

Protecting the energy weapon – new tasks for the Russian armed forces?

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Energieksport er Russlands viktigste inntektskilde i dag. Eksport av olje og gass utgjør samtidig et våpen Russland villig bruker i sitt forhold til andre stater. Russisk utenriks- og innenrikspolitikk har i økende grad fokusert på energisikkerhet. Energisikkerhet, som for mange betyr sikker tilgang til olje og gass, betyr i russisk sammenheng sikker levering av hydrokarboner til verdensmarkedet. For at Russland sikkert skal kunne levere petroleumsprodukter i fremtiden må landet bedre beskytte sin energiinfrastruktur enn hva som i dag er tilfelle. Denne rapportens formål er å undersøke i hvilken grad dette er en oppgave for de russiske væpnede styrker i fremtiden.

Rapporten viser at russisk doktrine er uklar omkring hvordan energisikkerhet skal oppnås. Denne uklarheten har ført til at kritisk infrastruktur i dag beskyttes av ulike deler av de væpnede styrkene, og på ulikt vis. Rapporten analyserer de ulike sikkerhetsstrukturene og i hvilken grad de har påtatt seg slike oppdrag, for å finne ut hva praksis er i dag. Rapporten tar for seg de regulære væpnede styrkene, FSB (den statlige sikkerhetstjenesten), MVD (Innenriksstyrkene), "Transnefteprodukt" og den regionale kollektive sikkerhetsorganisasjonen CSTO. Funnene viser at alle disse tjenestene allerede er involvert i sikring av energiinfrastruktur. Det finnes imidlertid ingen klar arbeidsdeling mellom de ulike strukturene, grunnet mangelen på doktrine omkring hvordan infrastrukturen skal sikres.

En rekke faktorer påvirker hvordan russisk energiinfrastruktur blir beskyttet i dag. Den første er hvilken vekt den russiske presidenten tillegger "energivåpenet". Dette våpenet vil bli viktigere for det russiske lederskapet ettersom russisk eksport av olje og gass øker i fremtiden.

En annen faktor er dobbelhatting mellom petroleumsindustrien og sikkerhetsstrukturene, noe som har blitt meget vanlig i Putins Russland. Dette har ført til at de statlige sikkerhetsstrukturer er et naturlig sted å henvende seg dersom væpnede tjenester er ønsket i petroleumsindustrien. Statlig eierskap i petroleumsindustrien legitimerer bruk av statlige sikkerhetstjenester for å sikre infrastruktur i denne bransjen.

Trusselnivået vil også være avgjørende for hva slags beskyttelse som er nødvendig. Dette vil også avgjøre om ny doktrine eller nye prosedyrer for sikring er nødvendig. De væpnede styrkenes egen innstilling til samarbeid er også avgjørende; deler av den russiske flåten nyter allerede godt av samarbeid med Gazprom og andre. Synergieffekter av samarbeid kan få de væpnede styrkene selv til å søke ut dette feltet som en lukrativ bransje med nye og spennende oppgaver.

Disse faktorene vil avgjøre i hvilken grad russiske væpnede styrker vil sikre russisk energiinfrastruktur i fremtiden. Rapporten viser at sannsynligheten for at dette vil bli en stor og viktig oppgave for de fremtidige russiske væpnede styrker er stor.

English summary

Energy has become Russia's most important source of income, and a favoured tool in Russian foreign policy. As the G8 meeting in June 2006 showed, energy security is one of Moscow's main priorities when it comes to both domestic and foreign policies. Energy security, in the case of Russia, means security of demand, rather than security of supply. In order to secure the uninterrupted flow of energy in the future, Russian energy infrastructure will need a higher level of protection than it has today. The focus of this report is to clarify to what extent the armed forces will provide this security. This issue ties in with the overall aim of the FFI project "Russia's use of armed force", which seeks to clarify how Russia under Putin uses armed force.

The report shows that the doctrinal provisions for how Russia is to ensure her energy security are unclear, at best. The unclear legislation has led to an *ad hoc* protection of strategic energy infrastructure, conducted by the various Russian security agencies. The report explores what tasks and procedures the different agencies have in terms of providing energy security. It looks at the Armed Forces, the FSB (Federal security service), the MVD (Interior Ministry), the company "Transneftprodukt", and the regional security organisation CSTO (Collective Security Treaty Organisation). The findings show that all these organisations are capable of securing Russian energy infrastructure, and that they do it on a case to case basis, rather than as part of a consistent and clearly formulated policy.

A number of factors determine to what extent the agencies take on these tasks. The first factor is the importance of the energy tool for the Russian leadership. The report argues that this tool will become more important in the future, as energy exports soar, and accordingly will probably the protection of this tool become equally important.

The intertwining interests of the political and industrial elites, especially in the hydrocarbon sector, facilitate the use of state structures for energy security provision. FSB and "Gazprom" interaction makes cooperation in the security sphere more feasible, and state ownership in the energy sector makes other state structures a natural resource pool for armed services.

The level of threats to energy infrastructure in Russia will also determine what level of protection is necessary. Threats from foreign or domestic actors determine what is currently being done, and whether new doctrines are necessary to meet future threats. The armed structures' own attitudes are also determining; the Navy is already reaping benefits from cooperating with the hydrocarbon industry.

In sum, these and a number of other factors explored in the report will determine the extent to which Russian armed forces will be involved in securing energy infrastructure in the future. Chances are that this is a growing task for the future armed forces of the Russian Federation.

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Preface

This report has been written as part of the FFI project “Russia’s use of military force”. The project seeks to identify how and why Russia under Putin uses military force, and how Russian military doctrine is developing.

The growing importance of energy to Russia is the prime trigger for this report, as the author wanted to explore what consequences this focus on energy is having and might have for the Armed Forces of the Russian Federation. This development has consequences for Norwegian security, at least in a regional perspective. The Russian Fleet is increasingly becoming engaged in energy security, also in the Barents Sea region. The increased activity of the Northern Fleet in the exploration, exploitation and transportation of hydrocarbons influences the Norwegian room for manoeuvre in the Barents Sea region. To Norway, it is important to be aware of the key developments in this region, in order to better meet future challenges. Energy security and the use of armed force toward this end is one element in this development.

1 Introduction

Russia is the world's largest gas exporter and the world's second largest oil exporter.[1] The increasingly important position as an energy supplier is seen as the key to Russia's great power status. The current and future role of the security structures in securing this infrastructure will be the subject of this report.

The paper will firstly elaborate on why protecting energy infrastructure is important in Russia, perhaps more so than in other countries. Secondly, the threats to this infrastructure will be discussed, to establish what tasks have to be fulfilled in order to protect this infrastructure. The main part of the report will expand on how Russia meets these threats, i.e. with the use of what means and based on what doctrine. Finally, the report will conclude that there is no clear doctrine in Russia that explains how energy infrastructure is to be secured. However, an *ad hoc* division of labour is emerging between the security structures in terms of securing energy infrastructure, and a number of factors will determine how this labour is divided. Unless more clear guidelines for how to provide energy security emerges, this *ad hoc* labour division will continue to define Russian energy security in the future.

1.1 Definitions

The focus of this study will be on *oil and gas infrastructure*. Thus, the discussion will not touch on infrastructure such as nuclear power plants, conventional electricity plants etc. The findings can, however, be extended to the protection of other types of energy infrastructure. The choice of oil and gas infrastructure has been made because of the significance of this sector to the Russian economy. As will become apparent, the oil and gas pipeline systems are operated through two different companies. However, when the report comments on the differing agencies that engage in the task of securing pipelines, this will include both oil and gas pipelines.

The study will use the term "state security structures" to describe the armed agencies herein analysed, i.e. the Armed Forces, the FSB, MVD and the regional organisation CSTO. The reference is to the armed branches of these structures, hence the term "security structures".

2 Threats against energy infrastructure

In a world increasingly dependent on energy, access to hydrocarbons has become a vital national security issue for most developed countries. Security of critical energy infrastructure has been devoted much attention, especially in the aftermath of 9/11, when thinking on national security skewed toward terrorist threats. There have been 41 known attacks on energy infrastructure in Russia in the period 1999-2006.¹ The actual number of attacks is probably significantly higher.

¹ See Table 2.2. and chapter 2.2.3.

Many countries have devoted large resources to the securing of critical energy infrastructure. Today, several hundred U.S. Special Forces advisers are training and aiding Georgian armed forces in securing Georgian pipelines. [2;3] The Baku-Tbilisi-Ceyhan pipeline, the first pipeline to carry Caspian oil to European markets avoiding Russian territory, was subject to much political haggling, and focus on security of this pipeline bordered on the extreme. US troops are partly responsible for the security of the pipeline, which runs through Azerbaijan, Georgia and Turkey. In June 2004, these three countries initiated an anti-terrorism command post exercise as a part of their enhanced focus on pipeline security in the region.[4;5] Azerbaijan has created 8 regional armed units, whose sole mission is to protect export pipelines.[6] The Bush administration is also engaged in securing energy infrastructure in its own hemisphere, by aiding Colombian armed forces with protecting the Caño-Limon pipeline.[7] This pipeline, which is the most frequently attacked pipeline in the world, was out of function 266 out of 365 days in 2001 and the approximate losses were \$600 million.[8] The Caño-Limon pipeline, often called “the flute”, shows that attacks on energy infrastructure can have grave consequences for local or regional economies.

The most popular infrastructure target for terrorists and insurgents is energy pipelines, through which about 40 per cent of the world’s oil, and most of the world’s gas, flows. Pipelines are easily sabotaged and difficult to protect.[9] In addition, conflicts make pipelines more viable to attack. Iraqi pipelines, oil installations and oil personnel have been subject to 366 attacks since the onset of the war in Iraq.[10] Paul Bremner, the US administrator in Baghdad in 2003, said that in that year, Iraq was losing US \$7 million a day as a result of pipeline attacks.[11] The most obvious way to increase pipeline security is to deploy security forces along their perimeters and in critical installations. In the case of Iraq, some 14 000 private security guards have been deployed to protect the energy infrastructure of that country.²

The NATO leadership has identified energy security provision as one of the Alliance’s main tasks for the future. The issue of how to provide energy security for the member countries was raised at NATO’s Riga summit in November last year.³ SACEUR General James Jones has pointed out that NATO’s Strategic Concept from 1999 contains an emphasis on and provisions for further development of an alliance capability to deal with the issue of energy security. He has highlighted a number of areas where the alliance could provide energy security for alliance members and other countries.[12] Paul Gallis of the US Congressional Research Service claims that a political role for NATO in energy security seems likely, and the allies have begun discussions with Bahrain, Qatar, Kuwait, and the United Arab Emirates to develop practical cooperation in the security field. NATO’s Partnership for Peace (PfP) countries might try and involve NATO in strengthening their energy security, the prime example being Georgia.[13] As international relations are increasingly influenced by energy politics, providing security for energy infrastructure is likely to become a task for the armed forces of states and alliances in the future.

² These days, the number one task for private security contractors in Iraq. Ref. Luft, G.: op. cit.

³ Aftenposten 28.11.06

2.1 The Russian energy infrastructure

Russia is one of the major energy players in the world. The Russian state budget has been stimulated in recent years by hydrocarbon dollars, and the Russian leadership is using energy as a foreign policy tool. Russia has used this tool in her dealings with her 'near abroad' ever since the break-up of the Soviet Union. But Russia is now also using the energy tool in its dealings with Western and Eastern partners outside the CIS (Commonwealth of Independent States) area. In terms of regaining its great-power status, the energy tool constitutes leverage for Russia over its partners. The Russian leadership tries to use this leverage for all its worth. It seems natural, therefore, that the Russian leadership should be concerned with the secure delivery of hydrocarbons. The weapon is less efficient if the Russian state is not able to secure the flow of hydrocarbons before it reaches other countries' territory.

Russia's energy infrastructure is today in a dire state. The pipeline system is under-capacitated and in desperate need of repairs and investment. "Transneft", the Russian state-owned pipeline monopoly, inherited about 65 000 km of crude oil and refinery products pipelines and over 150 000 km of natural gas pipelines from the Soviet Union. The total length of the Russian pipeline system today is only 222 000 km.[14] By comparison, the United States, with about 55 per cent of Russia's land mass, has privately owned oil pipelines that are four times that length and gas pipelines about twice that length.[15] Due to the lack of capacity in pipelines, 33 per cent of Russian oil is still transported by rail, a highly cost-ineffective transport mode.[16] Particularly the transport of energy eastwards poses a main challenge, with the distances of eastern Siberia and the Chinese hinterland. The main challenge for Russia in the future in terms of energy exports will be renewing, improving and expanding her energy, and particularly pipeline infrastructure.

To cope with this challenge, a number of new pipeline projects have been initiated in Russia in the past few years.[17]⁴ These will improve transport capacity, but experts are divided as to whether the improvement will be sufficient. Estimates presented jointly in October 2006 by the Russian Ministries of Industry and Energy and the Ministry of Economic Development and Trade suggest that an export capacity surplus will emerge in Russia in 2010. [18] Western experts suggest that even with an (unlikely) massive infusion of foreign capital, the capacity to transport the estimated oil and gas output of the Russian Federation will not be sufficient in the future.[19] Others again argue that Russian production is dwindling, and that this trend will continue if massive infusions of capital are not made.

The debate on how to increase the capacity of Russian energy export infrastructure is not the subject of this report. Regardless of whether capacity remains at current levels (unlikely), grows (more likely), or declines (possible), the safe delivery of oil, gas and LNG (liquefied natural gas) to world markets will be a key issue for the Russian leadership in order to make efficient use of the energy tool. Russia exports an increasing portion of her energy products, some 71% of her oil production in 2005. Her gas reserves imply that gas exports will grow even faster than the oil

⁴ Among these are the Adria Reversal Project, the Caspian Pipeline Consortium, the Murmansk pipeline project and the Eastern Pipeline for oil, for gas the Yamal-Europe II, the Blue Stream pipeline and the North trans-Gas Pipeline

exports. This calls for a more extensive, more sophisticated export infrastructure than the one now in place. Both oil and gas export capacity is stretched, security is insufficient, and this problem will grow as Russia as an energy exporter grows at the onset of the gas century.[20]

2.2 Threats to the Russian energy infrastructure

There are particular difficulties associated with the protection of energy infrastructure in Russia. A closer look at the infrastructure enables us to determine what the threats to these installations might be. The most important vulnerabilities of oil infrastructure are refineries and pipeline pumping stations, as well as chokepoints on ocean ship routes.[21] However, although petroleum production (wells) and shipping (tankers) can and have been attacked, they are numerous and operate in a global market, so substitutes may be relatively easily found. Gas facilities are more vulnerable to attack and more expensive and time-consuming to repair than oil production, handling- and shipping facilities. Natural gas systems consist of production facilities, transmission pipelines, storage areas, city gates and sub-transmission mains, distribution vaults, and distribution pipes. Gas requires compression or cryogenics to store and move, and sea-going vessels carrying LNG are particularly vulnerable. Thus, there are a number of critical points at which one could attack parts of the oil or gas infrastructure in order to severely damage the secure deliveries of Russian hydrocarbons.

The threats to the Russian energy infrastructure can further be divided into three categories. At the **state level**, energy rich states seek to protect their resources and transport structures against the **aggression of other states**. At the asymmetrical state level, **international terrorist networks** pose a threat to energy infrastructure, as it constitutes an attractive target for terrorist acts. On the **domestic** level, **separatists** (who, in the case of Russia, often are categorised as ‘international terrorists’) might seek to destabilise the regime and obstruct the flow of energy through a particular territorial entity, or ordinary criminals might seek to ward off energy resources for personal enrichment.

2.2.1 State-level threats

Threats to Russia’s energy resources or energy infrastructure from other states have not yet materialised. However, such scenarios might be envisaged in an energy scarce future. A linear projection of world energy consumption has the world’s proven oil supplies running out around 2030 after a long period of rising prices and falling supplies.[22] Neighbouring or distant states might try to expropriate Russia’s energy resources, or to paralyze Russia by hitting the country’s energy arteries. This might seem far fetched, but it is not an unrealistic scenario.

In such a scenario, one might assume that a potential enemy has more efficient weapons at his disposal than improvised explosive devices. Contingency plans would have to include defence against such phenomena as air strikes, complex naval operations and territorial occupation. Several studies in the field of energy infrastructure and security were carried out during the Cold War. One study explored what effect a nuclear strike with multiple warhead missiles might have on an oil refinery in the U.S.[21] This case was chosen because energy systems were considered

to be the most vulnerable part of the U.S. economy. The findings were that most of the refining capacity in any country would be destroyed by the impact of such an attack, and that the country would suffer extensive reductions in industrial productivity and significant changes in socioeconomic organization. One can assume that a deliberate attack in Russia might entail similar consequences, if not graver, due to the high level of energy consumption in Russia. Conventional attacks, however, might seem more realistic, and would produce effects on a smaller scale the Russian energy economy.

Russian long-term defence planners must take account of such prospects of another state wanting to strike or claim her energy arteries. Dr. Craig Hooper claims that, during the Cold War, both superpowers were engaged in economic warfare through targeting each other's energy infrastructure. As late as 2004 a Russian diplomat was questioned by US authorities regarding his photographing the Cove Point gas terminal.[23] Russia currently possesses some of the largest hydrocarbon reserves in the world, resources that an energy-hungry state would probably like to get its hands on. If the Russian tradition for conspiracy thinking has been upheld in recent years, scenarios like these have very likely been drawn up by Russian defence planners. One scenario might be how China or India would react in the case of a disruption in the supply from the Persian Gulf. Another scenario is a 20 per cent increase in current energy consumption, which suggests a future in which military conflict over energy resources becomes inevitable.[24]

2.2.2 Asymmetrical threats

A nuclear or conventional attack on a major oil refinery in Russia requires access to complex logistics and technology. Such technology might also find its way to the hands of international terrorist networks, the second level of threats to Russian energy security. The terrorist threat is highly present in the Russian leaderships' minds, as Russia has experienced a number of terrorist attacks in recent years.⁵ Indeed, in the aftermath of 9/11, al-Qaeda identified the world's energy system as "the provision line and the feeding to the artery of the life of the crusader nation".[25] International terrorists might resort to straightforward tactics, such as attacking a major pipeline or an oil terminal, or they might resort to more complex operations, in order to create more publicity around an attack. Numerous articles and books have been written on the dangers of terrorism at sea, in the form of e.g. attacks on oil or LNG tankers in a heavily trafficked area, such as the Malacca strait.[23] Estimates are that an attack in this area which would cause heavy oil spills could severely inflict the world economy. Russian newspapers have reported on the alleged fleet of Osama Bin-Laden, which supposedly numbers 16 to 19 cargo vessels intended for terrorist attacks.[26] Other threats are those against offshore installations, or the seizing of critical energy infrastructure, neither of which has been seen in Russia. However, the Russian leadership's rhetoric indicates that threats from international terrorist networks are very much imminent in Russia, and contingency plans must be made as to how to meet such potential threats.

⁵ The extent to which these terrorist attacks originate within or beyond Russia's borders is unknown, however, no international terrorist organization has taken responsibility for any of the major attacks that Russia has seen in recent years.

2.2.3 Domestic threats

For domestic actors, like separatists and other vigilantes, small-scale attacks on pipelines would be the preferred mode of attack on Russian energy infrastructure. This is a relatively simple strategy that could inflict severe damage on Russian energy deliveries and undermine the country's position as an energy power. The literature on terrorism and energy infrastructure suggests that relatively few international terrorist strikes have been launched against energy infrastructure targets. The findings of a survey of terrorist and rebel attacks on petroleum infrastructure in the period 1968-1999 were that most attacks against energy infrastructure were perpetrated during armed conflict and by domestic (rebel) groups. The most common modes of attack by far were blasting of pipelines and kidnapping of workers, and the numbers increase drastically for regions with domestic conflict, such as Columbia and Nigeria.[27] In the period 1998-2006, there have been 41 known attacks on energy infrastructure in Russia. Attacks on energy infrastructure have risen in recent years, as seen in the table below.

Attacks	1998	2000	2001	2002	2003	2004	2005	2006	SUM
Elect. power station	2	0	0	0	0	0	2	1	5
Power line	0	0	1	0	0	2	1	0	4
Gas station	1	0	0	0	0	0	2	1	4
Gas pipeline	0	1	1	1	1	7	6	1	18
Oil pipeline	1	0	1	0	0	1	0	1	4
Oil other	0	0	0	0	0	2	0	2	4
Telecoms	0	0	0	0	0	0	2	0	2
Sum	4	1	3	1	1	12	13	6	41

Table 2.2. Recorded terrorist attacks against hydrocarbon infrastructure in Russia 1998-2006(24.09.) *The data in the table are based on the Terrorist Knowledge Base MIPT database (www.tkb.org), which record international and domestic terrorist incidents from 1998, and terrorist attacks with international ramifications 1968-1998. The data on terrorist attacks are of course incomplete and there is reason to believe that a number of attacks have not been recorded. Additional reporting on terrorist attacks on energy infrastructure: [28;29]*

As the table shows, pipelines are also in Russia the most popular target by far. In the data shown above, there are no known examples of attacks where international terrorists claimed responsibility. Most of the attacks have taken place in the North Caucasus, and so one can assume the attacks have been perpetrated by domestic separatists or terrorists, rather than by international terrorist groups. All the attacks are of a relatively small and local scale. By no means can they be compared to attacks committed by international terrorist networks, aiming to cause maximum suffering to victims.

Of the three different types of threats to Russian energy infrastructure, domestic threats seem to be the most imminent worry of the Russian leadership. However, Russia must have contingency plans to meet all the three types of threats described above. In the following, the report will explore how Russian doctrine proscribes who will provide security from these threats. Thereafter

follows an exploration of how and to what extent this doctrine is implemented in practice.

3 The Russian National Security Doctrine

In order to understand how Russia provides safety for her energy infrastructure, an exploration of the Russian energy and security doctrines is necessary. This will highlight Russian current and past thinking on what energy security is, as well as how and by what means it is to be provided.

In the Russian energy strategy for the period until 2020, adopted in 2003, energy security is listed as the most important component of Russia's national security.[30] The wording of the Energy Strategy shows that energy is seen as the backbone of the Russian economy, and it states that "the provision of national security is one of the main tasks of energy policy". Energy security is defined as:

A situation in which the country, its citizens, society, state and economy are protected from threats posed to reliable fuel and energy delivery. These threats might be defined as domestic (geopolitical, macroeconomic, connected with trade cycles) factors, as well as the particular condition and functioning of the country's energy sector. The factors shown here, which can stall the development of the technological-energy complex, are the main sources of threats to Russia's energy security.[31]

The Energy Strategy thus links the concept of energy security closely to the concept of national security, but it does not clarify what specifically qualifies as a condition of "energy security", nor does it outline how it can be achieved.

It is easier to envisage how national security is to be achieved. "National security" is by former president Boris Yeltsin defined as "a situation where the national interests are secured from foreign and domestic threats, and which provides for the progressive development of the people, society and state".[32] The Military Doctrine of the Russian Federation states that one of the prime tasks of the Russian armed forces is to secure the economic interests (national security interests) of the Russian Federation.[33] This means that military force can be used to secure Russian economic activity. Within the sphere of economic activity lies that of the hydrocarbon sector, and military force can be used to sustain the Russian hydrocarbon sector, and thus Russia's 'energy security'.

The case of Russia is particular in this regard. Whereas energy security in e.g. the United States means security of *supply*, i.e. accesses to energy sources, energy security in Russia means security of *demand*, as well as secure conditions for the production of energy. Thus, Russian energy security consists in getting the hydrocarbons to the consumer, making sure production and transport of these resources do not undermine Russian national security. According to Daniel Yergin, "For Russia, the aim [of energy policy] is to reassert state control over "strategic resources" and gain primacy over the main pipelines and market channels through which it ships its hydrocarbons to international markets".[34]

The Russian concept of national security is vague enough to potentially include any policy issue. Such ambiguity implies certain advantages. Like the Bush administration declared the war on terror and pre-emptive strikes to be matters of national security, might the Russian Federation also declare that the maintenance of “Transneft” as a state monopoly of gas pipelines is a matter of Russian national security? National security as a concept can be seen as a *carte blanche* to pursue whatever goal the political elite sees fit by the means it deems necessary. Daniel Yergin has written extensively on the transformation of the concept of national security in the US:

And what characterizes the concept of national security? It postulates the interrelatedness of so many different political, economic, and military factors that developments halfway around the globe are seen to have automatic and direct impact on America’s core interests. Virtually every development in the world is perceived to be potentially crucial. An adverse turn of events anywhere endangers the United States. Problems in foreign relations are viewed as urgent and immediate threats. Thus, desirable foreign policy goals are translated into issues of national survival, and the range of threats become limitless.[35]

Thus the concept of national security can be used to “securitize” an issue in order to legitimise the use of military force to attain goals that could otherwise not be attained. In this sense, the link between energy and national security, and hence the use of force to obtain energy security, seems intrinsic, although not explicit. The Russian concept of national security is being expanded to include a broader focus on economic national security factors.

Somewhat distinct from the Russian Military Doctrine is the Russian Naval Doctrine. This document clearly stipulates the protection of Russian national interests at sea through the use of military force. The Russian Navy is designated the task of creating and maintaining conditions ensuring the security of maritime economic activity, in addition to deterring military threats at sea. There is a special section of the Naval Doctrine devoted to “state-controlled activity in studying, developing, and using the world oceans in the interests of the country’s defence and security with the participation of the military component of its maritime capability”.[36]

According to the Naval Doctrine, then, economic security cannot be obtained without a modern Navy capable of safeguarding Russia’s economic interests at sea.

When it comes to terrorist acts, the legitimisation of the use of force is more clear-cut than under “normal” circumstances. The law On Fighting Terrorism of 6th March 2006 clearly states that the armed forces can be used to contain terrorist threats and fighting terrorists.[37] The law does not directly refer to energy infrastructure, but rather depicts a general structure for all situations in which some part of the Russian territory or Russian installations are exposed to terrorist threats. This structure and the use of military force to this end, however, must be approved by the President, according to the law.

So, how does the Russian Federation then provide security for its energy infrastructure? With the exceptions of the Naval doctrine and the Law on fighting terrorism, the doctrinal provisions are somewhat vague in defining what role the armed forces should fulfil. It rather seems that the President might use whatever means one sees fit, in the name of national security, of which

energy security is a main constituent. This leaves considerable room for manoeuvre, and is not binding on any agency.

Some argue that energy security cannot be obtained without the use of military force. It is only military power that can provide the continued flow of oil and other critical materials from (or through) distant areas in times of crises.[38] Professor Michael T. Klare argues that Russia has shifted parts of its armed forces to regions that are rich in energy resources, i.e. the Caucasus and the Caspian Sea basin. Although there are other parts Russia rich in energy, potential threats to these resources are not as visible in the Russian heartland, i.e. Siberia, where unstable neighbours are absent.

Others argue that energy security is no task for state agencies at all. The protection of energy infrastructure should be provided by the companies themselves, e.g. through the use of private security contractors, as has been the case in Iraq. However, in Russia, the pipeline system and many of the oil and gas companies are state owned. Russian legislation does not open for the participation of private enterprises in the pipeline business, as the industry is seen as strategically vital for Russian national security.

In addition, the development of private security contractors has been somewhat particular in the case of Russia. There has been fierce resistance against legalising private military organisations, and the private security firms that exist are tightly regulated. The proposal to leave energy infrastructure security in the hands of private companies has increasingly come under scrutiny, but without any clear solution.[39] One result of this has been that state agencies have moved into the private market for security services, and to some extent even monopolised it. This is the case with the Interior Ministry's Extradepartmental Guard Service (see chapter 4.4). Many would argue that national armed forces taking on the task of securing energy infrastructure for a private or semi-private company amounts to the partial privatisation of those armed services. The army or navy do not seem to discriminate in terms of what hydrocarbon companies they deal with.

Many of the Russian energy giants have CEOs or chairmen with very close links to the political, military and intelligence establishments.[40] Under Putin's leadership, several intelligence officers have become members of the largest hydrocarbon companies' boards of directors. If, say, an energy CEO with a military career runs a state-owned company that is declared vital to national security, it would be only natural for him to draw on state resources for protection, a cheap and reliable option. Such relations can signify a willingness on part of the state security structures to provide security for companies, and that a number of state means (armed in this case) can be put at the companies' disposal.

4 Current practice

A seemingly open-ended provision to use armed force to protect energy resources is provided in the National Security Concept, the Military Doctrine, the Naval Doctrine and the Energy Doctrine of the Russian Federation. The doctrines do not stipulate exactly how this is to be provided. Thus,

to find out how this is done in practice, one needs to look at the current practices of the different branches of the state security services. This will enable us to identify who protects what kind of critical infrastructure, and under what circumstances. There should be no illusions, however, that a clear pattern will emerge from such an analysis. The examples provided below present only a partial picture of current practices. There are probably modes of cooperation that are not known, also in this sector. The report discloses some of the incidents that have taken place, in order to speculate on how and when particular branches of the armed forces might be used for such purposes at present and in the future.

Another unknown factor is that of regional variations in Russia. During the Yelstin era, the federation subjects in Russia developed dissimilar relationships with the federal centre, based on particular cooperation agreements between the centre and each region.⁶ Therefore, public administration at the regional level in Russia is, at best, fraught with variations. One cannot be certain one agency fulfils the same task in all the Russian federation subjects. Although Putin has tried to strengthen the “power vertical”, local differences and allegiances must still be expected to have an impact on the provision of security for energy infrastructure. Furthermore, the issue of energy infrastructure security is more pressing in some regions than others. Areas with a high density of critical installations and population will naturally be more preoccupied with contingency plans for disasters or attacks than scarcely populated regions. The urgency with which regional authorities see the issue of critical energy protection will have bearings on how it is provided.

4.1 The conventional armed forces

VS (Vooryzhennyie Sily) The conventional armed forces

- Task: Securing Russian territory and property against all threats
- Personnel 1 037 000
- Pipeline troops – historical experience
- Navy – already cooperating with hydrocarbon industry

Fact box 4.1 Key facts about the Russian conventional armed forces

The Russian armed forces have the main responsibility for securing Russia against all military threats. In the case of a military attack on Russian energy infrastructure, this would be the force structure it would be most likely to draw on. A number of capacities could be drawn on in such scenario, depending on the nature of the threat.

⁶ For a thorough exploration of the subject, see [41]

In terms of a high level attack on energy infrastructure, army special forces would be a natural pool of troops. These units are, as in other countries, specially trained to solve special reconnaissance, military assistance missions as well as direct attacks. The Special Forces within the Russian armed forces include the Military intelligence services' SF units, as well as a number of other units. The ground forces have formed special antiterrorist detachments to protect army units and military installations. The ground forces are also setting up company-sized tactical groups in every military district to support territorial MVD and FSB operations.[42] Any of these could be used to protect installations or to halt an attack on such installations.

The VS also have a capacity specially designed to secure energy flows, the Pipeline Troops. They are organised as a specially designated unit under the army's rear services. The Pipeline Troops were established in 1952, with the purpose of supplying Soviet army tank divisions with fuel. A main pipeline network of 20 000 km was laid after the Second World War in order to supply the troops in manoeuvre. The Soviet "Pipeline Troops" were to be the link between the main pipelines and the troops in operation.

The Pipeline Troops are still a functioning part of the Russian army, numbering 5000 and with a capacity of laying pipelines with a total length of 15 000 km.[43], [44] The "Concept of the Development of the Fuel Service of the Armed Forces of the Russian Federation for the Period until 2015" outlines the main priorities for the Pipeline Troops in the future. The Concept focuses on the efficient provision of fuels to Russian troops. The Pipeline Troops are, however, tasked with providing engineering rather than security services, and they do not provide for civilian energy infrastructure.[45] There have been extraordinary cases where the Troops have supplied fuels to areas of the country where the energy infrastructure is not extensive, such as in the far north and in Siberia.[46] But the Concept for the Development of the Troops shows no sign of a change in focus of the Pipeline Troops toward securing civilian energy infrastructure, at least not in peacetime.

The pipelines troops are a relatively small engineering troop, not primarily trained for guard services. The branch of the armed forces most likely to be used to protect energy security would then rather be regular units. There are a number of reasons for this. One is their sheer numerical strength. The Russian army is the single institution with the capacity or potential capacity to take on the task of securing the vast Eurasian pipeline network. Several different units could be drawn on for such tasks, from infantry units to airborne troops. The million-strong Russian army constitutes the largest troop number capable of providing security for such a complex. In addition, as Aleksey Arbatov of the Carnegie Moscow Centre argues, the majority of the conscripts are not well trained for combat tasks.⁷ In terms of combat readiness, the average Russian army conscript might be better fit to secure pipelines than to fight in Chechnya. Cooperation between the armed forces and the energy sector could prove fruitful for both parties. The Russian army would potentially escape their problems finding meaningful work for conscripts, and the Russian gas sector would be provided with cheap and necessary labour for securing their infrastructure. It

⁷ Interview with A. Arbatov 15.september 2006

could be a happy marriage of convenience between the gas sector and the armed forces of the future.

Expenses will be fundamental in determining how Russian energy infrastructure is secured. The petroleum industry is well aware of the importance of critical infrastructure, and high-tech solutions are available for those willing and able to pay the price. Examples are sophisticated surveillance systems such as seismic sensing technology that provides early warning when saboteurs approach a critical installation. This could diminish the need for large number of troops, since governments can rely on smaller rapid-response teams. Such a solution could be complemented by air surveillance. Small and medium-sized unmanned aerial vehicles (UAV) and unmanned helicopters can be used for pipeline inspection purposes. Some defence contractors are even developing UAVs mounted with automatic weapons to be used against saboteurs.[25]

The question remains, however, whether Russian authorities are willing or able to pay the price for these kinds of systems. There is little political will to invest sufficiently to maintain the current pipeline system, and it seems unlikely that there will be sufficient political will to splurge out on fancy surveillance capabilities. Defence budgets are up due to a surging oil price, and they might continue to rise as long as Russia is making money from hydrocarbons. If the flow stops from lack of protection of the energy infrastructure, however, so will the oil-boosted increases in defence spending. It might serve the armed forces' own interest to show an interest in vital infrastructure protection, if only to secure a continued growth in defence budgets. An increased threat level to this infrastructure would also secure future funding for the armed forces.

4.1.1 New tasks for the Russian Navy

Securing Russian economic interests in the littoral areas is the prime task for the Russian navy, not presence on the high seas.⁸

This statement by Pavel Zolotarev, of the USA and Canada Institute of the Russian Academy of Sciences, reflects the future of the Russian Navy. A debate within the Russian military establishment on the current and future tasks of the Russian Navy has been going on for some time, and a uniform conclusion is that the economic sphere will be increasingly important in the future.

The best example of this can be found in the Barents Sea, the prime area of dry operations for the Northern Fleet, and at the same time a highly promising area for hydrocarbon reservoirs. Economic interests have since the break-up of the Soviet Union begun to rival strategic security calculations. After some initial hesitation, the Navy and the hydrocarbon industry have found common ground over the past few years. Gazprom and the Russian Navy signed an agreement of cooperation on 24th November 2005. Under the agreement, the partners would promote cooperation in a number of areas, including the creation of a comprehensive safety and security system for hydrocarbon extraction and marine transportation, a search-and-rescue system, and

⁸ Interview with P. Zolotarev, Moscow 11.09.2006

schemes of joint transportation support (including marine, aerial and other types of support).[47] The fleet is also offering protection of tankers carrying Russian hydrocarbons on their way to world markets.[48] Gazprom has even been considering the possibility of transporting gas on the Navy's ships and warships.[49] This relationship is a prime example of the Russian armed forces protecting the economic interests of the country. It seems that in Russia, the threshold for the state to intervene and protect national companies is somewhat lower than in many other countries.

The armed forces can also gain a number of favours from their close relations with the oil and gas industry. A case illustrating this is the placing of military radar on an oil platform at the Kravtsovskoye deposit, (located 22 km offshore from Kaliningrad on the Baltic Shelf and owned by LUKoil-Kaliningradmorneft).[50] The radar is the Baltic Fleet's first sea-based radar station, and will be a significant addition to the fleet's surveillance capacity. Other examples are that LUKoil uses the Navy's services in the Caspian and Barents Sea, and that the Yamal-Europe gas pipeline is equipped with turbines from scrapped MiG-fighters. Defence Minister Sergey Ivanov has stated his full support for such cooperation between the Navy and the hydrocarbon industry:

The issue complies with the decisions of the Naval college, the Naval doctrine and the World's Ocean federal program. Such cooperation will contribute to the development of high technologies needed for oil production.[51]

Russian authorities wholly embrace such cooperation between the armed forces and private/semi-private companies. On 27th September 2004, LUKoil and the Ministry of Defence signed a broad cooperation agreement on the provision of technical and financial assistance to a range of defence establishments, including the Rear Services and Transport Military Academy in St Petersburg. The agreement included plans for employment in the petroleum industry for those discharged from military service.[52;53]

Another case point is the planned construction of the North European Pipeline from Vyborg in Russia to Greifswald in Germany. Defence minister Sergey Ivanov has confirmed the plans of the Baltic Fleet to contribute with hydrographic vessels in the construction of this pipeline, which is to be laid on the Baltic Sea bottom.[54] Indeed, Pavel Zolotarev claims that this pipeline is of such strategic value to European and Russian economies that it can not be left unprotected. He claims the Baltic fleet will have to be strengthened in order to protect it from future threats.[55;56] Tasks such as protecting energy infrastructure are a way of ensuring the fleet's importance as a regional security guarantor, and a way of securing future funding. Baltic Fleet, the other regional fleets and the Navy leadership will willingly use cases such as these to secure future funding from either state or private budgets.

The maritime sector is particular, in the sense that the Russian Fleet is the only agency that can offer maritime armed services to private companies that operate off-shore. Land-based installations, however, can be protected by a number of security structures that can offer their services. This is probably the reason cooperation in the maritime sector has advanced further than on land. However, as we will see, some land-based security agencies have also advanced far in their cooperation with oil and gas companies.

4.2 Transneft / Transnefteprodukt

Transneft (www.transneft.ru)

Transneft was established as a joint-stock company in 1993, the inheritor of Glaztransneft, the USSR Ministry of Oil Industry main production department of oil transportation and supplies. By that time, Transneft was operating 50 000 km of oil trunk pipelines, and a large number of pumping stations and tankers. From 1992 onwards, the company rendered services related to the oil transportation in accordance with the tariffs established by the federal centre. Today, Transneft is the Russian state monopoly of oil pipelines, controlling some 48 000 km of pipelines and 99,6 per cent of all oil transports.

Transnefteprodukt (www.transnefteprodukt.ru)

Transnefteprodukt was created in 1993, as an inheritor of the Soviet Rosnefteprodukt, which had disintegrated with the demise of the Soviet Union. The new company was to be responsible for the transportation of hydrocarbon products in Russia, i.e. refined oil products (while Transneft is in charge of the pipeline system), and from 1996 the company was also responsible for the construction and maintenance of such pipelines. It is 100% state-owned and holds a workforce of 15 700 employees.

For a more detailed description of the privatization efforts in the hydrocarbon industry in Russia, see Decree of the Russian Federation President No. 1403 of November 17 1992, “On the particularities of privatization and re-organisation of alliances in the oil, oil processing industry and oil production supply”.

Fact box 4.2 Key facts about Transneft and Transnefteprodukt

The companies “Transneft” and “Transnefteprodukt” are, at an overarching level, responsible for providing security for the company assets, i.e. the energy infrastructure of the Russian Federation. The companies have established departments directly responsible for pipeline security. In 2000 the company “Transnefteprodukt” founded a security service, and started focusing on the strengthening of the defensive units’ material equipment. A special daughter company was formed, “Spetstransnefteprodukt”, in order to fulfil these tasks. This security branch was created with the sole purpose of guarding the pipeline network against crime, as theft of hydrocarbons has been a major problem in recent years.[57] These branches have specifically been set up in regions with dense hydrocarbon infrastructure. For example, in June 2003 the security forces of “Spetstransnefteprodukt” in Orlov and Leningrad oblasts apprehended 10 people, 13 vehicles, weapons and ammunition, and returned some 210 tonnes of hydrocarbon products to the company.[58]

However, these companies also rely on other state structures to provide infrastructure security. The companies, and especially “Transnefteprodukt”, have maintained a close working relationship with the Ministry of Defence (MoD) for some time. There has been an MoD representative at Transnefteprodukt HQ since 1989, and joint exercises have been held since the 1980s.[59] After the break-up of the Soviet Union the level of cooperation between the MoD and the then turned civilian pipeline companies declined. In recent years the cooperation has again been revitalised, largely due to the president of “Transnefteprodukt”, Sergei Maslov, a *silovik* of

the Putin “clan”. According to him, although Russia has entered the world economy, one should not forget about the “defensive power and security of the country”. According to Maslov, “It is imperative to keep a focus on the security of the pipeline system - especially in the light of the new evil – international terrorism”. [60]

This fight against terrorism makes the companies reliant on cooperation with other Russian law enforcement agencies, according to Vladimir Kostrov, the Advisor to the president of “Transnefteprodukt”. He says that it would be impossible for the company to fight crime against hydrocarbon transport without the support of the law enforcement agencies. The company cooperates with these both on a federal and regional level. He does not, however, wish to elaborate on the nature of the cooperative measures. [61]

The cooperation has manifested itself in joint annual exercises. In connection with one such exercise, in July 2003, the head of the Russian General Staff Anatolii Kvashin said “I would like to thank the president of the company “Transnefteprodukt”, Sergei Maslov, for his good understanding of the company’s role in the defence of the country. [...] Today we have seen a fragment of the future Russian armed forces”. [62] Such a statement leaves little doubt that General Kvashin views the issue of energy security as an important one for the future armed forces of the Russian Federation, and that this is an activity that they will be heavily involved in.

In July 2005, the exercise “Strategic pipeline 2005” was held under the joint command of the Chief of the armed forces rear services/Deputy Defence Minister General Vladimir Isakov and the president of “Transnefteprodukt”, Sergey Maslov. More than 3500 servicemen (from 20 army detachments, among them units from the rear services special forces) took part in the exercise, and representatives of the commanding staff of the regular armed forces, MVD, FSB and MChS inspected the exercise. Specialists from “Transnefteprodukt” operated alongside the pipeline troops of the armed forces. The aim of the exercise was to train the company in the supply of fuel to troops, as well as other types of cooperation. The overall goal was that it should be possible for the pipeline troops of the rear services to storage fuel deposits in the TNPs pipelines and reservoirs. In a crisis situation petroleum products might be extracted out at any point of TNPs system of 20 000 km, spread over the whole Russian territory. [63] In return, the company receives assistance from the armed forces in the protection of its pipelines when necessary, that is when the company is up against a security threat it cannot handle alone.

The president of the company Transnefteprodukt, Sergei Maslov, has expressed this double mission of “Transnefteprodukt”:

To work in the interest of the economy and the defence of the country. [The purpose of the exercise] is for the company, in a crisis situation, to be able to transfer onto military mode. [...] The contact between our company and the Ministry of Defence is constant and steady. [64]

We are fulfilling the task of the circulatory system of the Russian army, and we can count on the help of the army in the defence of pipelines against crime when necessary. [65]

Colonel Anatoliy Tsyganok, the head of the Centre for military Prognoses, claims there has been hardly any research in the field of pipeline system security in Russia in the past 15 years. There is no agency that specialises in the protection of the Russian pipeline system. He claims there has been no advancement in Russia in this field in the past 30 years, and that current practices are not reflecting the current threats. The private service “Spetstransnefteprodukt”, which was established in 2002, is only engaged in preventing petty theft of fuel, rather than deliberate or terrorist attacks on the infrastructure.[66] Tsyganok suggests that “Spetstransnefteprodukt” could serve as a hub for private security companies who would be specialised to take on the task of energy infrastructure security. That would be one way of dealing with the lack of coordination in infrastructure protection in Russia today. No coordinated effort is made in the field of energy security. For the time being the companies managing the pipelines in Russia are relying on the armed forces to come to their aid when energy infrastructure is threatened. As energy exports grow, this will become an increasingly important task for the energy companies. Chances are they also in the future will look to their long-time collaborator, the MoD, for energy infrastructure protection.

4.3 Gazprom/ Unified Gas Transportation System (UGS)

Gazprom / Unified Gas Transportation System

- Gazprom: gas monopoly controlled by the Russian state
- UGS is the mainline gas pipe system, consisting of 155 000 km of gas pipelines [67]

Fact box 4.3 Key facts about Gazprom and UGS

The UGS is responsible for the safe delivery of gas through the largest transportation system in the world, and is wholly owned by Gazprom, the Russian state gas monopoly. In addition to the pipeline system in Russia, Gazprom also controls some parts of the pipeline networks in other CIS countries, such as Belarus and Georgia.

The daughter company “Gazobezopasnost” is the agency in charge of the production safety of the UGS, but their operations consist in blow out preventive activity, maintaining well equipment, as well as reconstruction after an attack or an accident has taken place. For example, the company conducted repairs of the Northern-Caucasus-Trans-Caucasus pipeline that were blasted in two places in January 2006.[68] In the aftermath of this incident, guards from the Interior Ministry were ordered to guard the pipeline, rather than the company itself.[69] This goes to show that the company does not have a security service of its own, like “Transnefteprodukt”, and relies on state security structures to provide security and guarding when necessary. The company Gazprom will likely be more preoccupied with the issue of infrastructure safety if threats to these installations

rise in the future, and it remains to be seen whether it will cooperate more closely with some state security structures than others.

4.4 The FSB

FSB (Federal'naya Sluzhba Bezopasnosti) Federal Security Service

- Internal security and counterintelligence agency
- Personnel 250 000 – 300 000
- In charge of the War on Terror in Russia
- Increased focus on economic security

Fact box 4.4 Key facts about the FSB

One of the agencies that “Transneft” and “Gazprom” are relying on when it comes to security is the Federal Security Service (FSB). The FSB is in charge of counter-terrorist operations in Russia today. This means that the service is responsible for both the prevention of terrorist attacks and the handling of them if they occur outside Chechnya. Due to the intelligence-led nature of the organisation, the FSB is keener on preventing terrorist operations than on controlling the damage once an attack has taken place.

The federal security service nurtures close relations with the hydrocarbon elite of the country, as they are in many instances the same people, or people with similar backgrounds. A number of Putin's former colleagues have been given top positions in the hydrocarbon industry since his ascent to power. Examples include Dmitry Medvedev, Putins Chief of Staff and Chairman of Gazprom, Igor Sechin, his Deputy Chief of Staff and the Chairman of Rosneft, Jevgenij Shkolov, former deputy of Medvedev and later Vice-president of Transneft, and Igor Yusufov, Russia's former Energy Minister and a member of the boards of Gazprom, Rosneft and Transnefteprodukt.[70] These personal relations between the leadership of the FSB and the hydrocarbon giants indicate that the two might help each other out, come times of trouble.

The FSB's budget and mandate have increased since Vladimir Putin came to power in Russia in 1999. The service has been given an increasing number of tasks, and in 2003 the Federal Border Troops were made a part of the FSB. The fight against international terrorism in Russia, an issue that receives much attention these days, has been wholly assigned to the FSB. A corresponding increase in operational budgets has thus been legitimised. Another factor contributing to the increased budgets of the security services from 1999 on is the second war in Chechnya and the terrorist threats to the Russian heartland that commenced in this period. The FSB is looking more and more like a military organisation, rather than a paramilitary one. One of the most recent

additions to this organisation has been the purchase of exclusive FSB military transport planes.

The Swedish Defence Research Institute has in several reports focused on the FSB's increasing focus on the economic sphere of national security.[70;71] In the Soviet era, the clandestine services were involved in business intelligence activities, and the energy sector was highly important. Larsson claims there is evidence that the FSB also today has formal responsibilities in the energy sector. He points to the Consultative Council of the FSB from 1996, a body with the responsibility to cooperate with private security companies and develop contacts with the business community. The intention of this Council was to promote state interests and assist authorities in the defence of the community and of individuals. The FSB has a special service for economic security, but its tasks are unknown.[70]

Undoubtedly, also the FSB is taking on the issue of energy security. The FSB head, Nikolai Patrushev, has highlighted securing energy infrastructure as a growing task for his agency:

I believe that [...] cooperation of special services and law-enforcement agencies in the sphere of providing security against terrorism at facilities of the fuel and energy sector could become an important component of the joint fight against terrorism.[72]

This comment was made in the context of the Fifth Annual International Special Services Conference held in Kazan in June 2006. On the agenda at this meeting was the issue of anti-terror security of energy sector objects, in the context of the coinciding G8 meeting in St. Petersburg, which also had a focus on energy security.[73] It seems that the FSB is realizing that there will be a growing need for security services in the energy sector in the future. It might well be that President Putin is also recognising this, and that he is securing a key role in this process for his "own" agency, the FSB.

Nowadays, the prevention and handling of attacks on energy infrastructure is a joint effort by several agencies. An example of this was the attack on a gas pipeline in North Ossetia in January 2006, which hindered gas deliveries to Georgia for a critical period. After the blasts the emergency services arrived at the scene. Emergency Ministry (MChS) officers suggested that the blasts might be a result of technical failure. But experts from the regional FSB concluded that an improvised explosive device had set off the explosions. The paramilitary organisations did not find any traces of the perpetrators, however. The MVD later concluded that the evidence had been destroyed by the large numbers of repairers and operatives from the state organs at the site.[74] It seems that all the agencies were involved in cleaning up after this pipeline blasting. In the aftermath of the incident, Putin instructed the FSB to step up security at energy facilities in the Caucasus. One of his comments about the new focus of the FSB was "I want the Interior Ministry to take note of this"[75]. This situation might illustrate the incumbent's reflex in turning to "his" agency in times of crises. Indeed, the MVD is the Ministry in charge of military operations in the North Caucasus, and it has the lead in the regional command. But with his comment, Putin is signalling a more important role for the FSB in the securing energy facilities in this region.

4.5 MVD

MVD (Ministerstvo Vnytrechnikh Dyel') Ministry of Internal Affairs

- Interior law-enforcement agency, with own paramilitary troops
- Paramilitary troops number 170 000
- Responsible for operations in Chechnya
- UVO – security provision for objects, personnel 368 300

Fact box 4.5 Key facts about the MVD

Regardless of the lack of cooperation between the different agencies involved in critical infrastructure protection, there are issues that constantly need to be addressed in the North Caucasus. The energy infrastructure of this region is subject to attacks more frequently than any other region of Russia. Historically, the task of preventing attacks on e.g. pipelines has been allocated to the intelligence services, that is, the FSB or the military intelligence. Today, the MVD has responsibility for coordinating operations in Chechnya. Therefore, one might expect that the MVD has gained valuable experience in Chechnya that might be transferable to other parts of the country. For example, the regional branch of “Transneft”, “Grozneftegaz”, allotted the responsibility of protecting pipelines to the Extradepartmental Guard Services (UVO) of the MVD.⁹ The UVO is a branch of the MVD that offers security services to private or other customers on a commercial basis, taking on such missions as securing objects, persons and geographical areas. The UVO is, in other words, a semi-privatised structure in the sense that it is funded partly through the MVD budget, and partly by clients. In this sense, one might expect that Grozneftegaz have probably paid the UVO market price for its services in securing one particular piece of pipeline. This, in turn, means that the MVD is offering security services similar to the ones offered by private companies in Russia.

The existence of the UVO has been a hotly debated issue in Russia, and several attempts have been made to reform the service. The debate has centred on the legitimacy of police officers engaging in commercial activity, as well as on the monopolisation of some parts of the security sector by the UVO. The UVO is said to control 50 per cent of the market in security services, a market with an annual turnover of \$ 2 billion.[76] There is indeed money to be made from this business, and it seems understandable the MVD leadership is reluctant to part with this profitable business. In 2005, a new structure was added to the UVO; a militarised and specialised unit trained specifically for the protection of technical objects.[77] However, it does not seem that this has given the MVD a stronger role in securing energy infrastructure in Russia. According to the

⁹ *Upravlenie Vnevedomstvennoy Okhrany MVD Rossii,*

commander of the Interior Troops, General Nikolai Rogozhin, the main priority for the MVD is the operation in Chechnya.[78] The secondary priority is the MVDs responsibility for securing 100 nuclear power plants across Russia. This is indeed a particular task of energy security that the MVD has been given. In the field of petroleum installations, however, the MVD do not seem to fill any particular role, and the UVO case in Chechnya seems largely region-specific.

In the North Caucasus, a particular division of labour is emerging between the security agencies in terms of both anti-terror and other operations. How these compilations and co operational procedures are organised in other parts of Russia remains less explored. This depends on not only the centre's doctrine or policies, but also on local structures, the energy companies and strategic or financial calculations, as well as the historical experiences in that particular region. When doctrinal provision for how these services are to be provided is unclear or non-existent, the result is that these structures are coalesced in an ad hoc manner if and when the need arises, as seen in Chechnya.

4.6 CSTO

CSTO **Collective Security Treaty Organisation**

- Member states: Russia, Belarus, Armenia, Kazakhstan, Kyrgyzstan, Tajikistan (+Uzbekistan)¹⁰
- Aim: preserve collective security; on all states' territories
- Collective Rapid Deployment force (KSBR): 11 battalions strong
- Focus on energy security in recent exercises

Fact box 4.6 Key facts about the CSTO

Energy infrastructure security has also caught the attention of the regional security organisation CSTO, of which Russia is the leading member. The CSTO is an aspiring regional security player and has lately stepped up its efforts to take on a number of military tasks. Its defined main task is fighting terrorism, and several anti-terror exercises have been held in order to practice interoperability. The CSTO has also established a Collective Rapid Deployment Force (KSBR) [79]¹¹, which is to be able to deploy in the event of a terrorist attack in the CIS area. Moreover, at the recent CSTO summit in Minsk in June 2006, the organisation proposed the creation of two more rapid reaction units, one consisting of peacekeepers, and another earmarked for emergency situations.[80]

¹⁰ Uzbekistan is a former member of the organization which has regained observer status and is contemplating a renewed membership of the collective organization.

¹¹ Kollektivnyie sily Bystrovo rasvertivaniya, which today consist of eleven battalions (three Russian, three Kazakh, three Tajik and two Kyrgyz battalions)

The scenarios of CSTO exercises in recent years have focused on securing energy infrastructure against terrorist attacks, resolving hostage situations, and eliminating terrorists. Both regular armed forces and the FSB and MVD armed forces have participated in the exercises. The exercise held in Belarus in June 2006, “Commonwealth Shield 2006”, was particularly oriented towards pipeline security.[81] According to Aleksandr Orlov in the CSTO secretariat, the issue of protecting pipelines has arisen several times in CSTO Security Council meetings. As of yet, there has been no talk of the permanent protection of pipelines, but rather of deployment when there is a particular need for pipeline security in one or more of the member states. The normative foundation for such tasks is currently being drafted within the organisation, according to Orlov.[82]

In September 2006, the exercise “Antiterror 2006” was held in Armenia, at which special units from Armenian and Russian special services, as well as other law enforcement agencies took part. The exercise simulated a terrorist seizure of a nuclear power plant, designed to “test the ability for information sharing and coordination among SNB¹², MVD, CIS TsSH (Tsentral’noye Spetsial’noye Naznachenye) FSB, MChS and the Defence Ministry of Armenia”, in the words of Boris Mil’nikov, the head of the CIS Anti-terrorist Centre in Bishkek.[83] The scenario shows how the different parts of Russian armed forces coordinate their efforts in securing energy infrastructure in the CIS area.

Exercise scenarios are not necessarily indicative of the course of action should a real crisis arise. Many see the CSTO, which is a Russia-dominated structure, as Russia’s tool for military intervention in her neighbour states, should these be destabilised. Destabilisation in any of these countries is one of Moscow’s main security concerns. It seems likely that Russia would want to take part in any operation that involved securing energy infrastructure in any of the other member countries, as it would be vital to Russia’s own energy security. In addition, Russian security structures have some experience with operating in the whole CIS area, and the security agencies of CIS countries have been known to cooperate closely.

However, in the case of a deliberate attack on energy infrastructure in Russia proper, it seems less likely that Russia would request military assistance from her CSTO allies. The Russian armed forces, which dominate the military structures of the CSTO, would probably not need CSTO support. As such, it seems the security alliance is an offensive foreign policy tool for Russia in her “near abroad”, rather than a collective alliance where all members come to each other’s aid. The leader of the Centre for Military Prognoses, Anatoly Tsyganok, claims that the signals from the organisation testify to Moscow’s plans to increase her influence in Central Asia, the Caucasus and Eastern Europe. “Protection of railway lines and energy pipelines by (the Russian dominated) CSTO forces might enhance Russian influence in the region”.[84]

¹² Sluzhba natsional’noj Bezopasnosti Armenii

5 Determining factors for future developments

The size and vulnerability of the Russian energy complex, and growing world energy consumption, indicates that security will have to be tightened if Russia is to be a safe future supplier of hydrocarbons to the world market. This report has argued that there are no clear doctrinal guidelines for how to provide such protection. However, a number of factors support the notion that the state’s armed and paramilitary forces will fulfil this task in the future. These factors are the importance that the Russian leadership attaches to the hydrocarbon sector, the presence of former intelligence officers in the energy sector, the weakly developed private security sector in Russia, the sheer size of the Russian armed forces, the numerous agencies that are able to secure infrastructure, the reformed Russian armed forces’ need for new tasks, as well as local power structures and relations.

The relationship between the independent and dependent variables that influence the extent to which Russian armed forces secure infrastructure might be presented in the following manner:

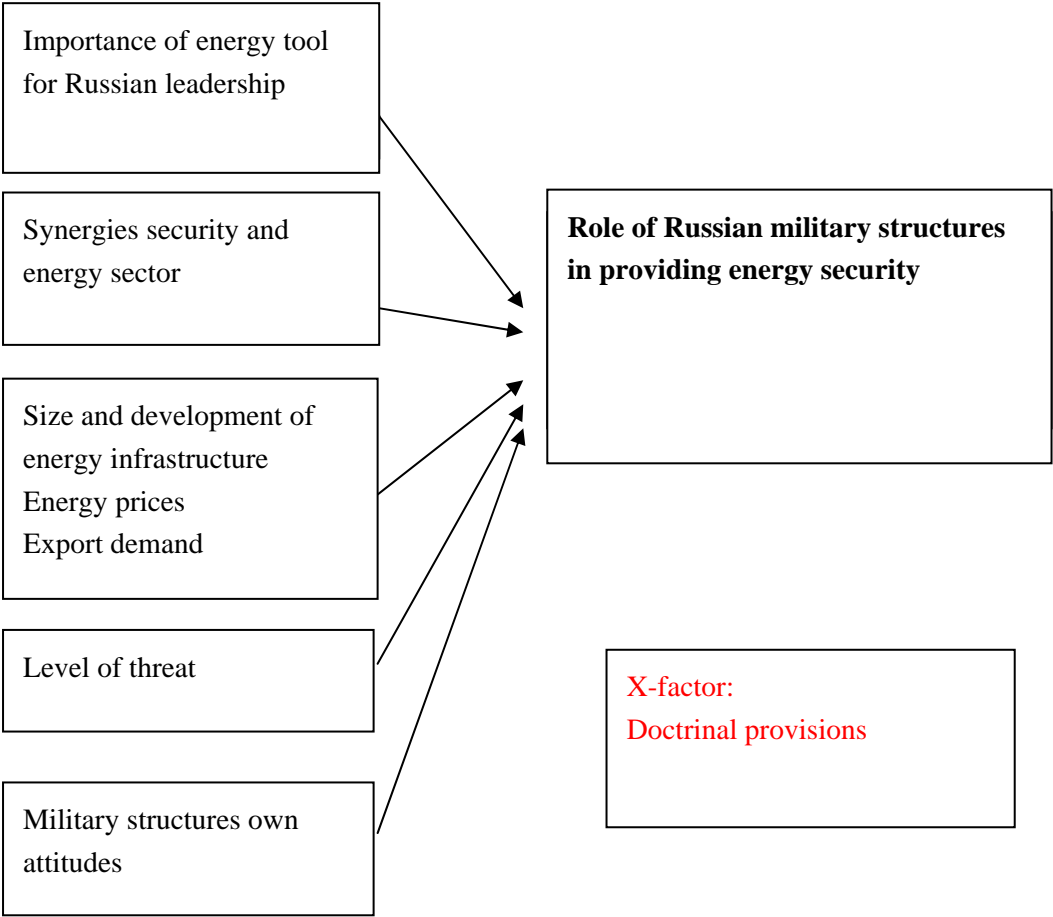


Figure 5.1. *Variables in Russian energy security provision.* The independent variables indicate the factors that influence the dependent variable, the extent to which Russian armed forces provide energy security The "x-factor" symbolises the fact that the relationships between the

independent and dependent variable might alter radically if a change in doctrinal provisions were to take place.

A number of independent variables influence the extent to which the various armed agencies fulfil the task of securing energy infrastructure. These factors are likely to continue to influence the process in the future, and they might serve as a good map for analysis.

The first determining factor is the importance of the energy tool to the Russian leadership. Hydrocarbon exports are Russia's main source of income, and an important foreign policy tool. If the Russian leadership attaches as great, or greater, importance to this factor in the future, chances are the focus on energy security will increase. If, on the other hand, Russia finds new sources of income, or that the energy tool is not really an effective foreign policy tool, energy infrastructure security might not be at the top of the Kremlin's agenda. The current president has attached great importance to the energy sector, partly because he believes it represents the key solution to many of Russia's current problems.

The second determining factor is also closely linked to the current Russian leadership. Representatives from the security sector take up posts as board members, chairmen and CEOs in the petroleum industry in Russia. This development has led to a closer collaboration between energy companies and the security services. When the companies have close contacts with the security services, these services become a natural pool upon which to draw to provide security. The current leadership, with its dual focus on energy security and national security, will also necessarily see potential synergies between the sectors. Another leadership might not see the relations between the two as natural. There is reason to believe, however, that the current leadership has made its imprint on Russian policy for some time to come.

All of the above is directly related to the development of the Russian energy sector. The size and development of the energy infrastructure will determine how important, and difficult, it will be to protect it in the future. Export markets and hydrocarbon prices will also influence these factors. Chances are that Russia will remain export-oriented as long as prices are high, and that it will develop its energy infrastructure further. Because of high production costs in Russia, there may be little impetus to develop the energy infrastructure, particularly if this implies less profit. If the necessary investments are not made in the hydrocarbon infrastructure, there will not be much left to protect, as the current infrastructure is in a dire state. Thus, the higher level of investments and hydrocarbon prices, the higher chances are for enhanced protection of energy infrastructure.

This brings us to the main independent variable that influences what tasks the Russian armed forces will take on in the energy sector: the level of threats to energy installations. To draw on the levels established in chapter 2.2., threats at the state level will most definitely require the use of state security structures to protect energy infrastructure. If Russian energy resources in the future are threatened by other countries, the pipeline troops of the armed forces have the necessary training to both provide Russian troops with fuels, and to protect the hydrocarbon infrastructure. Furthermore, the armed forces are the only force with the necessary troop number to protect the

vast Russian energy infrastructure.

As for asymmetrical threats, the anti-terror operations in Russia today are led by the FSB. In the case of heightened threats from international terrorist networks, this organisation will most likely take on the task of protecting infrastructure. However, the anti-terror legislation of the Russian Federation provides for the possible use of any state structure in anti-terror operations. The CSTO is also developing a capability to deal with terrorist threats. Chances are that Russia will not need to draw on CSTO capabilities to secure her energy infrastructure. On the other hand, if the organisation has developed efficient mechanisms, the use of this organisation cannot be excluded, also on Russian territory.

On the domestic level, terrorist and other threats are addressed jointly by the FSB and the MVD. In the case of Chechnya, the MVD is now in charge of operations, including anti-terror operations. The region has also had the highest number of attacks on energy infrastructure in Russia in recent years. The MVD has gained valuable experience in the field of energy security, and the semi-privatised branch of the MVD, the UVO, is already involved in energy infrastructure security. If threats were stepped up, this would be a natural pool to draw on, as the UVO has particular training in securing objects. However, this agency works on private contracts, and would need to be hired by the particular energy company on a case by case basis.

If the threat level in Chechnya were to rise even further, the lack of cooperation between the different agencies could come to the fore. The historical tradition in Russia has in times of crises been that of overlapping responsibilities and faulty coordination. Even in times of relative stability, cooperation is not functioning. A crisis in the energy sector would no doubt produce variable results, at the least. If domestic threats to energy infrastructure were stepped up, it seems likely the current president would turn to “his organisation” in order to provide security. This is an organisation he knows and trusts with solving problems. In addition, the FSB is constantly extending its portfolio, taking on more tasks related to all spheres of Russian national security, inside or outside the military domain. However, in the current situation, or in a situation with a lower threat level, the current trend, in which cases are solved on an ad hoc basis, is likely to continue.

The fifth factor that determines the role of the Russian armed forces in securing energy infrastructure is their own attitudes towards solving this task. The cases analysed in this report show that the agencies that have seen mutual benefit in cooperation willingly take on the task of securing energy infrastructure with arms. In the case of “Transneft” and “Transnefteprodukt”, the Ministry of Defence has pinpointed an area where it can provide services, and get favours in return. In the maritime sector, the Baltic and Northern Fleet are cooperating with the hydrocarbon sector in order to get favours from the companies, or to make themselves more relevant in a regional security perspective. In a reformed Russian armed force, the Navy and other branches of Russia’s armed forces are looking for new tasks that can secure future funding and make them become the prime security provider in a regional or national perspective.

The “x-factor” in the situation described above is the lack of doctrinal provisions on energy security in Russia today. A major change in any of the abovementioned factors might force Russian policymakers to provide clearer guidelines for how to achieve energy security on a large scale. For now, the open-ended doctrinal provisions serves as a catalyst for the use of the Russian security services to secure energy infrastructure, due to the possibilities for ad hoc solutions, and due to the suitability of the Russian security services for such missions.

References

- [1] "Rank order - oil/gas - exporters," www.cia.gov/cia/publications/factbook ed 2006.
- [2] M. T. Klare, "Oil moves the war machine," *Progressive*, vol. 66, June 2002, no. 6 June2002.
- [3] R. Mihailescu, "Joint efforts to safeguard Baku-Tbilisi-Ceyhan pipeline," 2004.
- [4] S. Brailovskaya, "Trubnyi interes spetsstlyzhhb," 128 ed 2006.
- [5] R. Mihailescu, "Joint efforts to safeguard Baku-Tbilisi-Ceyhan pipeline," 2004.
- [6] I. Plugatarev, "Karaul I truboprovodov mozhet prinyat' ODKB," 2006.
- [7] R. Mihailescu, "Joint efforts to safeguard Baku-Tbilisi-Ceyhan pipeline," 2004.
- [8] "Neft', Truby, Antiterror," *Neftjanye Vedomosti*, vol. No. 15 (86) June2006.
- [9] J. Daly, "Special report - Pipelines: How fragile?," 2003.
- [10] "www.iags.org/iraqpipelinewatch.htm," 2006.
- [11] J. Daly, "Special report - Pipelines: How fragile?," 2003.
- [12] "Do we need a transatlantic energy security policy?," 2006.
- [13] P. Gallis, "NATO and Energy Security," Order code RS22409, Mar.2006.
- [14] N. Grib, "Truboprovodniy Transport, Gaz na polnuyo moshnost," 054 ed 2005.
- [15] M. J. Economides, "Natural Gas Driving Most Crucial Pipeline Projects In emerging Energy Scene," *Pipeline & Gas Journal*, vol. May 2005 May2005.
- [16] "US Energy Securirty: Rusia and the Caspian," 2006.
- [17] "Energy Information Administration Background Brief Russia," 2006.
- [18] M. Korutikhin, "Russia faces growing surplus of oil and gas pipeline capacity"," *Russian Energy Weekly*, vol. V, September 2006, no. 232 Sept.2006.
- [19] "Energy Information Administration Background Brief Russia," 2006.
- [20] M. J. Economides, "Natural Gas Driving Most Crucial Pipeline Projects In emerging Energy Scene," *Pipeline & Gas Journal*, vol. May 2005 May2005.
- [21] A. E. Z. H. D. H. Farrell, "Energy Infrastructure and Security," *Annual Review of Environmental Resources*, vol. 29, pp. 421-469, 2004.
- [22] N. Elhefnawy, "Toward a Long-Range Energy Security Policy"," *Parameters*, vol. 36, Spring 2006, no. 1 2006.
- [23] C. Hooper, "The peril of power: Navigating the natural gas infrastructure," 132, June 2006 ed 2006.
- [24] C. & G. R. T. S. Singer, "Energy wars: past, present and future," 2001.

- [25] G. Luft, "Pipeline Sabotage is Terrorist's weapon of choice," *Pipeline and Gas Journal*, vol. February 2005 2005.
- [26] M. Shteinberg, "Voennyi flot Ben Ladena," 2005.
- [27] Å. & L. B. Kjøk, "*Terrorism and Oil - an explosive mixture? A Survey of Terrorist and Rebel Attacks on Petroleum Infrastructure 1968-1999*." FFI/Rapport-2001/04031, 2001.
- [28] "Posledstviya vzryvov na gazoprovodakh," 2006.
- [29] A. Tsyganok, "Chastnaya armiya na strazhe energeticheskoy bezopasnosti," *Khranitel'*, June 2006.
- [30] "The Russian Energy Strategy until 2020," 7 A.D..
- [31] "The Russian Energy Strategy until 2020," 7 A.D..
- [32] B. Yelstin, "On National Security,". Speech to Federation Council 1996, Ed. 1996.
- [33] "Voyennaya Doktrina Rossiiskogo Federatsii," 2006.
- [34] D. Yergin, "Ensuring energy security," *Foreign Affairs*, vol. 85, Mar/Apr 2006, no. 2 2006.
- [35] D. Yergin, *Shattered Peace: the origins of the cold war and the national security state*. Boston: Houghton Mifflin, 1977.
- [36] V. I. & M. M. V. Kuroyedov, "Russia's national maritime policy," *Military Thought*, vol. 001 2002.
- [37] "Federal'nyi zakon "O protivodeystvii terrorizmu",", N 35-F3 ed 2006.
- [38] M. T. Klare, *Resource Wars. The new landscape of Global Conflict*, 2001 ed. **New York** : Henry Holt and Company LLC, 2001.
- [39] A. Tsyganok, "Otdat' truboprovody pod okhranu chastnykh voyennykh organisatsiy,", 002 ed 2006.
- [40] K. C. Smith, "Security Implications of Russian Energy Policies,", 09 ed CEPS Policy Brief: Centre for European Policy Studies, 2006.
- [41] H. Blakkisrud, "*Centre and periphery in Russian politics: the development of Russian federalism*," 1998.
- [42] H. Plater-Zyberk, "Russia's Special Forces," Conflict Studies Research Centre, 05/50, Sept. 2005.
- [43] G. N. Ocheretin, "Armed forces fuel supply service: History and Present," *Military Thought*, vol. 6 Nov. 2001.
- [44] P. Altunin, "I v mirnyi chas, kak na voine," 2002.
- [45] G. N. Ocheretin, "Armed forces fuel supply service: History and Present," *Military Thought*, vol. 6 Nov. 2001.
- [46] M. Khodarenok, "Krovenocnaya Sistema sovremennoy armii," 2001.
- [47] "Gazprom and RF NAVY ink cooperation agreement," 2005.
- [48] "Neft' pod zashitoy flota," 2006.
- [49] N. Poroskov, "The military and society. Pipe all hands on gas!," *Defence & Security*, vol. 052 May 2005.

- [50] M. Fredholm, "The Russian Energy Strategy & Energy Policy: Pipeline diplomacy or mutual dependence?", Russian Series 05/41 ed Defence Academy of the United Kingdom: Conflict Studies Research Centre, 2005.
- [51] N. Poroskov, "The military and society. Pipe all hands on gas!," *Defence & Security*, vol. 052 May 2005.
- [52] M. Fredholm, "The Russian Energy Strategy & Energy Policy: Pipeline diplomacy or mutual dependence?", Russian Series 05/41 ed Defence Academy of the United Kingdom: Conflict Studies Research Centre, 2005.
- [53] A. Tsyganok, "Otdat' truboprovody pod okhranu chastnykh voyennykh organisatsiy," 002 ed 2006.
- [54] V. & M. V. Myasnikov, "Ministr oborony obespechit Evropu gazom ," 2006.
- [55] V. Myasnikov, "Energoflotobezopasnost'," 2006.
- [56] A. Tsyganok, "Otdat' truboprovody pod okhranu chastnykh voyennykh organisatsiy," 002 ed 2006.
- [57] "Truba zovet. Desyaya chast' rossiiskoi nefi prinadlezhit kriminalu," 2003.
- [58] V. P. Kostov, ""OOO "Spetstransnefteprodukt": Obespechenye bezopasnosti predpriyati MNPP ," *Transport i khranienie nefteproduktov*, vol. No 7, 2003 2003.
- [59] "Truba zovet. Desyaya chast' rossiiskoi nefi prinadlezhit kriminalu," 2003.
- [60] "Tryboprovodnye Oryzhye," 2005.
- [61] B. Gafutulin, "Truba ne bidet pokhozha na dushlag," 237 ed 2001.
- [62] "Minoborony i "Transnefteprodukt" stroyat armiyo budushhego," 2003.
- [63] "Sergei Maslov: Intervyو prezidenta OAO AK "Transnefteprodukt"," *Neft' i Kapital*, vol. August 2003 Aug.2003.
- [64] T. Rudyk, "Strategicheskaya Magistral' prolegla cherez Sibir' ," 2005.
- [65] M. Khodarenok, "Krovenocnaya Sistema sovremennoy armii," 2001.
- [66] A. Tsyganok, "Otdat' truboprovody pod okhranu chastnykh voyennykh organisatsiy," 002 ed 2006.
- [67] "Gazprom website," 2007.
- [68] "Delivery of equipment to N Ossetia gas pipeline blast site ending," 2006.
- [69] M. Sageyeva, "Russia-Georgia gas pipeline under tight guarding," 2006.
- [70] R. L. Larsson, *Russia's Energy Policy: Security dimensions and Russia's reliability as an energy supplier* FOI Scientific Report, 2006.
- [71] C. V. Pallin, *De ryska kraftministerierna: Maktverktyg och Maktförsäkring* 2006, p. 116.
- [72] "Russian security chief says countries should unite against religious extremism," 2006.
- [73] S. Brailovskaya, "Trubnyi interes spetslyzhd," 128 ed 2006.

- [74] V. Tokhsyrov, "Energicheskii Terror. Kavkazskie diversanty zamorzili Gruziyo I okhladili Armeniyo," 2006.
- [75] "Putin sends FSB to secure Caucasus Energy Plan, ". January 2006, Ed. 2006.
- [76] A. Nikolaeva and A. Voronina, "Militsiya bez okhrany," 2004.
- [77] A. Sharov, "Okhrana vykhodiit na rynek," 2005.
- [78] R. McDermott, "Russian interior troops expand security role," *Eurasia Daily Monitor*, Dec.2004.
- [79] S. Pemjakov, "Viziti. Zaplanirovannaya Senzatsiya," *Voенno-promyshlennyi Kur'er*, vol. 005 Feb.2006.
- [80] V. Mykhin, "Kollektivnykh silovikov v SNG stanet bol'she," 2006.
- [81] I. Plugatarev, "ODKB bidet sashishat truboprovody ," 2006.
- [82] I. Plugatarev, "Neft' - pod nadezhnuyo armeyskoyo sashitu," 2006.
- [83] "V Armenii natchinaetsya aktivnaya faza uchenij "Atom Antiterror-2006"," 2006.
- [84] I. Plugatarev, "Karaul I truboprovodov mozhet prinyat' ODKB," 2006.