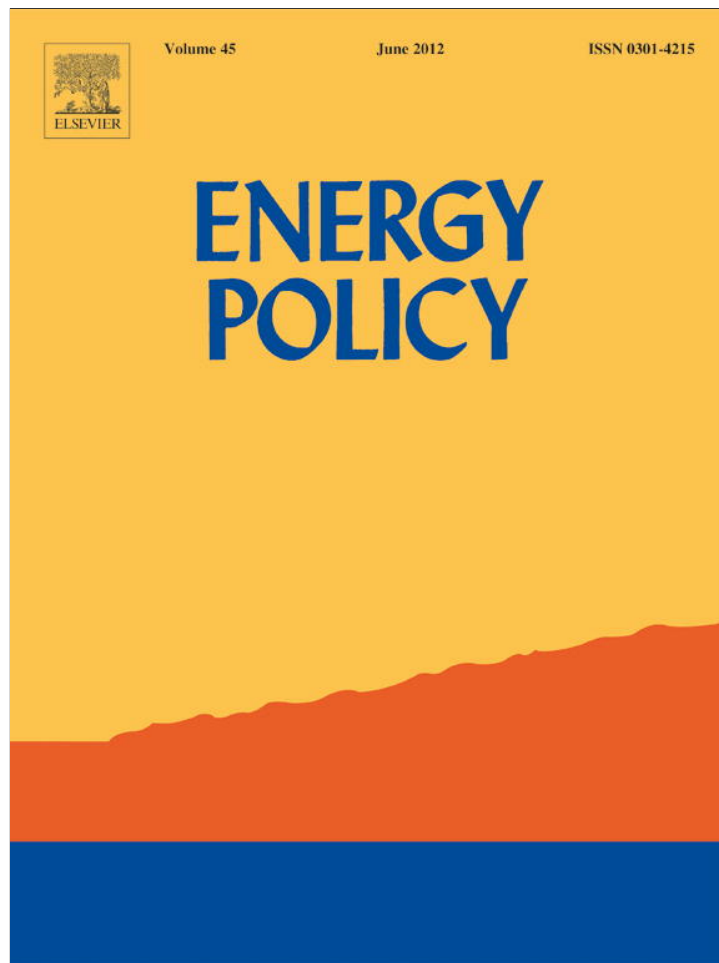


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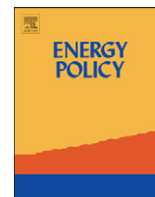


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Asymmetric interdependence in the Czech–Russian energy relations

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ABSTRACT

This paper addresses the issue of asymmetric energy relations between the Czech Republic and the Russian Federation. The theory of interdependence is a widely used concept in political and economic studies of international relations. As can be seen from the analysis of Czech–Russian energy relations and its costs and benefits, the interdependence cannot be limited to a situation of equal interdependence. Energy sensitivity and vulnerability of the Czech Republic towards Russia is considered as a key source of power for the energy policy of Russia vis-à-vis the Czech Republic. The evidence for this claim can be found in the procedures and expressions of Russia's energy policy. On the other hand, the energy policy of the Czech Republic is influenced by the European Union and its focus on the liberalization of the energy market, diversification of the currently existing transportation routes and legislative proposals aimed at strengthening the EU's own energy security. The European Union significantly contributes to an increase of the energy security of the Czech Republic. The European Union and regional cooperation (such as the V4 group) could balance out the asymmetry of interdependence, thus lowering the sensitivity and vulnerability of the Czech Republic towards Russia.

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1. Introduction

When the Czech Republic took over the presidency of the European Council after the French presidency had ended in 2008, the first problem it had to deal with – besides the Near East conflict – was the dispute over natural gas pricing between Russia and the Ukraine. As a result of the disagreement between Russia and the Ukraine, several European states were cut off from the supply of natural gas for approximately three weeks. Once again, the energy crisis revealed the vulnerability stemming from Europe's dependence on the supply of energy from Russia, which represents up to a third of the EU's total consumption of crude oil and a fourth of total consumption of natural gas in the EU (Paillard, 2010; Proedrou, 2007, 2010). As early as in January 2009, a debate was stirred up among the EU member states about the reliability of Russia and Ukraine as business partners. Similarly, in the Czech Republic the question of securing energy supplies and stable relations with Russia was examined in expert and political discourses (Hynek and Strítecký, 2010).

The main goal of the presented article is to explain why the current context of the energy-related interaction between the Russian Federation and the Czech Republic has the potential to influence the energy policy of Russia toward the Czech Republic and what Russian decisions in the area of energy policy have a direct effect on and pose a threat to the energy security¹ of the Czech Republic. The second

goal of the contribution is to show how not only the energy policy of the EU but also the Czech Republic's cooperation with the other members of the Visegrad Four (V4) could contribute to changes in the energy relations between the Czech Republic and Russia and correspondingly to lowering the Czech Republic's dependence on Russian energy supplies and increasing its energy security.

The first part of the article deals with the basic characteristics of the concept of interdependence. Then, the concept is applied to the current energy relations between the Czech Republic and Russia with the aim of postulating a framework of mutual energy relations (Kořan, 2008, pp. 43–44). The second part of the article focuses on defining the specific practices and modes of Russia's energy policy, as these can have a tendency to threaten the stability and security of oil and gas supplies to the Czech Republic. The third part of the article analyses the utility and the potential of the EU in the process of securing the energy supplies of the Czech Republic and support it in its efforts to reduce the Czech energy dependence on Russia. Although the article focuses mainly on the EU as a whole, it also briefly looks at the regional level.

2. The theoretical approach to the energy relations between the Czech Republic and Russia

We believe it is useful to start with a description of the basic characteristics of the neoliberal theory of interdependence, on the basis of which a complex theoretical platform for the following analysis of the current energy relations between the Czech Republic and Russia had been created. The theory of interdependence is a widely used concept in the political and economic

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¹ In this article, the term “energy security” is used in the sense of a sustainable securing of uninterrupted and stable deliveries of energy at commensurate prices (Haghighi, 2007, p. 480; Yergin, 2006, p. 76).

studies of the international relations which attempts to analyze the complexity of cooperative and conflictual issues in interstate interaction (Proedrou, 2007, p. 332; Skurbaty, 2007, p. 11).

Joseph Nye and Robert Keohane define interdependence as a situation in which “across state borders, intensive transactions (flows of money, goods, persons and information) are taking place, entailing certain expenses” (Keohane and Nye, 2001, p. 9). As the actors have an effect on each other, this process includes gains and losses that would not come about without their existence.

The following analysis of expenses and profits in relations of interdependence draws the conclusion that interdependence cannot be limited to a situation of equal interdependence, as this would indicate a relatively balanced situation. Keohane and Nye emphasize “an unequal distribution of gains and expenses lies at the heart of asymmetrical interdependence, which secures the source of power” (Keohane and Nye, 2001, p.9).

In order to understand the nature of the asymmetrical interdependence as a source of power it is important to look closer at the peculiarities of its dimensions and the ways it can be manipulated in order to become a source of power. Power is defined as the ability of an actor to get others to do something they otherwise would not do (Skurbaty, 2007, p. 12). Keohane and Nye stress that when one considers the asymmetrical interdependence as a source of power one thinks of the power as control over resources, or potential to affect outcomes. In other words, it is a situation when a “less dependent actor in a relationship often has a significant political resource, because changes in the relationship (which actor may be able to initiate or threaten) will be less costly to that actor than to its partner. This advantage does not guarantee, however, that the political resources provided by favorable asymmetries in interdependence will lead to similar patterns of control over outcomes” (Keohane and Nye, 2001, p. 10; Nye, 2007). There are two dimensions that are important for the understanding of the role of power in interdependent relations, these are: sensitivity and vulnerability.

Sensitivity involves degrees of responsiveness within a policy framework i.e., “how quickly do the changes in one country bring costly changes in another, and how great are the costly? It is measured not merely by the volume of flows across borders, but also by the costly effect of changes in transformations on societies or government” (Keohane and Nye, 2001, p. 10). Thus, sensitivity refers to the costs that each side suffers when the other state does not offer it the benefits it should get from their relationship, for example reduction of energy supplies or withholding payment for the energy bought. Sensitivity interdependence is created by interactions within a framework of policies where the framework remains unchanged. Sensitivity interdependence can be social, political or economic (Wendt, 1999, p. 343; Keohane and Nye, 2001, p. 10).

In contrast, vulnerability can be defined as “an actor's liability to suffer costs imposed by external events even after policies have been altered” i.e., if the framework of policies could be changed and new and very different policies were possible what would be the costs of adjusting to the outside change (Keohane and Nye, 2001, p. 11). Vulnerability is the degree of weakness of a state in a relationship of interdependence with another state in a situation where the other state tries to end this relationship, for example if Russia ceased supplying gas to Estonia, Estonia would face severe problems due to a lack of alternative sources (Proedrou, 2007, p. 332). Vulnerability depends on more than aggregate measures. It depends on whether a society is capable of responding quickly to change, whether substitutes are available and whether there are diverse sources of supply (Nye, 2007, pp. 214–215).

How does this distinction between sensitivity and vulnerability help us to understand the relationship between interdependence

and power? According to Keohane and Nye, “Clearly, it indicates that sensitivity interdependence will be less important than vulnerability interdependence in providing power resources to actors. If one actor can reduce its costs by altering its policy, either domestically or internationally, the sensitivity patterns will not be a good guide to power resources” (Keohane and Nye, 2001, p. 13).

To illustrate both concepts and its difference, we use following example. In energy relations, the Czech Republic is more sensitive to increase of oil and gas prices, than Russia which as one of the main producer and exporter support high prices of energy resources. The Czech Republic is also vulnerable in relation to Russian decision to cut off supplies of gas and oil because of minimum of domestic energy resources and lack of alternative suppliers, although less vulnerable than countries rely more heavily than the Czech Republic on imported oil and gas from Russia. Russia, on the other hand, is less sensitive to oil and gas purchases from the Czech side and its possible decision to reduce or substitute Russian oil or gas imports by another suppliers (import of Caspian oil through pipeline IKL or increased import of Norwegian natural gas) or energy source (replacement of gas by domestic coal in energy mix). In line with this statement, Russia is less vulnerable because loss of the Czech energy market would have a minimal financial impact on change of Russian economy.

As Joseph Nye Jr. points out, “the state that is less vulnerable does not necessarily have to be less sensitive as well” (Nye, 2007, p. 214). On the Russian side, because of its heavy reliance on exported oil and gas as its primary source of state revenue, Russia's policymaking sphere also is highly attuned to changes in the world crude oil and natural gas price. If too many producers were pumping too much oil, the global price would drop, and Russia would suffer (Bartholomees, 2006, p. 254). In this respect, Russia is highly sensitive to decrease global price and loss of revenue from export of oil and gas primarily to the EU, which is the Czech Republic a member. As a result of it, Russia is also vulnerable toward the EU attempts both to diversify energy resources and producers, and to build new pipelines.

3. The energy (in)security of the Czech Republic and its relations with Russia

Besides being aware of the basic characteristics of the theory of interdependence, in order to understand the energy relations between the Czech Republic and Russia, one has to properly identify the situation of the Czech Republic in view of its dependence on the import of crude oil and natural gas from Russia, as these energy supplies account for three quarters of the Czech Republic's total consumption of oil and gas (Ministry of Foreign Affairs of the Czech Republic, 2007).

Even though this figure might seem dramatically high at first look, the overall dependence of the Czech Republic on energy raw materials from Russia is only slightly above 40 percent, given the high proportion of coal and nuclear power in the Czech energy mix. For composition of the Czech energy mix, see Table 1.

Table 1
Energy mix of the Czech Republic in 2010.
Source: Ministry of Industry and Trade of the Czech Republic.

Composition	Share of percent
Solid fuels	47
Natural gas	20
Liquid fuel (oil)	18
Nuclear energy	12
Renewable sources	3

3.1. Crude oil

In the Czech Republic, smaller sources of crude oil can be found in the region of South Moravia. Although the oil from these sources is of a high quality, it only provides about 2 percent of the Czech oil consumption each year. Thus, the Czech Republic depends on imports for approximately 98 percent of its oil consumption. Total oil imports for 2010 were 7.733 million of tons (MERO ČR, 2011).

The Czech Republic imports about 64 percent of the oil it consumes from Russia. Besides it, the Czech Republic also imports oil from Azerbaijan, Libya, Kazakhstan, Algeria and Turkmenistan (refer to Table 2) (Ministry of Foreign Affairs of the Czech Republic, 2007; Ministry of Industry and Trade of the Czech Republic, 2010).

Russian oil is transported primarily via the southern branch of the Druzhba pipeline, which accounts for 59 percent of total oil imports (Ministry of Industry and Trade of the Czech Republic, 2010). It is a medium-sulfuric oil of the Russian Export Blend (REB) type. The Czech Republic has a transport contract with the Russian state-owned company Transneft and the oil itself is bought directly from the Russian oil mining companies.

An alternative to the Russian oil deliveries is provided by the Ingolstadt–Kralupy–Litvínov (IKL) pipeline, which was commissioned at the end of 1995. The IKL pipeline is used to supply the Czech Republic with low-sulfuric (sweet) oil, primarily from the Caspian Sea region (Azerbaijan, Kazakhstan). The Czech Republic imports via pipeline IKL about 2–3 million tons of oil annually (Ministry of Foreign Affairs of the Czech Republic, 2007). The oil is delivered by crude-carrying tankers to the oil terminal in Trieste from where it continues via the trans-Alpine TAL pipeline which joins the IKL in Germany. The IKL pipeline also supplies refineries in Schwechat (Austria), Vohlbürg and Karlsruhe (Germany). With its launch, the Czech Republic has no longer been 100 percent dependent on oil deliveries from Russia (Litera et al., 2006).

The total transportation capacity of both pipelines – Druzhba and IKL – is approximately 19 million tons of oil per year. More specifically, the annual capacity of the Druzhba pipeline in the Czech Republic is 9 million tons of oil, and the transportation capacity of the IKL pipeline is 10 million tons of oil per year (Ministry of Industry and Trade of the Czech Republic, 2010).

3.2. Natural gas

The situation of the Czech Republic is very similar when it comes to natural gas. The Czech Republic is basically fully dependent on the supply of natural gas from foreign countries. In the past, Russian gas imports covered Czech consumption up to almost 100 percent. However, in the nineties, the Czech government decided to diversify away from Russia and concluded a contract on gas imports with Norway (Pačes Report, 2008).

Table 2
Oil import to the Czech Republic by countries in 2010.
Source: Ministry of Foreign Affairs of the Czech Republic.

Country	Import of oil (million of tons)	Share of percent
Russian Federation	4.928	64
Azerbaijan	1.434	18.7
Turkmenistan	0.693	8.5
Kazakhstan	0.285	3.7
Libya	0.262	3.4
Algeria	0.131	1.7
Total import	7.733	–

In 1998 a contract was signed between the companies Transgas and Gazexport for a delivery of 8 to 9 billion cubic meters (bcm) of Russian gas to the Czech Republic annually for a period of 15 years. In 2006, this contract was extended to 2035 by the company RWE Transgas (the successor company to Transgas), which is responsible for the long-term gas deliveries to the Czech Republic (Litera et al., 2006, p. 23).

The Czech Republic is to a high degree dependent on Russian gas (see Table 3), which is transported from the reservoirs near the Russian city of Orenburg through the Soyuz and Brotherhood gas pipelines. These deliveries cover 75 percent of the Czech annual gas consumption (RWE Transgas, 2011). The Brotherhood pipeline is linked to the Transit pipeline network south of the Moravian city of Brno, which ensures the transportation of natural gas mainly in the east–west direction to other EU countries.

The current operational configuration of the Czech Republic's Transit pipeline network also makes it possible to reverse the flow of gas from the standard east–west direction to the emergency west–east direction (see Map 1). This possibility was first taken advantage of during the 2009 gas crisis, when the company RWE used the pipeline network to transport natural gas received via the Jamal pipeline at the Czech–German border. From there, the gas traveled through the territory of the Czech Republic to the border delivery station at Landshut (Lanžhot) and then to Slovakia (Ministry of Foreign Affairs of the Czech Republic, 2009; Tichý, 2009a, p. 102).

The Czech Republic took an important step towards reducing its dependence on Russian gas in April 1997. Despite some reservations from the Russian Federation and Gazprom, Transgas signed a long-term gas contract with Norway. The contract secured deliveries of Norwegian natural gas to the Czech Republic up to 2017. The Norwegian natural gas enters the Czech Republic at the delivery station in St. Catherine's Mountain (Hora Svaté Kateřiny) in the Ore Mountains (Krušné hory). The volume of the

Table 3
Gas import to the Czech Republic by countries in 2010.
Source: Ministry of Foreign Affairs of the Czech Republic.

Country	Share of percent
Russian Federation	75
Norway	24
Germany	0.4



Map 1. Gas Pipelines from Russia to Europe.
Source: <http://positivity.wordpress.com/2008/09/09/european-dependence-on-russian-energy/>.

gas deliveries is at the level of about 2 bcm per year (Pačes Report, 2008, p. 124).

In addition to the diversification of natural gas supplies, eight underground gas storages represent another tool strengthening Czech energy security. Underground gas storages have an overall capacity of approximately 3.077 bcm of gas, which makes up to 33 percent of the Czech yearly gas consumption (Pačes Report, 2008, p. 127). The goal of the Czech state energy conception from October 2009 (containing energy-related plans for the period until the year 2050) is to increase the capacity of the underground gas storages up to 40 percent of gas volumes consumed by the CZ per year and to guarantee monthly gas production up to 70 percent of the average daily gas consumption during the winter by 2015 (Ministry of Industry and Trade of the Czech Republic, 2010).

4. The asymmetric interdependence between the Czech Republic and Russia

If we take into consideration the given energy situation of the Czech Republic and try to apply the theory of interdependence to the relations between the Czech Republic and Russia, we can see that the energy interaction between the Czech Republic and Russia is an asymmetric interdependence rather than a one-sided dependence. This will be the argument for the remainder of this section. This assertion will be tested against selected examples of the sensitivity and vulnerability of not only the Czech Republic, but also Russia.

4.1. The energy sensitivity of the Czech Republic

As was already mentioned in the text, the energy sensitivity of a particular state is expressed by the costs of a change in the energy interactions with another party (Keohane and Nye, 2001, p. 11). In this regard, the energy sensitivity of the Czech Republic is revealed by the fact that it would have to spend greater amounts of money for deliveries of more expensive oil through the IKL pipeline if Russia decided to cut off or reduce the agreed-upon deliveries of its oil to the Czech Republic (this scenario once already materialized in July 2008 when Russia cut off its oil deliveries to the Czech Republic – see below).

The energy sensitivity of the Czech Republic would be similarly affected should a short-term suspension of Russian gas deliveries take place. The last time such a suspension occurred was in January 2009. Although the Czech Republic handled the energy crisis very well (i.e., without declaring a state of emergency and without limiting individual consumers) and even managed to help its more severely affected neighbors, it had to import more expensive gas from Norway via the northern route and its costs increased (Hynek and Střítecký, 2010, p. 81).

The energy sensitivity of the Czech Republic would also be exposed if Russia did not invest enough into the development of new oil and gas fields and the refurbishment of its outdated and decrepit transportation infrastructure (Keohane and Nye, 2001, pp. 10–11). In this context, there exists a real threat that Russia might not be capable of meeting the growing oil and gas demand of the EU countries. In this scenario, the Czech Republic and other European states would be forced to make unexpected investments into renewing the Russian energy sector and infrastructure just to secure their own deliveries of energy resources.

The Czech Republic's sensitivity is not only connected to a possible suspension of deliveries of mineral raw materials on the part of the Russian Federation. The Czech Republic is also sensitive to any sharp rise in the prices of oil and gas as such a

price increase would have negative effects on all the economic and social areas of the country's functioning.

4.2. The energy vulnerability of the Czech Republic

In contrast to a country's energy sensitivity, its energy vulnerability depends on the availability of alternative resources that could take the place of an unavailable raw material or compensate for its unavailability. For example, if Russia stopped its gas deliveries to the Czech Republic, the Czech Republic would not be able to compensate for the Russian gas in a time horizon exceeding 90 days, because of high degree of dependence on Russian gas (Pačes Report, 2008, p. 127). However, if Russia stopped exporting oil to the Czech Republic permanently or at least for a longer period of time, the vulnerability of the Czech Republic would be relatively low, given the fact that the Czech Republic could substitute Russian oil with imports of non-Russian Caspian oil via the IKL pipeline. The overall share of this oil in the overall volume of the Czech oil imports has continued to grow since 1999 and this growth happens at the expense of the Druzhba pipeline. This trend is based not only on geopolitics, but also due to the bad technical condition the Druzhba pipeline is currently in Kratochvíl and Kuchyňková (2009, p. 71).

According to Russia's energy strategy till 2030, Russia's long term interest is to (1) lower its transit dependence on the Ukraine, Belarus and Poland; (2) to diversify export paths to the EU and (3) to diversify exports (with an eye to Asia) and thus lower Russia's dependence on the EU (Energetičeskaja strategija Rossiji na period do 2020 g., 2003; Energetičeskaja strategija Rossiji na period do 2030 g., 2009). To reach these goals, Russia plans to build several transportation projects for oil (the Baltic Pipeline System II and the East Siberia–Pacific Ocean pipeline) and a couple of new gas pipelines (Nord Stream, South Stream). Most of these projects do not count with the Czech Republic as a direct buyer or transit country for Russian oil or gas and therefore they are circumventing the country. Therefore, these projects could significantly increase the vulnerability of the Czech Republic.²

Luckily, Russian plans to diversify energy export from the EU is unlikely to materialized in coming years as the EU represent the most solvent and credible partner. As the EU remains the most important partner a permanent stop of Russian oil or gas supplies to the Czech Republic would directly affect Russian exports of both commodities to other European countries as well. Given by historical development of a Soviet energy export infrastructure in oil and gas, Czech Republic is a key country for energy transit to Germany (see Map 1). Although Czech–German gas transfer experienced continuous decline in volumes since the 1990s, Russian plans to build new gas infrastructure is considered to be a game changer. Gazprom plans to diversify its gas export corridors to the EU bypassing Ukraine, currently the most important energy corridor to Europe, materialized in November 2011 when first branch of the Nord Stream gas pipeline came online.

Russian efforts to diversify its energy exports to the EU could find Czech Republic in very unpleasant position in coming years, changing indispensable transit country to a dead branch of Ukraine gas corridor. Nord and South Stream realization could have far reaching consequences for Czech Republic in terms of its vulnerability making it dispensable segment in gas delivery chain from Russia to Germany. The impact on the Czech Republic could be fourfold. First, the Czech Republic could be bypassed as a transit country without disruption of deliveries to Germany,

² For example, after the Nord Stream pipeline is completed, it will be easy for Russia to shut down gas deliveries to today's transit countries, including the CR, but without threatening the market for Russian gas in the main European economies, namely those of Germany and France.

Russia's most important partner in energy. Second, outfall of 60 million EUR of income from transit fees every year. Third, reduce political significance of the Czech Republic in relation to Russia on the one hand and to Germany on the other. Fourth, negative effect on domestic gas network designed as a transit infrastructure for large gas volumes. Underutilization means higher operating costs for domestic consumers (Ministry of Foreign Affairs of the Czech Republic, 2009).

Luckily for the Czech Republic, these scenarios are unlikely. Plans to supply Bavaria with gas from Nord Stream resulted in projects for number of interconnecting pipelines. One of them, the Gazelle pipeline, supposes to connect Czech–German border stations Hora Svaté Kateřiny and Waidhaus as the shortest possible way to connect Saxony and Bavaria via the western part of the Czech Republic (see Map 2). This pipeline will ensure that the Czech Republic will not be omitted from Russian deliveries to Germany.

4.3. The energy sensitivity and vulnerability of the Russian Federation

Up to now, we were dealing with the vulnerability and sensitivity of the Czech Republic. It has to be stated, however, that the state of the asymmetric interdependence of the Czech Republic and Russia can make the latter vulnerable and sensitive as well.

The sensitivity of the Russian Federation, whose economy is heavily dependent on the revenues from exports of Russia's mineral riches, involves two factors: the risk of other countries importing a smaller amount of mineral raw materials and the risk of Russia receiving lower profits from these exports. Russia's energy sensitivity is also influenced by the threat of a country not paying for its deliveries of Russian oil and gas, and the real or perceived unreliability of transit countries. We have to keep in mind that at the moment a huge proportion of Russian gas traveling to Germany (Russian gas accounts for roughly 43 percent of German gas imports) and France (Kratochvíl and Kuchyňková, 2009, p. 72) still has to cross the territory of the Czech Republic. This situation will change significantly with the commissioning of the Nord Stream pipeline.

In contrast, the vulnerability of Russia consists of the risk of losing its access to the EU energy market and European countries' efforts to diversify away from Russia. The situation is similar in the case of the EU's efforts to reduce its dependence on Russian oil. At the same time, Russia is also vulnerable to the EU's

attempts to build new alternative routes for the transportation of oil and gas.

One of the few opportunities that the Czech Republic has in order to gain some leverage on Russia is the Czech Republic's capacity to support new transportation routes. If one of the planned pipelines circumventing Russian territory (e.g. the Nabucco gas pipeline and the Trans-Caspian gas pipeline) was actually built, the Russian Federation's sensitivity to smaller purchases of Russian oil and gas by the EU would be exposed. It would also affect Russia's vulnerability in the sense that its share and influence on European markets would decrease.

5. Asymmetric interdependence as a source of power for the energy policy of Russia vis-à-vis the Czech Republic

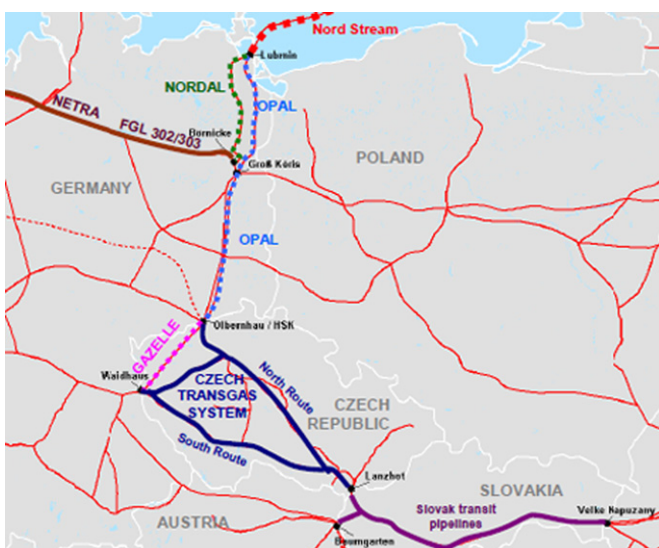
In spite of the partial vulnerability and sensitivity of the Russian Federation, the asymmetric interdependence in the Czech–Russian energy relations acts as a source of Russia's power and a potential threat to the energy security of the Czech Republic (Keohane and Nye 2001, pp. 9–10) because of the high level of the Czech Republic's dependence on oil and gas from Russia. Other factors reinforcing the asymmetric nature of the energy relationship is the unequal distribution of gains and expenses and the Russian idea of national energy policy, which oscillates between notions of maximum gains and the employment of energy sources as a means to gain a dominant economic and political position in the world.

All the basic priorities and main tasks of the Russian Federation's energy policy were formulated in the August 2003 "Strategy for the Development of the Energy Policy of the Russian Federation up to the year 2020". In the Strategy, energy policy is closely tied to Russia's foreign policy and diplomacy (Energetičeskaja strategija Rossiji na period do 2020 g., 2003). Russia's energy policy is conceived similarly in the new "Energy Strategy of the Russian Federation up to the year 2030", which was made public in November 2009. The Energy Strategy sets a new strategic orientation for the energy sector in an effort of the Russian economy to move on to a new innovative path of development. The main goals of the Energy Strategy are to maximize the effectiveness of exploitation of natural resources and the potential of the energy sector for the long term sustainable growth of the domestic economy, improve the living standard of the citizens of Russia and strengthen Russia's position in other countries and globally. In Russia, the country's vast energy resources are generally recognized as an instrument for renewing Russia's power and status in the international arena and also as a means to protect Russia's sovereignty against external influences (Energetičeskaja strategija Rossiji na period do 2030 g., 2009).

Jeffrey Mankoff, in his report "Eurasian Energy Security", defined the following energy policy practices of the Russian Federation that potentially could have negative effects on the security and stability of oil and gas supplies to European countries: (1) using energy supplies as an instrument of Russia's foreign policy; (2) trying to diversify the recipients of Russian energy commodities and (3) supporting Russian energy companies in their effort to penetrate the energy markets of other countries or the EU (Mankoff, 2009, p. 5).

5.1. The use of energy sources as an instrument of foreign policy

The greatest threat not only to the sensitivity but also to the vulnerability of the Czech Republic is the scenario where Russia might reduce or cut off its oil or gas supply in order to employ its energy exports as an instrument of pressure to achieve its political or economic goals. There has been talk in Russia about



Map 2. The Nord Stream and related infrastructure.
Source: Lochner-Lindenberger 2009.

the possibility of using energy supplies as a means for achieving Russia's political goals in relations with other states ever since the wave of state interventions in the energy sector in the period 2003–2004.

According to Vladimir Milov, the conservative part of the Russian academic community started to think of energy as a key factor in foreign policy in 2001–2002, when it was clear that global oil and gas prices would rise and remain at a high level. At the same time, Milov presented four basic incentives for the use of energy as a foreign policy instrument: (1) energy dependence of other states on Russian energy supplies could be used to achieve certain political goals in these states; (2) the opportunity for a future expansion of Russian energy deliveries primarily through new pipelines could be used to support the interests of the Russian Federation in various countries; (3) investors and energy companies from countries that are dependent on deliveries of Russian energy could become involved in the management of oil and gas mining projects or in the development of Russian energy reserves with the purpose of supporting and strengthening Russia's bilateral relations with these countries; (4) Russia could gain control over companies that are in charge of the oil and gas imports in a given country and also over key energy companies that operate the networks of oil and gas pipelines on their territories for the sake of achieving economic and political goals (Milov, 2006, pp. 14–15).

Robert Larsson, in his study *"Russia's Energy Policy – Security Dimensions and Russia's Reliability as an Energy Supplier"*, identifies several motives that lead the Russian Federation to use its energy resources politically: (1) to get better prices for oil and gas deliveries from the importing countries; (2) to gain control over the pipeline distribution networks in other countries; (3) to reduce the autonomy and influence the foreign policy of its neighbors; (4) to punish the neighboring states for their pro-western orientation and their "disloyalty" to Russia; (5) to coerce other states into making economic concessions (such as selling shares in their strategic energy companies) (Larsson, 2006).

Some of the best examples of Russia using its energy riches as a tool of foreign policy were Russia–Ukraine gas wars in 2006 and 2009. Resulting gas crisis threatened the energy security of the European Union. Russia–Ukraine gas rows resulted in the reduction in 2006 and complete disruption in 2009 of gas shipping through Ukrainian territory to the EU. The key features of the disputes were unresolved pricing issues between two companies, Russian Gazprom and Ukrainian Naftogaz. It was not only about a purchase of Russian gas by Ukraine, but also about the pricing of transit fees for gas sales to Europe. Ukraine tried to exploit its key transit position to achieve better conditions for their own good. Gazprom on the other hand, with strong support from Russia political leadership following its political goals, argued that Ukraine already enjoy lower gas prices than Russia's western trade partners. Constant topic of mutual accusations was a question of gas stealing in Russia's wording and technical gas from Ukraine point of view (Pirani et al., 2010, p. 9).

The 2007 energy crisis between Russia and Belarus was not about the gas, but over oil transit prices. As a result, the oil supplied via Belarusian branch of the Druzhba pipeline were disrupted with negative effects on several EU member states, especially the three-day reduction in supplies to Poland and Germany. The Russian Federation has also used its energy riches in a similar way in regard to Latvia, Georgia, Moldova and other countries that used to be a part of the Soviet Union (Milov, 2006; Larsson, 2006).³

³ According to Robert Larsson, after 1992, there were 55 threats of Russia stopping its energy deliveries or changing its energy prices and out of these only 11 did not have a political background. For example, in 1998–2000, the Russian



Map 3. Reverse gas flows during the 2009 gas crisis.

Source: www.entsog.eu.

The Czech Republic itself got a taste of Russia's unreliability at the beginning of July 2008. Possibly as a direct result of the signing of an agreement between the Czech Republic and the United States on the stationing of some elements of the U.S. anti-ballistic missile defense system on the territory of the Czech Republic, Russia cut off its oil deliveries through the Druzhba pipeline, allegedly due to "technical reasons". The real reason behind this suspension of deliveries is, however, still the object of discussions in the Czech Republic (Kratochvíl and Kuchyňková, 2009, p. 76).

At the beginning of 2009, Central Europe experienced the worst natural gas cut-off in a decade. What appeared to be usual matter of days took longer than three weeks and raised the question of energetic security in Central Europe with new intensity. To design the theater of 2009 gas war we will briefly describe position of Russia and Ukraine. On the Russian part of the equation it was a free-fall in oil prices after reaching its top in July 2008. Natural gas prices are closely connected with oil prices, but with few month delays. Gazprom as well as the rest of Russian energy economy suffered a lot, and every years' negotiations with the Ukraine seemed to be a good opportunity to level the Ukrainian prices with European netback. Also new delivery terms were signed with Gazprom's most important gas supplier – Turkmenistan setting a price of \$ 340 per tcm. Under these terms Gazprom faced difficult situation and a prospect of loss. Moreover, natural gas demand prediction for 2009 recognized the possibility of decline on the EU market. Under these circumstances Gazprom was in no mood to give up every years' negotiations easily. The coming economic downturn stroke the Ukraine even harder than Russia, mostly because of export structure and no energy savings from previous years of plenty. Paradoxically, this gave the Ukraine room for maneuvers. The Ukrainian economy, one of the world's most energy-inefficient, was in a recession and needed less gas. Mild weather over Europe late last year and 17 bcm in storage held by Naftogaz Ukrainy appeared to be the best time to negotiate better conditions for 2009.

The 2009 gas crisis was the worst one in terms of its length and impact on gas importing states in Central Europe. However, Czech Republic got some political points out of it. Not only in terms of EU Presidency in the first half of 2009, but also as a gas bridge between old and new member states acting as a transit country for reverse gas flows to struggling Slovakia (see Map 3).

(footnote continued)

energy company Transneft stopped its oil deliveries to Lithuania nine times (Larsson, 2006, p. 191).

Thank to its underground gas storage capacities Czech Republic was ready for almost three weeks of disruptions and was even ready to support its eastern neighbors in gesture of solidarity.

However, Czech Republic was not intact by the crisis lethally; the conflict turns gas dependency into an acute problem for the EU in general but also for new member states, including Czech Republic, in particular. The crisis accelerated political efforts to decrease it. Even the states with relatively good relations with Russia, but almost absolutely dependent on Russian gas flows started to rethink their position.

5.2. Efforts to diversify the energy market

There are two other ways in which the vulnerability of the Czech Republic in its energy relations with Russia could be affected: (1) Russia is currently making efforts to diversify its oil exports in order to include more “big” clients, namely the US and China; (2) Russia is also trying to decrease its transit dependence and transport its oil exports via tankers instead of pipelines (Energetičeskaja strategija Rossiji na period do 2030 g., 2009). With these measures, Russia is trying to gain full control over the export of its energy resources to world markets.

The Russian Federation took its first steps in this direction approximately in 2000 and it will come considerably closer to this goal through the realization of two oil transportation projects. The first project is the Baltic oil pipeline system with a transportation capacity of 74 million tons of oil per year which was completed in 2007. Its second phase, the Baltic Pipeline System II with initial capacity of 30 million tons a year and 50 million tons of oil per year at a later stage should be completed by 2011 and commissioned in 2012 (Vatansever, 2010, p. 10).

The second project is the East Siberia-Pacific Ocean oil pipeline (ESPO) with a capacity of 80 million tons of oil per year. This pipeline is currently one of the biggest infrastructure projects undertaken by the Russian oil industry. The ESPO will tap the vast oil fields of Eastern Siberia and ship the oil to China and other countries in the Asia-Pacific region. The first section of the ESPO pipeline, which has a total length of some 2750 km and stretches from Taishet to Skovorodino, was completed in December 2009 and first oil to China through this pipeline was delivered at the beginning of 2011 when the interconnection of the tubular systems of the neighboring states were completed. The second section of the ESPO pipeline will have a total length of 2100 km, leading from Skovorodino to Kozmin. It is expected to be finished in 2015 (Ungermann, 2010, p. 4).

At that point, the Russian Federation will need 80–130 million tons of oil annually to operate both projects at full or near-full capacity. However, the Russian Federation lacks the capacity to boost its oil production to such a degree. At the same time, the Russian Federation will have difficulty finding an adequate volume of oil in other producer states. This could lead Russia to a decision to “optimize” the export corridors that carry Russian oil to world markets. This optimization will have an impact in particular on the traditional pipelines such as Druzhba, which is in a very bad technical condition and crosses several transit states. Thus, there is a real possibility that the Czech Republic, which is connected to the southern branch of the Druzhba pipeline, might suffer the consequences of a shut-down or a substantial reduction of oil imports through the pipeline.

5.3. Russia's firm presence in and intensive penetration into the new energy markets

The asymmetric interdependence – acting as a source of power – enables Russia to ask for more concessions from the (more vulnerable) Czech Republic, even in other areas of their mutual

relations. The Russian energy company Gazprom is trying to gain a dominant position on the Czech gas market by becoming the exclusive distributor of natural gas. Currently, the company RWE Transgas holds some 62 percent of the Czech natural gas market. If Gazprom managed to gain control of the energy market of the Czech Republic or succeeded in acquiring a majority share in some domestic energy companies, the Czech Republic's opportunities to lower its dependence would be significantly reduced (Hodač and Strejček, 2008).

Similarly, the Russian oil company Lukoil is trying to obtain a share of the Czech corporation Česká rafinářská, a.s. (Czech Refineries), which is the biggest oil refinery in the country capable of processing non-Russian oil. With this step, Lukoil, like Gazprom, would gain direct access to the energy market of the Czech Republic. In this context, there are fears and speculations that the new owner could decide to close down the refinery in Kralupy and cause the Czech Republic to lose the option of processing non-Russian oil delivered via the IKL pipeline, thus effectively killing the only alternative to the Czech Republic's dependence on Russian oil (Tichý, 2010).

The Russian Federation is also keen on entering the liquefied natural gas (LNG) market and developing new export directions for its energy resources. According to many experts, by doing this, Russia could disrupt the balance of the interdependence which would affect not only the Czech Republic, but the EU as a whole. These analysts are also of the opinion that such an aggressive energy policy on behalf of the Russian Federation is bound to cause significant price spikes of raw energy resources (Youngs, 2009, p. 90).

6. The energy security challenges of the Czech Republic

For the Czech Republic to improve its asymmetric position in its relations with Russia, it will be necessary to take the following steps in the short to medium term:

6.1. The Czech Republic should promote the energy policy of the European Union

The main determining factors of the Czech Republic vis-à-vis the EU energy strategy are the effort of the Czech Republic to balance out the dominant share of Russian oil and gas in its energy imports, the effort to further diversify energy importers and find alternatives to Russian deliveries and at the same time to secure stable imports of mineral raw materials.

In this context, the platform of the European Union represents an important vector for the Czech energy policy, which is confronted and influenced by various initiatives stemming from Brussels. These initiatives are focused on – among other things – the liberalization of the gas and electricity markets of individual member states, diversification of current transportation routes and proposals for strengthening the EU's energy security. The EU has the potential to play a key role in reducing the sensitivity and vulnerability of the Czech Republic. At the same time, the EU as a whole can significantly influence Russia's vulnerability and balance out the asymmetry of the interdependence. EU–Russia energy relations are based on the concept of interdependence.

According to Mikko Palonkorpi, the relative strength of energy interdependence can be measured by such factors, as energy trade balance, level of (domestic) energy resources, possibilities of energy diversification and specific total energy consumption in the country (the ratio of the raw material to the total primary energy consumption). This serves to identify the interdependence of consumer energy resources (Palonkorpi, 2006).

On the territory of the European Union, there are no significant mineral reserves. The European Union has only about 2 percent of global oil reserves and 4 percent of natural gas (Vošta-Bič-Stuchlík, 2008, p. 39). The EU27 is dependent on the import of fuels from 53.1 percent, of fossil fuels from 41.2 percent, of gas from 60.3 percent and of oil from 82.6 percent. The gross inland consumption of the EU27 was composed of oil 36.9 percent; natural gas 24 percent; coal 17.8 percent; nuclear 16 percent; renewables 7.1 percent; other 0.2 percent (Vošta-Bič-Stuchlík, 2008, p. 50). The EU currently imports from Russia about 30 percent of oil, which represents approximately 28 percent of EU oil consumption. While 40.8 percent of natural gas exported from Russia to Europe represents more than 25 percent of total gas consumption (Youngs, 2009, p. 80).

On other hand, to determine the supplier's dependence on exports of oil and natural gas, the following indicators have to be measured: the proportion of export revenues (oil and gas) to GDP, the share of revenue from the export of energy raw materials to the state budget revenues and share of the export revenue to total revenue exports (Palonkorpi, 2006). Export of crude oil and gas accounts for more than 65 percent of Russian total exports. Over 60 percent of Russian crude oil and 90 percent of Russian gas goes to the EU. Between 75 percent and 80 percent of Russian export revenues are directly linked to the European Union energy market (Paillard, 2010, p. 72). Approximately 40 percent of the Russian public money comes from European oil and gas markets and 60 percent of profits from the sale of oil and natural gas to the EU go into the Russian budget (Proedrou, 2007, p. 334). The energy sector contributes about 25 percent to the total output of the economy. In the last few years, energy sector contributes approximately 30 percent to Russia's GDP. In 2009, revenues from export of oil and natural gas accounted for about 20 percent of Russian GDP, the sales drop could be related to the gas dispute with Ukraine (Paillard, 2010, p. 72).

Energy interdependence between Russia and the EU can be described as asymmetrical against Russia, where Russia is more dependent on the EU energy market than EU depends on Russian energy supplies. While the vulnerability of the EU, due to interruption of import of crude oil or natural gas from Russia, would be relatively less, because EU can replace the energy consumption different energy sources (nuclear, renewables, LNG) or other suppliers (increased import of Norwegian and North African gas or increased import of Libyan or Saudi oil). The vulnerability and sensitivity of the Russian Federation would have been far more affected (Proedrou, 2007, pp. 340–341). Russia is dependent on the EU energy market as a substantial part of Russia's energy exports go to the EU at high prices, which constitutes a large part of state revenues and forms an essential part of the Russian budget and share of exports. (Skurbaty, 2007, p. 42). At the same time, Russia does not have a great alternative of diversification of natural gas or oil in the short and medium term.

On the other hand, this is particularly true for the old EU member states. Russia is advantageous position vis-à-vis most new EU member states, which are in the long term dependent on supplies of energy resources, mainly gas from Russia. There is an asymmetrical interdependence against new EU member states because for these countries would have complete cease or interruption energy supplies catastrophic consequences. At the same time, new Europe's overt dependence on Russian oil and gas makes these countries strongly vulnerable to Russia's potential decision to acts of political blackmail and manipulation (Proedrou, 2010).

To strengthen the energy security and defend the member states against the assertive policies of the Russian Federation, the European Union supports the liberalization of the internal market with electricity and natural gas and advocates rules of competition

for the protection of its member states from the influence of Russian monopolistic state-owned energy companies. The EU is also striving towards the integration of old and new gas suppliers into the European energy market, as this would stimulate competition. Competition supposes to decrease the Russia's share in the EU energy market and it should also result in stability and more energy secure EU (Proedrou, 2007, 2010; Eikeland, 2011).

The EU's energy regulations have the potential to transform the interdependence between the EU and Russia in favor of the EU. Russia's energy sensitivity will be affected as a result of the reduction of gas purchases on the part of the EU and thus also the reduction of financial revenues from the sale of Russian gas. The reduced presence of Russia on European energy markets will then have an influence on its vulnerability. Besides finishing the liberalization of the energy market, the EU – in its efforts to reduce the energy dependence of some states – focuses on diversifying its sources and suppliers and on building new transportation routes (European Commission, 2008, 2010).⁴ This involves, above all, the European project of the Nabucco pipeline, which should transport 31 bcm of natural gas annually from the Caspian and Middle Asian gas fields to Central Europe without crossing Russian territory (Proedrou, 2010).

However, the prospects of the Nabucco pipeline are not at all rosy. The project has been on the agenda of the EU for a couple of years without any significant progress. The European Council and the European Commission decided on a tentative allocation of 50 million EUR for this project instead of the 250 million EUR that were originally planned as a part of a 3.98 billion EUR package allocated for the support of new EU energy projects (Lussac, 2010). Furthermore, the EU has so far not succeeded in concluding an agreement on deliveries of gas with any of the concerned states from the Caspian region. Another fact that keeps the Nabucco pipeline from being realized is that some of the member states lack the will to unanimously agree on the realization of the project. Inability to provide enough spare gas capacities in the region to fill Nabucco pipeline is a separate but still very significant problem (Overland et al., 2010, p. 7).

The planned Trans-Caspi pipeline is closely related to the Nabucco project. The Trans-Caspian pipeline is intended to transport natural gas from Kazakhstan and Turkmenistan to Baku. From there, the gas would travel through the already existing Baku–Tbilisi–Erzurum pipeline and the Nabucco pipeline to Central Europe. The capacity of the Trans-Caspian pipeline is planned at about 30 bcm per year and the price tag of the project is an estimated 2–3 billion EUR (Mäkinen, 2010; Tichý, 2009b, p.13). The political developments of the last months of 2010 indicated that the political obstacles to the project could be removed by the fact that as Turkmenistan tries to diversify its exports its relations with Azerbaijan are improving. Another hotly debated issue is the so-called Southern Corridor, which is supposed to create a network of pipelines transporting natural gas from the region of the Caspian Sea and the Near East through Turkey to Europe with Nabucco pipeline as a flag ship. The Southern Corridor is a realistic and important project for both the EU and the Czech Republic (Lussac, 2010; Kirchner and Berk, 2010).

For the Czech Republic, supporting diversification and building new oil and gas pipelines that would not cross Russian territory

⁴ For example, the European Commission, in its Second Energy Review from November 2008, mentions the need for the European Union to increase its activity and participate more in, for example, the Caspian Sea area and the South Caucasus. The new EU Action Plan for Energy Security and Solidarity stipulates, among other things, the need for the EU member states and the Commission to intensively negotiate and cooperate with their energy partners – for example, Azerbaijan, Turkmenistan and other Caspian Sea countries (European Commission, 2008).

are ways in which it could bring about at least a partial balance to the asymmetric interdependence. In the case of a realization of one of the proposed EU energy projects, the effects on Russia's vulnerability will be directly proportional to the partial decrease of its geopolitical influence in areas which are vital to it, and its sensitivity will suffer because of its loss of a portion of its revenues from the transit of oil and natural gas. In turn, if a new European oil or gas pipeline is built, it will reduce the dependency of the Czech Republic and thus also its sensitivity and vulnerability. Nevertheless, without the involvement of other EU member states and their willingness to work and negotiate with each other, the realization of any new major EU energy infrastructure is very hard to bring about.

It is precisely the disunity of the member states and the de facto nonexistence of a common energy policy that so far prevented a more coordinated approach of the EU in its energy relations with Russia, and the realization of alternative arrangements. Before the ratification of the Lisbon Treaty, energy policy was in the exclusive competence of the member states and the key actors (for example Germany or France) unequivocally preferred bilateral agreements with suppliers. This allowed Russia to take a "divide and conquer" approach. It allowed Russia to tie the main buyers to itself while taking advantage of the dependence and vulnerability of the new EU member states in order to achieve its political goals (Kaveshnikov, 2010).

The Lisbon Treaty, which came into force on December 1st, 2009, should contribute to a more coherent and united energy policy of the EU. The Lisbon Treaty is the first treaty to explicitly refer to energy policy and include specific goals such as security of supplies, interconnectedness of networks, energy solidarity between member states and environmental protection. The Lisbon Treaty, which ensures a new legal framework for energy cooperation, lists energy policy under the shared competences of the EU and its member states. The treaty also places other significant issues into the category of shared competences, such as energy efficiency and the creation of a single energy market (Termini, 2009, p. 99). In these areas, decisions are currently being made under the new, so-called, Orderly Legislative Procedure (the co-decision procedure), which makes the implementation of decisions at the EU level considerably easier.

In the new treaty, EU energy policy is conceived in a spirit of solidarity between member states with the following goals: to guarantee a functioning energy market and reliable deliveries of energy for all of Europe; to increase energy efficiency; to support the use of renewable sources of energy; to connect the energy networks of the EU (Termini, 2009, p. 99). The principle of solidarity should act as a guarantee that other EU countries would help the Czech Republic in the case of a Russian cut off of oil or gas supplies. The principle of solidarity should thus contribute to a decline of the influence of Russia and should put a limit on Russia's use of energy as a political instrument.

Furthermore, by introducing the position of a President of the European Council and the High Representative of the European Union for Foreign Affairs and Security Policy, the Lisbon Treaty strengthens the present and future foreign-policy activities of the EU. This should contribute to an improvement of the continuity of the EU's foreign and security policy, including its relations with Russia. As a consequence of the changes brought about by the Treaty, Russia's possibilities of bypassing the EU 27 in energy matters and leading bilateral negotiations with individual member states should be substantially diminished.

6.2. The Central European Energy Cooperation should be intensified

Besides a more active participation in the framework of the energy policy of the EU, another possible path for the Czech

Republic in regard to its energy security is energy cooperation with other Central European states. The countries of Central Europe are united in their effort to gain access to other energy suppliers besides Russia and to extend the currently existing oil and gas pipelines that lead from the north to the south (Orban, 2008).

Presently, the Central European countries are mainly focusing on the project of connecting the north of the V4 (the 4 Visegrad countries) region with the south of the region. A gas pipeline going from Denmark to Poland and/or an LNG terminal in the northwestern part of Poland would significantly increase the security of gas deliveries for all of the Visegrad states. It might be even possible to continue the project in the southern direction, or more specifically in the direction of the already existing gas pipelines, crossing southern Moravia, Slovakia, Hungary, Austria and then to Croatia with a connection to the LNG Adria terminal in Omisalj on the Krk Island in Adriatic sea.

Another obvious benefit of regional cooperation is the stronger position of the Central European countries in negotiations of contract terms and prices of gas deliveries. The V4 countries pay higher prices for their deliveries of natural gas, which puts them at a disadvantage economically vis-à-vis their wealthier western neighbors. However, counted as a whole, the V4 countries represent 18 percent of the Russian natural gas export market. This share is the second largest, trumped only by Germany's share of Russian gas exports. A coordinated approach to negotiations with Russia could therefore result in a convergence of prices with what is paid for gas in Western Europe (Nosko et al., 2010).

7. Conclusion

Due to several energy crises that resulted in the suspension of oil and gas deliveries to European countries, the question of energy security and relations with Russia has become a relevant and much discussed topic for the Czech Republic during the last few years. This has been made evident by the fact that the Czech Republic chose energy security as one of the priority issues of the Czech Presidency of the EU in the first half of 2009.

The main intention of the presented article was to explain how the current framework of the energy interaction between the Russian Federation and the Czech Republic influence Russia's energy policy towards the Czech Republic, and what energy policy decisions by Russia directly affect and threaten the energy security of the Czech Republic. A second goal was to show how the European Union as a whole and the cooperation in the framework of the Visegrad Four (V4) can contribute to changing the framework of the energy relations between the Czech Republic and Russia.

With the help of the neoliberal theory of interdependence, it is possible to conclude, that the current energy relations between the Czech Republic and Russia can be defined as an asymmetric interdependence in which the Czech Republic is at a disadvantage because of the Czech Republic's vulnerability with respect to deliveries of natural gas. However, partially because of the alternative IKL pipeline, the Czech Republic's vulnerability in regard to deliveries of crude oil is significantly lower. Similarly, the sensitivity of the Czech Republic would be lower in the event of a short-term suspension of oil or gas deliveries. The asymmetric interdependence could act as a source of Russia's influence on energy security and thus have an effect on the vulnerability and sensitivity of the Czech Republic. Evidence for this is found in some of the aspects and expressions of Russia's energy policy, which threaten the efforts to secure stable deliveries of oil and natural gas to the Czech Republic. Some examples of this are – for instance – cases where Russia uses energy exports as a political instrument, Russia's efforts to diversify the recipients of its energy

supplies and the efforts of Russian energy companies to enter new energy markets in other countries.

On the other hand, the energy policy of the Czech Republic is influenced by many initiatives of the European Union. These initiatives are mainly focused on the liberalization of the gas and electricity market, the diversification of the currently existing transportation routes and legislative proposals aimed at strengthening the EU's own energy security. In its external relations, the EU tries to establish energy partnerships with new producer countries and strengthen ties with existing suppliers – especially with Russia. The EU as a whole significantly contributes to increasing the energy security of the Czech Republic. It could also balance out the asymmetry of interdependence, thus lowering the sensitivity and vulnerability of the Czech Republic. Meanwhile, the EU as a whole could noticeably influence the vulnerability and sensitivity of Russia. Besides a more active participation at the EU level, another alternative path that the Czech Republic could take to improve its energy security is that of strengthening the Central European energy cooperation in the context of the V4.

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