The Effects of the Russian Energy Sector on the Security of the Baltic States

By Liina Mauring and Daniel Schaer*

Introduction

What do $80 oil barrels, single hull tankers and nuclear energy reactors have in common? They all have the potential to affect the security of countries. A region’s security can be influenced by the energy sectors of other countries especially in the areas of the environment and economy.

The European Commission forecasts an energy dependence level of 70% in 2030 for the European Union compared with 50% today1. It is also generally agreed that the world’s energy demand and consumption will continue its growth for decades. Furthermore 40% of EU gas imports originate from Russia and by 2030 over 60% of EU gas imports are expected to come from Russia with overall EU dependence on gas imports expected to reach 80%2. Therefore, European dependence on the Russian energy sector does not only weaken the security of the Baltic States, but also that of the European Union (EU) itself. Without a significant domestic energy supply, the EU needs to guarantee the security of its external energy supply sources. This, however, must be done without negatively affecting the security of other EU member states.

The European Commission’s “Report on the Green Paper on Energy - Four years of European initiatives” confirms that the EU’s dependence on energy imports is growing daily. The report also confirms the worries of the 2000 Green Paper, where security of supply, the spread of nuclear energy, the threat of terrorist attacks, the need to diversify energy sources and environmental safety are considered as threats to European security3.

On the basis of these developments, energy has become a key topic in EU-Russia relations. Energy co-operation was at the top of the agenda of the EU-Russia Summit held on October 4. In 2005 in London the first meeting of the Permanent Partnership Council (PPC) on Energy was held the day before in the same venue. The PPC reported to the Summit that energy is a crucial part of the relationship between Russia and the EU, and that they had discussed ways of

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deepening their engagement. The EU-Russia Energy Dialogue’s 6th Progress report was released on 7 October 2005. It recognised the need for increasing cooperation and the exchange of information in the energy sector, and underlined the importance of the convergence of regulatory frameworks in the EU and Russia. Several green papers, white papers and reports on the energy sector, have also reflected the importance of this topic on the EU agenda.

This article argues that the EU’s dependence on the Russian energy sector not only affects the Baltic States economically, but also has a significant impact on security in the Baltic States. This article concentrates on energy, environmental and economic security and so from the perspective of soft security. The first section introduces the EU’s dependence on the Russian energy sector through EU-Russia relations, while looking at how this affects the stability of energy supply in Europe. The second section looks at the Russian energy sector and its environmental security, while presenting clear examples of threats to Baltic security. The third section presents the internal energy security situation in the Baltic States. The fourth section is a case study of the planned German-Russian gas pipeline that is to be built in the Baltic Sea.

1. EU-Russia relations and the dependence on the Russian energy

Since the customary security threats of military nature are not an issue in EU-Russia relations any more, the development of Russia's increasing interest in the EU common market poses new threats of other origin - namely those of a “soft security” nature. There is reason to believe that the EU’s dependence on Russian energy has created several threats to soft security, defined as non-military security that has a cross-border effect on its neighbours and presents a threat that is hard to defend independently.

The EU’s energy dependence has allowed Russia to create a new policy tool for itself - energy. The new approach of using economic levers as a diplomatic tool is letting the EU know that the relationship is ruled by "interests" (national, economic etc.). There is, however, uncertainty in the relationship as to whether the Russia-Germany natural gas pipeline construction and similar projects should fall under Common Foreign and Security Policy (CFSP) or whether they should remain bilateral agreements. There is also the question as to what role the Commission should play in this domain as energy falls into the 1st pillar - the community pillar. The article treats the energy security question as a CFSP question as it is an aspect EU security in this context. If Europe is seeking the
The deepening of European integration then these kinds of issues should at least partly be treated at the EU level.

The Partnership and Cooperation Agreement (PCA) between the EU and Russia serves as a basis for their bilateral relations, which came into force as of 1 December 1997. Formally, Russia is the EU's strategic partner. Current debate shows that the EU and Russia share common interests that are largely related to the energy sector as the EU is the largest importer of Russian energy and therefore the largest market for Russia in that sector (EU's trade deficit with Russia originates from the energy sector, Russia accounts for some 50% of total gas imports or 25% of total EU gas consumption, and for over 30% of total crude oil and oil product imports or over 25% of total EU oil consumption).

1.1 Economic security

A fairly new concept in the security debate that has developed considerably since the end of the Cold War is economic security. Barry Buzan defines economic security, “Economic security concerns access to the resources, finance and markets necessary to sustain acceptable levels of welfare and state power”. This article concentrates on the supply of resources aspect of economic security and the reliance on Russian energy.

After looking at the statistics and reading the reports compiled by European institutions (Commission Energy Green Paper) it can be said that the EU is dependent on Russian energy and that in turn leads to potential threat of energy price discrimination, which in turn is related to the concept of energy supply security. What happens if Russia decides to use its energy exports as foreign policy tools? This problem is listed in the “National Security Concept for Estonia”, “A major threat factor is the great dependence of Estonia’s gas and electrical systems upon foreign monopolistic energy systems and suppliers”. The Lithuanian security concept has a similar point and the Latvian concept mentions economic security in general. However, this might even be the most dangerous threat to the Baltic States and the European Union in particular because European economies and cities are dependent on energy. The lifestyle of every European would be significantly affected by a decline in energy supply.

The EU must maintain a stable energy supply, but the question remains whether Russia is a reliable partner? It would be rather difficult to change strategic energy suppliers in a short run. Can only one dominant energy supplier guarantee stable supply? The volatility of energy price may also depend on other factors such as
Russia’s internal political stability, e.g. in case of a macroeconomic shock the state's budget may have to be increasingly financed by revenues from energy sector exports. Currently, the Russian fiscal dependence on gas and oil revenues amounts to almost 37% of annual budget revenues making the budget significantly dependent on revenues from their energy sector\textsuperscript{10}. Therefore, the price of imported energy from Russia is not only dependent on EU-Russia relations, but also on the internal developments in Russia, which the EU has very limited control over.

The growing dependence on Russian energy fortunately has another side as well. The fact that the Russian energy sector is a part of the world's energy sector makes it dependent on the prices of world energy, which reduces its arbitrary possibilities for gas price manipulation. So, it can be said that there is a degree of mutual dependence as the growing European dependence on energy imports from Russia are being balanced by Russia’s reliance on oil and gas revenues\textsuperscript{11}. In other words the invisible hand does its job.

When looking at potential energy trade partners, we cannot forget the interests of China, Japan and India towards Russian energy. These economies are also dependent on energy imports and could play a role in disrupting the EU-Russia relationship, as Russia will not be able to supply all of the demand. This represents the growing dependence of other consumer regions on imported energy where the competition is predicted to intensify, which will in turn modify international political and economic relations\textsuperscript{12}.

The world’s demand for energy will also force the EU to make concessions in negotiating with Russia in other policy areas. If Russia is able to freely choose whom it will supply, the choice will be made based on two criteria: the highest price and the least political demands. This gives a significant advantage to China who is prepared to buy energy at all costs to ensure their continued economic growth.

Another problem with supply is the concentration of world gas and oil reserves in a few areas (including Russia). This limits the amount of potential suppliers and gives these countries "monopolistic" control over energy sources and may mean monopolistic prices\textsuperscript{13}. The EU will try to balance its supply by looking at other energy import sources such as the Baku-Tbilissi-Ceyhan oil pipeline supplying energy from the Caspian region\textsuperscript{14}. However, a threat to this diversification of energy supply sources is the role played by Russia in the CIS.
area. Recently, a Russian state-owned Pipeline Company Transneft has decided to remove its signature from an agreement to provide oil transport solutions to the Kazakhstan energy company Kazmunaigaz to block oil transport from Kazakhstan to Latvia\(^1\). This is an obvious attempt by Russia to use its energy transport monopoly to control supply in the energy market.

1.2 The Russian energy sector and its environmental security

World’s demand for energy has helped the energy industry grow significantly. Oil, natural gas, electricity, coal and nuclear energy, the main energy sources can be found in Russia and are all exported by Russia to world markets. Since energy has become a key component of economies around the world, its importance in a security context has grown. The production, export and consumption of energy can threaten security in several ways through environmental damage, attacks against energy networks and supply related effects on economies.

Russia’s most important energy source according to exports is crude oil of which 70% is exported. The Oil and Gas Journal lists Russia’s proven oil reserves to be at 60 million barrels, ranking it 8\(^{th}\) in the world. Russia also ranks second in the world to Saudi Arabia in oil production and exports. 60% of Russia’s oil exports are transported via pipelines\(^1\)\(^6\). Another important energy source in Russia is natural gas. Russia’s proven natural gas reserves more than double those of its closest rival as it places number one in the world with 1 680 trillion cubic feet (Tcf) of gas reserves. It was also the world’s largest producer (22.4 Tcf) and exporter (7.1 Tcf) of natural gas in 2004. Russia has a significant pipeline system to distribute the natural gas domestically and internationally.

One of the most multifaceted Russian energy sources is electricity. Electricity is produced using three different methods: thermal, hydro and nuclear. Russia has 440 thermal and hydro electricity plants of which 77 produce electricity by burning coal. Russia also has 31 nuclear reactors in 10 nuclear plants and plans on building 4 or 5 more nuclear power plants in the next 15 years\(^1\)\(^7\). Thermal power accounts for 63%, hydro power 21% and nuclear power 16% of total energy production. Russia exported an estimated 55 billion kilowatt hours of energy to former Soviet countries, China, Poland, Turkey and Finland in 2004. Another major source of Russian energy is coal. Russia has the world’s second largest recoverable coal reserves (173 billion short tons), second to the United States.
1.2.1 Environmental security

Environmental security is an aspect of security that is often forgotten. Several security theories do not even take environmental security into consideration. Environmental security is needed to address threats to the ecological balance of states with an emphasis placed on the safety of the basic requirements of human life: the quality of water and air, the purity of arable land. According to Buzan, “Environmental security concerns the maintenance of the local and the planetary biosphere as the essential support system on which all other human enterprises depend”.

The environment is also a relevant topic in the Baltic soft security especially because of the Soviet heritage. One of the weaknesses of environmental security is that it often needs to be politicised or needs a public outcry before it is dealt with. Many environmental security actions seem to be reactive rather than preventive measures. This is the reason why environmental security breaks down into two categories: scientific, based on hard scientific facts; and political, influenced by the decision makers and public interest.

An environmental catastrophe in Russia would also affect the human security in the Baltic States. The result of the pollution of water or the threat of radiation could lead to a significant movement in refugees towards the EU.

1.2.2 Nuclear energy

Nuclear safety is the most talked about potential environmental threat of the Russian energy sector. Environmentalists including Russian environmentalists say that none of Russia’s nuclear reactors meet Western standards. The Leningrad nuclear power plant (LNPP) located in Sosnovy Bor, 80 kilometres west of St. Petersburg produces 50% of the electricity in the St. Petersburg region and 25% of its production is exported to Finland. The 4 reactors are RBMK-1000 model a new generation of the models in Chernobyl “…thought to be the most unsafe in the world…” The LNPP is one of the largest and oldest plants in Russia. Construction on the first reactor began in 1967 and the reactor was fully operational in 1973. This style of reactor has a life span of 30 years. Thus, the two oldest reactors were supposed to have been taken out of operation in 2003 and 2005, but a decision was taken in 1999 to extend their use after reconstruction.
Bellona, a Norwegian NGO, believes that the LNPP is a safety risk to the environmental security of the Baltic area. It currently poses a threat to the Baltic Sea as one of its larger fuel element storage buildings lies 90 meters from the Gulf of Finland and is in an appalling state with large cracks in the walls and roof\textsuperscript{22}. The “Asset Mission” by the International Atomic Energy Agency (IAEA) to the LNPP in May 1993 reviewed 327 operational events that had occurred from January 1982 to April 1993 of which 152 were determined safety relevant. The mission also found 5 safety problems that affect the general safety of the power plant\textsuperscript{23}. However, it must be noted that an operational event occurs in a nuclear plant in the world almost everyday.

1.2.3 Nuclear pollution

Radioactive contamination, having its beginnings in the Soviet period, is still a major source of nuclear pollution. The Yablokov report, an official Russian report compiled in 1993, stated that from 1964 until 1990 at least 17 000 barrels of solid radioactive waste, thirteen nuclear reactors from submarines, between 11 000 and 17 000 containers of radioactive waste were sunk in the Novaya Zemlya and Kara Sea areas. Some cases were already leaking and others had holes shot into them to speed up the sinking\textsuperscript{24}. Another legacy of the nuclear pollution is “Lake Karachay … one of the most polluted spots on earth”\textsuperscript{25}. Experts say that the lake contains seven times more strontium-90 and cesium-137 than was released in the Chernobyl explosion. Other significant problems with nuclear safety include the storage, transportation and processing of nuclear waste, insufficient safety rules, brain drain, employee strikes, lack of financing and terrorism.

1.2.4 Crude oil

Being the world’s second largest crude oil exporter and producer also increases the potential for environmental desecration. The total length of Russia’s mainline pipelines is equal to 240 000 km\textsuperscript{26}. Transneft, Russia’s largest oil pipeline company says “Special attention is paid by OAO AK Transneft to providing highest environmental safety of the Baltic Pipeline System’s facilities at all stages of the project implementation”\textsuperscript{27}. Environmentalists refute this by claiming that environmental legislation was not met; “We did not find any waterproofing on the pipe, nor, which is more important, on the welds. So the pipe corrosion has started even before coming into use”\textsuperscript{28}.
The most serious problems with oil pipelines are found in Chechnya. Estimates have been made that 30 million barrels of crude have leaked into the ground from the area’s black market oil industry of over 15 000 illegal mini refineries\(^{29}\). Of course these mini refineries have no interest whatsoever in the environment and do not follow environmental safety legislation. Greenpeace has estimated that 5% of all crude oil extracted in Russia leaks from its pipelines every year representing over 15 million tonnes per year\(^{30}\).

Only 4 million bbl/d of Russia’s yearly 7 million bbl/d production of liquids for export are transported in its pipeline system\(^{31}\). This means that a significant amount of production has to use alternative transport sources: rail and oil tanker. This has several effects on the environmental security of the Baltic States: the proliferation of single hull oil tankers in the Baltic Sea as Russia is the only member of the Council of the Baltic Sea States that does not support the banning of single hull tankers; the construction of new Russian oil ports on the Baltic Sea; increased travel of oil transport trains and trucks. All of these cases increase the risk of an environmental catastrophe\(^{32}\).

### 1.2.5 Environmental terrorism

Terrorism is also a threat to the soft security of the Baltic States. Russia’s large and intricate pipeline system and its nuclear energy plants are potential soft targets for terrorist attacks. Islamist terror groups in the former Soviet States including Chechen separatists pose a threat to security\(^{33}\). By attacking either a pipeline or a nuclear plant serious damage can be done not only to the energy supply, but also to the environment. Placing a bomb at one or more strategic pipeline locations would result in significant oil spills, which would have the potential of polluting water sources. With the energy pipeline network running right to the Baltic Sea ports of Ventspils, Butinge, Tallinn, Primorsk and Gdansk, the entire Baltic area is at threat. The three ports of Ventspils, Butinge and Primorsk transited 1.1 million barrels of crude oil per day in 2004 with the oil arriving through pipelines.

A more serious threat is an attack on one of the nuclear reactors. The potential environmental and human security repercussions would be immeasurable. An attack could bring a new nuclear disaster worse than Chernobyl. It is estimated that only 3.8 to 20 per cent of the reactor fuel was released in the Chernobyl accident. The accident still seriously contaminated over 125 000 km\(^2\) of the Ukraine, Belarus and Russia, the home of over 7 million people. Radiation
reached most of Scandinavia, Poland and the Baltic States, as well as southern Germany, Switzerland, northern France and England. Belarus estimates the damages of the disaster to be valued at 235 billion USD. Since this is only the beginning of the list of damages, it makes one think what could the damage be if all the reactor fuel of a nuclear power plant is released.

International organisations and other countries such as the United States and the EU carry out significant co-operation projects with Russia including the funding of energy safety projects. The European Commission lists the achievement of a high level of nuclear safety in Russia as one of its co-operation objectives in its “Country strategy paper-Russia 2002-2006”. Around 300 million EUR have been earmarked to nuclear safety projects in Russia through the TACIS programme from 1991-2001, showing the EU’s great concern for nuclear safety in Russia.

1.3 The energy situation in the Baltic States

The Baltic States are not only a consumer of Russian energy, but they also play a significant role in the distribution of Russian energy. The oil exports of the three major Baltic ports of Ventspils, Butinge and Tallinn represented approximately 16% of net Russian crude oil exports. Being an important transit location for the Russian export system has given the Baltic States flexibility in bilateral relations with Russia. To reduce dependence on the use of the Baltic ports as transport solutions, Russia has built a port in Primorsk, which significantly reduced the crude oil exports of Ventspils and Butinge. The transit fees collected by the Baltic States represent a fairly significant part of GDP (4-5% and up to 10% when transport services are included).

Russia’s natural gas monopoly, Gazprom, whose majority stake belongs to the Russian Federation, is the only player in the Baltic natural gas market. Currently, the Baltic States, because of their special transit country status, enjoy a price for natural gas of around $80-$85 per thousand cubic meters as opposed to the European prices (around $120-135 per thousand cubic meters). Gazprom plans to raise the price of natural gas for the Baltic States by 50% at the beginning of next year and this will be simplified by eliminating the Baltic States as transit locations. Gazprom has also begun to make significant investments in natural gas utilities in the Baltic region (34% stake in Latvia's Latvijas Gaze and a 37% stake in Estonia's Eesti Gaas). These investments have two purposes: the first being the control over essential infrastructure and the second being the
reduction of transit fees and other costs when the Baltic companies are owned by the exporting companies.

The Ignalina Nuclear Power Plant (INPP) in Lithuania is another relic of Soviet occupation, but its importance to Lithuania’s energy supply is significant as 85% of Lithuania’s electricity production comes from the power plant. The INPP consisted of three RBMK-1500 models; reactor 3 was never operational, reactor 1 was decommissioned on 31 December 2004 and reactor 2 will be decommissioned in 2009. Lithuania and Estonia are both net electricity exporters and Latvia is a net importer from the other Baltic States and Russia. Currently, Estonia, Latvia and Finland are co-operating in joint electricity project, Estlink, which aims to lessen the dependence on Russian energy by linking the Baltic States to the Nordic countries through an underwater cable running between Estonia and Helsinki.

1.4 The German-Russian Natural Gas Pipeline-A Case Study

The German-Russian natural gas pipeline, the Putin-Schröder Pact, according to Lithuanian MEP Vytautas Landsbergis, is planned to run 1 200 kilometres from Vyborg, Russia to Greifswald, Germany as early as 2010. The most publicized concerns regarding the pipeline construction under the most polluted sea in Europe, the Baltic Sea, are of environmental nature. Lithuanian Prime Minister Algirdas Brazauskas has warned that the project was dangerous as it risked disturbing tonnes of chemical weapons sunk in the Baltic Sea by the Russians following the World War II. The dangers related to the building of the pipeline become more serious as they are largely unpredictable. Estonian environmental specialists Marek Strandberg has said that building this tremendous pipeline in the bottom of the Baltic Sea is a threat to the sea's ecosystem as the construction is planned over a short period of time. That would result in sediment rising up from the bottom of the sea and will cause the rise of nutrients in the seawater thus reducing water transparency, the effects of which are multiplied by the shallowness of the Baltic Sea. Strandberg emphasises that we still do not know the details of the upcoming project, which makes any assessments of the effects on the sea's ecosystem unpredictable - a thorough environmental risk assessment is missing in this project.

Although the environmental aspect of the pipeline project is of great importance, the political aspect is what creates the most controversy. The environmental aspect is important, since it is the only way to prevent the
pipeline from being built, but even with ecologically sound arguments that will be difficult. In many cases, the environmental aspect is a cover up for the EU’s internal problems. The pipeline agreement was put together in secrecy, in which the Baltic States and Poland were not able to participate in the negotiations. Germany states that it is their sovereign right to ensure their energy security. This imposes on the concept of unity among the EU member states. It is customary to consult with your partners in matters that might affect them.

Another area of debate involves the costs of the construction of the pipeline and whether it would be cheaper to build it above the ground. Most statistics show that it would be cheaper to build the pipeline above the ground as construction and maintenance costs would be significantly lower. However, the advantage of constructing the pipeline in the Baltic Sea from the Russian point of view is that Russia does not need to negotiate transit fees with nearly half a dozen countries, but at the same time it has an effect on these countries as well. Namely, the Russian new energy distribution policy aims at leaving the former Soviet republics in isolation from direct energy distribution channels. Therefore there is potential to isolate the Baltic States from a very important part of EU - Russia relations.

According to the planned agenda Germany will be the major retailer of Russian gas in Western Europe. It will also increase the dependence of the Baltic States and the EU on Russian gas as the Russian energy giant Gazprom will own 51% of the pipeline. Recently, Russia announced that it is happy to look at having new partners join the project, but it is not willing to give up any part of its majority ownership.

Estonian Member of European Parliament, Vice-President of the Parliament’s Foreign Affairs Committee Toomas Hendrik Ilves has an interesting interpretation of the actions of the Russian Federation. He shares the belief with other Russia experts that Russia is interested only in control. “[But] why bother occupy them (the Baltic States)? It’s so much easier and less troublesome to simply control them. No messy independence fights, occupation troops, etc. You get the same effect if you simply control the government, access and influence important international organizations such as NATO and the EU” states Ilves. Russia is trying to achieve this by buying up components of vital infrastructure, and not only in the energy sector.
Conclusion

The situation is frightening - dependence on imported energy in the EU will rise from the current level of 50% to 70% in 2030. Even worse, 90% of the EU oil demand will have to be satisfied by imports by 2030. More frightening is the fact that the energy that the EU imports creates serious threats to the security of the Baltic States and ultimately of the EU. Environmental dumping, the ending of environmentally unsafe energy production methods in the home country (e.g. nuclear energy) while buying non-green and environmentally unsafe energy from secondary sources (Russia) is an everyday occurrence in the EU.

The Russian energy sector affects the Baltic States in two ways: first in creating a series of soft security threats resulting from shabby energy safety, an old and tired energy infrastructure, lack of finances and a hunger for growth in imports at any cost; second a blind reliance on Russian energy by the EU.

There appear to be two differing views on what should be done to solve the soft security problems. The first is to use more of a “soft” method by engaging in international co-operation and funding energy security programmes such as the EU is currently doing. The idea is that by treating Russia as an equal partner and only reacting when asked will solve the problem. The second more radical view is that there has been an overemphasis on international mechanisms and the stress should be placed on the changing of internal policies and internal conditions of the threatening states. This solution is also difficult as in the context of Common Foreign and Security Policy it is almost impossible for the EU to have one common policy on relations with Russia as the EU is incapable to define its common interests especially in the field of energy supply. The worry is that, “…when it comes to Russia, individual member states’ interests will triumph over the interests of the Union if a good bilateral deal can be had”.

A prime example of the ineffectiveness of the EU policy is that there is no consensus as to whether the Russian-German Pipeline project should fall in the framework of CFSP or should it be based on bilateral agreements. So far, the only countries that currently worry about the non-coherent policy on energy supply security issues are the Baltic States and Poland who have a long history of relations with Russia and therefore are quite cautious about the relations. These four countries along with Slovakia, the Czech Republic and Hungary find that “…the EU hitherto has pursued a needlessly naïve appeasement policy toward
Russia, based on lack of knowledge or the pursuit of narrow national agendas rather than based on the interests of the Union as a whole.\textsuperscript{52}

The second problem is connected to the increasing dependence on Russian energy supplies. If the energy market is able to operate solely on market forces there should be no reason for worry. However, Russia itself is dependent on the revenues from its energy sector, which places stable energy supply from Russia into question.

A solution for the energy dependence as well as the diminishing oil and gas reserves, and rising oil prices lies in using renewable, environmentally friendly sources of energy. It has been predicted that oil will cease to be produced in approximately 80 years, meaning that the problem needs to be solved urgently.\textsuperscript{53} Europe is already taking a lead in promoting new energy sources, but it still needs to do more. It needs to find a common position on energy security that encompasses all aspects of the sector not simply concentrating on reducing energy consumption, finding new energy sources and diversifying supply. The EU must take into consideration the security threats of the Russian energy sector and must work together to negate them as soon as possible.

NOTES


\textsuperscript{2}http://www.euractiv.com/Article?tmuri=tc:29-142665-16&type=LinksDossier 28.11.05.


\textsuperscript{4}European Commission Press Release, “EU-Russia Energy Dialogue’s 6\textsuperscript{th} Progress report”, 07.10.05.

\textsuperscript{5}http://europa.eu.int/comm/external_relations/russia/intro/index.htm.

\textsuperscript{6}European Commission Press Release, “EU-Russia Energy Dialogue’s 6\textsuperscript{th} Progress report”, 07.10.05.


\textsuperscript{8}Reuters “Russia must diversify energy export routes” 22.11.05.


\textsuperscript{10}http://www.theglobalist.com/StoryId.aspx?StoryId=4276.


\textsuperscript{14}Andrew Beatty “Middle East remains one step ahead”, European Voice, 20-26.10.05.
15 BNS-Interfax, “Kasahstani ärritas Venemaa keeldumine naftaveost Leedu” 20.11.05.
16 If not detailed by a special endnote, the information in this article with regards to the energy markets comes from http://www.eia.doe.gov/ Official Energy Statistics from the U.S. Government.
18 Buzan et al., pp. 7-8.
19 Buzan et al., pp. 71-72.
20 Fact Sheet “Leningrad Power Station”, http://www.bellona.no/imaker?sub=1&id=12668 viewed 10.11.05
21 Pursiainen, p.108.
22 Fact Sheet “Leningrad Power Station”, please also see the pictures http://www.bellona.no/c/russia/sos/sos10.htm.
24 Pursiainen, pp. 112-113.
26 http://www.bellona.no/en/energy/30532.html 18.11.05.
28 Pursiainen, p. 117.
30 Pursiainen, p.117.
31 http://www.eia.doc.gov/emeu/cabs/russia.html, viewed on 17.11.05.
32 Please see this article on oil pipeline bursts in Russia, http://www.bellona.no/en/energy/30532.html.
34 http://www.chernobyl.info/index.php?userhash=11034191&navID=2&lID=2, viewed 09.11.05.
35 A scary example of the potential for a terrorist attack on a nuclear site was the capture of a terrorist cell in Australia. Police arrested 18 men on November 8th 2005 in connection to an anti-terrorism operation. Police have claimed that “Islamic terrorists were planning to inflict "maximum damage" with a devastating attack on Australia's only nuclear reactor”. The police also found bomb-making equipment. The Lucas Heights nuclear plant consists of two nuclear that were built in the 50s of which the smaller has been closed down. The security of the site has been questioned as three of the men had been caught close to the nuclear plant in December 2004 and in December 2001 more than 60 Greenpeace activists entered the facility to point out the security failures.
36 For more information on TACIS http://europa.eu.int/comm/external_relations/ceeca/tacis/.
38 http://www.eia.doc.gov/emeu/cabs/baltics.html, viewed on 05.11.05.
39 http://www.arileht.ee/artikkel_2941.html, viewed on 29.11.05.
40 http://www.eia.doe.gov/emeu/cabs/baltics.html viewed on 24.11.05.
44 European Parliament, Sitting of the European Parliament’s Foreign Affairs Committee.
45 BERLIN, Oct 25 (AFP).
46 E-mail from Marek Strandberg, 30.11.05
47 http://www.eia.doe.gov/emeu/cabs/russia_pipelines.html#gas.
48 Interfax-BNS, "Moskva ei vastusta investorite lisandumist Läänemerealuse gaasijuhtme projekt"i, Moscow, 04.12.05.
49 Interview with Toomas Hendrik Ilves, Brussels, 30.11.05.
52 Ilves. CRIA p. 197.