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DEPENDENCE OF EU ENERGY MARKET ON RUSSIAN OIL AND GAS

ABSTRACT

The authors analyze energy market in Europe by presenting the gross consumption of energy as well as production of energy within the European Union. Although the Russian Federation was severely hit by the worldwide financial and economic crisis, Russia remains an important energy supplier to the EU, especially for oil and gas. Furthermore, some EU countries rely heavily on Russian hard coal. EU desperately looks for means to secure new sources of gas and oil supply by importing it from countries like Norway, Saudi Arabia, Algeria, Libya, Nigeria, and Iraq. As the likelihood increases that Russia will remain its dominant position as most important EU energy supplier, questions have emerged as to whether Russia would use this position to influence EU member policies.

Key words: primary energy sources, EU, energy dependency rate, Russia, energy efficiency, energy intensity.

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1. INTRODUCTION

Energy sector has been under the spotlight in recent years in European Union (EU). Gas crises in January 2009 caused implementation of protective measures against gas disruptions. Reliable and sustainable energy sector became essential for EU whish is why energy issues made top priorities on European political agenda. More than a half of EU energy comes from countries outside the Union, and not surprisingly this proportion is rising. Biggest share of this energy import comes from Russia. For more than a forty years Russia has been a reliable energy supplier to Western Europe, and today Russia alone accounts for about 10% of world primary energy production, and 27% of gas reserves.[3] The volatility of oil prices and interruptions to energy supply pushed Member States to expand their use of renewable energy sources in order to reduce energy dependence. Energy efficiency also became one of the key elements of European energy policy. European Council endorsed new rules in 2009, in order to improve security of gas supplies. Regulation 715/2009 was put in place with a task to ensure that Member States take actions to prevent and mitigate the consequences of disruptions, even if they are only potential. The EU now requires all Member States to adopt and regularly update preventive action plans and to identify energy security threats. A Directive (2009/119/EC) adopted in September 2009 imposed an obligation on Member States to maintain minimum stocks of crude oil and petroleum products. Also a coordination mechanism has been set-up so that Member States can react uniformly and immediately in emergency cases.[4] The question of security of the energy supplies to EU pushed European Commission to address this issue by reducing dependency on imported energy and reducing its emissions of greenhouse gases. Considering this, EU set up the following goals:

- reducement of greenhouse gas emissions by at least 20% (compared with 1990 levels) by 2020;
- improvement of energy efficiency by 20% by 2020;
- increasement of the share of renewable energy in final energy consumption to 20 % by 2020;
- increasement of the share of renewable energy sources in the fuel used by the transport sector to 10% by 2020.[5]

[3] Lights out?: the outlook for energy in Eastern Europe and the former Soviet Union, The International Bank for Reconstruction and Development, 2010 .p. 11

[4] Europe in figures, Eurostat yearbook 2011, European Union, 2011. p. 540

[5] Ibid. 536

2. ENERGY PRODUCTION IN EUROPEAN UNION

European Union feeds the half of its energy needs from its own sources and other half from imports. As a highly developed industrial region, EU industrial and service sector, along with population, consumes vast amount of energy. All of the 27 Member States have different structure of production, consumption and energy imports. Still we can determine present trends when it comes to energy market and its degree of dependence.

Production of primary energy in the 27 Member States totaled 812 million tonnes of oil equivalent (Mtoe) in 2009. The downstream trend is noticeable considering that reduction in production between 1999 and 2009 was overall 14%. From the 2008 to 2009 the worldwide financial and economic crisis contributed to highest annual reduction rate (-4%) of this period.[6]

Table 1.

Primary energy production, by fuel EU-27, 1999-2009, (Mtoe)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Change (%)
Total	949	941	941	940	932	928	896	877	856	850	812	- 14
Oil	180	173	161	166	156	145	133	121	120	112	104	- 42
Gas	203	208	208	204	200	203	189	179	167	168	153	- 25
Nuclear	243	244	253	256	257	260	258	255	241	242	231	- 5
Hard coal	133	119	114	111	108	103	99	94	89	83	74	- 44
Lignite	91	94	97	99	99	98	96	97	96	94	91	1
RES	93	97	100	97	104	111	115	122	133	141	148	60

Source: Energy, transport and environment indicators, Eurostat pocketbook, 2011 p. 35

In this ten year period primary energy production was spread across a range of different energy sources, but it is evident that nuclear energy was the most important one. In 2009 the nuclear share of total energy production in EU-27 was 28.4%. The significance of nuclear fuels was especially visible in Belgium, Spain, France, Lithuania, Slovakia and Sweden, were it accounted for more than half of the national production of primary energy.[7] It is also likely to conclude that the growth of primary production from renewable energy sources (RES) surpassed all other types, rising by 60% overall between

[6] Energy, transport and environment indicators, Eurostat pocketbook, 2011. 35.

[7] Europe in figures, Eurostat yearbook 2011, European Union, 2011 p. 537.

1999 and 2009. In 2009 primary production from RES amounted almost like production of hard coal and lignite combined. In the last decade biggest reduction was observed in the production of oil, and it fell by 42%. Since 2006 renewable energy sources, mostly solar, geothermal and wind energy, as well as biomass and waste, presented more significant energy resource than crude oil in EU. It is very important to stress that between 2008 and 2009 gas production in EU recorded the highest annual reduction rate of 9%, and that overall gas production in last decade fell by 25%. This is important fact because natural gas dependency rate of EU grew by about 16% in the same period, reaching 64.2% in 2009.[8]

Geographically speaking, United Kingdom dominated the production of energy within EU in 2009 with a 19% share of the total energy production.[9] Considering that United Kingdom experienced by far the largest reduction in its output of primary energy during last decade, with production falling by 104.8 Mtoe, this was significant achievement.[10]

3. ENERGY CONSUMPTION IN EUROPEAN UNION

Energy consumption in European Union has been the reason why the questions of energy security emerged in last decade as one of the most important economic and political issues. Gross inland energy consumption represents the quantity of energy necessary to satisfy inland consumption. It describes the total energy needs of a country. Gross inland energy consumption in EU in 2008 was 1802 Mtoe, and in 2009 it stood at 1703 Mtoe.[11] This reduction in consumption can be explained by insight in consequences of global economic crisis which was on its peak during this period. The level of consumption in 2009 was the lowest of the decade. Beside that, gross inland consumption in EU presented a rising trend from 1999 to 2006. After stabilization in 2006, there was a trend of reducing consumption, and it has gradually declined to a level that is lover than the one in 1999, when the consumption was 1711 Mtoe. Looking at these numbers one can claim that policy makers in EU fully understood the problem of energy security when pledged to cut its energy consumption by 20% by 2020.

In the last decade consumption of energy in the EU has evolved, especially through a gradual shift from fossil fuels to renewable sources.

[8] Energy, transport and environment indicators, Eurostat pocketbook, 2011. 31.

[9] Ibid. p. 35

[10] Europe in figures, Eurostat yearbook 2011, European Union, 2011p. 537.

[11] Energy, transport and environment indicators, Eurostat pocketbook, 2011. p. 37.

Decline in the share of crude oil and petroleum products, solid fuels, and nuclear energy was followed by increase in the consumption of gas. While consumption of solid fuels fell by 14%, oil and nuclear energy by 7% and 5% respectively, the consumption of gas rose by 9%. Renewable energy sources increased its share in final energy consumption of EU in a period from 1999 to 2009 by amazing 65%. Solar energy, wind power and biofuels became a significant source of energy in the EU. In 2009 consumption of RES almost reached the level of consumption of hard coal. It is clear that EU is making changes in its energy mix by taking a move away from the most polluting fossil fuels to natural gas and renewables in order to adress the issues of import dependency and energy-related emissions.

Table 2.

Gross inland consumption, by fuels EU-27, 1999-2009, (Mtoe)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Change (%)
Total	1 711	1 725	1 763	1 758	1 799	1 818	1 823	1 825	1 806	1 802	1 703	0
Oil	671	661	676	671	675	677	678	674	659	658	623	- 7
Gas	383	394	404	405	425	435	446	438	433	441	417	9
Nuclear	243	244	253	256	257	260	258	255	241	242	231	- 5
Hard coal	222	225	225	221	230	228	222	229	231	212	178	- 20
Lignite	91	95	98	98	101	99	96	96	97	94	90	- 1
RES	93	97	100	98	104	112	116	124	135	144	153	65

Source: Energy, transport and environment indicators, Eurostat pocketbook, 2011 p. 37.

More than a half of the consumed energy in EU is attributed to only four countries. On the top of the list is Germany which consumes 19% of the gross inland consumption of primary energy in 2008. Second largest consumer of energy in EU is France with share of 15%. Third is United Kingdom that had a share of 12% in 2008, followed by Italy with 10%.[12] United Kingdom and Germany recorded a largest reduction in gross inland consumption during the period from 2003 to 2008. Still these countries are considered to be the biggest energy consumers. The gross inland consumption of each Member State depends on the structure of its energy system, the availability of its natural resources and the development of each economy. Countries mentioned above are the most developed, most productive and most populated in EU.

[12] Europe in figures, Eurostat yearbook 2011, European Union, 2011, p. 550.

The key indicator for measuring progress under the Europe 2020 strategy for smart, sustainable and inclusive growth and the measure of an economy's energy efficiency is energy intensity. This indicator represents the ratio between gross inland consumption of energy and GDP. This ratio is expressed in kilograms of oil equivalent (kgoe) per 1000 EUR. Energy intensity in EU decreased in the period from 1999 to 2009 by 14% and it reached 165 kgoe/1000 EUR in 2009.[13] In the last couple of years Denmark and Ireland recorded a lowest level of energy intensity, with 107 and 109 kgoe/1000 EUR respectively. On the other hand in 2009 there was Bulgaria with energy intensity of 843 kgoe/1000 EUR and Estonia with energy intensity of 607 kgoe/1000 EUR.[14] Still Bulgaria represented the most noteworthy decrease of 39% of energy intensity level in the EU during the last decade.

By insight in gross inland consumption in EU we can conclude that even with growing trend for policy initiatives with focus on improvment of energy efficiency in the attempt to reduce energy demand the most used fuels in EU are oil and gas. In 2009 EU consumed 626 million tons of oil and 417 Mtoe of gas. With the production of only 104 million tons of oil and 153 Mtoe of gas, EU is highly dependant of import. The combination of declining European production and environmental policies favoring less carbon intensive fuels significantly increased EU's import dependency, especially for natural gas. Since 2004 the EU's net imports of energy have been greater than its primary production which means that more than half of EU's gross inland consumption was supplied by net imports.

4. ENERGY DEPENDENCY OF EUROPEAN UNION ' AND IMPORTS OF OIL AND GAS

European Union since 1999 experienced downturn in the primary production of hard coal, lignite, crude oil and natural gas and became increasingly reliant on energy imports. In order to satisfy demand in 2008 net imports of primary energy in EU was 1015 Mtoe.[15] This represents the level of primary energy imports that exceeded exports of EU-27. According to Word Trade Organization in 2010 value of imported energy in EU was 506 billion dollars and EU became the largest importer of fuels and mining products in the world.[16] The value of imported fuels in the same year

[12] Europe in figures, Eurostat yearbook 2011, European Union, 2011, p. 550.

[13] Energy, transport and environment indicators, Eurostat pocketbook, 2011 p. 33.

[14] Ibid. p. 32.

[15] Europe in figures, Eurostat yearbook 2011, European Union, 2011, p. 538.

[16] International Trade Statistics, World Trade Organization 2011 p. 79.

represented more than a quarter of EU's total merchandise imports, while energy products represented three quarters of the value of all imports. The value of imported energy in 2010 in United States, as second largest fuel importer in the world, amounted to 362 billion dollars.[17] The gap between the values of imported fuels of these two entities and the size of its economies speaks for itself. Unlike the United States the origin of EU's energy imports has changed rapidly in recent years. Russia emerged as the leading supplier of EU in recent years. This is the sole reason why EU trade balance has been in deficit with Russia during the last decade. In 2008 in amounted to almost 73 billion EUR, and in 2009, thanks to world economic crisis and lower prices

Table 3.

Energy dependency rate, EU-27

(% of net imports in gross inland consumption, based on tonnes of oil equivalent)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
All products	46.1	45.2	46.8	47.5	47.6	49.0	50.3	52.6	53.8	53.1	54.8
Solid fuels	26.6	27.8	30.7	33.8	33.1	34.9	38.1	39.9	41.1	41.5	44.9
Crude oil	76.0	73.0	74.5	76.7	75.4	77.7	80.0	81.6	83.2	82.9	84.2
Natural gas	45.6	47.9	48.9	47.3	51.2	52.5	54.0	57.7	60.8	60.3	62.3

Source: Energy, transport and environment indicators, Eurostat pocketbook, 2011 p. 545

of energy it decreased to 52 billion EUR. However in 2010 EU trade deficit with Russia jumped to 74 billion EUR.[18]

To fully understand the energy dependency of EU, we need to take a look at its energy dependency rate. This rate represents the ratio of net imports of energy and total energy consumption. It is significant indicator of dependence on energy imports. In the first decade of 21 century, energy dependency rate for all products of EU has grown reaching 54.8% in 2008. All Member States in 2009 had energy dependency rate above 20%, most of them more than 50%, except Denmark. This country was the only Member State with negative dependency rate of almost 20%, which indicates that it is a net exporter of energy.[19] In 2008, EU's dependency on crude oil was more than 84%, while the same rate for natural gas was just above 62%. EU's dependency on solid fuels, like coal and derivates was about 45%. It is clear that EU craves for

[17] Ibid. p. 79.

[18] EU-27 and Russia: basic statistical indicators and selected trade figures, 2000–2010, Eurostat, Statistics in focus, General and regional statistics, Author: Morag OTTENS p. 3.

[19] Source: Energy, transport and environment indicators, Eurostat pocketbook, 2011 p. 25.

Table 4.

Imports of crude oil by country of origin (Mt)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Russia	118	136	153	169	183	186	188	185	178	173
Norway	115	107	102	105	107	97	87	84	86	79
Saudi Arabia	65	57	53	62	64	61	51	40	39	30
Libya	46	44	39	46	50	50	52	54	56	47
Kazakhstan	10	9	13	15	19	26	26	26	27	28
Iran	35	31	26	35	36	35	35	35	30	25
Other countries	145	148	138	115	109	118	124	133	151	140
Total	533	532	524	545	568	573	564	557	568	522

Imports of crude oil by country of origin (Mt)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Russia	4 540	4 396	4 534	4 872	4 922	5 100	5 097	4 856	5 108	4 520
Norway	1 921	2 104	2 644	2 758	2 802	3 064	3 307	3 566	3 924	4 052
Algeria	2 203	1 957	2 132	2 159	2 042	2 257	2 132	1 946	2 000	1 867
Nigeria	172	216	218	336	410	436	564	588	540	313
Qatar	12	27	88	80	160	196	233	281	304	609
Libya	33	33	26	30	48	209	321	384	398	380
Other countries	398	488	433	571	842	1 288	1 316	1 018	1 308	1 461
Total	9 280	9 222	10 075	10 807	11 226	12 550	12 971	12 639	13 582	13 201

Source: Energy, transport and environment indicators, Eurostat pocketbook, 2011 p. 38

natural gas and crude oil, and its hunger for these fuels satisfies from imports. Most of it comes from Russia.

Oil and gas accounted for almost 72% of total value of EU's imports from Russia in 2010.[20] In the same year, according to International Energy Agency, Russia surpassed Saudi Arabia in terms of crude oil production and became first producer of oil in the world. Just from Russia in 2009 the EU imported around 173 million tonnes of crude oil, while in 2006 this import was at its highest level and it peaked at 188 million tonnes.[21] While overall crude oil imports of EU presented a slight decline between 2000 and 2009, imports from Russia grew by 47%. Lion's share of this crude oil imports belonged to Germany and Poland, 20% and 11% respectively. Netherlands was at the third place with a share of 9.4, along with Italy as forth runner-up with a share of 8.8%. The only net exporter of crude oil in EU in 2009 was Denmark with 4.4 million tonnes of exported oil. United Kingdom on the other hand, for the first time in the last decade became net importer of crude oil. In 2004 United Kingdom exported almost 14 million tonnes of crude oil, while in 2009 was forced to import 5.8 million tonnes of same fuel. In order to bypass Russia, EU imported in 2009, a 79 million tonnes of crude oil from Norway, 47 million tonnes from Libya, 30 million tonnes from Saudi Arabia, and 28 million tonnes from Kazakhstan.[22] Imports of crude oil from Kazakhstan tripled in last decade, and in 2009 surpassed imports from Iran. Of all Member States

[20] EU-27 and Russia: basic statistical indicators and selected trade figures, 2000–2010, Eurostat, Statistics in focus, General and regional statistics, Author: Morag OTTENS p. 4.

[21] Ibid. p. 7.

[22] Source: Energy, transport and environment indicators, Eurostat pocketbook, 2011 p. 38.

[23] EU-27 and Russia: basic statistical indicators and selected trade figures, 2000–2010, Eurostat, Statistics in focus, General and regional statistics, Author: Morag OTTENS p. 7.

that import crude oil, only eight of them are not importing any oil from Russia, these states are: Estonia, Ireland, Cyprus, Latvia, Luxembourg, Malta, Portugal, and Slovenia.[23]

In the period from 2000 to 2009 the imports of the natural gas rose by 42% in EU. During this period Russia remained its number one position as prime supplier of EU. In 2009 Russia had share of 34% of total imported natural gas in EU. This presented insignificant decline compared to year 2000, and it's caused by increases in imports from other countries like Norway, Algeria, and Qatar. Imports from Norway and Nigeria almost doubled in this period, while imports from Qatar recorded a 49-fold increase. Libya became also a significant source of natural gas, whose export to EU increased 11 times during these nine years. Russian gas arrives in the EU via pipelines transiting through the Ukraine, Belarus, and, more recently through the Baltic Sea to Germany. Among the 27 Member States, in 2009 only Netherlands and Denmark were the net exporters of natural gas with exports that amounted to 999 PJ and 167 PJ respectively.[24] On the other hand, in 2009 close to 30% of the total amount of Russian natural gas exported to the EU was destines for Germany. Second largest EU consumer of Russian natural gas was Italy, with a share of almost 17%. Only six Member States in 2009, did not imported any natural gas from Russia. These states are: Denmark, Ireland, Cyprus, Sweden, United Kingdom, and Malta. Having in mind that Malta and Cyprus do not use natural gas at all, we can conclude that only four member States are independent of Russian gas. Even Netherland, country that is self-sufficient in natural gas, and is net exporter, started importing this energy resource from Russia since 2005.[25]

5. OVERALL OUTLOOK OF EU-RUSSIA ENERGY RELATIONS

By the year 2030, EU countries will be to meet only 25% of the demands for gas from internal sources.[26] Relying exclusively on Russia as a supplier is something that EU countries are trying to avoid at all cost. At the beginning of XXI century, project of "Nabuko" pipeline has begun to develop. With strong support from USA, this project seemed as good solution. Expenses were estimated at firs at 7 billion dollars in 2001, but in 2011 estimated

[24] Source: Energy, transport and environment indicators, Eurostat pocketbook, 2011 p. 43.

[25] EU-27 and Russia: basic statistical indicators and selected trade figures, 2000–2010, Eurostat, Statistics in focus, General and regional statistics, Author: Morag OTTENS p. 8.

[26] Eurogas, Natural Gas Demand and Supply: Long term outlook to 2030. 2009.

[27] Coskun, Orhan (2011-05-06). "Nabucco investment seen at 12-15 bln euros-sources".Reuters.

expenses rose to 12–15 billion dollars.[27] But, even the financial crisis had influence on this project, main issue is political rather then economical.

Although Russia will stay the main supplier for Europe, African countries and the Middle East will provide Europe with increasing quantities of gas. Besides it's not impossible that potential shale gas reserves in Europe will strengthen its supply position to some extent. There is a general consensus in the industry that at best, and in a medium-long term perspective, unconventional intra-EU production would not exceed 20 or 25 mtoe per year.[28]

he European Union is anxious to diversify its supply sources. Diversification away from gas supplied directly from Russia, however, may not necessarily lead to diversification away from Russian, or partly Russian-owned, gas. Russia has been pursuing investments in several of the countries from which the EU hopes to procure non-Russian gas. For example, the 2009 joint venture between Gazprom and Nigeria's national oil company includes plans to construct a gas pipeline connecting African producers with Europe.[29]

Nabuco project is widely considered as a rival project to the Russian financed South stream. However, many experts point out that Nabuco is simply not big enough to substitute South stream and provide enough gas for EU countries. There are many reasons that put into question Nabuco as substitute for South-stream, but the fact that Nabuco will not be able to meet demands of EU countries stands out.[30] As a matter a fact, putting a side questionable economic justification, Nabuco will only bring gas to some south-eastern and central European countries, not to entire EU region.[31] On the other hand, as much as EU is dependent on Russian gas, that much is Russia dependent on EU market. Much more eminent is problem facing Russia in the shape of competition in EU market, from Norway and Algeria. Finally, even if this project is technically possible, it would be too expensive. [32] Asian countries are all well equipped with gas recourses, such as Turkmenistan, Pakistan, Iran.

Relying on all facts and figures previously pointed out, we can predict with high level of certainty that Nabuco project will never be finished. That is why

[28] Long Term Outlook for Gas Demand Supply, 2007–2030, Europa energy review,http://www.europeanenergyreview.eu/data/docs/Viewpoints/final_eurogas_brochure_outlook_lr_060510.pdf.

[29] "Gazprom and Nigeria agree to form oil joint venture", Internet: http://af.reuters.com/article/investingNews/idAFJOE55O02W20090625, Jun 25, 2009.

[30] Dempsey, Judy (2009–12–22). "Hoping for More Than Just Energy From a Pipeline".New York Times.

[31] Ibid.

[32] Both for technical and political reasons.

we shall insist on alternative ways of preventing potential gas problems in EU. As we can see, EU and Russia are naturally pointed to each other as partners in energy business. Their dependence on each other will only rise. According to European Commission forecasts up to 2030, energy dependence (for all categories of energy) will rise from 52% in 2004 to about 75% in 2030. [33] As a supplier Norway represents a good balance to Russia's potential monopoly position. Considering Norway's production development potential, and its current exports of 60 Bcm that could reach 100 Bcm/year by 2020.[34] If we look at the historical features, we can see that even during the Cold War, supplies of gas were almost never interrupted, we can safely conclude that fear of Russia using a natural recourses as *energy weapon* in its relations with EU is not realistic.

Today, domestic oil production in the EU is less than in 1990 and only covers 14% of EU consumption. The rest of the oil demand is met by imports. A third of crude oil imports in the EU come from Russia, followed by Norway (15%), Saudi Arabia (9%), Libya (8%) and Iran (5%).[35] This statistic is very deceptive, because eastern-European EU members are completely dependant on Russia as an oil supplier. There are two main pipelines that deliver oil to Europe: one from Russia through the Druzhba North and South pipelines, and one from Norway through Norpipe. But, that is only one small part, because over 85% of crude oil imports to the EU are transported by sea, more precisely by oil tankers. Political situation in Iran are starting to effect economy and oil coming from that country cannot be considered as reliable source for EU. Oil from countries in Americas such as Venezuela and Mexico will almost certainly decrease, due to increased demands from USA.[36]

This increasing dependence of EU on oil from Russia, Middle East and Africa is not something that can be easily to overcome. One of the solutions might be long-term deal between EU and Russia, but such a proposal has some disadvantages comparing to Gas solution. First of all, oil reserves are rapidly diminishing, due to ever-increasing demand. Second, oil is manly used for transport, and gas has much more diversified usage. That makes oil much easer to substitute both on the long and short terms.

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[33] EC Green Paper, 2006.

[34] Ibid.

[35] IEA, 2008.

[36] Arianna Checchi Arno Behrens Christian Egenhofer: "Long-Term Energy Security Risks for Europe: A Sector-Specific Approach" No. 309/January 2009, p. 9.

[37] Ibid.

6. CONCLUSION

For a long period of time, Russia was oil-production leader. In the 1990s, Azerbaijan and Kazakhstan emerged as producers and exporters of oil, and in 2008 those three countries produced 95% of region's oil production.[37] Almost all of Europe is dependant on Russian oil, there are only few exceptions.[38] Key factor in this EU dependence on Russian oil (and gas) is Germany. Most powerful EU country is at the same time most dependent on Russian resources.

EU and Russia are condemned to be partners in the energy field. There is simply no alternative supplier for the EU and the EU is the most lucrative market for Russia (Gazprom gets nearly 70% of its profits from sales to the EU). Best and only solution is long-termed contractual agreement between Russia and EU.[39] On the other hand, we would like to point out common EU politcy in relation with Russia. Individual approach by EU countries has resulted in lack of trust from Russian side, and forced that energy giant to deal with the gas issues wit hesitation and without direct approach. Nabuco gas-pipe line as alternative is too questionable to be relied on and we think that it will never be completed. Chances for fulfilling Nabuco project will decrease every year, and Europe must size opportunity to conclude long-term deal now, when possibility of alternative pipeline still exist and Russia will be more willing to negotiate both price and other conditions of agreement. On the other hand, waiting too much will put Russia in dominant position as soon as it will be obvious that Nabuco is not realistic project anymore. Although, Russia is one of the largest suppliers of the oil for EU,

[38] Norway, Spain.

[39] The confusion between energy dependence and the issue of energy security has undoubtedly clouded approaches to the question of the economic risk stemming from Gazprom's position in the European market. Here, we have developed the point of view that the reality of gas trading between Russia and Europe is determined by market principles and a need for stable long-term contractual arrangements based on credible commitments. While it is inevitable that Gazprom's share in certain national markets will rise thanks to the availability of Russian gas and the development of transmission infrastructures, we challenge the idea that Gazprom is in a monopoly position or that it can create an oligopolistic agreement. Consequently, it would seem unnecessary to guard at all costs against the risk associated with the Russian seller's market power by creating a special power at the European level, the gas contract market being fundamentally a contestable market. It seems unrealistic to give priority to promoting short-term competition by dispersing the assets of the large gas companies rather than using the long-term planning and bargaining powers of the major buyers to encourage development of future supply capacity if, in the end, it has to be recommended that the bargaining power of fragmented players be consolidated by a European coordination of gas purchases. Dominique FINON, Catherine LOCATELLI. "Russian and European gas interdependence Can market forces balance out geopolitics?" CAHIER DE RECHERCHE LEPII Série EPE N° 41 bis, p. 29.

risk of being totally dependant on Russia is not so high as it is in gas sector. Moreover, there is something that EU can do on that subject, without looking for long-term deals with other countries. That is developing eco-friendly alternative for oil. That is best way of protecting environment and being energy independence.

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