 4 December 2003, all the measures proposed by the EU. Therefore, the accelerated phase-out scheme for single hull tankers, the banning of transport of heavy grades of oil in single hull tankers and the extended application of the Condition Assessment Scheme (CAS) for tankers have become part of the MARPOL convention.

Due to the IMO procedural rules, the new measures will only come into force in April 2005. However, in view of the urgent nature of those measures, the MEPC has invited all signatory parties of MARPOL to implement them as soon as possible.

The Commission has approached neighbouring countries, including Russia, to persuade them to follow the invitation made by the IMO itself and adopt immediate measures banning the carriage of heavy grades of oil, in particular heavy fuel oils with single hulled tankers. Meetings have been held between Commission officials and their counterparts in the Ministry of Transport of the Russian Federation. These have produced very concrete results, as noted in the conclusions of the May 2003 EU-Russia Summit[29] "*we agreed to enhance our co-operation on maritime safety in the framework of the International Maritime Organisation with the objective of preventing maritime accidents and consequent pollution through concrete measures, especially concerning the phasing out of single hull tankers*". In the spirit of that agreement, Russia has supported the EU efforts within the IMO framework.

Also in the same spirit, attending to the problems that those measures may raise for the oil supply of certain geographical areas, EU Member States supported the Russian position asking for an exemption in the new IMO rules for oil tankers exclusively engaged in domestic voyages.

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27 Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 417/2002 on the accelerating phasing in of double hull or equivalent design requirements for single hull oil tankers and repealing Council Regulation (EC) No 2978/94. COM(2002) 780 final of 20 December 2002.

28 Regulation (EC) No 1726/2003 of the European Parliament and of the Council of 22 July 2003 amending Regulation (EC) No 417/2002 on the accelerated phasing-in of double hull or equivalent design requirements for single-hull tankers. Official Journal of the European Union, L 249 of 1.10.2003, page 1.

29 EU-Russia Summit. Joint statement.
Relations with third countries – 2003. Press release: Nr 9937/03 (Press 154). (http://ue.eu.int/newsroom/)

Member States bordering the Baltic Sea have also repeatedly expressed their concerns about the safety conditions resulting from the increase of seaborne oil exports from the Russian Baltic ports. The planned expansion of Russian oil export capacity in the region implies that these oil traffic volumes will continue to increase.

The situation is aggravated in winter time. Fears arose during the 2002-2003 winter over the risk of a maritime environmental disaster as several oil tankers were trapped in ice in the Gulf of Finland, which stretched the region's ice breaking fleet to its limits. Maritime authorities in the region found that some of these tankers, including double-hulled tankers, were not built to cope with the region's extreme conditions and could crack under pressure from the frozen sea. This has been exacerbated by the differing ice class rules of EU Member states such as Sweden and Finland compared to those of the Russian Federation and difficulties in interpreting and comparing them.

Following extensive contacts between the Commission services and the relevant Russian maritime authorities, Considerable progress has been achieved over the last few months in the framework of the HELCOM Convention[30]. This Convention established a working group involving all countries the countries surrounding the Baltic, including Russia and in which the Commission has participated. On 18th November 2003, this group reached an agreement establishing common rules for maritime traffic conditions in the area, which should be endorsed by the HELCOM Ministerial meeting before the end of the year.

The Commission intends to continue giving its technical support through co-operative research projects funded by the EU in which the Russia can participate and, following the request of several Member States, is in favour of strengthening the common requirements for ice class rules. This will necessarily only really be effective if the Russian Federation makes a clear commitment with respect to these requirements. The project "Safeice", under the Community's 6th European Research Framework Programme, will seek to create a common scientific basis for ice class rules. The Russian "Arctic and Antarctic Research Institute" will participate as an EU-funded partner, together with partners from Sweden, Finland, Germany, Estonia, Japan and Canada. This collaboration will represent an overwhelming majority of those countries operating within ice covered waters.

There has been growing concern expressed about the intention of a Russian oil company to start extracting oil offshore in the Baltic Sea due to the proximity of the environmentally sensitive Curonian Spit. The Commission's view is that a full Environmental Impact Assessment should be carried out that meets high international standards and is pressing this approach in contacts with the Russian authorities.

The EU is also supporting the Arctic Operational Platform (ARCOP) project[31] which is examining the development of the transport of the natural resources, particularly oil and gas, in the Arctic regions in Russia. The project involves a total of 21 organisations from Finland, Germany, Italy, the Netherlands, Norway, Russia and UK, and will run for a period of three years at a total cost of € 5.23 million (of which € 3.02 million is financed by the EU). The project consists of the following six work packages:

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30 The Convention on the Protection of the Marine Environment of the Baltic Sea Area (HELCOM Convention) was agreed in 1992 and entered into force on 17 January 2000. For further information, reference: http://www.helcom.fi/helcom/convention.html

31 Further details on the ARCOP project can be found at the following internet web address: http://www.arcop.fi/arcop.htm

- Development of collection methods for ice information and ice forecasts in view of choosing transport routes;
- Assessment of the rules and regulations on transport by sea and of insurance and payment systems;
- Development of a united transport system for Arctic oil and gas transport;
- Development of the environmental impact assessment method and the environmental hazard management system;
- Trial in practice of the solutions developed and recommendations given during an actual transport assignment;
- Organisation of expert meetings between industry, authorities and representatives of technology to direct the project, to assess the results and to give recommendations.

2.8. Energy Technology Centre

The EU-Russia Energy Technology Centre[32] was opened in Moscow on 5th November 2002 with the aim of promoting new and advanced energy technologies in Russia as well as facilitating the attraction of investment financing for priority projects. Following the resolution of a number of practical issues and the nomination of both the Russian and European Commission co-directors, the Centre is now operational and the work programme for the next six months is being finalised.

The first event organised by the Centre, a Round Table on "Coal Bed Methane – How to promote investments" was held in Moscow on 10th June 2003 in co-operation with the State Fair of North-Rhine Westphalia on Energy and Environmental Protection. The objectives of the event were to explore the barriers that hamper the implementation of Coal Bed Methane utilisation technologies in Russia and to find solutions for promoting investments into this sector. As a result of this round table, representatives of the Russian National Research Centre for Mining are co-operating with the Technology Centre to develop a specific demonstration project on the use of Coal Bed Methane for electricity and heat generation in the Kuzbass coal region in Western Siberia. A business plan is currently being developed that could be presented to potential investors and international financial institutions.

A technology co-operation working group has also been established with RAO UES and this has identified a concrete programme of activities for consideration. The Centre will participate in the organisation of seminars on the management of thermo-mechanical equipment and on the utilisation of ash from coal-fired power plants. Working contacts have also been established with the key players in the Russian oil and gas sectors. A round table on how to increase oil recovery from mature wells is foreseen for 16th December 2003.

With respect to renewable energy and energy efficiency, a number of possible projects of common interest have been identified by the Centre such as a small hydro power project in the Northern Caucasus, two geothermal projects (in the Kaliningrad and Krasnodar regions), a peat-fired power project, a wind power project and a project on energy efficiency in the Leningrad region.

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32 Further details on the Centre can be found at the following internet web address: http://www.technologycentre.org/eng.htm

2.9. Energy Efficiency and Energy Savings.

Following the missions to Astrakhan in January 2002, Archangelsk in April 2002 and Kaliningrad in October 2002, work is progressing on the specifications for the technical assistance projects to be financed under the TACIS programme for 2003.

In the context of the Round Table on energy strategies held in Moscow on 17th October 2003, the Russian Government representatives underlined that energy efficiency had now become a priority policy issue for them. In the context of developing efficient frameworks for reducing their energy consumption they highlighted their strong interest in the practical experience of the Commission in preparing legislative proposals to address energy efficiency and energy demand management.

A number of Community frameworks could be of particular interest for Russia (*reference annex 7*).

It is clear, however, that the Russian context is different in a number of respects to that of the EU. The cost of energy is significantly lower on the Russian market, the security of supply concerns have traditionally related more to the production and transportation of energy as opposed to the need to reduce overall energy consumption, there are currently no CO_2 emission constraints and the cost of financing the necessary investments is higher.

The Commission services, in collaboration with the Energy Technology Centre in Moscow, will examine jointly with their Russian counterparts those elements of the EU legislation and Commission proposals which are of interest to Russia and define a programme of work that will permit an effective transfer of know-how adapted to the Russian situation.

2.10. Clean Coal.

The recently updated provisions of Russia's "Energy Strategy until the year 2020" document project an increase in coal production of up to 81%[33], with the amount of coal used in electricity generation possibly more than doubling over the period.[34]

Recognising the importance of encouraging the use of modern, efficient and cleaner coal combustion technologies, three projects are underway under the CARNOT programme[35] related to Russia:

- "Cost Effective Clean Coal Improvements to Russian Utility Plant". With the objective of gaining better market and technical information to facilitate the technology transfer of relatively low cost methods to improve the efficiency and environmental performance of conventional coal-fired power plants in Russia, three workshops have taken place (24th-25th April 2003 in Novosibirsk, 28th April in Ekaterinberg and 26th-27th May in Moscow);
- "Promotion of Renovation Activities in the Russian Energy Sector";
- "Circulating Fluidised Bed for the Clean and Very Efficient Retrofit of an Existing Coal-Fired Power Plant".

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33 From a 248 million tonnes in 2002 to between 365 and 450 million tonnes in 2020.

34 The Strategy forecasts that coal consumed for generating electricity could increase from 139 million tonnes in 2002 to between 216 and 289 million tonnes in 2020.

35 Council Decision 1999/24/EC of 14.12.1998.
Official Journal of the European Communities, L 7 of 13.1.1999, page 28.

A fourth CARNOT project was launched in Spring 2003 for "*Pre-Engineering Studies for a new Integrated Gasification Combined-Cycle (IGCC) Plant based on the Puertollano Elcogas Plant Experience: IGCC technology possibilities in the new Russian power sector*". The Puertollano IGCC plant, at 335 MWe, is the largest in the world and the consortium of eight major European utilities and three technology suppliers behind the project was supported by Community Research and Demonstration funds from 1992 until 2000. The IGCC concept is based on a coal gasification process, which converts coal into a synthetic gas which is then subject to an exhaustive cleaning process. The result is a combustible gas which is virtually free of pollutants and which can be burned with high efficiency in a combined-cycle electricity generating unit[36]. In addition, this technology presents two important possibilities:

– CO2 capture, which the possibility later of sequestration;

– Hydrogen production. This can be used in the refining sector and, in the future, in fuel cells.

The objective of the project is to develop the concept for an improved IGCC plant, based upon that used at Puertollano. Potential locations for an IGCC will be identified in Russia and the pre-design adapted to meet the site conditions, namely the characteristics of the local coal, the demand for the co-generation of steam for local district heating and local environmental regulations. In addition, the economic viability and market potential in the opening Russian electricity market will be assessed.

In addition, an international conference on "Russian Power in Progress: Project opportunities in the Russian Power Generation Sector" is planned for 5-6 February 2004 in Moscow. This conference, organised in the framework of the Energy Dialogue and of a project under the 5th Framework Programme entitled *"Securing Energy Supply and Enlarging Markets through Cleaner Fossil Technology",* is designed to highlight and to promote the opportunities in the Russian energy sector for investments for Cleaner Fossil Fuel technologies. It will bring together European and Russian power, technology and finance companies to stimulate business contacts for investments into more efficient thermal power generation technologies.

2.11. Safety of the energy transport networks.

The importance of co-operating to monitor the hydrocarbon transportation infrastructure and the necessity of rehabilitating and upgrading it where necessary has been recognised from the outset of the Energy Dialogue. There is an agreement to collaborate in the framework of an observatory to ensure the safety of the energy transportation network.

There is also an agreement to examine the possibility of using a regional satellite monitoring system for accident prevention and leak detection for oil and gas infrastructures, relying principally on the GALILEO and GLONASS satellite infrastructures. This issue will be addressed in the framework of the negotiations between both parties aimed at concluding in early 2004 a far-reaching cooperation agreement on satellite navigation.

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36 Further information on the Puertollano project can be found on the CARNOT on-line case studies website: http://www.carnot-online.org/Case_Studies/Case_Studies_Database/case_studies_database.html

3. SUMMARY

In the three years of its existence, the Energy Dialogue has, among other things:

- Permitted a permanent and continuous comparison of energy strategies,
- Helped to encourage the growing confidence of EU energy companies to invest in Russia,
- Confirmed the importance of long-term natural gas supply contracts and assisted in resolving one of the disputes relating to the issue of destination clauses which exist in some of these contracts,
- Identified a number of important energy infrastructure projects as being of "common interest",
- Ensured a negotiating mandate for the Commission from the Member states on the issue of trade in nuclear materials. This means that negotiations should commence in early 2004,
- Enabled a closer co-operation between the EU and the Russian Federation in the field of enhancing the safety of the transportation of oil by maritime transport;
- Obtained an agreement to analyse the feasibility of a non-commercial risk guarantee mechanism that could significantly improve investments in the Russian energy sector by reducing the perceived risks,
- Worked to ensure that a high priority is given in Russia to addressing the environmental aspects related to the production, transportation and use of energy, including energy efficiency, energy savings and the use of renewable energies,
- And established a technical joint working group to examine all the issues related to the interconnection of the continental European electricity grid with that of the Russian Federation.

Annexes

Annex 1: The development of the Energy Dialogue

a) Objective

The EU-Russia Energy Dialogue was launched at the EU-Russian Summit of 30th October 2000 in Paris to give an impetus to the definition and arrangements for an EU-Russian Energy Partnership to be established within the framework of the Partnership and Co-operation Agreement (PCA). The remit of the Energy Dialogue was defined in the Joint Statement[37] to the Summit of Paris as providing a framework within which "*to raise all issues of common interest relating to the [energy] sector, including the introduction of co-operation on energy saving, rationalisation of production and transport infrastructures, European investment possibilities, and relations between producer and consumer countries*".

In pursuing the dialogue, the Commission is also very conscious of the necessity of continuing to ensure coherence with other legal frameworks such as Energy Charter Treaty process, as well as regional initiatives such as the energy component of the Northern Dimension. The Commission continues to underline the importance of an early ratification of the Energy Charter Treaty by Russia in meetings with the Russian authorities.

b) The programme of work

The EU-Russia Summit of 3rd October 2001[38] recognised that, in the short term, progress could be obtained in the following areas:

- improvement of the legal basis for energy production and transport in Russia, completion of the regulatory provisions for production sharing agreements and a mechanism for assisting investors in the energy sector, aimed primarily at simplifying administrative and licensing procedures, which are essential preconditions for boosting European investment in the energy sector;
- ensuring the physical security of transport networks. In this context, the European Union is ready to co-operate in the export networks, if and when this is considered necessary by the Parties. The development of a regional satellite monitoring system for accident prevention and leak detection for oil and gas infrastructures will be examined;
- legal security for long-term energy supplies, recognising the important role played in this context by long-term contracts and energy markets in ensuring energy security. Russia stresses the importance it attaches to long-term "take or pay" contracts;
- the recognition of certain new transport infrastructures as being of "common interest", such as interconnection of the Parties' electricity networks, the northern trans-European gas pipeline, the Yamal-Europe gas pipeline network through Belarus and Poland, the development of the Shtokman field and, in the case of oil, connection of the Druzhba transmission system, through Belarus and Ukraine, with the Adria network, which will ensure non-discriminatory transit of energy products and increased supplies to the EU and the candidate countries. Russia considers the implementation of the Kobrin-Velke Kapoushany gas pipeline a priority. Such projects, and the choice of routes, are the responsibility of the States and companies concerned;

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37 EU-Russia Summit. Joint statement.
Relations with third countries – 2000. Press release: Nr 12779/00 (Press 405). (http://ue.eu.int/newsroom/)

38 EU-Russia Summit. Joint statement.
Relations with third countries – 2001. Press release: Nr 12423/01 (Press 342). (http://ue.eu.int/newsroom/)

– in the light of the importance of rational energy use and savings, it is recommended that pilot projects in the Arkhangelsk and Astrakhan regions of Russia be carried out as soon as possible. During 2002, detailed summary reports for these regions will have to be drawn up with financial support from various European sources including industry. This should create a basis for the implementation of other such regional projects.

The Summit also recognised that certain other important issues required further examination and technical study:

– the potential and merits of an investment support scheme which would mitigate non-commercial risks;

– a study of the prospects that the flexible mechanisms of the Kyoto Protocol could offer to Russia for attracting investment in the modernisation of its energy sector;

– the conditions for reinforcing energy science and technology co-operation, notably through the creation of a Russia-EU Energy Technology Centre in Moscow. The added value which co-operation between such a centre and any national energy centre set up under bilateral co-operation between Russia and an EU Member State should be taken into account;

– certain preconditions which should be required for the supply of electricity, such as sufficient availability on the Russian installed capacity market, measures to protect the environment and a high level of nuclear safeguards, comparable to those in force in the EU Member States;

– a study of the possibilities for common implementation of energy-saving and renewable energy projects, in particular by drawing up a catalogue of such projects in Russia which could be financed under the joint implementation mechanism provided for in the Kyoto Protocol;

– the organisation of training in corporate governance.

A number of further issues were identified for examination in the framework of the EU-Russia Energy Dialogue at the Russia-EU Summit of 29th May 2002[39]:

– extension of the pilot energy saving projects from the Archangelsk and Astrkakhan Oblasts to include Kaliningrad;

– necessity of jointly examining any constraints to the trade in primary energy;

– for electricity, the necessity of moving forward on the questions of reciprocity in market access and environmental and nuclear standards;

– and, for the trade in nuclear materials, highlighted the importance of reaching a mutually acceptable solution in accordance with Article 22 of the PCA.

[39] EU-Russia Summit. Joint statement.
Relations with third countries – 2002. Press release: Nr 9424/02 (Press 171). (http://ue.eu.int/newsroom/)

c) Maintaining transparency.

Following the submission of the joint Synthesis Report to the October 2001 EU-Russia Summit and the tasks defined in the Joint Statement from this Summit, discussions were held with the Russian authorities, as well as representatives of the European and Russian energy industries, to examine the modalities of implementing concrete actions in line with the priorities that had been identified. A Staff Working Paper on progress was presented by the Commission in March 2002[40] and a second joint progress report was submitted to the May 2002 EU-Russia Summit. This Summit noted[41] "*with satisfaction*" that the energy dialogue had "*preserved its dynamism and pragmatic approach*" and, in addition to recognising the progress achieved, identified a number of further issues for joint examination.

Following the submission of a third joint progress report to the November 2002 Summit, a Staff Working Paper updating the progress achieved was presented by the Commission in November 2002[42], which was followed by a further update in April 2003[43].

The Russia-EU Summit in St. Petersburg on 31 May 2003 agreed "*that the momentum of the energy dialogue should be maintained, with particular emphasis on promoting investments and improving the investment climate*." Both sides also confirmed their commitment "*to actively pursue regulatory convergence*".[44]

A fourth joint progress report[45] was submitted to the November 2003 EU-Russia Summit in Rome, which "took note of the annexed fourth Progress Report on the Energy Dialogue" and "*welcomed progress in the field of energy and agreed to enhance [our] co-operation in this area*".[46]

The Commission has therefore ensured, as far as practically possible, a high level of transparency in the Energy Dialogue through regular detailed reports on progress and oral presentations in the relevant working groups in the Council, which now include representatives of those countries which will join the European Union in May 2004. Bearing in mind that the objective of the Energy Dialogue is to enhance the security and sustainability of energy supplies across the entire European continent, it is important that the Commission continues to keep Member states and Candidate Countries fully informed on progress in the Dialogue.

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40 Energy Dialogue with Russia – progress since the October 2001 EU-Russia Summit. Sec(2002)333 of 21.03.2002

41 EU-Russia Summit. Joint statement.
Relations with third countries – 2002. Press release: Nr 9424/02 (Press 171). (http://ue.eu.int/newsroom/)

42 Energy Dialogue with Russia – update on progress. Sec(2002)1272 of 20.11.2002

43 Energy Dialogue with Russia – update on progress since the November 2002 EU-Russia Summit. Sec(2003)473 of 15.04.2003.

44 EU-Russia Summit. Joint statement.
Relations with third countries – 2003. Press release: Nr 9937/03 (Press 154). (http://ue.eu.int/newsroom/)

45 Attached as annex 2 to this document

46 EU-Russia Summit. Joint statement.
Relations with third countries – 2003. Press releas

46 Directive e: Nr 13990/03 (Press 313). (http://ue.eu.int/newsroom/)

Annex 2
THE EU – RUSSIA INDUSTRIALISTS' ROUND TABLE
FIFTH GENERAL MEETING
(Russia, Moscow, December 1-2, 2003)

JOINT CONCLUSIONS

Section 1. Introduction

The Fifth General meeting of the EU-Russia Industrialists' Round Table was held in Moscow, Russia, on December 1-2, 2003 under the joint chairmanship of *Anatoli Chubais*, Chairman of the Board of the RAO "UES of Russia", and *Matti Vuoria***,** Executive Chairman of the Board, Fortum Corporation. The forum attracted more than 250 participants, who represented a broad cross-section of both business communities and the EU and Russia official bodies. They discussed the most essential issues of bilateral cooperation, including the Russia's accession to the WTO, impact of the EU enlargement on bilateral relations, challenges to direct foreign investments in Russia, new directions in the EU and Russia industrial policies, prospects for cooperation in priority sectors, including energy, transport, telecommunications and information technologies and some other industries. A special attention was given to the project of creation of a EU-Russia Common European Economic Space (CEES) and to the role of business in this process.

The forum was attended by high-level officials of the European Commission and the Russian Government, including:

Mr *E. Liikanen*, Member of the European Commission, Mr *D. White*, Director, DG Enterprise, Mr *C. Cleutinx*, Director DG Energy and Transport, Mr *S. Niinisto*, Vice President of the European Investment Bank (EIB), Mr *H. Pandza*, EBRD Business Group Director on Russia and Central Asia – *from the EU side*; and

Mr *A. Kudrin*, Deputy Chairman of the Russian Government and the Minister of Finance, Mr *V. Khristenko*, Deputy Chairman of the Russian Government, Mr *B. Alyoshin*, Deputy Chairman of the Russian Government, Mr *G. Gref*, Minister of Economic Development and Trade, Mr *I. Yuzhanov*, Minister of Anti-Monopoly Policy, Mr *A. Fursenko*, acting Minister of Industry, Science and Technology, Mr *A. Kozlov*, First Deputy Chairman of the Central Bank – *from the Russian side.*

An active role in the Forum's deliberations took the high-level delegation of the European Round Table of Industrialists (ERT), top officials of the Russian Union of Industrialists and Enterpreneurs (RSPP) and of the Union of Industrial Confederations of Europe (UNICE).

A delegation of prominent European industrial leaders had informative and useful meetings with Mr *V. Putin*, the President of the Russian Federation, and Mr *M. Kasyanov*, the Chairman of the Russian Government.

The wide representation and high level of participants, together with an open and informal pattern of discussions stimulated the frank exchange of views on important current issues in bilateral trade and economic relations and made possible the direct presentation of opinions and proposals of the business community to political leaders and important decision-makers of the EU and Russia. The Fifth Round Table demonstrated the growing interest of European and Russian industrialists to direct contacts and dialogue, as well as to the joint business projects of 'common interest'. These constructive and positive attitudes allowed to discuss a number of important initiatives, broadly supported by business on both sides.

Section 2. The EU enlargement and bilateral cooperation

The impact of the EU Enlargement on bilateral EU-Russia relations was extensively discussed by Government and industry representatives from both sides.

Russian participants expressed concerns with regard to the possible negative impact of the Central and Eastern European countries accession to the EU on the trade flows between them and Russia. Specifically they have referred to three main concerns:

(1) application of the EU internal market rules and common commercial policy by the acceding countries may hurt traditional trade interests of Russian industry in these countries;

(2) the transition of the acceding states to the EU standards, technical regulations and conformity assessment procedures may cause difficulties for existing contracts and will require a large-scale re-certification of Russian products;

(3) subordination of the national legislation of acceding states to the EU law will invalidate a large number of bilateral agreements, that now provide a legal base for trade and economic relations with Russia.

European participants underlined the advantages of Russia's access to the enlarged single EU market with uniform rules and standards. They have also pointed out that the alignment of the acceding countries with the EU internal market rules and the trade diversion to the EU were a gradual process started with the Europe Agreements. They indicated that specific provisions have been negotiated, and are still being negotiated, in areas of Russian interest, to avoid or to reduce punctual problems. Both European and Russian participants invited the EU and Russia authorities to strengthen this process and to find balanced solutions acceptable to both sides.

Notwithstanding these differences, the Round Table participants expressed a general hope that the expansion of the EU-Russia common borders and interests will increase the interdependence between the two sides and give a new impetus for closer EU-Russia co-operation, aimed at the Europe without dividing lines.

The Round Table recognized these opportunities and called upon political leaders to ensure that EU enlargement will proceed without major legal uncertainty in relations of new members with Russia. The Partnership and Cooperation Agreement is the legal basis for economic and trade relations between the EU and Russia and it should be properly extended to cover the acceding EU Member States. The practical way for both parties to make the most of the opportunities of the enlargement is to promote a much broader integration of the Russian and European economies. In this context, the CEES will serve as an important tool to facilitate further efforts to bring the EU and Russia closer together.

Section 3. Accession of Russia to the World Trade Organization

Russia's accession to the WTO was one of the major themes of the IRT discussions in Moscow. Both the European and Russian participants declared that they attach great importance to Russia's accession to the WTO. Industrial leaders underlined how much the investors and traders on both sides need a predictable, stable, non-discriminatory, rules-based system of business relations. This is a pre-condition and the only firm basis for trust. Business representatives underlined that the reliance on the exclusive bilateral relations of EU and Russia should be avoided. The application of the general rules of the multilateral WTO system prevents trade conflicts and allows the development of more flexible, diversified and efficient patterns of

international trade, investment and production. The full participation of Russia in the rules-based trading system of the WTO would be a right step in this direction.

The business leaders recognize that in trade negotiations with important partners long lead-times are usually needed to ensure a balanced agreement, clarity in commitments and a common understanding about the implications of final agreements reached. In attempts to maximize their tactical advantages both sides need to understand that there are no perfect agreements and that the obfuscation of the interests of one of the parties will lead to no agreement at all or to trade disputes in the future. In the end, the reasonable compromise based on long-term interests of both parties should be reached.

The EU and Russian members of the Round Table are very supportive of an early accession of Russia to the WTO. They welcome the call for intensification of the negotiations by the recent EU-Russia Summit and take the view that Russia's accession to the WTO by the end of 2004 is both desirable and possible. The WTO decision should be viewed as a part of a more general process of Russia's institutional integration into the world trade and economic system.

The business welcomed the enormous efforts already undertaken by Russia to align its rules and regulations to those of the WTO and to enlarge market access for industrial products. In fact, over the last years considerable progress in this direction has been made. To successfully complete the bilateral negotiations it is necessary to continue work on market access for goods and services, and on non-tariff barriers. The Round Table invited the negotiators to keep the objective of overcoming non-tariff barriers to trade and business activity high in the market access agenda. It also noted that some difficult issues have emerged in the negotiations, notably in areas of energy prices and market regulation, and urged negotiators to resolve them by finding mutually beneficial and commercially viable solutions.

Both sides agree on a fundamental need to continue market reforms and to introduce market pricing mechanisms in the energy sector as soon as it is possible. It might be useful for both sides to agree on a common blueprint for deregulation and integration of their energy markets. Accelerated transition of energy-intensive producers to a market-based prices for natural gas and electricity is an essential element of this approach. At the same time, inherent risks and social costs of this transformation should be taken into account.

The Round Table highlighted a number of services sectors, notably insurance, banking and other financial sectors, which are of great common interest to both sides. Different speakers underlined that restructuring and development of these sectors is an important condition for sustainable economic growth in Russia and that there is a considerable potential for trade, investment and other forms of cooperation there. The representatives of the Russian Government and the Central Bank described some of the on-going reforms in this sector. Participants of the Round Table agreed that a mutually acceptable set of commitments in the GATS framework would facilitate the progress of these reforms.

The deregulation of telecommunications was also discussed in the WTO accession framework. The Round Table recognized the importance of this sector as a striving innovative industry and as an information infrastructure for other industries. The Russian participants underlined that the continued liberalization of national telecom market is a complex process, involving many structural, social and administrative problems that need to be addressed in appropriate manner. In this context, Russia's accession to the WTO was recognized by industrialists as a practical way for both sides to make their legal, regulatory and trade mechanisms in this sector compatible and conducive to fair competition and cooperation in the long run.

The Round Table participants believe that the early accession of Russia to the WTO on mutually acceptable and commercially viable terms, with reliable guarantees of implementation and a reasonable period to adapt its economy to the WTO rules meets the interests of both parties. It will not only ensure the liberalization of mutual trade and investment but will also promote the complete modernization of the Russia's regulatory system and will improve internal conditions for sustainable market-based economic growth in Russia.

Section 4. Development of the Common European Economic Space

The Round table welcomes the Joint Statement of the 12th EU-Russia Summit, which endorsed the CEES concept and confirmed the commitment to progressive integration of social and economic structures of Russia and the EU. The IRT stresses the importance of achieving concrete results in a foreseeable future. The work on the implementation of the CEES, as well as on the other common spaces[47], through expedite adoption of detailed working plans will become an important core of the EU-Russia cooperation and the Round Table is ready to actively collaborate on all issues. It calls upon the EU and Russia's business communities to find appropriate forms to associate themselves with this historic effort.

Participants agreed that the establishment of the CEES meets the interests of both sides. The geographical proximity and the complementarity of economic structures give a clear incentive for both sides to enhance and intensify their cooperation, to reduce trade and investment barriers and to establish compatible, predictable and transparent rules for transnational business.

The IRT welcomes the final objective of the CEES, namely, open and integrated markets as a basis for realization of synergies and economies of scale effects associated with a higher degree of competition in bigger markets.

From this point of view, the formation of the CEES is a long-term process that has three major dimensions:

(1) *regulatory convergence* aimed at the harmonization of Russia's legal and economic systems, as well as its technical, corporate and financial standards with international and European practice;
(2) *liberalization* of trade and investment, reciprocal opening of the markets and elimination of trade and investment barriers with the final perspective of establishing a Free Trade Area;
(3) *integration* of the EU and Russia's infrastructure systems in energy, transport, telecommunications and other relevant areas.

The IRT is positive that the CEES, based on well-functioning market economies, compatible business rules and integrated infrastructure networks, will contribute to national economic development and to the expansion of trade and investment between the EU and Russia. The participants underlined the need for stable and efficient institutions and for the effective enforcement of laws and regulations as a precondition for the CEES establishment.

Industry representatives discussed the elements of the CEES concept and expressed the intention to react positively to the invitation from the EU-Russia Summit to contribute actively to the process. The organizational aspects of possible business contributions were debated in detail and the Russian side advanced specific proposals on starting the 'strategic' Business Dialog on the CEES.

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47 Freedom, Security and Justice; External Security; Research and Education

The Round Table calls upon the EU and Russia to ensure that the views of business communities are taken into account in the further development of the CEES. The IRT decided to discuss this issue in further detail and will come up with tangible proposals on it in time to be taken into account by the High Level Group on the CEES.

Section 5. The EU-Russia Energy Dialogue

The energy sector is a top priority on the EU-Russia co-operation agenda. This is the area of the greatest conjunction of economic and strategic interests of both sides and the basis for the development of all other aspects of the EU-Russia economic relations. This is also the test ground for new approaches, institutional forms and financial arrangements in bilateral cooperation.

The participants of the Fifth IRT General Meeting welcome the progress achieved in the framework of the EU-Russia Energy Dialogue. It conducted serious discussions and consultations that helped to identify the broad agenda of bilateral cooperation in this area, to clarify critical issues and to find ways to resolve major problems. The most obvious positive results are reflected in the emerging consensus on the long-term gas contracts and their role in the future EU-Russia energy cooperation, on security of supply and demand and safety of energy transportation systems, on synchronization and integration of electric power systems, on trade in nuclear materials, equipment and services, on energy saving and demand control, on exchange of information and reconciliation of national energy strategies and on the list of high priority projects of 'mutual interest'. In fact, there is the solid analytical and political foundation for a major breakthrough in our energy relations that can result in massive joint or reciprocal investments in oil, gas and electricity sectors.

In order for this to happen both sides should undertake the decisive and concerted actions in the following directions:

(1) to work out a common blueprint for the development of energy markets, reforms of natural monopolies and convergence of regulation systems, and to establish a joint consultative mechanism for exchange of information and coordination of new developments in the energy markets. Europe and Russia should also set the framework for level playing field to enable direct investments in both regions.

(2) it is time to move the EU-Russia Energy Partnership to a new qualitative level as stressed in the Fourth Progress report on the Energy Dialog tabled during the recent EU-Russia Summit. In this framework, issues of nuclear trade, security of demand and supply, energy conservation and advanced forms of cooperation in the energy sector should be tackled in a most practical way.

(3) work on the Transit Protocol and other legal documents of the Energy Charter Conference as well as the preparations for the ratification of the Energy Charter Treaty by Russia on conditions, corresponding to its national interests, will contribute to the process.

Actions should be taken to move the Energy Dialogue from conceptual to practical stage. The first priority is to establish mechanisms for consistent work on major projects of common interest. They will have to deal with the selection of participants, design of appropriate financial schemes and legal forms for these projects, establishment of management systems and so on. The role of business and its organizations should be substantially increased at this stage. The first step in this direction is the establishment in the IRT framework of the 'Energy Steering Group', composed from the eminent leaders of the EU and Russia energy industries. This group should become the nucleus and the central coordination body of a broader system of business participation in the EU-Russia Energy Dialogue.

Section 6. Creating favorable conditions for strategic investment in Russia

Notwithstanding evident successes in economic growth, financial stability and institutional reforms in recent years, the systemic risks of investing into the Russian economy remain high. The major structural, legal and institutional reforms are not yet completed. There is an excessive government regulation of business activities coupled with low government efficiency in vitally important public functions. This situation imposes large administrative burden and transaction costs on productive activities, especially for small and medium-size business, and holds down the productivity and international competitiveness of the Russian economy. Lack of coherence in economic policy, national legislation and law enforcement also undermine the investors' confidence. The situation is aggravated by the progressing obsolescence of economic infrastructure and by the underdevelopment of banking system and financial markets.

All these factors have a negative impact on outside estimates of investment climate in Russia and hold off large-scale investments into the Russian economy. Despite improvement of investment ratings, the total volume of direct foreign investment is still rather small comparative to the size of the Russian economy and its potential.

In last two decades the country essentially did not expand its productive capital assets. Although the recovery of gross domestic investment from the abnormally low levels of the 90-s is clearly under way since year 2000, this is not enough to resolve accumulated problems. The modernization of the Russian industry and the reconstruction of its vast infrastructure requires enormous investments, which can not be fully financed from domestic sources. The investment climate and related issues of institutional and structural reforms remain the key to high and sustainable rates of long-term economic growth in Russia. They require a continuous attention and a pointed dialog between business and public authorities.

The most important thing for the successful development of Russia is the administrative reform, based on tested international experiences. It is the only way to modernize the state administrative structures, to increase the government efficiency, to curb corruption and to establish normal legal and administrative conditions for business activities.

Equally important is the corporate sector reform and the restructuring of industrial establishments. Participants of the Round Table emphasized the need for transition to international accounting and audit standards as a major condition for improvement in corporate governance and international competitiveness of Russian business. The establishment of the 'National Organization on Accounting and Audit Standards' (NOAAS) at the initiative of Russian business and professional associations is an important practical step in this direction that will help to address multiple intellectual, technical and organizational problems of this transition. The 'managerial revolution' and the observance of fair competition rules also remain a high priority for those companies who want to tap foreign financial markets and to attract foreign direct investment.

Consolidation of financial capital and development of banking system and financial markets are essential for mobilization of domestic savings and successful financial intermediation which are vitally needed to channel investment resources into the reformed real sector. Particularly important for business are structural reforms of natural monopolies because of large cost effects and investment risks of their cost-price policies for the rest of the business. Reforms are also needed in education, healthcare, social services, public utilities and housing in order to improve the efficiency of public spending, to reduce fiscal press on business and to open the way for more efficient private operations in these areas.

A more persistent implementation of institutional and structural reforms will substantially increase the chances for the successful modernization of the Russian economy and for the much stronger international support of these efforts.

Substantial differences in business law and practice create the mutual problem for European and Russian business communities. Harmonization of legal and regulatory systems is a strategic task for closer bilateral cooperation and will require a persistent long-term effort. The Round Table calls the Russian government to provide for the timely implementation of scheduled programs of law development, including the harmonization of existing product conformity rules and certification procedures with international standards.

Russia should be also more active in its interaction with international financial institutions and development banks, as well as with Export Credit Agencies in the EU member-states. It can receive a valuable advice and technical assistance on structuring financial services and investment mechanisms for the real sector. The weakness of financial infrastructure is one of the reasons why Russia is unable to convert growing domestic savings into productive investments, to prevent national capital outflow and to attract more foreign capital.

In the transition period, marked by structural reforms and associated risks and uncertainties, it is important to develop business-government partnerships, to protect investments from non-commercial risks and to develop financial technologies for, risk-sharing and investment guarantees, especially needed to support long-term, large-scale and low-return investments in economic and social infrastructure.

European and Russian industrialists expressed substantial interest in the co-financing schemes with the participation of the EBRD and in the prospects for the expanded role of the EIB in Russia. The EU-Russia Industrialists Round Table is strongly in favor of expanding the EIB mandate and operations to Russia which corresponds closely to the IRT recommendations of 2000 in Moscow and of 2002 in Turin. The information on the decision of EIB to increase the financing limit of the infrastructure and other projects in Russia and the EU New Eastern Neighbours to 500 M€ was noted with satisfaction.

Section 7. Forest Industry Cluster Group (FICG)

The FICG reiterated at its meeting the importance of the Russian forest resources for the country's future economic development and for the EU-Russia cooperation. Specific projects in FDI, joint ventures, and other forms of partnership in this area were examined.

In the upcoming legislation the key question of ownership and management of national forest resources must be dealt with in a market-based way. This is the only way to provide for productive use and timely replenishment of these renewable resources and for a dynamic development of this sector in Russia on the basis of a large-scale investments and transfers of modern technologies.

European and Russian representatives from the forest sector decided to jointly publish guidelines on an advanced risk sharing and incentive model for the development of saw-mills in Russia. Finally, the launching of an internship program for young high potential Russian specialists and managers in the forest sector was agreed upon by the interested parties.

Section 8. Cooperation in telecommunications and information technologies

The EU and Russia's representatives of telecommunications and information business noted recent favorable developments in this area of cooperation which are being reflected in more transparent regulation policies, cost-based tariff schedules and the development of a pro-competitive legal framework. They confirmed their interest in further discussion and cooperation in such areas as:

(1) Trade and operational problems for EU ICT industry in the context of Russia's accession to the WTO and the EU-Russia Dialogue on future telecom standards and regulations, including mobile communications networks.

(2) Linkage of European and Russian multimedia networks and European interests in using Europe-Asia 'information bridge' and projects of telecom cooperation in Kaliningrad region.

(3) *Cooperation in space communications and navigation aimed at the provision of compatibility and interoperability of GALILEO and GLONASS systems, as well as special application projects based on integration of EGNOS program and Russian technologies.*

(4) Joint projects in ITC R&D, including TV and multimedia, Internet, telemedicine and offshore programming.

(5) EU-Russia cooperation in Information Society: Government, telemedicine, Internet security and other issues.

At the same time the participants identified a number of obstacles to a wider cooperation in these areas. Since Russia was not earlier participating in international standardization, a great number of applicable standards are national GOSTs, which deviate significantly from international ones. Therefore it is essential to reinforce the standardization policy oriented towards international standards that has been recently adopted by Russia.

The main common priority for ICT industry today is to accelerate the process of 'Content Meeting Telecom' with major emphasis on content rich, interactive multimedia services and broadband capabilities. Active education campaign and high-level support are required to encourage and widen the dialogue between all stakeholders in the dynamic development if the ICT Industry.

In recent years Russian Government institutions, business and public paid special attention to the development of software and Internet technologies for the business sector. The meeting confirmed it as a high priority and suggested that special attention be devoted to projects involving small and medium-sized enterprises on both sides and to support of direct contacts between them.

The formulation of the Pan-European knowledge society is considered a common goal and a critical factor for the international competitiveness and sustained economic growth both of the EU and Russia.

Section 9. Task Force on Industrial and Scientific Cooperation

The open and informal pattern of discussions, presentation, opinions and proposals, made during the Task Force meeting, clearly demonstrated the growing interest of industrialists in direct contacts and dialogue.

Research and development is one of the main pillars in the industrial dialogue between the EU and Russia as it offers high opportunity and low risk cooperation to industry. However, in order to achieve direct results a framework that provides for a fair, equitable and predictable intellectual property management needs to be established. Functional structures fostering innovation and joint undertakings, as well as a special tax regime exempting R&D from taxes, including customs duties and VAT, must be introduced. The IRT meeting identified key industrial and technological sectors, such as energy (including renewable energy sources), environment protection, transport, biotechnologies, IT, aerospace materials science, which will benefit from joint R&D efforts and scientific and technological cooperation.

In each of these areas there is a strong need for a coherent, mutually recognized regulatory framework, for example to share standards in order to avoid undue re-certification. To achieve rapid progress and concrete results, the TF intends to invite broader participation of industrialists, to organize work in inter-session groups and to make better use of existing instruments, such as the International Science and Technology Centre.

Section 10. The EU-Russia Transport Business Dialogue

Structural and institutional changes in the transport sector are underway both in the EU and Russia. In the EU, they are focused on restructuring and integration of the overall transport system, stricter environmental controls over vehicles and management of transport globalization. In Russia, reforms have been carried out in the rail transport and are underway in the maritime and air transport. The Transport Strategy of Russia is being developed up to 2025.

An increasing number of challenges in transport relations have emerged in recent years, including the situation around the Kaliningrad region after the EU enlargement and the widening gap in standards and operational rules. These issues should be reflected in the development of the 'transport dimension' of the Common European Economic Space.

Under these circumstances, the EU-Russia transport dialogue, aimed at resolving these problems, becomes a matter of high priority. The 5th IRT hosted the business initiative, put forward by the International Road Transport Union (IRU) and the European Business Club (EBC), on launching the bilateral Business Transport Dialogue. The participants of the workshop identified four priority areas for the first stage of this dialogue:

1. Convergence and harmonization of legal norms, operational rules, technical standards and regulation instruments and procedures in the transport sector. Special attention is required with respect to custom duties, freight registration and clearance procedures, to visa problems and to legislation on the leasing of vehicles.

2. Transport insurance and safety, including harmonization of insurance norms and safety rules, use of modern transportation technologies for dangerous and perishable freights, standardization of safety equipment.

3. Investment in the upgrading of the Russian transport system and its integration with Pan-European networks and the use of PPPs, concessions, joint management companies and private investment consortiums for these purposes.

4. Development and transfer of new technologies, including multi-mode transportation, 'intelligent' transport systems based on integrated satellite and aerial navigation facilities, computerized floor control and logistics centers, environment impact control stations.

The IRT recognizes transport co-operation issues to be of a high priority in the future EU-Russia relations, especially in the framework of the CEES, and undertakes to establish in 2004 a permanent IRT Task Force on Transport, where the broad cross-section of European and Russian transport industry interests will be represented.

Section 11. Follow-up actions

The Round Table Co-Chairmen will undertake without delay the necessary steps to inform the EU and Russian governmental authorities about the conclusions and recommendations of the 5th Industrialists Round Table and to obtain the appropriate official positions with regard to their implementation.

The IRT Co-chairmen will continue their consultations with the aim to expand direct contacts of leading European and Russian business associations and to activate the work of joint commissions, contact and expert groups on interaction of specific industries and implementation of selected joint projects.

The IRT Co-Chairmen will also call a working meeting with the participation of the Task Forces' Co-Chairs to discuss the future organizational structure of the IRT and the ways and means to develop and to improve its activities.

The next General Meeting of the Round Table will be held in the EU in October 2004.

THE RUSSIAN CO-CHAIRMAN THE EUROPEAN CO-CHAIRMAN

Anatoli Chubais	Matti Vuoria
Chairman of the Board and CEO	Executive Chairman of the Board
RAO "UES of Russia"	Fortum Corporation

Annex 3:

Summary of the Russian Energy Strategy for the period up to 2020.

The Energy Strategy of Russia for the Period of up to 2020
was approved by the Decree No.1234-p of August 28, 2003,
issued by the Government of the Russian Federation

SUMMARY OF THE ENERGY STRATEGY OF RUSSIA FOR THE PERIOD OF UP TO 2020

CONTENTS

The aims, tasks and goals of the country's long-term energy policy and the stages for carrying it out

Russia has considerable energy reserves – its territory contains a third of the world's natural gas, a tenth of its oil, a fifth of its coal and 14% of its uranium – and the country has at its disposal a powerful complex of fuel and energy industries which is the basis of its economic development and an instrument for the implementation of its domestic and foreign policy. With the surge in economic development that has now started, there is every reason to expect a substantial growth in demand for the energy resources within the country. To be able to keep Russia's economy and population supplied with all forms of energy in the long term, a scientifically founded long-term energy policy that is accepted both by the general public and by government institutions is absolutely essential.

The aim of the energy policy is to make the most efficient use of natural fuel and energy resources and of the energy industry's potential for economic growth and improving the quality of life of the population.

"Russia's Energy Strategy for the Period up to 2020" ("the Energy Strategy") is a document which sets forth the aims, tasks and main lines of development of Russia's long-term energy policy in the period under consideration. The main purpose of the Energy Strategy is to define ways of revamping the fuel and energy complex and improving the competitiveness of its products and services on the world market. The key means of achieving this task is to establish a civilised energy market and non-discriminatory relations between its members and towards the state. At the same time the state, confining itself to being an economic player, strengthens its role in the formation of the market infrastructure as the regulator of market relationships.

The strategic goals of Russia's long-term energy policy are energy security, energy efficiency, budgetary efficiency and environmental safety in the power industry. To attain these goals and make the development of the power industry more manageable, the main components of state energy policy have to be devised and put into effect. These include above all using and managing Russia's mineral resources, developing domestic fuel and energy markets, setting up a rational fuel and energy balance, implementing regional and foreign energy policies and conducting social, scientific and technical and innovation policies in the energy sector. The main instrument for putting all these into effect will be a set of economic control measures: on prices (tariffs), taxes, customs and antimonopoly policy. The creation of a consistent and flexible system of economic control is one of the main tasks and prerequisites for the economic efficiency of energy policy.

Implementation of state energy policy will be based on constant development of the legal and regulatory framework. This will be improved by direct-action laws regulating various aspects of energy sector activity and new legislation to ensure the stability, completeness and consistency of the rules and regulations in this vitally important area of social activity.

Implementing the Energy Strategy in Russia will result in an efficiently developing fuel and energy complex and a competitive energy market which will satisfy the demands of the growing energy resource economy and integrate well into world energy markets.

Socio-economic development forecasts for the country indicate that Russia's long-term energy policy is likely to pass through at least two qualitatively different phases.

It is envisaged that by the end of the first phase (2009-2010) initial reform of the energy sector will have been completed, creating the basis for its progressive development with different scenarios for the country's socio-economic development, including:

– the formation of a complete and approved legislative and regulatory base, removing all barriers still standing in the way of transparent and highly competitive energy markets operating on fair-trade principles;

– the completion of reforms in adjacent economic sectors, raising them to a new level of energy efficiency;

– realisation of the export potential of the oil and gas complex and attainment, for the most part, of stable positions for energy companies in domestic and foreign fuel and energy markets;

– transition from the fuel and energy complex's driving role in the Russian economy to the role of an efficient and stable supplier of fuel and energy resources for the needs of the economy and the population.

During the second phase the formation of Russia's new fuel and energy complex will be characterised by:

– further growth of the openness and competitiveness of energy markets in the framework of a market infrastructure (chiefly energy transport) formed in the previous phase;

– speeding up the work already under way in the nuclear, hydroelectric and coal industries; developing the petrochemical and gas chemistry industry; doing the preliminary work for promising large projects (including the development of oil and gas fields in Eastern Siberia and the Russian Far East, on the Yamal Peninsula and offshore), along with a corresponding growth of annual investment in the fuel and energy complex in absolute terms (no less than 1.5 times more than in the previous period);

– a sharp increase in the contribution of the scientific, technical and innovative potential to improving the efficiency of Russia's energy sector;

– creation of the basis for a substantial increase of the share of renewable energy sources in the next period and for transition to the power industry of the future.

Energy Security

There are a number of factors in the fuel and energy complex (FEC) industries today which adversely affect their functioning and development and pose a threat to Russia's energy security:

– high depreciation of capital assets (more than 50%);

– a persistent lack of investment assets in the fuel and energy sectors (apart from oil) and their inefficient use. With the high investment potential of FEC industries, the foreign investments they receive amount to less than 13% of funding from all capital investments. At the same time, 95% of these investments go to the oil industry;

– distortion of the relationship between prices for interchangeable energy sources has led to a lack of competition between them and a demand structure characterised by overconcentration on gas and a fall in the share of coal;

– the productive potential of the fuel and energy complex is lagging behind the world level of science and technology;

– a shortfall in development and an objective increase in spending on opening up a long-term raw materials base for hydrocarbon production, especially as regards the gas industry ;

– the lack of a market infrastructure and a civilised, competitive energy market;

– a persistently high burden on the environment resulting from the activity of the fuel and energy industry;

– the considerable dependence of the oil and gas sector, and therefore state profits, on world energy market conditions;

– the absence of developed and stable legislation fully taking into account all the operational specifics of fuel and energy undertakings.

In order to ensure the security of energy supply it is vital, first of all, to modernise the technological basis of the fuel and energy complex and regenerate its depleted resource base. During this decade, limited investment (except in the oil industry) will mean that technological modernisation will be chiefly confined to existing production facilities, but later on plants will be completely rebuilt and new ones created. Secondly, there will be a need for a change in the consumption pattern and the location of production facilities for fuel and energy resources. There is going to be an increase in consumption of energy from nuclear, hydroelectric, coal and renewable sources and hydrocarbon production will spread from Western Siberia to other regions of the country (Eastern Siberia and the Far East, the European North and the Caspian Sea region).

To enable the state to respond promptly and appropriately to any threats that may arise to energy security and to be able to analyse the security situation in the regions, it is planned to develop and implement a set of measures for preventing and neutralising internal and external threats, to use security criteria (indicators) and to set up a security monitoring system and mechanisms for stabilising the situation.

The environmental safety of the power industry

The operation and development of the power industry come up against a whole range of environmental problems, one of the worst being pollution by oil and oil products. The development of new hydrocarbon fields in the Northern and Eastern parts of the country (the Timano-Pechora region, the Yamal Peninsula, Eastern Siberia and the Far East) demands a solution to the problem of preserving the extremely vulnerable ecosystems of these remote regions with severe climatic conditions. Another very important problem is that of protecting the environment during the major projects to develop the oil and gas fields of the Arctic Sea shelf and Sakhalin Island and the marine deposits of the Caspian and Baltic seas. These projects are being carried out in regions rich in bioresources, including valuable fish and other fishery species.

It is the aim of environmental policy gradually to limit the burden on the environment caused by the fuel and energy complex and to come closer to European environmental standards. The policy uses the following methods:

– economic stimulation of the use of environmentally safe production processes and low-waste and no-waste technologies of production and consumption of energy resources by imposing strict environmental demands on fuel and energy companies and products, creating a system of compensation payments to the state for breaching these requirements (the organising principle of such a compensation system will be enshrined in law and will take the form of economic payments, including payments into insurance funds for preventive measures), rationalising the amounts of payments for the use of natural resources, and introducing and legally regulating the principles of environmental insurance;

– tightening up monitoring of compliance with environmental requirements in the implementation of investment projects and improving the state environmental assessment system.

The Energy Strategy stems from Russia's need to meet its international environmental commitments. If the Kyoto Protocol to the UN Framework Convention on Climate Change is ratified, Russia will be committed to keeping its emissions of greenhouse gases to 1990 levels in the period 2008-2012. According to the estimates, in the fuel and energy sector greenhouse gas emissions will be only 75-80% of 1990 levels by 2010, and in 2020 they will not even reach that level, so Russia will be able to meet its commitments.

The main trends and forecast parameters of Russian economic development; energy efficiency

Two basic socioeconomic development scenarios for the country lie behind Russia's Energy Strategy: an optimistic one and a more moderate one.

The optimistic scenario is characterised by a GDP growth to 3.3 times the 2000 level by 2020, a seven-fold increase in the physical volume of investment in fixed capital in that period, and high world prices for Urals oil (up to $30 a barrel in 2020) and gas ($138 per thousand cubic metres in 2020). It is based on intensive implementation of economic reforms and fast liberalisation of prices and charges for natural monopolies' products and services, and envisages the fast creation of a competitive environment in the markets for such goods and services. So this scenario is outstanding for the active use of energy-saving and energy-efficient technologies and high rates of reduction of the energy consumption share of GDP: more than halved by 2020 compared with 2000.

The moderate scenario is characterised by a GDP growth to 2.3 times the 2000 level by 2020, a 3.6-fold increase in the physical volume of investment in fixed capital in that period, and stable prices on world markets for Urals oil at $18.50 a barrel and average contract prices for gas of no more than $118.50 per thousand m^3. This scenario foresees a 42-46% decrease in the energy consumption share of GDP by 2020 compared with 2000, assisted by pricing policy. Price rises in the natural monopoly industries, slightly ahead of industrial inflation, will lead to a shift in profitability from the main high-energy users in favour of the natural monopolies and create the conditions for saving energy resources.

Alongside these scenarios the Energy Strategy also considers a favourable scenario for Russia's economic development intermediate between the two basic ones above and a critical scenario.

The critical scenario - the most difficult one for Russia - is characterised by an unfavourable combination of external and internal conditions and especially by low world oil prices, a fall in demand for Russian raw goods and other complications. This scenario proposes intensive economic reforms in unfavourable external conditions with the aim of rapidly diversifying the economy and decreasing the social burden on the budget. It anticipates the implementation of a whole set of reforms by 2010, including reform of the natural monopolies, housing and municipal services, the tax system and the banking sector and administrative restructuring. Together with the assumption of unfavourable external factors, such liberalisation may in the first years lead to negative economic growth rates and a worsening of the social situation. But it will make it possible to free the economy from the costs of later reform and foster a competitive environment for the natural monopolies and municipal services, and on this basis the rate and quality of economic growth will be improved and the changeover will be made from a fuel and raw materials development model to an innovation model.

To achieve optimum economic development parameters, much more efficient energy use is vital. A tendency towards sluggish, power-intensive growth may mean not only technological backwardness and a loss of competitiveness in the national economy, but also a growth in internal demand for energy resources. As a result, even when production of these resources is at its highest, demand may have to be satisfied by increasing imports and/or limiting exports.

Russia's economy is currently highly wasteful of energy resources. Its GDP power consumption (calculated on the basis of currency purchasing power) is more than 2.3 times the world average and 3.1 times that of EU countries. This is due not only to poor climate and territorial factors, but also to the structure of manufacturing industry that has evolved over a long period and the increasing obsolescence of the power-intensive sectors of industry and housing and municipal services, coupled with the fact that underestimation of the cost of energy resources, especially gas, does not encourage energy-saving. The present energy-saving potential is 39-47% of current energy use. Almost one-third of it is concentrated in the fuel and energy industries (including one-quarter in power generation and heat supply), 35-37% in industry and 25-27% in housing and municipal services.

The aim of state policy in this area is to be sure to meet the strategic goals of improved energy efficiency through a wide range of activities ensuring:

- economic restructuring to benefit low-energy manufacturing industries, the knowledge industry and the service sector, by means of a tailor-made industrial policy;
- achievement of the technological energy-saving potential.

The economic restructuring and technological energy-saving measures are expected to cut GDP power consumption 26-27% by 2010 and 45-55% by the end of the period under consideration. Restraining the development of power-intensive industries and promoting technological energy-saving measures will make it possible to limit energy consumption growth to 1.25-1.4 times and that of electricity consumption to 1.35-1.5 times for a growth in the economy of 2.3-3.3 times.

What is needed to boost energy saving is a well-founded increase in the domestic prices for energy carriers at economically justified rates which are acceptable to consumers; gradual elimination of cross-subsidisation in price formation, especially in the power industry; and continuation of the reform of housing and municipal services. At the same time, effective price control is an absolutely essential condition, though insufficient by itself, for encouraging energy saving. It is necessary to implement a complete system of legal, administrative and economic measures stimulating efficient energy use.

Such a system will involve:

- changing the existing norms, rules and regulations governing fuel and energy use in order to toughen up energy-saving requirements; improving the rules for accounting and control of power consumption and establishing standards for power consumption and maximum energy losses, and obligatory testing and certification of energy-consuming devices and general electrical appliances for their compliance with energy consumption rules;
- carrying out regular energy audits of firms (obligatory for budget enterprises);
- creating extra economic incentives for energy saving, turning it into an effective business sector;

– widespread state efforts to popularise efficient energy use; mass staff training; accessible databases containing information on energy-saving measures, technologies and equipment, technical standards and specifications, etc.

The aim is to create a sustainable and effective system for encouraging energy consumers to invest in energy saving.

Another instrument of state policy will be to support a specialised business sector in the energy-saving field, still underdeveloped in Russia. Support for energy-saving business calls for a transition from direct financial aid from the state to a system of implementing effective business projects in the respective field and of insuring commercial and non-commercial risks.

Budgetary efficiency of the energy industry; state investment policy

The energy sector is interlinked in a complex and diverse way with the state budget, being at once its main source of income (providing about half of federal budget revenue) and a recipient of state funds. Ensuring that these links remain civilised and effective is one of the state's most important tasks and the main aim of the industry's budgetary efficiency policy.

The main principles of this policy are:

– a stable outlook for the future – timely and well-founded evaluation by the state of the necessary estimates of budget receipts from energy-sector enterprises (taking into account not only fiscal objectives but also the energy industry development targets set by the Energy Strategy);

– a comprehensive assessment of budgetary efficiency – taking into account the present and future budgetary effects of the change in the structure and value of state property, future spending cuts, effects in allied industries, etc;

– balance in the budgetary efficiency policy – correspondence of the growth of capitalisation in the energy sector to the volume of budget receipts from it;

– consistency and purposefulness in the use of state funds and investments made under state control – management of budgetary efficiency making use of modern methods of selection, organisation and follow-up of joint business projects.

The state's investment policy in the fuel and energy complex (FEC), based on budgetary efficiency principles, is aimed at solving two tasks: how to increase the volume of investment and how to change its structure.

The nature of state support will differ depending on the individual sectors, though economic incentives to private investment will be a priority instrument. Direct support in the form of funding from budgets of all levels will be limited to projects of strategic or high social importance and will be assured by specially programmed mechanisms.

Despite restrictions on direct budgetary financing, state support of investment in the FEC does not by any means preclude investment under state control. In particular, the Government of the Russian Federation or federal agencies authorised by it will consider and approve investment programmes for developing the state nuclear industry and the unified national electricity grid (carried out by the federal grid management company), the long-distance gas, oil and petroleum products pipeline system, and the comprehensive development of deposits in new regions and port infrastructure. They will be financed from the agencies' own resources and any investment funds attracted while ensuring an economically justified return on the capital investment through

controlled prices (tariffs) for the services of relevant organisations, while keeping to the budgetary efficiency principles of the energy industry.

Support will continue for promising investment projects in Russia's mechanical engineering industry for the FEC. It will be assured in the first place by subsidising, through the federal budget, the interest rates on credits attracted for carrying out the projects and by providing guarantees for commercial and non-commercial risks. The integration and merger of engineering companies will provide an important potential for making them more attractive to investors.

There will be a continuation of state support for FEC activity by subsidising the interest rates on credits attracted for building up seasonal fuel stocks and repairing power equipment, compensating for differences in the tariffs for industrial consumers in different areas, financing completion of the elimination of particularly unprofitable mines and opencast pits, subsidising the interest rates on credits attracted by organisations of the coal industry and financing specific measures in the special federal programmes.

Development of domestic fuel and energy markets

The system of internal trade in all types of energy resources is characterised by insufficient competition and a lack of transparency as regards financial flows and pricing principles, as well as by closed cartel chains which impede the formation of fair and economically justified prices and the improvement of product quality and allow the creation of artificial shortages of goods.

The policy for developing the domestic fuel and energy markets chiefly consists of:

- structural policy measures in the energy sector (including the reform of natural monopolies) aimed at creating competitive energy markets;
- interlinked measures of pricing (tariff), taxation and customs regulation;
- establishment of civilised rules and institutions for trade in energy resources;
- creation and development of mechanisms of state control over deregulated energy markets.

The structural policy measures provide for the continuation of reforms in the power and gas industries.

The main objective of the reforms under way in the power industry is to develop competition in potentially competitive areas – generation and sale of electric power in those regions where it is technologically and economically feasible.

The Government of the Russian Federation has adopted the Main Guidelines for Reform of the Power Industry, providing for three successive and coordinated stages of reform.

In the first stage there will not be full liberalisation of the electricity market, in order to avoid the overlapping of two complex processes – company restructuring and market liberalisation. A competitive wholesale market will be set up to sell up to 15% of generated power, which will allow a model of the competitive wholesale market to be worked out as early as the first stage.

The second stage will launch and develop competitive wholesale and retail electricity markets. As the market and infrastructure develop, the competitive markets will expand and the number of market operators will increase. The basis of the competitive market created will be a combination of organised (exchange) trade in electricity with a system of bilateral agreements giving market operators the right to set up economic links independently. The efficient

regulation and control system set up in the first stage will mean fewer risks during the transition to market liberalisation.

In the third stage the plan is to create the conditions for attracting substantial investment in the capital of the electric power utilities, to complete the infrastructure and bring sustainable development to the power industry.

The reform of the industry will create the conditions for competition between the power utilities on both domestic and foreign markets, which will make it possible to expand Russia's export potential. In this connection, particular importance will be attached to efforts to integrate Russia's and Europe's electric power systems in a parallel working scheme (it is expected that there will be an increase in demand for Russian electricity in Europe up to 20-35 billion kWh by 2010 and 30-75 billion kWh by 2020) and to the export of electricity to Asia-Pacific region (APR) countries from electric power plants in Siberia and the Russian Far East, including the construction of transmission lines for exporting electricity.

Priorities for structural change in the gas sector are: greater transparency in Gazprom's financial and economic dealings through separate accounting for expenditure on the different types of activity; improved efficiency of corporate management, an improved domestic trading system and transition to a liberalised gas market. Reform of the internal gas market will be smooth and gradual and implemented in several stages in line with the legislation. In particular, the following is planned:

- a gradual increase in gas prices on Russia's domestic market, changing to selling gas at market prices;
- a changeover from controlling the wholesale gas price to establishing a single gas transportation tariff for all producers;
- support for the establishment and development of independent gas producers;
- creation of conditions for non-discriminatory access to the gas mains system for all market operators;
- in the medium term, the preservation of the country's Unified Gas Supply System as a single infrastructure technology complex, and its development by constructing and connecting to it new plant of whatever form of ownership;
- creation of the conditions for competition in those segments of the gas market where it is possible and economically worthwhile (sale, extraction and underground storage of gas).

Interlinked price (tariff), tax and customs control measures should ensure macroeconomic and social stability and favourable conditions for economic growth taking into account the need to increase financial stability and the attractiveness of Russian fuel and energy companies to investors.

The gradual elimination of disproportionality between the prices for the main energy carriers will, in the first place, bring the prices for natural gas to a level when the industry becomes self-financing (taking into account necessary investment), and then to a level ensuring equal profitability of gas supplies for both the export market and the internal market. As a result of faster growth in natural gas prices and stabilisation of coal prices, the price ratio (in comparison fuel) for gas and for energy coal in the area of its actual use will rise from 0.62 in 2002 to 1/1 in 2006 and 1.4/1 in 2010, making 1.6-2/1 in subsequent years. This will ensure the necessary development of the coalmining industry.

Taxes will play an increasing role in stimulating growth in the production volumes, development and effective use of the FEC's raw material base. The taxation system in the area of organic fuel extraction will be geared to a rental (instalment?) approach.

Establishing civilised rules and institutions for trade in energy resources calls above all for improved transparency of deals for the sale or purchase of energy resources. The development of exchange business will make it possible reliably to determine the prices for fuel resources in a given region, to calculate taxes and duties objectively, and to compare quotations for the same resources in different regions as well as prices for deals made inside vertically integrated oil companies and at the exchange in one region. Exchange trading in real goods will also permit trade in derivative instruments to be organised, which is necessary for managing the risks of these markets which are characterised by sharp fluctuations in prices (development of a hedging market, futures, forward and option deals, hedging).

The above measures will make it possible to increase competition and limit the final growth in fuel and energy prices while eliminating any disproportions that may have developed in the prices for energy resources and ensuring that FEC organisations are self-financing.

Use and management of state mineral resources

The present state of the mineral and raw materials base of the fuel and energy complex bears witness to the need for fundamental changes to the mechanisms for replacing hydrocarbon raw material stocks. The imperfections of the state management and control system for using and replenishing supplies of strategic types of raw materials lead to a tendency to use up the best supplies, slowness in opening up new deposits, failure of projects to develop new fields, slowness in preparing supplies and other negative trends which threaten Russia's energy security.

The main aim of state energy policy in this area is to ensure the replenishment of stocks of oil and gas and other fuel and energy resources and the rational use of Russia's mineral deposits in order to secure the country's stable economic development.

To achieve this objective it is planned to:

- improve and coordinate management of the development of the FEC's mineral and raw materials base through medium and long-term programmes to study the mineral deposits, taking into account projected fossil fuel consumption levels;
- coordinate interworking between executive bodies at all levels, grant the federal executive authorities the powers for strategic planning of the development of the FEC's mineral and raw materials base and the main regulatory and control functions, and clearly separate executive from management functions in matters of state control of the exploitation of mineral deposits;
- improve Russian legislation on the use of mineral resources, providing the possibility of granting rights to use deposit lots on both an administrative and a civil-law basis, including concession contracts, regulation of the mechanism for granting the right to use mineral resources precisely detailing all stages and phases in the licensing process, simplification of the procedure for issuing licences for small deposits in order to meet local demand for fuel and energy resources, laying down in the licences and contracts for the use of deposit lots users' commitments regarding the amount and type of work to be carried out in connection with the use of the mineral resources, the stages and time limits for use of the deposits and

the checking of applicants' financial standing when deciding whether to grant the right to use the mineral resources;

- prepare and carry out programmes to make deposit lots available for exploitation, extending the practice of public auctions for exploitation rights including the issuing of all-in licences covering the prospecting and development of resources;
- create reliable legal conditions for deposit users to make the long-term investment decisions on working unique coal and gas deposits and building the transport systems necessary for developing and exploiting them;
- transfer the main work of geological study, search and prospecting of mineral deposits in mining regions with developed infrastructure from the state to the deposit users, taking steps at the same time to stimulate investment in the regeneration of Russia's mineral and raw materials base;
- ensure the fullest possible extraction of raw hydrocarbons, using new techniques and technologies to raise the ultimate oil yield from the formations;
- mine mineral deposits only in accordance with approved technological mining specifications and subject to mandatory compliance with the planning decisions taken;
- reevaluate the raw materials base of hydrocarbons and coal in accordance with a new classification;
- take sanctions against deposit users who breach the conditions of their use, amongst other things for deliberately mothballing mineral deposits and oil wells; work out ways to increase deposit users' economic liability for defaulting on investment obligations and failing to use mineral raw material resources efficiently;
- step up monitoring of the efficient mining of reserves and of their rational use over extended periods.

Regional energy policy

The Energy Strategy takes into account the main differences in the conditions of energy supply and the structure of the fuel and energy balances of macroregions (zones) such as the northern, southern and central regions of the European part of Russia, the Urals, Siberia, the Russian Far East and the regions of the Far North. In the development of the power industry priority is given to regions with valuable energy resources that are in short supply (Far East, Transbaikalia, North Caucasus, Kaliningrad Oblast, Altay Kray, etc).

The regional energy policy provides for:

- a legislative division of powers and responsibilities in the area of regulation of the energy sector between the federal and local government authorities, in order to achieve a balance of interests between the state authorities, power utilities and energy resource users;
- taking into account geographical asymmetry in the supply of natural energy resources and in the structure of energy resources in the different regions of Russia, and also the considerable differences in the conditions of energy supply to such zones; subsidising the creation of seasonal fuel supplies for the "critical" regions;

– maximum possible but economically efficient use of local fuel and energy resources in the regions.

The optimum use of renewable energy sources is of considerable importance to the implementation of regional energy policy. Renewable energy has to be developed due to its role in solving the following problems:

– providing a stable heat and power supply for the population and industry in areas of decentralised energy supply, especially in regions of the Far North and similar territories;
– providing a guaranteed minimum power supply to the population and manufacturers in regions with a centralised supply where there is an energy shortage; preventing damage from emergency shutdowns;
– reducing harmful discharges from power installations in towns and environmentally sensitive populated areas, as well as in public open spaces.

Social energy policy

The relatively high proportion of poor families' income taken up by the cost of electricity and the insufficient level of social support in the reforms mean that there is a need for an active social policy to minimise the adverse effects of energy price increases for socially unprotected population groups. To achieve this we must:

– ensure an average per capita income growth of not less than 3.4-3.7 times, amongst other things to compensate for expenditure on fuel and electricity (2.3-2.4 times more);
– ensure coordination of housing and municipal reforms and interbudgetary relations and an end to cross-subsidisation;
– create the institutions responsible for providing the population with the energy resources, food and consumer essentials it needs (liable suppliers);
– create an effective state system of family protection for the needy;
– rationalise the spending of budget funds on social needs;
– create, against budget funds, additional reserves of energy resources for supplying socially important and strategic consumers.

External energy policy

Russia's energy policy in the foreign trade sector must be geared towards transition from its role as predominantly a supplier of raw material resources to the role of an active and independent member of the world energy market. Strengthening its position on the world oil market and on the related gas market is a strategically important task. Over the next 20 years we have to realise the export capabilities of the Russian fuel and energy complex and contribute to ensuring the country's economic security, while remaining a stable and reliable partner for European countries and the whole world community. Russia's participation as a major supplier of energy resources will be a new factor in ensuring world energy security in the period up to 2020.

Creating a unified energy and energy transport infrastructure in the contiguous regions of Europe and Asia, developing international energy transport systems and ensuring non-discriminatory transit of energy carriers are in Russia's strategic interests. To achieve these objectives, the state will promote the participation of Russian joint-stock companies in preparing and carrying out major international gas, oil and electricity transport projects both westbound and eastbound.

For Russia, with its unique geographical and geopolitical situation, the problems of transit of energy resources have a special significance. Accordingly, the country has all the necessary prerequisites for transit ensuring that it can reliably supply itself with energy resources, as well as exporting them efficiently and receiving income from transit operations.

Russia, as one of the world's greatest producers, exporters and consumers of energy resources, will actively pursue a dialogue with both producer and consumer countries, participating in international energy conferences, cooperating with industrially developed countries on the basis of the declaration on cooperation with the IEA and in the framework of the G8, and cooperating with the leading oil exporting countries (both independent states and OPEC members) in order to secure fair prices for energy resources.

An effective foreign trade policy has to be based on evaluating promising energy markets where maintaining an active presence will benefit the country. The market of the countries of central and western Europe will remain one of the most important for Russia in the coming 20 to 25 years. The USA may become a long-term market for the sale of Russia's oil industry products, while American capital is a source of investment in the development of the industry and of export sectors of Russian oil transport. Besides, the USA is a promising market for energy sales from Russia's nuclear industry, as it will eventually be for liquefied natural gas as well. Our main partners in economic cooperation with the Asia-Pacific region (APR) and Southern Asia will continue to be China, Korea, Japan and India – promising sales markets for gas, oil, power, nuclear technology and nuclear-fuel cycle products. The share of APR countries in Russian oil exports will rise from 3% at present to 30% in 2020, and natural gas to 25%. The markets of the Near East, South America and Africa are of interest primarily as potential consumers of Russian energy companies' services, but also as importers of energy technology and equipment for the fuel and energy complex.

Formation of a rational fuel and energy balance (FEB)

The Energy Strategy has been worked out taking into account Russia's FEB optimised as regards structure and as a cross section of industries and regions.

The FEB as devised envisages a growth in exports of energy resources (of course after domestic demand has been met) in line with world price variations and changes to the product range delivered, as well as the possibility of imports. External demand for fuel and energy resources is determined above all by the rates of world economic development. According to available estimates, these will amount to 2.5-4% in the next 10 years, and therefore average annual demand for raw hydrocarbons will also grow at the moderate rate of 2-4% a year worldwide and 1.5-2.5% in Europe.

According to the estimates, after oil prices have stabilised at around 18-20 dollars a barrel, Russian fuel and energy exports will increase 23-25% by 2010 and 25-30% by 2020 compared with 2002, and with prices rising steadily to 30 dollars a barrel the economically efficient growth of exports of all types of energy from Russia will reach 30-35% and 45-50% respectively. If oil prices reach 13-15 dollars a barrel in the present decade, exports of energy resources will have to be cut by 10-15% of the level reached.

Exports of Russian oil products are expected to decrease in the period under consideration. This is connected both with the poor quality of some oil products and the high cost of delivering them to the external markets (especially petrol and diesel fuel) and with the reduction in export stocks of the others (especially straight-run naphtha) as a result of the firmer demand for them on the domestic market. By 2020 exports of oil products may amount to 30-50 million t, as against 75

million t in 2002. Russian gas exports are expected to reach 275-280 billion m^3 by 2020, compared with 185 billion m^3 in 2002).

The main domestic demand for fuel and energy resources in all scenarios will continue to be for natural gas. At the same time its share of expenditure on primary energy resources will fall from 50% at present to 45-46% in 2020. Liquid fuel (oil and oil products) will make up around 20-22% in all forecast periods, while solid fuel will be about 19-20%. Domestic demand for non-fuel energy resources will also be fairly stable (heat and power from hydroelectric power plants, nuclear power plants and renewable energy sources).

In the period ahead the greatest increase will be in the consumption of motor fuel – 15-26% by 2010 and 33-55% by 2020. During this period liquefied and compressed natural gas will also be used as a motor fuel (up to 5 million t of equivalent oil products by 2010 and 10-12 million t by 2020). It is also forecast that the use of electric drive systems, hydrogen engines and fuel cells in automobiles will start to become more widespread by 2020. In spite of the high growth rates of electricity use, the energy consumption share of GDP will systematically decrease in the period under consideration.

The territorial structure of energy consumption will not change substantially in the period under consideration. The main consumers of primary energy resources will remain the Cis-Volga and Central federal regions (about 22% and 20% respectively) and the Siberian and Urals regions (18% and 17%). The relative share of the North Western and Southern regions in Russia's total domestic energy consumption will be 9-10% each, and that of the Far East federal region about 5%.

Development prospects of fuel and energy complex industries

Optimisation of Russia's fuel and energy balance has set the following strategic objectives for the country's FEC industries:

- increase electricity output from 878 billion kWh in 2000 (892 billion kWh in 2002) to 1015-1070 billion kV/h in 2010 and 1215-1365 billion kW/h in 2020;
- increase oil production from 324 million t in 2000 (379 million t in 2002) to 445-490 million t in 2010 and 450-520 million t in 2020;
- increase motor fuel production from 83 million t in 2000 (88 million t in 2002) to 100-110 million t in 2010 and 115-135 million t in 2020;
- increase gas production from 584 billion m^3 in 2000 (595 billion m^3 in 2002) to 635-665 billion m^3 in 2010 and 680-730 billion m^3 in 2020;
- increase coal production from 258 million t in 2000 (253 million t in 2002) to 310-330 million t in 2010 and 375-430 million t in 2020;
- increase district heat production from 1 452 million Gcal in 2000 (1 437 million Gcal in 2002) to 1 570-1 625 million Gcal in 2010 and 1 720-1 820 million Gcal in 2020.

The oil complex

Oil production will be carried out and developed in Russia both in the traditional oil-producing regions, such as Western Siberia, the Volga region and North Caucasus, and in the new oil and gas provinces: in the European North (the Timan-Pechora region), in Eastern Siberia and the Far East and in the south of Russia (North Caspian province). The main oil base of the country will continue to be the Western Siberian oil and gas bearing province throughout the period under consideration.

Priorities for scientific and technical progress in oil production:

- create and implement widely technologies and equipment permitting highly efficient extraction of oil reserves that are difficult to recover;
- develop and implement shelf drilling and production facilities in the Arctic, Far Eastern and Southern seas;
- improve the technologies for building and operating oil production facilities in difficult climatic and environmental conditions;
- improve the existing methods and implement them widely, and create new ones for working on formations and increasing oil recovery from them.

The main source of investments during the whole of the period under consideration will be the companies' internal funds. For opening up new oil production areas it is also proposed to attract credit funds under project financing conditions. Loan and share capital may make up 25-30 % of the total volume of investments.

The main line of development in crude oil processing is the modernisation and reconstruction of existing oil refineries with advanced construction of facilities to increase the "depth" of oil processing, improve the quality of oil products and produce catalysts.

Another task of this industry is to provide the petrochemical industry with raw materials (straight-run naphtha, naphtha for the chemical industry, liquefied petroleum gas, aromatics, monomers, raw material for carbon black, etc.) which would cost it far more to produce itself than to obtain from oil refining. Even with the widespread introduction of energy-saving technologies, the chemical and petrochemical industries' requirement for raw hydrocarbons will increase 2.0-2.5 times by 2010 compared with 2002.

Priorities for progress in oil refining:

- develop and create catalysts for hydrogenation processes with high hydrodesulphurisation activity and hydrocracking capacity, highly-effective reagents, adsorbents and absorbents and new types of high-octane oxygen-containing petrol additives and the technologies for making them;
- raise the quality of diesel fuels and aviation kerosene on the basis of deep hydrofining and hydroaromatisation;
- obtain low-sulphur fuel oil and low-sulphur raw material for destructive distillation;
- develop the technology and modular facilities for refining heavy oil residues by heating to 430° C in the absence of hydrogen;
- develop acicular coke production technologies and hydrogenation technologies for the production of base oils and implement isocracking and isodewaxing processes.

The main sources of investments will be vertically integrated companies' own funds.

The oil transport systems are to be developed along the following main routes:

North-Baltic route – construction of the second phase of the Baltic pipeline system, increasing the capacity of the route to 50 million tonnes a year and creating a new pipeline system for oil export with a transshipment terminal on the Kola peninsula (up to 120 million tonnes of oil a year);

Caspian – Black Sea – Mediterranean route – development of oil transit routes in CIS countries on the Caspian Sea by expanding the Atyrau - Samara line to 25-30 million t/year, increasing the

capacity of the export line via the bulk oil sea terminals at Novorossiysk and Tuapse to 59 million t/year and expanding the Caspian Pipeline Consortium system to its design capacity (67 million t/year);

Central European route – connection of the Druzhba ("Friendship") and Adria pipeline systems with the aim of increasing oil exports from Russia and the CIS countries via the oil terminal at the port of Omishal (Croatia) in stages (5-10-15 million t/year). Integration of the pipeline systems of Central and Eastern Europe into the "unified pipeline system";

Eastern Siberian route – creation of new centres of oil production in Eastern Siberia and in the Republic of Sakha (Yakutia) and Russia's outlet to the Asia-Pacific energy market make it necessary to create an oil pipeline system between Angarsk and Nakhodka (with a capacity of up to 80 million t/year) with a branch line to Daqing in China;

Far Eastern route – creation of transport mains for delivering raw hydrocarbon from the Sakhalin shelf to the markets of the Asia-Pacific region and Southern Asia. In project Sakhalin 1 it is planned to construct an oil pipeline with a capacity of 12.5 million t/year with a sea crossing through the Tatar Strait to the terminal at De-Castry (Khabarovsk Kray). In project Sakhalin 2 it is intended to construct, in the first stage, two overland pipelines 800 km in length for transporting oil and gas from the northern part of the island to the southern part.

The creation of these routes will call for the construction of new marine oil terminals and the development of existing ones.

In order to optimise export deliveries of oil products from Russia's largest oil refineries, avoiding the customs territory of adjoining countries it is planned to construct the oil product pipelines "Syzran – Saratov – Volgograd – Novorossiysk", "Andreyevka – Almetyevsk", as well as the pipeline "Kstovo – Yaroslavl – Kirishi – Primorsk" and a transshipment terminal in Primorsk.

Priorities for scientific and technical progress in pipeline transport:

- create highly reliable, resource-saving and environmentally friendly technologies, equipment and devices for ensuring high-quality work in the construction, operation and modernisation of pipeline transport systems;
- develop new equipment for detecting, locating and eliminating breakdowns in pipeline transport.

One possible way to improve economic relations in the pipeline transport field is to set up an "Oil Quality Bank", which makes it possible to compensate companies for losses they incur due to the mixing of oils from different deposits during transport.

Investment sources will be both Transneft's and Transnefteprodukt's own resources and investors' funds, with controlled prices (tariffs) providing a guaranteed return on the invested capital.

The gas industry

Gas production will be carried out and developed both in the traditional gas producing regions, the main one being Western Siberia, and in the new oil and gas producing provinces in Eastern Siberia and the Far East, the European North (including the Arctic sea shelf) and the Yamal peninsula.

Besides the development of major gas fields it is also worthwhile to exploit the smaller deposits, especially those in the European part of the country. According to the estimates available, in only three regions – Urals, Volga and North West – up to 8-10 billion m^3 of gas annually can be got from these deposits.

Over the long term there is likely to be a substantial growth in gas volumes extracted by independent producers: from 73 billion m^3 in 2002 (12% of total output) to 105-115 billion m^3 (17%) in 2010 and 140-150 billion m^3 (20%) in 2020.

Natural gas is used mainly to meet municipal and domestic needs (heating, hot water supply, food preparation) with the gas supply developed accordingly, the needs of the state (defence, reserve gas stocks, etc), non-fuel needs (production of mineral fertilizers, raw material for gas chemistry, etc) and gas exports under long-term contracts. Promoting a change in gas use from fuel to raw material purposes will ensure growth in the manufacture of higher added value products.

Exploitation of the helium deposits of Eastern Siberia and the Far East will require the development of a helium industry and the construction of a number of large helium processing plants and helium concentrate storage caverns in Irkutsk Oblast, Krasnoyarsk Kray and the Republic of Sakha (Yakutia).

The reequipment and modernisation of existing gas processing plants will be aimed at increasing the extraction of valuable components from the gas and improving the economic efficiency and environmental safety of the undertakings. The total volume of gas processing will more than double. Through deepening the level of processing of hydrocarbon resources it is intended to increase the output of motor fuel, liquefied gases and sulphur, produce polyethylene and – if the external market conditions are favourable – methanol. The use of natural gas (methane) for non-fuel needs will also increase 1.5-2 times.

Priorities for scientific and technical progress:

- develop equipment and modern technological facilities as complete package units for specific installations for producing, transporting and processing raw hydrocarbons;
- develop well designs with damping of the axial loads of the drilling strings for different product flow rates with the aim of creating highly reliable wells for developing, in particular, the difficult deposit formations of the Yamal peninsula and the Caspian Sea region;
- develop and introduce equipment and technologies for the major overhaul of working wells without crushing the productive layer;
- create and introduce methods for reliably removing wells with the aim of reducing the risk of any pollution of the Earth's interior and the environment;
- use the technology and equipment for pumping gas or another agents back into the formation during the exploitation of deposits, and change to low-temperature processes which will help to increase the component yield of the deposits;
- create and implement the equipment and technology for laying the shallow and deep water subsea gas pipelines necessary for developing the deposits of the Ob-Tazovsk Gulf and the Yamal peninsula;
- develop the technology for improving the efficiency of creating and operating gas storage caverns;
- introduce the equipment and technology for liquefying and transporting natural gas, including a peak shaving arrangement to ease the burden during peak loads;

- in the next few years, develop Russian variants of equipment and technology for converting natural gas into liquid-phase products (synthetic crude oil, petrol, diesel fuel, etc);
- create highly reliable corrosion-resistant pipes for gas mains based on the new pipe steels and polymer materials with the aim of substantially extending the operating period between servicing.

The main source of capital investments throughout the period under consideration will be the companies' own funds, as well as credit funds including funds obtained under project financing conditions.

The coal industry

Mining of coking coal in Russia is going to grow much more slowly than that of power station coal. The development of the consumption and extraction of power station coal will be determined by the following economic, natural and geological factors and territorial priorities:

- coal mining will increase especially in the Kuznetsk and Kansk-Achinsk Basins, where the conditions are most favourable for providing the country with high quality and economic coal fuel;
- it will remain important in the deposits of Eastern Siberia, Buryatia, Yakutia, the Far East, and in the European part of Russia – the Eastern Donbass and Pechora – as a vital factor of energy supply to the western regions of the country which are short of fuel.

State policy in the coal sector over the long term aims to create the conditions for stable development of the industry and provides for 3 different stages:

- 2003-2005 – completion of the privatisation of the coal industry, improvement of the financial standing of coal firms, continuation of the closure of particularly unprofitable ones, social security measures for workers, measures to provide for the social and ecological rehabilitation of mining towns using state aid funds;
- 2006-2010 – completion of the closure of particularly unprofitable undertakings, relocation of redundant workers from closed undertakings from regions of the Far North and similar areas, making coal more competitive with natural gas by means of a special state pricing policy, reequipment and intensification of production;
- 2011-2020 – a fundamental change in the technical and economic standard of the coal industry is forecast, which will be brought about by moving the centre of mining to new facilities with new-generation equipment and a high-quality end product, including coal-fired metallurgical plants, power generation plants and coal chemical complexes.

State aid to the industry will be limited to financing completion of closure of the most unprofitable mines and opencast pits and subsidising, in the first stage, the rates of interest on the credits attracted by organisations in the industry for the development of production and the financial revival of undertakings. In addition, in the period up to 2010 state support will be needed for the projects to create clean coal technologies and coal chemical industries (synthetic liquid fuel, gas, superclean fuel, carbon threads, hydrogen, etc).

The following are the main tasks which science, technology and innovation policy in the coal industry seeks to solve:

- development and introduction of a set of measures to improve the quality of coal products (including changeover to the international system of controlling and monitoring the quality of coal being shipped, establishment of national quality standards for each type of coal consumption, organisation of product certification and introduction of the ISO 9000 international quality management system into companies);
- radical modernisation of the coal industry, including reequipment of opencast mines with highly efficient continuous and cyclic mine transport equipment (amongst other things for the selective working of coal seams), introduction of cyclic flow and flow technology, development of an underground coal mining technology mainly using longwall face mining systems of a new technical standard, as well as a shortwall technology using continuous cutter-loaders and self-propelled coal transporters, provision of equipment for the industrial utilisation of mine methane;
- increasing the volume of coking coal preparation virtually to 100% and that of power station coal (apart from lignite) to 50%;
- introduction of a deep coal refining technology based on gentle pyrolysis obtaining liquid hydrocarbons and an ecologically safe solid fuel, carbon threads, sulfonated coal and a superclean energy carrier;
- development and introduction of resource-saving technologies and equipment for the production and transport of hydrocoal fuel, gasification of coals and their residues after preparation;
- development of new technologies and equipment for effective gas drainage from coal seams;
- development and implementation of a programme to create a competitive mining technology for Russia.

The main sources of capital investments throughout the period under consideration will be the internal funds of the companies in the industry and financial loans.

The power industry

The development of the power industry in the period under consideration will be derived from the following economically justified priorities for location of the industry's generating plants:

- in the European part of Russia: reequipment of gas-fired thermoelectric power stations replacing the steam power turbines with combined steam-and-gas turbines and maximum development of nuclear power plants;
- in Siberia: development of coal-fired thermoelectric power stations and hydroelectric power stations;
- in the Far East: development of hydroelectric power stations, gas-fired thermal power plants in the large cities.

The basis of power production throughout the period under consideration will continue to be thermoelectric power plants, which will still make up some 60-70% of the installed capacity of the industry. By 2020 these plants will be producing 1.4 times more electric power than in 2000.

The thermal energy development scenarios call for the fastest possible implementation of the achievements of scientific and technical progress and the new technologies of the power industry.

For electric power plants working on gas such technologies include: the steam-and-gas cycle, gas-turbine superstructures on steam-cycle units, and small gas-turbine cogeneration units. At

electric power plants burning coal: the ecologically safe technologies of fuel burning in steam cycle in steam-and-gas units with coal gasification. New coal-fired thermal power plants in large cities, densely populated areas and agricultural regions must be fitted with desulphurisation facilities.

Hydroelectric power will be developed chiefly in Siberia and the Far East, as virtually the main type of thermal power plant operation in these territories. In the European regions, where the economic potential of hydro power is all but exhausted, the building of small hydroelectric plants is in the process of development, while the construction of small hydroelectric plants for peak-load operation is continuing, mainly in the North Caucasus.

The investment sources will be:

- for the heat generating companies – the companies' own funds (depreciation charges and profit), borrowed and share capital;
- for hydropower generating companies with state participation – besides the abovementioned sources there is the possibility of creating and using special investment funds taken out of hydropower plant profits.

The main lines of development in the nuclear field are laid down in the "Development strategy for the nuclear industry in the first half of the 21st century", approved by the Government of the Russian Federation. The nuclear power plants' share of energy production is going to increase from 16% in 2000 to 23% by 2020 (to 32% in the European part of the country). To achieve such figures it will be necessary virtually to double the capacity of nuclear power plants and energy production (creating new capacity at a rate of up to 2 GW a year). The main sources of investment in this industry will be firms' own funds, obtained from the investment component of their charges, and funds from the state budget and investment and finance houses attracted by project financing conditions with state guarantees.

Heat supply

Severe climatic conditions in Russia make heat supply the most socially significant and the most fuel-intensive sector of the economy: it consumes almost 40% of the energy resources used in the country, and more than half of this in the domestic and municipal sector.

In the period under consideration, heat production is expected to increase 9-13% by 2010 and 22-34% by 2020 over the figure for 2000. At the same time there will be a growth in real thermal energy consumption 1.4-1.5 times greater on account of cutting of losses and exploitation of the high energy-saving potential in this energy sector.

The extent to which it is proposed to develop and radically modernise and reequip the heat supply and district heating industry will demand a considerable investment increase. The main source of capital investment will be the internal funds of the undertakings in the industry, state (municipal) funding, and loans including credits from investment and finance houses attracted by project financing conditions.

Expected results of implementation of the Energy Strategy

The main results of implementing the Energy Strategy may be characterised as follows:

- halving of the specific energy consumption share of GDP with a corresponding improvement in the energy efficiency of the economy – the share of consumable energy resources in GDP will fall from 22% in 2000 to 13-15% in 2020;

- moderate growth of the mean per capita cost of fuel and energy supply to the population in 2001-2020 (2.3-2.4 times), for a higher increase in the real disposable income of the population (3.4-3.7 times);
- annual income from FEC activities will increase 1.5 times by 2010 with a reduction in the share of the FEC in industrial production from 30% at present to 25-26% in 2010 and 18-20% in 2020, for a higher growth in the high-tech and processing sectors with low energy consumption;
- exports of energy resources may grow 45-64% by 2020, which corresponds to the country's need for a stable balance of payments, a stronger economic situation and greater geopolitical influence, and takes into account the interests of coming generations of Russia's population.

The total volume of capital investment in the modernisation and development of the energy sector may amount to USD 260 to 300 billion in 2001-2010 and USD 400 to 510 billion in the next decade. The share of the fuel and energy complex in total investments in fixed capital stock, estimated at 33-35 % in 2001-2005, will fall to 31-33 in 2006-2010 and to 20-24% in 2020.

The growth of capital investments in the energy sector, including a substantial influx of direct and portfolio foreign investments, should subsequently spread to the other sectors of the economy due both to the growth in orders for their products and services and to the accumulation of capital in the processing industries.

Monitoring of the Energy Strategy

As part of the implementation of Russia's Energy Strategy, a system for monitoring it is put into operation. This constantly observes the real situation in the fuel and energy complex and the implementation of the country's long-term energy policy, and it receives rapid information enabling prompt detection and analysis of any changes with the aim of avoiding negative tendencies affecting the security of the country's energy supply, as well as permitting timely and justified correction of the Strategy's proposals.

As a result of monitoring of the Strategy a special Progress Report on the Energy Strategy for the period up to 2020 has to be presented to the Government of the Russian Federation annually, and the Energy Strategy has to be updated and revised at least once every 5 years for the next 20-year period, laying down the main objectives for the longer term.

Annex 4.

Conclusions
of the Round Table on Electricity
held in the context of the Conference on Comparative Analysis of European and Russian Energy Strategies and EU-Russia Energy Dialogue.

Moscow, Russia, October 16, 2003

A Round Table on Electricity was held in Moscow on October 16, 2003, in the context of the Conference on Comparative Analysis of European and Russian Energy Strategies and EU-Russia Energy Dialogue. It focused the attention of the Russian and EU political leadership and high-level experts on the problems and prospects of the development of a wider European electricity market and allowed them to consider the interconnection of the electricity systems of Russia/CIS and the EU and the establishment of a common European electricity market. Interconnection of the electricity systems and creation of the common electricity market is one of the priorities of the energy sector development strategies of both Russia and the EU.

Participants from the EC side included Mr. F. Lamoureux, Director General for Transport and Energy in the European Commission and single interlocutor for the Energy Dialogue on the EC side, Mr. J. Vasconcelos, President of the Council of European Energy Regulators, Mr. Martin Fuchs, President of UCTE, Mr. P. Bulteel, the Secretary General of EURELECRIC and senior representatives from ETSO (European Transmission System Operators).

The Russian side was represented by Mr. V.Khristenko, Deputy Chairman of Government of the Russian Federation, Mr. A.Chubais, CEO of RAO UESR, Mr. V.Pauli, CEO of SO-CDU of the UES, Mr. A.Rappoport, CEO of Federal Grid Company of the UES, and high-level representatives from the Government of Russian Federation, Ministry for Foreign Affairs, Ministry for Energy, Ministry for Trade and Economic Development, Committees for Energy of the Federation Council and the State Duma, Federal Energy Commission, and from other Russian organizations.

Participants expressed their interest in the establishment of a single common European electricity market and believe that such a market is an important component of the EU-Russia Energy Dialogue. Integration of electricity markets will bring substantial benefits in terms of the development of a free competition, improvement of security of electricity supply and the creation of new opportunities for business cooperation in the electricity sectors of both Russia and EU countries.

The process is taking on a pan-European scale and nature, while the enlargement of the European Union is giving a further momentum and broader prospects to it. Russia, on the other hand, is embarking upon the actual liberalisation of its domestic electricity market, acting at the same time as a leader of the integration processes in the electricity industry of the former USSR area.

In order for integrated markets to function in an acceptable and efficient manner, a level playing field must be ensured. This requires that all parts of such a wider market are organised on the basis of equivalent basic rules with respect to the degree of market opening and other important market rules, such as regulation of network access and unbundling. Furthermore, environmental and safety standards for electricity production must be comparable, including nuclear safety. In the context of environmental standards those resulting from the Kyoto protocol need to be taken into account. The structural reforms leading to the creation of the internal European electricity

market and the ongoing reform process regarding market opening in Russia are encouraging developments in this respect.

Participants stated that an efficient market integration would require setting up the technological infrastructure necessary for joint operation of the electricity systems of Russia and the EU countries. Participants also believe that the synchronisation of the EU electricity systems with the United Power System of Russia and CIS countries can be one of the best solutions to ensure an efficient operation of the European competitive electricity market.

In any event, an interconnection can only take place on the basis of high safety and security rules that guarantee the continuous reliability of both systems. The importance of efficient safety and security rules and efficient co-ordination between regional system operators forming part of a wider system has been highlighted again by the recent black-outs in the United States of America and Italy.

Important initial steps towards the implementation of the electricity systems interconnection have already being taken. A working group of experts has been set up in context of the energy dialogue to undertake an analysis and to provide a detailed picture of the current status of the markets in the EU and Russia, notably on the extent to which current and planned EU and Russian market and environmental rules are equivalent. The working group should now make rapid progress and submit a report of all relevant issues by mid-2004. Following this, a common strategy on a progressive integration of the European and Russian networks and electricity markets should be developed, including options for a conclusion of a respective Agreement.

The East-West electricity systems interconnection items as well as the development of a common electricity market, environmental and security issues will be further discussed at the conference "Electricity market from Lisbon to Vladivostok" to be held by EURELECTRIC, UCTE and CIS EPC in Brussels on 13-14 November 2003.

Participants are convinced of the need to conduct a comprehensive feasibility study on the synchronous interconnection of the UCTE and IPS/UPS systems. The project should be given a status of high mutual interest of Russia and the EU. Mr Lamoureux underlined in this context that the Commission is prepared to co-finance this study as a priority study of common European interest. Mr Chubais stated the willingness of RAO UES of Russia to co-finance this project from the Russian side. Mr Khristenko stressed the objective of making a final decision on the interconnection issue by 2007. This Round Table on Electricity opens a new perspective for a more profound cooperation in the electricity sector, as well as for a further successful development of the EU-Russia Energy Dialogue. Participants expressed their support for the efforts aimed at solving the issue of a synchronous interconnection of both electricity systems concerned on a mutually acceptable basis, taking into account the interests and the requirements of the parties involved and addressing it in the context of the evolution of the overall political and economic situation in Europe and at the global scale.

Annex 5.

Conclusions
Of the Round Table on Energy Strategies
held in the context of the EU-Russia Energy Dialogue's Conference on the Comparative Analysis of European and Russian Energy Strategies.

Moscow, Russia, October 17, 2003

The EU-Russia Energy Dialogue, over the last three years, has achieved a number of significant results, among which:

- Access for Russian companies to the EU's internal energy market,
- The confirmation of the importance of long-term natural gas supply contracts and the work in resolving the issue of destination clauses that exist in certain long-term contracts for gas,
- The increased opening of the Russian energy sector to European investments,
- The identification of a number of important energy infrastructure projects as being of common interest, including the Northern Trans-European gas pipeline,
- The forthcoming mandate from the EU Member states for the Commission to negotiate on the issue of trade in nuclear materials. This will mean that negotiations should commence in January 2004,
- Close co-operation between the EU and the Russian Federation in the field of enhancing the safety of the transportation of oil by maritime transport;
- The agreement to analyse the feasibility of a non-commercial risk guarantee mechanism which could significantly improve investments in the Russian energy sector by reducing the perceived risks,
- The establishment of a technical joint working group to examine all the issues related to the interconnection of the continental European electricity grid with that of the Russian Federation.

The Russian Federation and the European Commission today held a Round Table on Energy Strategies under the framework of the EU-Russia Energy Dialogue. This event was opened by Mr Viktor Khristenko, Deputy Prime Minister of the Russian Federation and Mr François Lamoureux, Director-General of Energy and Transport of the European Commission. Representatives of the authorities of the Russian Federation, the European Commission and the EU Presidency participated in this event, together with the Russian and European energy industries.

The Round Table was held in the context of the recently approved *"Russian Energy Strategy to 2020"* and the publication earlier this month by the European Commission of the latest *European Energy and Transport Trends to 2030"*, as well as the European Commission's Green Paper *"Towards a European Strategy for the security of energy supply"*.

The exchange of views highlighted the recognition of the growing mutual energy interdependency and interest of pursuing policy convergence, industrial co-operation and the facilitation of investments, as well as the approximation of technical norms and standards in the energy sector to open up a truly continent-wide energy market.

Russia's energy strategy underlines its role as a major factor on world energy markets and focuses on enhancing the security of energy supplies via the modernisation and expansion of energy capacities, attracting investments into the energy sector and the development of new energy infrastructures, improving the internal balance between different fuels and the development of a monitoring system. The EU strategy recognises its position as a net and growing energy importer, particularly following enlargement to 25 Member states next year, and places an important emphasis on guaranteeing secure, stable, reliable and competitive supplies of energy.

Participants noted common objectives of secure supply and demand of energy, improving economic competitiveness, reducing the instability in the energy markets, co-financing of important infrastructure projects of mutual interest, ensuring the sustainable development and use of energy sources, co-operating jointly in new and advanced energy technologies, and the necessity of improving energy efficiency and energy demand management. There was also a general appreciation of the decisive contribution that Russian natural gas has, and will continue to make for the energy security of the European continent.

In the discussions on the importance of reinforcing energy relations, the issue of denominating Russia's oil and gas exports in Euros was raised. While recognising that this issue is finally one for the suppliers and their clients, participants at the Round Table highlighted that this would be a clear signal of the deepening relations between Russia and the EU in the energy sector.

With respect to enhancing the energy transport infrastructures between Russia and the EU, the recent decision by the EU to co-finance a feasibility study of the North European Gas Pipeline was welcomed.

The announcement by the Commission that the negotiations on the trade in nuclear materials will commence in January 2004 was considered as an important progress on this issue. The Round Table, recognising the challenge of ensuring the non-proliferation of nuclear materials and of preventing nuclear terrorism, stressed that co-operation in the field of nuclear safeguards should be a priority.

It was also suggested that work could usefully be undertaken to develop efficient frameworks for reducing energy consumption. Following the strategy set out in the European Commission's Green Paper on the Security of Energy Supplies, the practical experience of the European Union in preparing legislative proposals to address energy efficiency in the construction and renovation of buildings, as well as in the transport sector and co-generation could be usefully shared with the Russian Federation.

Representatives of the Russian Federation and the Commission have therefore agreed, in the framework of the Energy Dialogue, to co-operate closely together to promote the convergence of energy strategies and the development of energy markets.

Annex 6.

Commission press release on territorial destination clauses with Gazprom and ENI.

IP/03/1345

Brussels, 06 October 2003

Commission reaches breakthrough with Gazprom and ENI on territorial restriction clauses

The European Commission's competition services have reached a settlement with the Italian oil and gas company ENI and the Russian gas producer Gazprom regarding a number of restrictive clauses in their existing contracts. Under the settlement, ENI will no longer be prevented from reselling, outside Italy, the gas it buys from Gazprom. The latter will be free to sell to other customers in Italy without having to seek ENI's consent. ENI also committed to offer significant gas volumes to customers outside Italy, which will be beneficial for gas competition in Europe. Finally, ENI agreed to increase capacity on the pipeline that transports Russian gas to Italy via Austria. It will also support the introduction of a regime, which will facilitate access to this pipeline for third parties. The settlement marks an important milestone towards the enforcement of competition rules in the sector and the creation of a European gas market. It is expected that similar clauses in a few other Gazprom contracts as well as in contracts between Algerian company Sonatrach and its European customers will soon be eliminated to the benefit of competition and gas users in the EU.

Competition Commissioner Mario Monti welcomed the settlement saying: "I am pleased that we were finally able to bring this issue to a good end. We hope that Gazprom will soon bring its contracts with a few other European importers in line with EU law. We also encourage Sonatrach to follow the same path. The Commission's action aims to increase competition between European gas suppliers to the benefit of European consumers. It has no impact on the producers' ability to sell their gas in the Union under long term contracts. To the contrary the settlement strengthens the legal certainty of these contracts ».

The Commission's Competition Directorate General has been investigating territorial sales restrictions in supply contracts between gas producers and European wholesalers for some time. The clauses prevent wholesalers from reselling the gas outside the countries where they are established, which represents a breach of European competition law and undermines the on-going creation of a European gas market.

The investigations concern the Russian company Gazprom, Sonatrach of Algeria and a large number of their European customers. In December 2002, the Commission settled a similar case concerning the Nigerian gas producer Nigeria LNG Ltd (see IP/02/1869).

The settlement of the Gazprom/ENI case is very significant because of the huge volumes of gas involved. ENI is one of the biggest European customers of Gazprom with approximately 20 billion cubic meters of gas bought every year and the first of the European importers to have reached a settlement with Gazprom, Europe's largest external gas supplier.

The following arrangements were agreed upon either between the companies directly or between the companies and the Commission services:

– To delete the territorial sales restrictions from all of their existing gas supply contracts. The amended contracts provide for two delivery points for Russian gas, as opposed to one only in the past. ENI is free to take the gas to any destination of its choice from these two delivery points.

– To refrain from introducing the contested clauses in new gas supply agreements. To this extent ENI committed not to accept such clauses or any provision with similar effects (e.g. use restrictions and profit splitting mechanisms) in all its future purchase agreements, be they for pipeline gas or gas in liquefied form (LNG). Gazprom had already agreed last year not to introduce the clauses in future contracts with European importers.

– To delete a provision that obliges Gazprom to obtain ENI's consent when selling gas to other customers in Italy, even if ENI claims that it never relied on this provision. The companies already implemented the amendment allowing Gazprom to sell to ENI's competitors in Italy.

In addition to these contractual issues, ENI also agreed to offer significant gas volumes to customers located outside Italy over a period of five years. The primary beneficiaries are likely to be customers in Austria and Germany, where ENI recently acquired – together with Energie Baden Württemberg (EnBW) - a controlling stake in the Southern German company GVS (see IP/02/1905) and ENI might use this company for its German expansion strategy. If ENI has not sold sufficient volumes during the first half of the commitment period, which started on 1 October 2003, it will organise an auction offering certain gas volumes at Baumgarten, the border point between Austria and Slovakia, where Russian gas is delivered to a number of European customers. All these measures should enhance liquidity in the European gas market.

ENI also undertook to promote an increase of the capacity in its majority-controlled Trans Austria Gasleitung (TAG) pipeline, which runs through Austria and is used to transport all Russian gas destined for the Italian market. The expansion has to be completed between 2008 and 2011 depending on certain Italian market developments.

ENI finally offered to promote an improved third party access regime (TPA regime) facilitating the use of the TAG as a transit pipeline. This commitment includes amongst others the introduction of one-month transport contracts, an effective congestion management system, the introduction of a secondary market and the regular publication on the Internet of the available capacity. The new TPA regime will be inspired by the Guidelines for Good Practice developed by the European Commission, European Regulators and European gas industry ("Madrid Forum").

In view of these benefits for European gas consumers, the investigation into territorial sales restrictions contained in the gas supply contracts between Gazprom and ENI has been closed.

Other cases

At the same time, the competition services decided to close their probe into the gas supply relationship between Gazprom and Gasunie of the Netherlands after verifying that their contracts do not contain territorial sales restrictions and after Gasunie explicitly confirmed it was free to sell the gas delivered by Gazprom wherever it wishes. In this respect it is important to note that the gas is delivered to Gasunie at the German Dutch border.

The competition services continue, however, their investigation regarding other contracts involving Gazprom. But they are confident that Gazprom and the importers concerned, most prominently two companies in Germany and Austria, will soon find an agreement with Gazprom leading to the deletion of the contested clauses.

The Algerian Energy Ministry and Sonatrach recently informed the Commission services that Sonatrach will no longer introduce any provisions limiting cross border sales into its future gas supply contracts with European importers. The Commission services welcomed this constructive step. It is the Commission's services' understanding that this commitment includes territorial sales restrictions as well as so-called profit splitting mechanisms, which oblige the customer to share part of the profit with Sonatrach when reselling the gas outside its traditional supply area.

Sonatrach also indicated its readiness to discuss the modification of the existing contracts with its European customers, but progress has been until now rather slow. The Commission services therefore called on the parties to intensify negotiations in good faith and to establish an ambitious timetable in order to reach an agreement soon.

Annex 7.

Community energy efficiency and energy savings measures which may be of interest to the Russian authorities.

For addressing the energy consumed in buildings, there is the Directive on the energy performance of buildings[48]. This promotes the improvement of the energy performance of buildings, taking into account outdoor climatic and local conditions, as well as indoor climate requirements and cost-effectiveness, and which lays down requirements with respect to:

- minimum energy performance requirements to be set at national level (taking into account of local conditions) for new buildings or for existing buildings subject to major renovations;
- energy certification of buildings (pushing owners to improve the energy performance of their buildings while helping them to get higher prices in return when they intend to sale or rent);
- regular inspection of boilers and air-conditioning, including assessment of the heating installation in which the boilers are more than 15 years old;
- a methodology for calculating the integrated energy performance of buildings.

For improving the efficiency of products used in buildings, there are a number of directives related to the minimum energy efficiency requirements in equipment.[49] These establish performance limits that have to be complied with for the product to be allowed onto the market. In this context, attention should be drawn to the Commission's recent proposal[50] for a framework directive on the "eco-design of energy using products", which covers all the products sold and used on the EU market which consume a significant amount of energy;

There is also the framework directive on the labelling of domestic appliances[51], together with its eight Implementing Directives[52], which is designed to increase consumer awareness when purchasing domestic appliances while, for office equipment, there is the Energy Star

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48 Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings. Official Journal of the European Communities, L 65 of 4.01.2003.

49 These include:
Council Directive 92/42/EEC of 21 May 1992 on efficiency requirements for new hot-water boilers fired with liquid or gaseous fuels. Official Journal of the European Communities, L 167 of 22.06.1992;
Directive 96/57/EC of the European Parliament and of the Council of 3 September 1996 on energy efficiency requirements for household electric refrigerators, freezers and combinations thereof. Official Journal of the European Communities, L 236 of 18.09.1996;
Directive 2000/55/EC of the European Parliament and of the Council of 18 September 2000 on energy efficiency requirements for ballasts for fluorescent lighting. Official Journal of the European Communities, L 279 of 01.11.2000.

50 Proposal for a Directive on establishing a framework for the setting of Eco-design requirements for Energy-Using Products and amending Council Directive 92/42/EEC. COM(2003)453 final of 01/08/2003.

51 Council Directive 92/75/EEC of 22 September 1992 on the indication by labelling and standard product information of the consumption of energy and other resources by household appliances. Official Journal of the European Communities, L 297 of 13.10.1992.

52 These specific Directives relate to household washing machines, electric tumble driers, combined washer-driers, dishwashers, household lamps, air conditioners and electric ovens.

Programme. As office equipment is traded world-wide, an Agreement[53] was signed in December 2000 between the Government of the USA and the European Community intended to co-ordinate energy-efficient labelling programmes for office equipment in two of the major global markets for office products. The Agreement is intended to stimulate international trade of office equipment, by facilitating the procedures for economic operators to participate in the ENERGY STAR programme. The US Environmental Protection Agency (US EPA) and the European Commission manage the Agreement and it will remain in force for an initial period of five years.

The EC ENERGY STAR labelling programme is a voluntary labelling programme that aims to achieve energy savings and in particular:

– to help consumers identify energy efficient office equipment products that could save them money and help protect the environment by saving energy;

– to raise awareness in users, equipment and component manufacturers, and re-sellers about energy use in office;

– to act as a *de-facto* world-wide efficiency standard for office equipment. This is due to the very international nature of the ENERGY STAR, which is present in most of the OECD countries.

The Commission's proposal on the promotion of co-generation based on a useful heat demand in the internal energy market[54] could also be discussed with the Russian counterparts.

The Commission is examining ways of improving transport efficiency and encouraging a shift away from road transport to alternative modes of transport. In this context, a proposal has been submitted concerning public service requirements and the award of public service contracts in passenger transport by rail, road and inland waterway[55], which is designed to stimulate more efficient and attractive public transport through the use of controlled competition and other measures. Of interest also in this context is the promotion of the use of bio-fuels or other renewable fuels for transport[56].

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53 Council Decision 2001/469/EC concerning the conclusion on behalf of the European Community of the Agreement between the Government of the United States of America and the European Community on the co-ordination of energy-efficient labelling programmes for office equipment, Official Journal of the European Union, L 172 of 26.06.2001.

54 Proposal for a Directive on the promotion of co-generation based on a useful heat demand in the internal energy market. COM(2002)415 final of 22 July 2002.

55 Amended proposal for a regulation on action by Member states concerning public service requirements and the award of public service contracts in passenger transport by rail, road and inland waterway. COM(2002) 107 final of 21 February 2002.

56 Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport. Official Journal of the European Union, L 123 of 17.05.2003.