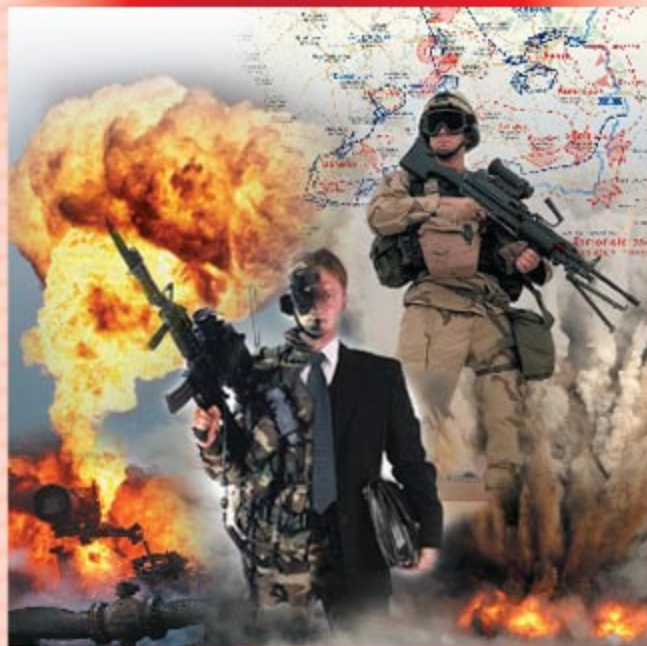


CENTRE FOR GLOBAL STUDIES 'STRATEGY XXI'



ANTARES PROJECT

ENERGY COMPONENT IN NEW GENERATION WARFARE.



Case of Russia's Hybrid Aggression
against Ukraine.

XIV
August 2015

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Energy Component in New Generation Warfare. Case of Russia's hybrid aggression against Ukraine.

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Antares* – project of the Centre for Global Studies «Strategy XXI», aimed at studying non-military components of the New generation warfare. Basically, it aimed at the energy sphere – research of using energy resources and energy infrastructure as a weapon and component of waging hybrid war. Critical energy infrastructure, risks and threats of its exploitation under the non-linear war. The problematics of its protection is also in the epicenter of attention. A forerunner of this research became another project of the Centre – «Energy Resources and their delivery infrastructure: the potential for inappropriate operations in Europe» in 2010, supported by the NATO Liaison Office in Ukraine.

Antares project was launched in October 2014 by the report “Hybrid warfare in Eastern Europe. Non-military dimension. Energy component”. Project materials provided input to international conferences and seminars in Bratislava, Prague, Paris and Warsaw. In 2015, on the base of the project materials in cooperation with the NATO Energy Security Centre of Excellence the lectures for the special course in the Baltic Defence College were elaborated.

Current stage of Antares project under the name «Energy component of New Generation Warfare: genesis, features, consequences» is realized under the auspices of International Renaissance Foundation and Kyiv International Energy Club Q-Club.



****Antares – the one who confronts Ares. Ares is the god of war in the ancient Greek mythology (Mars is other name of Ares in accordance with Roman mythology).***



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1. FALSE TARGET PROGRAMMING.

Warfare through the prism of energy approach is a clash of two energy potentials in the broadest sense, which includes the human, economic, military and other components of the state. The winner is not the one who has the biggest potential, but the one who provides the majority of its concentration in the direction of the main attack, which usually focuses on the most vulnerable point of the enemy. At the same time, the main enemy's vulnerabilities are associated not only with the external defense, but also, above all, with the internal conditions of the state.

Russia while waging warfare with the West will not be able to achieve its goals by the means of the classical war. Its military power is not so great, even taking into account the existing nuclear capacity. In direct clash with the West, it will lose. However, Russia has a huge resources potential, above all, energy. *Therefore, the basic idea of Russian strategists is to expand the covert war, which would not be perceived to be a war and would not allow NATO to use Article 5 of the Washington Treaty.*

The Russian version of New generation warfare is a complex of diverse controlled and combinable effects on the enemy, applicable for a given algorithm, where military means are not dominant and the use of them is carefully disguised and denied. Multidimensional Directed Polydestruction is the essential of such a war. That imply state-to-state destruction with the complex combinable application of forces and means of military and non-military character in different dimensions (political, economic, military, humanitarian, and others), but directly concentrated on the defeat of the enemy, not only and not so much on the battlefield, as by undermining its vital potentials from the inside. The latter is a key feature. The war does not begin with an act of foreign aggression, but with the actions of the aggressor from within the victim-country, aimed at the development of internal processes of destruction and self-destruction.

According to our observations and analyses, basic determinants of Russia's strategy of XXI century from the Kremlin's point of view can be formulated as follows: **"Those one who have a base resource self-sufficiency (energy, water, food, minerals) and have the power quadra (nuclear weapons, organizational weapons, energy weapons, cyber forces) – could rule the world.**

What is an organizational weapon? Spartacus Nikanorov and later Sergei Solntsev, the developers of systems of organizational management, used this term in the Soviet times, although they were not the authors. They were engaged in applied research issues of "management control systems" in the Soviet period and in the post-Soviet Russia. Orgweapon's essence consists in the application of the system of organizational impacts on the enemy, forcing him to move in the desired for the opposing party direction. One report of the pro-Putin Izborsky club says: **"It can help you send the opponent in a strategic policy deadlock, wear down its economy with ineffective (back-breaking) programs, slow down the development**

of weapons, distort the foundations of the national culture, to create "the fifth column" in the population. As a result, the environment of the inner political, economic and psychological chaos occurs in the state"¹.

Over the years, developments of S. Nikanorov and S. Solntsev for the Defense Ministry and the General Staff of the Russian Federation are the cornerstone of Russian conceptual approaches for waging a hybrid warfare. Already mentioned report to Izborsky club contains capacious characteristic of orgweapons: **"In fact, organizational weapons is a way to activate the pathological system within the functional target-state system, in which the pathological system consumes resources of the target-state (carrier) for its development. A characteristic feature of the pathological system (application of organizational weapon) is that it affects the functional system of society, first of all, from the "outside", from a hierarchically "overlying" (powerful) level of system organization. In addition, the use of organizational weapons "is not always visible" to the traditional forms of scientific observation and "incomprehensible" in the traditional logic of everyday cognition. Destruction, as the action of organizational weapons, aimed at achieving results that are in the "system of values" of the initiator of applying the weapons. One of the main conditions for the application of organizational weapons is the substitution of the basic values of the target-state by the values of initiator-state, as the most promising"².** Thus, a pathology, quietly introduced into the organism of the victim-state by the aggressor-state, disables victim's immune system (the system of national security) and reprogram its operation by the algorithm where victim-state does not identify a threat and does not fight with them.

Therefore, we can give another name to orgweapons that more accurately reflects its deep essence - **False Target Programming (FTP)**. Aggressor in advance creates and sets in its relations with the victim attractive false programming affirmations, realization of which leads to a strengthening of its position and weakens the enemy positions. Future victim does not perceive these affirmations as dangerous for him, because they look neutral or such that are based on universal values.

For instance. A programming thesis about the development of economic cooperation between Russia and Ukraine. It sounds as standard, neutral, universal. This thesis is present in the relations of many countries as every state tries to promote economic cooperation. This programming affirmation priori is not only perceived critical, but on the contrary - strongly supported by the future victim. Media of both countries strongly advocate it. Whenever high-level meetings were held, the parties with pathos demonstrated high figures of bilateral trade as an indicator of the success of economic cooperation. However, the reality was quite different. First, these relationships are asymmetrical because of the inequality of economic potentials of the parties and differences in their economies. Second, the share of the parties in the total foreign

¹ «Организационное оружие: Функциональный генезис и система технологий XXI века (доклад Изборскому клубу)», *Izborsky club*. Available online: <http://www.dynacon.ru/content/articles/1466/>

² *Ibid*

trade of each other differs in many times - Ukraine had an average of 5%-6% of foreign trade turnover of Russia, while the Russian Federation took up to 25% -30% of foreign trade turnover in Ukraine, which led to the **effect of unequal mutual dependence**. Third, the foreign trade balance is always a positive for the aggressor and always negative for the victim-country. Fourth, the structure of trade turnover was transformed more in the interests of the aggressor. In this case, with the bias towards increasing volume of purchases of energy resources, that was becoming increasingly burdensome for the victim, it has led to increased dependence, the emergence of debt problems, etc. Fifth, a request existed to increase imports of expensive energy resources (natural gas) that had a positive effect on the aggressor and the negative effects for the victim, increasing energy intensity of GDP and bigger dependence on the supplier. Thus, the apparent correct programming affirmation results in a strategic losing environment in the economy of the victim-country on the eve of aggression. The economy is dependent, weakened by high prices for energy imports and debt problems in relations with the country-aggressor, incapable of rapid reorientation to other markets, and so on.

Another example of the FTP is an attitude of leaders of the Western states to Ukraine and to the events that going on in the East. In August 2014, after a unique raid of the 95th airmobile brigade belonging to Ukrainian Armed Forces through the occupied Donbas with the defeat of the main forces of illegitimate armed formations and Russian troops³, the Kremlin conceived, that Novorossiia project under the Crimean scenario did not work and failed. Russia with the help of its foreign policy and propaganda machine launched the so-called peace process of the "settlement of civil conflict in Ukraine." That is, the substitution of notions was made. Russian diplomacy prevented in advance using of the term "aggression" defined by the Resolution №3314 (XXIX) of the UN General Assembly as of December 14, 1974. Instead, the notion of the "internal conflict in Ukraine" was obtruded on. Further, the Kremlin's chief message to the world community became apparent: "Ukraine and Donbas need peaceful dialogue." As the peace is a universal value, it was expected to obtain predictable responses from Kyiv, Brussels and Washington. Counter-replays were actually programmed. From Brussels and other EU capitals came a "military solution does not exist." From Kyiv: "I am a President of the Peace, but not War" (Petro Poroshenko). From Washington: "We continue appeal to the diplomatic solution". Elected a President of Ukraine Petro Poroshenko, known as a major businessperson, diplomat and an adherent of the Orthodox Church subordinated to the Moscow Patriarch Kirill. Calculations of the Kremlin were simple. In the Western capitals, the bet is placed on a peaceful settlement. Orthodox president of Ukraine would be adherent to peace. «Chamberlain-Daladier syndrome» appeared in the

³ The American military expert, main strategist of the Pentagon in the past, Phillip Karber said: "*Mikhail Zabrodskiy and his 95th airmobile brigade in the beginning of August became a part of the military history. They broke through the separatists' defense line, accomplished march to Mariupol, got back along the borderline, destroyed several Russian artillery battalions, which stood already on the Ukrainian side of the border and took their arms and equipment. Russian tanks passed up to Lugansk and backed to Slavyansk. It was the longest raid of the military formation in the world military history*". Available online: http://censor.net.ua/n312798http://censor.net.ua/news/312798/95ya_brigada_provela_samyiy_dlinnyiy_reyid_v_istorii_amerikanskiyi_voennyi_ekspert_schitaet_jitomirskih

tandem Merkel-Hollande. Obama as a laureate of the Nobel Prize would be a priori for the peace.

False target programming of the EU leaders, who hadn't the slightest idea about the Russian aggression and concerned in the restoration of the economic relations with the RF, limited due to sanctions, gave to aggressor several important results. The first - to impose losing for Ukraine "peace process" (Minsk-1, Minsk-2, Minsk-3), to minimize the likelihood of fatal for the Russian economy additional sanctions (disconnection from SWIFT, quotation limits for Russian oil Urals, etc.), to slow down the provision of lethal weapons to Ukraine. The Kremlin had difficulties using FTP towards the U.S., but the U.S. Administration became also its victim, as President Obama after a year and a half cannot take a proper decision despite of several resolutions of Congress. Leading politicians in Europe and America, not burdened by the in-depth analysis of the Kremlin's true motives and intentions, believed that "peace at any price" wanted also in Moscow. Therefore, programming affirmation from Moscow "for a peaceful settlement," received a resonance in Europe and America. Moreover, the theme of the annexation of Crimea will be omitted in the upcoming "peace settlement process" under pressure from the Western leaders. However, in Moscow they wanted another thing. According to the hybrid war technology, the "peace process" disguised military preparations and strengthening of "volunteers" illegal armed groups in the Donbas. The battalion tactical groups of the Armed Forces of the RF were sent on the territory of Ukraine. "Humanitarian convoys" with ammunition became a symbol of the Russian "peace efforts". The culmination of the parties' "peace efforts" was the defeat of the Ukrainian Armed Forces under Ilovaisk and Minsk-1 in September 2014. After a year and a half, in February 2015, everything repeated. Debaltsevo instead of Ilovaisk, Minsk-2 in addition to Minsk-1. Everyone keeps talking about the peace, but the peace does not occur, although there is a decrease in the intensity of the fighting. Preparations for the Minsk-3 indicate that it would happen at the expense of Ukraine. Indeed, the main pressure to Kyiv in the matter of implementation of the Minsk Agreement (regardless of its performance by Moscow) is exerted from the West. Thus, Russia has made Europe and the United States almost its allies in the implementation of unprofitable agreements for Ukraine. In fact, the Minsk-3 will have dire consequences if Kyiv will go down this path. In practice, it is fraught with not only the inner political crisis, but also a real civil conflict. That is where the Russian efforts have been directed during this year. Hybrid aggression smoothly and gradually transforms into a training phase for **intrawar**. Intrawar is an internal war, based on the civic conflict **triggered and fueled from the outside**, where an aggressor take part minimally and in hidden way through the subversive troops and local agent organizations, as well as through the "volunteer formations" and by the groups of foreign mercenaries.

Moscow's FTP "for the peace" towards the leaders of the leading democracies and organizations like the EU and NATO, can lead aggressor to the real success. Not so fast, as it was expected in Moscow a year ago, but still with a final positive effect. The maximum program ("Novorossiya project" and lifting of sanctions against the

RF) was not reached, but a minimum program is realized (“Crimea Is Ours!”, the puppet DPR and LPR with the special status are pulled again as parts of Ukraine, the «Bosniization» process of Ukraine through the constitutional mechanism is launched by the hands of the Western partners). It gives us a hope that at the new stage an opportunity will occur to understand what was not realized earlier. Optionally, it would not be by military means, while the military scenario remains valid. Hybrid war will end either by hybrid peace with the resumption of crypto-war, or by classical war.

2. ENERGY WEAPON. ENERGY WARFARE. CRYPTO-WAR.

In the New generation warfare, the boundaries between military and non-military threats are blurred. When it comes to "non-military means," energy resources and energy infrastructure play the crucial role. Russia is traditionally energy power, where hydrocarbons and infrastructure for their delivery is more than just a commodity.

Energy warfare, as well as information warfare or psychological operations, is not perceived in the public consciousness as war. Rather, the energy war is perceived as a kind of metaphor, or through the light of the economic phenomena: market expansion, acquisition of assets, competition, monopolization of the market and so on. However, the consequences of energy war can be similar and even surpass the effects of a real war.

Significant damage to economic potential of victim-state and systemic crisis may be caused through energy war (blockade, disruption of energy supplies). It is able to slow or even throw the country backwards in its economic development, and dramatically reduce the possibility of a prolonged defense of the territory in the event of subsequent armed aggression.

Energy weapons is a complex system of using energy and infrastructure potentials of the state with the aim of economic and political defeat of potential opponent. Energy weapons can be used in the form of energy resources and infrastructure.

Energy resources weapon or CH-weapon (CH – chemical symbol of compounds of carbon) – systematic use of hydrocarbon resources (oil, gas) supply with the aim, which is not characteristic for typical trade operations, of economic defeat of potential enemy to ensure political and economic concessions and / or preferences from him.

Infrastructure weapon - systematic use of energy infrastructure by one country in order to reorient its energy flows bypassing the other countries to implement economic and political pressure and obtain concessions and subsequent preferences.

Historical insight – 1. *The first successful use of energy resources weapon, as a kind of energy weapons, was the Arab oil embargo in 1973. After considering the fact of the massive military U.S. aid to Israel that provided problems to Egyptian and Syrian forces in the course of the military campaign, Arab oil exporting countries led by the Saudi Arabia, on 21th of October, 1973 declared oil supply restrictions for the U.S. and some western countries that had supported Israel.*

In fact, supply constraints were not large-scale. According to the Inter-Arab agreement, oil exports had to be reduced by 5% each following month. In the peak period of the embargo in December 1973, the volume of supply was 4.4 million barrels of oil daily to 5 million barrels before the embargo. The reduction was only 9%. However, these percentages were critical against the backdrop of lack of oil in the western countries and on the grounds of the mass panic provoked by a lack of objective information and false information disseminated in mass media.

Because of joint actions of Arab countries to the United States, Washington put pressure on Israel to force it to stop the advance of the troops towards the capitals of its Arab neighbors - Cairo and Damascus⁴. American researcher Daniel Yergin in his fundamental work «The Prize. The Epic Quest for Oil, Money and Power» focuses on the consequences of oil embargo for western countries:

- ⇒ disproportional sharp increase in oil prices (from \$ 2.9 per barrel in mid-1973 to \$ 5.12 in early October before the embargo, and to \$ 17 and even \$ 22.6 after the embargo),*
- ⇒ panic at gasoline filling stations in the U.S. and Europe with increasing gasoline prices and shortage of fuel on them,*
- ⇒ chain reaction and panic in political and social spheres,*

Applying of oil embargo exacerbated the economic crisis in the U.S., Japan and Western Europe, made a shocking psychological effect turning the mass consciousness of the Europeans and the Japanese to post-war period of the total deficit.

Intelligence services of the United States, Israel and European countries did not pay enough attention to the possibility of an oil embargo by Arab countries, considering it not only unlikely, but also unrealistic.

It was believed that in case of war in the Middle East, Arab countries would nationalize oil production. Therefore, their common decision on the embargo was a complete surprise. Under these approaches, intelligence services did not have relevant guidelines in their work and failed to provide timely information.

⁴ Factor of oil embargo was not the only one that has played a role. Another factor was a harsh letter of the Soviet leader Brezhnev L. to U.S. President Nixon R. on Soviet willingness to use armed forces in the Middle East.

Since then oil weapon has not been used by the Arab countries. However, the USSR and subsequently Russia pay attention to the example of 1973. After a period of decline in production of energy in the 90s and low oil prices, Russia resorted to the use of CH-weapon de facto, as a tool for achieving foreign policy goals. **It was Russia that masterfully provided weaponization of energy resources and infrastructure.**

To explain joint functioning of FTP and Energy weapons we need a concept of Crypto-war. **This is a covert form of gradual, systematic and long-term endamage-ment of victim-state in order to maximize the exhaustion of its potential, until a decision about aggression of hybrid or classic type is taken.**

In the case of Ukraine, the main mechanism of Crypto-war was natural gas. It is known that the Ukrainian economy is extremely energy intensive and, above all, gas-consuming. Comparative gas intensity level is shown below:

Table 1*.

Countries	GDP 2010 (PPP) \$ bln.	Total Annual Gas Consumption, bcm/a	Specific Gas Consumption, (tcm/\$1mln)
Czech Rep.	266,278	8,979	33,7
Slovakia	129,843	5,700	43,9
Hungary	203,251	12,438	61,2
Poland	754,097	14,491	19,2
Italy	1908,569	82,981	43,5
Ukraine	305,408	55,923	183,1
Belorussia	134,561	21,803	162,0
Russia	2812,383	458,100	162,9

*Own calculations of the Centre for Global Studies "Strategy XXI" based on the official statistical data of 2010.

Therefore, Ukraine is sensitive to gas imports and prices on it. In the early 2000s, more than 2/3 of gas needs was imported from Turkmenistan via Russia. The first thing that Kremlin did on April 10, 2003, it forced the deceased Turkmen President S. Niyazov for signing long-term agreement for 25 years, according to which the total amount of produced Turkmen gas was contracted by "Gazpromexport". Thereafter, Russia put pressure on Turkmenistan forcing it to deny prolongation of the intergovernmental agreement with Ukraine on gas supplies, which expired in 2006. Turkmenbashi (President of Turkmenistan Saparmurad Niyazov) fulfilled this Putin's requirement. In 2004, in Yalta Putin proposed to Kuchma a 25 years contract for gas supplies under the scheme of RosUkrEnergo AG, a company registered in the Swiss canton Zug, in which only three letters in the name were from the Ukrainian. It was a

schema of the Turkmen gas re-export, but through the mediator fully controlled by Gazprom. In autumn 2004, in Ukraine Orange revolution took place. In 2005, Ukrainian government announced the need to eliminate non-transparent scheme of gas trading through an offshore intermediary. Russia launched the mechanism of price escalation for the supplied gas.

Table 2*.

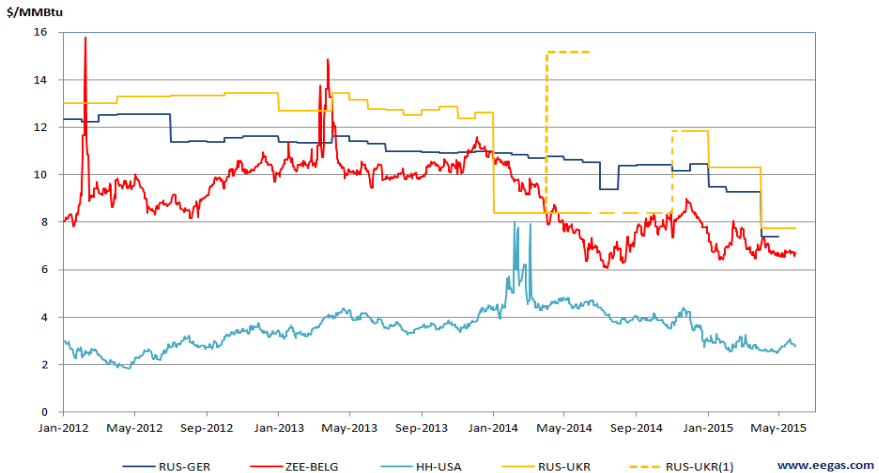
Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Price, USD/1000 m ³	50	95	130	179,5	259,4	260,7	309	426	413,5	485

On the base of the official data of JSC Gazprom, JSC Naftogaz of Ukraine.

The change in prices over the 2005-2009 period was particularly intense. It was a serious burden for the economy of Ukraine.

In 2010-2013, Ukraine paid to "Gazprom" about \$12-14 billion annually for the supplied gas. Germany paid approximately the same amount, while the price of gas for Germany was significantly lower. High prices, large volumes of imports and consumption led to a permanent negative balance in trade with Russia and the gradual depletion of the Ukrainian economy.

Chart 1*.



*Gas prices for Ukraine (yellow line) surpass the price of gas supply to Germany (blue line) as well as the level of the spot prices (red line).

Infrastructure was another element of Crypto-war. Since 2003, Russia has been implementing the course of creation non-transit oil and gas transition systems bypassing Ukraine. It constructed and put into operation the Baltic Pipeline System-I in Primorsk and the Baltic Pipeline System-II with the Ust-Luga oil export terminal. The gas pipeline projects “Blue Stream” through the Black Sea and “North Stream” through the Baltics were realized.

Crypto-war is an important preparatory phase for the further unfolding of aggression. It can take a long time and even years. However, its culmination is a regime of economic sanctions on the main trade items disguised as a forced measure to restrict imports of products from the target-state due to their alleged inconsistencies to the standards of aggressor-country. **In the case of Ukraine, the final stage of the Crypto-war was a period from August 14, 2013 to February 20, 2014. On August 14, 2013, Russia began massively discriminate Ukrainian exports, causing economic damage.** The aim was clear - to prevent the signing of the Association Agreement with the EU and to draw Ukraine into the Customs Union. The plot of the Kremlin of that time could be called the Anschluss scenario. Its core idea was to get Ukraine without firing a shot, forcing Yanukovich’s regime with stick and carrot to make irreversible geopolitical turn towards Russia. Euromaidan had struck down these plans of Putin. Yanukovich’s regime was thrown down. Since February 20, 2014, a paramilitary scenario of aggression has been launched in the form of the hybrid invasion of the “little green men” to Crimea. Although the long phase of the Crypto-war has caused serious damage to the Ukrainian economy, it failed to solve the task of the Anschluss scenario.

Therefore, the New generation war on Russian manner is a well-prepared complex of the system measures. At the beginning, it is not perceived by the world as aggression so does not stimulate to take adequate responses in order to stop it. The False Target Programming and energy weapon applied to the victim-country during the long-term phase of Crypto-war make it easier but do not solve the task of defeating the enemy. Therefore, we can conclude - the Russian version of the New generation war has a flaw - the underestimation of the enemy.

3. RUSSIA’S ENERGY WAR: RETROSPECTIVE ANALYSES.

Historical insight - 2. In 1969, having proposed at the traditional Hanover Messe "gas pipes" deal, the Soviet Union has set a goal to develop energy resources relations with West Germany - the leading country of the European Economic Community. Moreover, on February 1, 1970 in Essen a package of three agreements was signed, which legalized the idea. Only the U.S. adequately calculated risk on the Soviet-German gas cooperation and were strongly opposed the deal "gas - pipes".

West Germany remained adamant in its intention to develop gas cooperation with the USSR. What the U.S. managed to do only in 1981 was a limit of a 16-percent share in the total imports of Russian gas to Germany.

It is difficult to make firm conclusions about whether such a rapid process of negotiations between the Soviet Union and West Germany during the Cold War was motivated solely by political considerations of appeasing the Soviet regime through economic cooperation. At the same time there could be also other motivations assured by Moscow through the non-official communications. The Soviet Union in terms of restrictions of the Coordinating Committee for Multilateral Export Controls needed a high-tech products, which was produced at that time primarily in the U.S and Western Europe. The course of history provides further reason to suppose that there were private interests of the Western decision-makers. That could be called Amerongen-effect – by the name of Otto Wolff von Amerongen, head of the Eastern committee of German economy in 1952-2000, who not only lobbied the deal in Bonn, but had been fostering German-Soviet and further German-Russian business relations through the decades. Under his rule, the volume of gas imports exceeded more than twice the 16 per cent threshold agreed in 1981.

“Plan of Romano Prodi” of 2000 on the increase of gas supply to Europe from the RF became the manifestation of Amerongen-effect, while its culmination occurred to be “Schröder-effect”. Perhaps once with the opening of a number of archives, the light will be shed on the nature of the personal motivations of policy initiatives and strategic decisions of a number of individuals who have held senior positions in the capitals of the EU and NATO.

The breakdown of the social camp (The Warsaw Pact and The Council for Mutual Economic Assistance) and the decay of the USSR itself, sharp decline of oil prices in nineties left in the virtual dimension the possibility to apply energy resources weapon, to which the USSR prepared, taking into account the Arab experience of 1973 oil embargo. The USSR undermined itself not only by the arms race, but also by the reckless attitude to the Siberian minerals, which were ruthlessly depleted. In addition to the sharp decline of oil prices in nineties, reduction in energy reserves growth against a background of excessive costs on the arms race led to the disintegration of the Soviet economic system. As a result, energy resources weapon could not snap into action. But it remains in the political scene of the globalizing world.

The situation has changed after almost a decade and a half. High oil prices not only stimulated economic development of the Russian Federation, but also dangerous processes in the consciousness of its political establishment, experiencing a complex of defeated in the Cold War. Global thirst for revenge in conjunction with the ideas of the exclusive leadership in the post-Soviet space have stimulated the search for ways and means of eliminating the imbalance. If in the Soviet period, it was seen by a military build-up, in a globalizing world economy, oil, gas and electricity can replace

tanks, planes and missiles with nuclear warheads. Windfall profits from energy exports turned the head of the Kremlin's strategists.

Energy Strategy of the Russian Federation aimed at assistance of reaching its ambitious geopolitical goal⁵. Energy resources and the infrastructure for their supply will rest the major tools of Russian policy. Few people pay attention to the fact that official document “Energy Strategy of the RF till 2020” begins with the statement: **“Russia possesses huge energy resources deposits and powerful fuel energy complex, which is the base for development of its economy, an instrument of foreign and domestic policy implementation”**⁶. President V. Putin signed this document in August 2003. In 2006-2009, two significant gas crisis took place in Russian-Ukrainian relations after this. The EU countries also felt them as Russia had stopped gas transit through Ukraine to Europe. Intentions to use energy resources as a political instrument are confirmed both by the statements of the Russian high-ranking officials and by the number of recommendations for Kremlin from developers of concept documents for Russian government.

Mikhail Margelov, a special envoy of the Russian President to Africa and simultaneously a Chairman of the Foreign Affairs Committee of the Federation Council of Russia had expressed himself very openly on the instruments of Russian foreign policy in November 2011: **«...oil and gas policy should become not only a significant part, but one of the most important instruments of the Russian foreign policy»**.

Following recommendations show very demonstratively conceptual approaches for updated Energy strategy of Russia until 2030: **«...main priorities of energy policy for concerned period are <...> effective deployment of Russian energy potential with regard to international economic and political relations<...> , ensuring of geopolitical and geo-economic interests of Russia in Europe and neighboring countries, as well as in Asian-Pacific region»**⁷.

Now while Russia formulates the basic provisions of the Energy strategy until 2035, an additional dimension of external energy policy is not hidden: **«Russia as a responsible state considers external energy policy not from the exporter’s narrow point of view, intended to maximize short-term revenues, but as a tool to solve both national and global problems»**⁸.

It should be noted, that energy resources use as an instrument for “ensuring geopolitical and geo-economic interests of Russia” is not only political rhetoric, but

⁵“В противостоянии с США Россия возвращает себе роль сверхдержавы”, *The Military Review*, September 6, 2014. Available online: http://topwar.ru/page_1_2_57672-v-protivostoyanii-s-ssha-rossiya-vozvraschaet-sebe-rol-sverhderzhavy.html

⁶Energy Strategy of the RF till 2020.

⁷ Energy Strategy of the RF Concept till 2030 (project). Institute of the Energy Strategy. Available online: <http://www.energystrategy.ru/editions/concept.htm>

⁸ Energy Strategy of Russia for the period till 2035 (basic provisions). Institute of the Energy Strategy. Available online <http://www.energystrategy.ru/>

also a practice. Following cases may be considered to show how Russia used energy resources as a pressure instrument in relations with other countries:

- unilateral disruption of Russian oil transit via Latvia in 2003;
- reduction of Gazprom's gas supply to Belarus during winter time in 2004 and 2006;
- blockade by Transneft of Kazakh oil transit to Lithuania via Russia in 2006;
- oil supply cut off by Transneft to Lithuania in 2006.

It is evident that all mentioned cases belong to post-Soviet space. However, given Russian approaches to use energy resources for solving both "national and global problems", it cannot be excluded that similar instruments will be deployed against EU and NATO member states. In this regard, a sudden reduction of oil supply to Czech Republic in summer 2008 is a very clear example; at time, Prague signed agreement to station on its own territory US antiballistic missile system radar. **Some «fresh ideas», which are on the table for considering in Kremlin, cover inter alia oil products cut off via Baltic countries seaports.**

The provisions of a number of official documents of the Russian Federation («National Security Strategy of Russian Federation until 2020», «Military Doctrine», «Energy strategy of Russia for the period up to 2030», «Program of effective and systematic use of foreign policy factors for a long-term development of the Russian Federation») contain ambiguous statements and do not contribute to the strengthening of confidence to Russia as a predictable partner. «National Security Strategy of Russian Federation until 2020» and «Military Doctrine» do not perceive NATO enlargement process and the performance of its global functions, and, on this basis, the objectives of deterrence are formulated in the abovementioned Russian documents through the "neutralization of possible military dangers and military threats by political, diplomatic **and other non-military means**". This increases the probability of using energy and infrastructure potentials of the Russian Federation in the case of deterioration of relations with individual countries and with NATO as the whole.

In this case, the monopolistic public companies, which control the energy infrastructure and at the same time deliver energy to the world markets, are of particular importance. "Gazprom" is one of them. Actually, the Kremlin carries weaponization of energy and infrastructure through them. ***“Development of Gazprom, turning it into a state-forming, empire-forming structure, is a big achievement of Putin. With its help he had scattered the pipes across Eurasia, connecting them with Europe, Belarus, Ukraine and the Central Asian republics. And this space strapped with steel pipes was the first prototype of the future great state. Gazprom is civilizational achievements of Putin's Russia... Gazprom ... saved the country, laid the foundations for a future Eurasian statehood. Gazprom is a***

*steel bud, from which eventually a flower of fifth Russian empire bloomed*⁹ – this is the vision of Gazprom in the circle of pro-Putin intellectuals from Izborsky club.

Large-scale projects of non-transit gas export pipeline systems, initiated by Russia, can create surplus pipeline capacity. In the absence of an integrated gas infrastructure in the EU, it poses a threat for manipulating the volumes and directions of gas export prices in order to maximize revenues of monopolist. In the case of critical deterioration of relations between Russia and NATO and between Russia and one of the countries (group of countries) of Alliance this could serve as a mechanism of synchronized heterogeneous pressure by the projection of threat of limiting / interruption of supplies combined with information-psychological campaign and cyber-attacks.

It should be noted that the increase in the surplus of the Russian pipeline infrastructure includes a potential threat to the markets, especially those that do not have the diversification of energy sources. Russian energy strategy just provides an increase in surplus due to the policy of diversification of export routes of energy resources: "The fate of the European direction in the total export of Russian energy resources will steadily decline by diversifying the export energy markets in eastern direction." If we take into account that in 1973 the success of the oil embargo by Arab countries was achieved by 9 per cent reduction in oil supplies, the presence of a substantial facilities capacity signifies the ability of proportional supply constraints. It means that transit flows would be unstable. It can be concluded, that the main aim of the creation of a diversified system of Russian gas exports is to vary the volumes, directions and exporting prices on the internal non-integrated EU market. It should provide the revenues maximization, as well as exerting of pressure on the one or another member state of the EU and NATO, by the threat of limit / stop the hydrocarbon flow, especially when combined with the information and psychological campaign. Michael Korchemkin, American expert of Russian origin from the East European Gas Analyses (U.S.) has come to the similar conclusions: "The gas pipelines Nord Stream and South Stream are designed NOT to increase supply of Russian gas and NOT to increase the stability of energy supply to Europe. Gazprom's new projects will provide Russia with the ability of selective cut of gas flow to Belarus, Germany, Poland, Hungary, Romania, Bulgaria and Greece. Thus, the energy security of THESE countries will be reduced".

An assessment of the energy activity of Russia was done in the EU only in the system of business-coordinates. **Analysis of Russia's behavior in 2000-s shows that the RF had been consecutively approaching to deploy energy resources as energy weapon, carefully disguising its actions under commercial disputes with buyers of Russian hydrocarbons on the post-Soviet space. The traditional system of business-coordinates (volumes-prices-debts-contract conditions) is not sufficient**

⁹ "Александр Проханов: Замковый камень российской государственности", *Politikus.ru*. December 22, 2013. Available online: <http://politikus.ru/articles/10111-aleksandr-prohanov-zamkovyy-kamen-rossiyskov-gosudarstvennosti.html>

for understanding the nuances of gas relations between Ukraine and Russia. In the condition of waging hybrid war by Russia against Ukraine, a modified system of coordinates with additional non-military dimension is needed, as the energy sector is one of the fronts of New generation war.

A special focus is the cases of Russian “gas aggression” against Ukraine in 2006 and 2009. Europe used to name them “Ukrainian-Russian gas crises”, that reflects traditional unwillingness of the European Commission to call things by their proper names. Gas supply cut off to Ukraine and reducing of volumes of gas transit via Ukraine to the EU in 2006 were Russian “actions of punishment”. Ukraine was punished for the Orange revolution in 2004, Europe - for supporting Ukraine. Now it can be concluded, that it was the use of the energy resources weapons in the long phase of Crypto-war, which had to go to the stage of hybrid invasion.

Crisis in 2009 had wide reaching goals. It should play a role of a detonator to provoke political conflict in Ukraine on the axis East – West. It intended to case gas shortage in eastern part of the country through complete gas supply disruption (for internal consumption + gas transit to the EU), because Kiev based authorities might be unable to deliver gas from underground gas storages (UGS) located in west part of Ukraine to main industrial centers and will leave them without heating. According to Russian strategists, it should provoke “social explosion in the East and South of Ukraine”. In 2009, Russian Strategic Culture Foundation studied so called “half hard” scenario, according to which it was provided for emergency deployment of the military contingents to Ukraine combined with “provisional government”, dynamic expansion of local self-government authorities on occupied territories with reliance on prepared in advance “support forces” – marginal groups with critical approaches toward Kiev-based authorities, creation of “independent” quasi-state institutions”. It was not an accident, that on January 12, 2009 Russian mass media published article to the topic of “borders revision” in CIS and statements of Russian politicians: **«Member of the State Duma of Russia Konstantin Zatulin does not rule out that Russia will “signal at the proper moment” to eastern and southern regions of Ukraine to join Russia»**¹⁰. This scenario failed in 2009, because Ukrainian GTS reversed gas supply: central, eastern and southern regions of Ukraine received gas from UGS.

However, Russia started to implement in 2014 an improved scenario of hybrid war, but it was prepared in advance. An economic damage with long-term consequences to Ukraine became one of the objectives of this hybrid war. From June 16, the supply of gas to Ukraine was cut off under the pretext of the gas debt of Naftogaz of Ukraine. Gas blockade of Ukraine lasted for 180 days, therefore almost half a year. Since July, targeted artillery strikes began to be applied on the energy and transport infrastructure. In Donbass, a part of the coal mines were put out of operation, railroads were destroyed in order to damage coal delivery to the other regions of the country, the coke plants supplying the steel industry were also destroyed.

¹⁰ “Затулин о Хмельницком, Ющенко и знаке в нужный момент”, *The UNIAN*. January 12, 2009. Available online: <http://www.unian.net/world/179446-zatulin-o-hmelnitskom-yuschenko-i-znake-v-nujnyiy-moment.html>

4. ENERGY RESOURCES COMPONENT OF HYBRID AGGRESSION AGAINST UKRAINE.

Gas supplies in Ukraine have always depended on supplies from Russia. Gas sector has traditionally been a weak point for Ukraine in its relations with Russia. However, Ukraine was always independent with coal, obtaining sufficient quantity and even partially exporting it.

Situation with coal deficit reflects two realities. First, when separatist groups of LPR and DPR controlled by Russia, failed to capture the entire territory of Donbass, they, with the support of Russian troops, retreating, retained control over those territories, where the major anthracite coal production was concentrated as a half of Ukrainian power stations (7 from 14) use anthracite. Thus, by the military efforts temporal coal dependence of Ukraine before the 2014-2015 heating season was formed. Such a difficult situation will remain in heating season 2015-2016.

***Note.** As of July 1, 2015 in Ukraine 150 coal mines functioned, 69 of which did not operate due to the fighting. In areas controlled by the terrorist groups, 85 mines of all forms of ownership are located. That is 57% of the total amount in Ukraine. 60 mines from 85 produce energy coal. From 90 mines subordinated to the Ministry of energy and coal industry of Ukraine, 55 mines are located on the territory controlled by the separatists and 35 mines – out of the combat zone¹¹.*

Russia created for Ukraine two alternatives: the shortage of coal should be covered either by imports from the Russian Federation or by buying it on the territory of Donbass from LPR and DPR controlled by Russia. Nevertheless, “coal leverage” could not be used effectively as occupied Crimea for 85% depends on electricity supply from the United Energy System of Ukraine. Ukraine used it to deter Russia advancement in the Donbass demonstrating through the full switch off of Crimea 25-26, December what will be in the case of further aggressor’s offensive. On 30th of December at the level of commercial companies, a set of agreements was signed, which guaranteed coal supply to the Ukrainian side and uninterrupted supply of electricity to Crimea for Russian side. Thus, there was the mutual use of the available energy leverages by the conflict parties.

Donbass territories occupied by Russia are not energy self-sufficient, even taking into account the coal surplus. Gas is supplied from the gas transportation system, electricity - from the United Energy System of Ukraine. Therefore, Russia will try to expand the occupied territories to ensure greater energy stability that at the same time will lead to the destabilization of the energy systems of Ukraine. Energy resources line of balance-imbalance, which can lead to the energy self-sufficiency of the "Novorossiya" project, as well as the Crimea, and can lead to the energy collapse of Ukraine, runs from Kharkiv to Zaporizhia and then along the Dnieper to Kherson.

¹¹ «Plan of preparation of the fuel and energy complex of Ukraine for the autumn-winter period 2015 - 2016 and its passing»

Today Ukraine is partly dependent on nuclear fuel from Russia. So far, there are no problems with nuclear fuel supply. In addition, the nuclear power plants of Ukraine possess a one-year stock of nuclear fuel. It is technically possible to diversify nuclear fuel supplies via the company Westinghouse. The existing contract with Westinghouse provides a fuel supply for only 3 of the 15 operating units of Ukrainian nuclear power plants. The question of increasing the proportion of purchases of up to 50% is being considered, depending on the behavior of the Russian side, and market conditions. Given the protracted nature of the hybrid war against Ukraine it is about creating a larger than usual supply of nuclear fuel.

To conclude it should be mentioned that although involvement of energy component in the hybrid war by Russia seriously damaged Ukraine, this damage did not have a fatal nature mainly because of the warm winter. Kremlin's strategic miscalculation was to underestimate the energy stability of Ukraine and the capabilities of authorities to implement a set of measures to reduce energy consumption, to import coal from abroad, to maximize the use of nuclear power generation, as well as underestimation of the level of dependence of annexed Crimea on supplies from mainland Ukraine.

Later, in the winter 2015-2016 the scenario of engagement of the whole complex of effects at the level of the maximum intensity use of the hybrid war military component with simultaneous escalation of non-military methods of influence, is not excluded. Particularly through the use of energy resources as a tool for pressure up to the interruption of gas supply to the EU through the territory of Ukraine, and any coal supply (either from Russia or from Donbass territories under occupation).

Russia will continue to intimidate Europe by unreliability of Ukraine, although all previous Kremlin's "prophecies" about energy catastrophe in Ukraine without Russian gas, as well as breaking up gas transit to the EU by Ukraine were only the theses of Putin propaganda. Scenario of interruption of gas supplies to Ukraine and the EU still remain in force and for the period of 2015-2016.

Energy weapon is effective under the monopoly of foreign supplies, surplus of pipeline capacity, high energy prices, low temperatures in winter, when the increasing demand creates a shortage of fuel. Reduction of oil and, consequently, gas prices since the summer of 2014, warm winter 2014-2015, reverse gas supply from the EU have made inefficient use by Russia the mechanism of the "gas war" against Ukraine. In addition, in recent years it occurred quite rapidly reduce of gas consumption in Ukraine. Cut of gas imports from Russia was even more dynamic, following a rapid increase in the volumes of gas deliveries from the EU countries through reverse. The data in Table 3 indicates the diversification of supplies and a sharp reduction in Ukraine's dependence on Russian gas imports.

Table 3*.

	2011	2012	2013	2014	2015**
Consumption, <i>bcma</i>	59.305	54.775	50.358	42.465	~38.5
Production, <i>bcma</i>	20.614	20.191	20.998	20.170	~19.7
Import, <i>bcma</i>	44.801	32.939	27.974: 25.842 – RF 2.132 – EU	19.466: 14.450 – RF 5.016 – EU	~18.3: 6.5 – RF 11.8 – EU

*On the base of the official data of the State Statistics Service, Ministry of energy and coal industry, JSC Naftogaz of Ukraine.

** Projections on the base of the results of the 6 and 7 months of 2015.

Scenario of gas supplies disruption from Russia to Ukraine could be expected in the winter 2015-2016, at the low temperature extremes that may be in the period starting from the middle of December to the middle of February, when there is an increase in the peak daily demand for fuel. The scenario can be quite simple. If at the peak of the cold Ukraine will not be able to obtain sufficient volumes of reverse gas from Europe (or it will be very expensive), it will be forced to turn to "Gazprom" for the increase in supply. Russia will also be ready to meet it on its own terms, which, obviously, will have both a military and political components. If Ukraine does not agree with this, the supply of gas to Ukraine and transit through its territory would be ceased under one pretext or another. At the same time, the supplies would be maximized through the "Nord Stream", for the purpose that the EU did not take gas blockade of Ukraine as a threat.

However, the greatest risk for Ukraine in the winter season 2015-2016 is related to the power and thermal energy. Deficiency of anthracite coal, the main production of which located in the occupied territories of Donbas, could trigger the deficit of the electricity and heat production in the temperature extremes. Only the Russian and Belarusian supplies will compensate electricity shortages. However, the potential of energy supply from Belarus is light.

In contrast to the gas supply, where there is an alternative due to the reverse of gas from the EU, in the electric power there is no such possibility. What can Ukraine do, is to reverse the "Burstyn energy island", located in the western part of the country that operates on a stand-alone electricity production for export to the countries of the Central Europe. It can be redirected to supply the United Energy System (UES) of Ukraine. Also, since summer nuclear energy capacity usage is increased. For the first time in the history of Ukraine, nuclear power production in 2015 exceeded the production of other types of electricity generation and made 55% of the total volume in the first semester.

However, at the peak of the cold weather, these measures may not be enough. Ukraine will be forced to turn to Russia for additional import electricity. As is the case with the above described scenario for gas, Russia may accompany this with counter conditions. Their core idea would entail one or another sort of the formulae “gas and electricity in exchange to recognition of the Russian status of the Crimea and special status of DPR/LPR”. No doubt, Russia will try to use “electric trump card”. In the summer of 2015, a scenario was elaborated to limit electricity supply to the South of Ukraine (Odessa region) on the part of the Moldovan thermal power plant located on the territory of Transnistria and controlled by Moscow.

Ukraine, with the political will of its leadership, is able to withstand the Russian energy blackmail. Total blockade of the occupied territories of the Crimea, Donbas, and Transnistria may be adequate countermeasures. It is also important that the government of Ukraine in early August approved the “Plan of preparation of the fuel and energy complex of Ukraine for the autumn-winter period 2015 - 2016 and its passing.” An international «Group of planning the release of Ukraine from the energy crisis» developed the plan. Ukrainian experts group has been strengthened by American, Canadian and European experts.

5. UKRAINE'S CRITICAL ENERGY INFRASTRUCTURE IN THE FOCUS OF THE RUSSIANS.

According to available information, since spring 2014 Russia has been working out options for critical energy infrastructure defeat in Ukraine, when it started the “Novorossiya project”. The objectives should become assets of the United Energy System (UES) of Ukraine and gas transportation system. It was assumed, that after defeat of the key energy infrastructure, Ukraine would suffer from power shortages with non-functioning UES and GTS. According to the logic of developers of these scenarios, Ukraine would be forced to turn to Russia for help to get through the winter. The condition of Russia would be recognition of LPR/DPR by Kiev, signing the “peace agreement” and withdrawal of “occupation forces”.

Yet in summer 2014, the “experts of Novorossiya” elaborated the scenarios of attacking the critical energy infrastructure of Ukraine. It was about the existence of an “Achilles heel” in the generation of the UES of Ukraine. In particular, in the relevant analytical materials the case touched the following: *“We are talking about the power sector in Energodar, Zaporizhia region. It consists, in fact, only separated by a fence, from Zaporizhia NPP and Zaporizhia TPP ... Both power plants are the largest in Ukraine in terms of installed capacities, and the nuclear power plant is the largest in Europe and the former Soviet Union”*. Here is an example of one of the recommendations for action around Energodar. *“Of particular importance is the issue of the decommissioning of both Zaporizhia power plants, especially the nuclear one. In addition to the previously proposed possibility to undertake an attack against the nuclear power plant cooling towers, success could be achieved more likely by disconnecting lines from 750 kW substation “Dniprovska” in the direction of the Left Bank. If successful, the action would result in turning off at least a part of the NPP equipment... If one combines it with the attack on the 750 kW line, which is going*

from the same substation to the West, you would get the scenario ... of the "black-out" in Odessa and Mykolaiv regions, which could cause emergency tripping of the South-Ukrainian NPP. The attack could begin with the decommissioning of the main line Western Ukraine - Donbas in two places on the territory of Cherkasy region. This event would ... destabilize the UES as a whole ..."

In general, other actions, not just disabling intersystem power lines, were proposed too, in particular: a cyber-attack against the UES dispatching system, as well as fire attack on vulnerable generation facilities - the NPP cooling towers, thermal power plant's smoke pipes, water supply system. **Altogether, it would have to lead to a "systemic failure across the united energy system."** Attacking tools should become long-range artillery or pilotless vehicles. However, this scenario would be relevant for open offensive. According to the scenario of hidden subversive actions, one should disrupt the system of water supply to the cooling units. Moreover, using propaganda tools, "Kiev junta" should be accused of undertaking this subversion to blame "militias".

Indicative fact is that in July 2015 the armed formations began to apply artillery strikes on thermal power plants located in the combat zone. As a rule, they avoid doing this before, because the supply of electricity to the territory of the LPR / DPR is dependent on thermal power plants located on the territory controlled by the central government of Ukraine. In particular, this is the case of the Lugansk thermal power plant, which supplies electricity to the whole region including so-called LPR, but is located on the territory controlled by Ukrainian central authorities.

Uglegorsk TPP in Svetlodarsk, Donetsk region, which also supplies partly electricity to the DPR, has undergone specifically intense attacks. This power plant with the capacity of 3.6 MW is the second largest in Ukraine and as important as Zaporozhe TPP. Traditionally, it supplied electricity not only to Donbas, but also to the other Eastern regions. Two transmission lines by which electricity were supplied to the UES for other regions were seriously damaged. Capacity of 700 MW is locked in the power station. In our opinion, it is done by the command from Moscow. Now, they test the actions of UES dispatching center, as well as the reactions of the government and ministerial levels. By the attacks to TPP, which together with several other TPPs play the fundamental role for electricity and heat generation in the East of Ukraine, Russia wants to achieve three goals. The first – to reduce the resistance of UES of Ukraine and approximate it to the blackout. The second – to force Ukraine to import additional electricity from the Russian Federation, which will strengthen its energy dependence. The third - to reset in Ukraine local surplus in electricity generated due to commissioning of the new units of Rostov NPP located near the border with Ukraine (the third power unit of the Rostov nuclear power plant was put into the nominal power level of 14 July 2015, and this year it will begin commercial

operation¹². The fourth energy unit will be put into operation in 2017). All this could become non-military (energy) coercion to Minsk-4.

Returning to the gas theme it is worth to mention that Ukraine's GTS is of particular importance for both Ukraine and the EU. Its importance is determined not only by the role of transit. UGSF are crucial for operability with the overall active gas volume of 31 bcm. They allow ensuring the gas supply during peak consumption in the EU in the winter. Very important is also a high level of interconnectivity of main pipelines, which provides security of supply of gas by an accident or other emergencies. This is something that other transportation routes are lacking, named by Gazprom as alternatives to the Ukrainian gas pipelines: Yamal - Europe, «Blue Stream», «Nord Stream», «South Stream». Failure in any of these systems will automatically lead to the disruption of gas supply. In Ukraine, the situation is completely different. Examples. In 2007, there were two significant technical incidents on the main gas pipeline Urengoy - Pomary - Uzhgorod. To eliminate the consequences of accidents, in both cases it took more than two weeks. However, the gas supply to the EU was not disrupted even for a minute, because instead of affected pipeline some parallel lines were used from - "Progress" and "Union" gas pipeline systems. The same occurred in 2014, when in May and June subversive acts have been conducted on the main gas pipeline Urengoy - Pomary - Uzhgorod, which indeed have not lead to interruption of gas supplies to the EU. **It should be noted that for complete interruption of gas supplies to the EU and Ukraine, it is necessary to make simultaneous attacks in 29 points on GTS, which is practically impossible task in a hybrid war conditions.**

Obviously, the desperate situation with energy supply to Crimea in winter 2014-2015 became an obstacle to the implementation of the scenario to destroy critical energy infrastructure. However, this does not mean that the threat has disappeared.

Due to such risks and threats, as well as high activity of subversive groups on the territory of Kharkiv and Odessa regions, which are key to the success of the "Novorossiya project", at the level of the National Security and Defence Council of Ukraine and the Government, measures have been taken to enhance the protection and defence of energy infrastructure objects, particularly on the right bank of the Dnieper. The important measures of critical energy infrastructure protection were represented in the already mentioned "Plan of preparation of the fuel and energy complex of Ukraine for the autumn-winter period 2015-2016 and its passing". A special unit of the National Guard, "Scorpion", designed for the protection and defence of the nuclear industry and nuclear energy, has been significantly reinforced.

A series of command and staff exercises were conducted at all Ukrainian NPPs. The purpose of the exercises was to train actions for the protection of nuclear power

¹² «Третий энергоблок Ростовской АЭС впервые введен на полную мощность», *RIA News*, July 14, 2015. Available online: <http://ria.ru/atomtec/20150714/1128607797.html#ixzz3i02sdvW2>

plants against terrorist and subversive activities. During the exercises, steps to prevent acts of sabotage under scenario, prepared by external actors in cooperation with internal one were worked out. On April 22, 2015, the command and staff exercises were held at the Zaporizhia nuclear power plant, on April 29 - on Khmel'nitsky NPP, on May 14-15 at the South-Ukrainian NPP. On May 29, the special anti-terrorist command and staff exercises were held together by "Scorpion" Special Forces of the National Guard and by "Alpha" of Security Service of Ukraine at the Rivne nuclear power plant.

Given the above, the protection of nuclear power plants, gas facilities and oil transportation infrastructure is secured. However, Ukraine failed to ensure protection of mining and drilling platforms in the Black Sea shelf in 2014. They were captured by Russian paratroopers, who had landed on platforms after almost three weeks after the invasion of Crimea. The main problem was that under the administrative chaos neither the Ukrainian Navy nor Marine Border Guard received appropriate guidance for the protection of these platforms, although the protection of objects of maritime economic activity is one of the basic tasks of the Ukrainian Navy, which was repeatedly worked out during the various exercises. Navy Forces of Ukraine were blocked in the bays of Sevastopol and Donuzlav. However, the guarding flotilla of the water region, based in Odessa could perform the necessary actions. Helicopters could also deliver forces and means to protect the platforms. Given that, all platforms are equipped with helipads. However, none of this happened.

The loss of 1.6 bcm in national gas production from the overall level of 21.5 bcm is not very sensitive for Ukraine, as this gas was transported only to the peninsula. However, it means the loss of almost all marine gas production infrastructure, which was developed in Ukraine since the 80th. Ukraine also lost the possibility of expanding offshore gas production by using two new drilling platforms, which were also captured. Moreover, mining and drilling rigs were located outside the territorial sea, that is, such actions of Russia can be qualified as an act of piracy. According to the drilling program, it was supposed to increase the gas production on the shelf until 8 bcm per year by 2020, which greatly would help to reduce gas imports from Russia.

6. AS CONCLUSIONS AND PROJECTIONS.

Despite the fact that oil prices, starting from June 2014 show steady downward trend, and the fact that many factors indicate the beginning of a long period of volatile but low oil prices, Russia is unlikely to change the basic concept of development as an energy superpower. Basing on the concept of Energy Superpower and speculating on the subject of Russia's readiness to help the West in the fight against ISIL in exchange for the solution of the "Ukrainian issue" under the Russian recipe, the Kremlin will attempt to:

- maintain and strengthen its status of monopolist provider of hydrocarbons to Europe from the Eastern direction;

- destabilize the current and prospective supplies to the EU with non-Russian sources (the Caspian region and Central Asia);
- destabilize prospective routes for hydrocarbon supplies to Europe (for instance, by hidden stimulation of the Kurdish issue in Turkey);
- put under its direct or indirect control the promising hydrocarbon deposits of global significance;

This means that Russia will attempt to:

- implement at any cost the project with a view of bypassing Ukraine and Slovakia as a traditional transit corridor;
- gain control or, if not possible, to destabilize Azerbaijan as a prospective gas supplier to the EU;
- prevent the construction of a Trans-Caspian gas pipeline to provide supplies of Turkmen gas to the EU;
- detach the Atyrau region in northern Kazakhstan, where its main oil projects with participation of international investors are located – Tengiz, Kashagan, etc.;
- indirectly promote destabilization in Algeria, which has ambitious plans for development of new hydrocarbon deposits in the Sahara;
- indirectly promote the destabilization of Saudi Arabia as the largest playmaker in the global oil market, in order to resume price growth;
- establish a zone of military control over a major part of the Arctic, not excluding the option of occupation of Svalbard.

Through the annexation of Crimea and invasion into the East of Ukraine, Russia has achieved strategic goals, in particular the breakdown of major projects of development of natural gas deposits in the Black Sea and development of unconventional gas onshore, which has been important indeed for both Ukraine and Western companies. European and American companies left the country.

The Caspian region and the Southern Caucasus can become another military flash point region as projects of gas development and transportation in these regions are competing for Russian deliveries to Europe. That is why a scenario of coercive intervention by Russia cannot be neglected. In fact, the EU and NATO will be helpless in these regions, unless they resort to preventive actions in the near term to deter Russia.

The USA and NATO should pay serious attention to the security dimensions of the Caspian region, South Caucasus, EuroArctic region. Considering the features of Russian policy described above, one cannot neglect the scenario of a renewal of the Armenian-Azerbaijani war, which would transform the South Caucasus and the Caspian region into a high-risk zone for projects of production and transportation of natural gas in Azerbaijan, as well as the transit of Turkmen gas through it. In addition, such a scenario may be used to distract attention from Russian aggression in Ukraine.

It is necessary to strengthen regional intelligence capabilities of NATO in the Caspian Sea, the South Caucasus, the Black Sea, the Baltics, the Arctic, as well as in Russia, Belarus and Kazakhstan – everywhere where there is energy resources and communications, which Russia sees as competitive. A special attention should receive cyber space activities with regard to smart grids in Europe during period of low temperatures in winter 2015-2016. Also, it is important to strengthen scientific and technical intelligence capabilities to identify dangerous "hybrid" know-how of nuclear weapons **engagement** on the base of the civil infrastructure, in particular energy one.

Significantly important is an enhanced monitoring of Russian activities in NATO countries and the EU. Russia, by the logic of New generation war, will largely act from within, not from outside, including using lobbying and corruption mechanisms elaborated in the last decade of hydrocarbon supplies to Europe. And the example of Ukraine of Yanukovich times is quiet demonstrative, as well as examples of some member-states, where political leaders act in line with the interests of Russia trying to lobby for the lifting of sanctions against the aggressor. A trip of the French deputies group to the RF and to the Ukrainian Crimea annexed by Russia, as well as the announcements of the similar future VIP-tours by Italian, German and Hungarian parliamentarians make us ponder the issues of spontaneity of such means and the periodic appeals from Europe about lifting of sanctions from the RF.

In the case of Ukraine in conditions of low hydrocarbon prices, the energy component of the hybrid war itself can not produce the desired effect for the aggressor. But, in the connection with other components, including military one in a winter cold, it can play its role.

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