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# Shale Gas in Poland. Financial, Political and Legal Outline

#### Introduction

The interest in Polish natural deposits of raw materials greatly increased after the discovery that there is a potential of shale gas exploitation. The first forecasts were extremely optimistic, assuming that Poland may have had an access to nearly 5.3 trillion square meters of shale gas¹. However, further work on the subject proved to be rather disappointing. According to the report prepared by Polish Geological Institute, the amount of shale gas in the territory of Poland is estimated to be in the range of 346 to 768 billion cubic meters. The report, however, does not state how rich deposits are for efficient, cost-effective exploitation². According to M. Kołaczkowski: "The production of unconventional gas at the level of 15 billion cubic meters with the consumption increase at 5 billion cubic meters is enough to cover the local demand in 100%... achieving the level of production that is greater than local demand might transform Poland

<sup>1</sup> A. Kublik, *Łupki dzielą świat*, "Gazeta Wyborcza" 2011, no. 118; *Polska ma gaz na 300 lat*, http://biznes.onet.pl/eia-polska-ma-gaz-na-300-lat,40690,4234951,1,-news-detal (11.09.2011).

<sup>2</sup> Ocena zasobów wydobywanych gazu ziemnego i ropy naftowej w formacjach łupkowych dolnego paleozoiku w Polsce, www.pgi.gov.pl/pl/component/docman/doc\_dowland/771-raport-pl.html (06.01.2013).

into significant exporter on European markets"3. How much those beliefs are set on realistic principles? This we will know for certain only in 10-15 years, when the gas production from unconventional sources will reach industrial level.

The opportunity of effective, cost-efficient exploitation of unconventional gas is a strategically important issue for Poland. This country does not have enough gas deposits to sustain its selfsufficiency. Therefore, it is forced to import most (about 60%) of "blue fuel", with Russia being the main supplier. Unfortunately, Russia heavily uses its resources, especially natural gas, as a political tool<sup>4</sup>. This raises concerns of gaining too much dependency on its eastern partners. Hence, attempts to diversify its natural gas supplies taken by this country. One of them will be a terminal of liquefied natural gas (LNG) that is being built in Świnoujście. As estimated, It will deliver five billion cubic meters of gas annually. Poland is also expanding the natural gas transmission lines connecting it to the European Market. Planned Interconnectors under the principle of European "energetic solidarity" will contribute to the security of the European Community, including Poland<sup>5</sup>. Gas tanks will also be modernised. They provide a valuable reserve in case of any hostile action taken against Poland, as well as problems with the transportation via gas stations and the reduction buses<sup>6</sup>. However, the most pressing issue is the insurance of energy security by shale gas production.

<sup>3</sup> M. Kołaczkowski, Liberalizacja rynku gazu i wzrost bezpieczeństwa energetycznego w kontekście rozwoju sektora gazu niekonwencjonalnego w Polsce, [in:] Gaz niekonwencjonalny - szansa dla Polski i Europy? Analiza i Rekomendacje, ed. I. Albrecht, Kraków 2011, p. 130.

<sup>4</sup> See more: W. Paniuszkin, M. Zygar, Gazprom rosyjska broń, Warszawa 2008; B. Molo, Polityka bezpieczeństwa energetycznego Federacji Rosyjskiej, [in:] Międzynarodowe bezpieczeństwo energetyczne w XXI wieku, ed. E. Cziomer, Kraków 2008, p. 71–122.

<sup>5</sup> R.L. Larson, Tackling Dependenci. The UE and its Energy Security Challenges, Defence Research Agency (FOI), Stockholm 2007, s. 38-39; More on the energical policies of EU, M. Kaczmarski, Bezpieczeństwo energetyczne Unii Europejskiej, Warszawa 2010.

<sup>6</sup> More on the topic of gas buses in Poland: S. Brańka, Ekonomiczne uwarunkowania lokalizacji podziemnych magazynów gazu, Warszawa 2009; M. Kaliski, P. Janusz, A. Szurlej, Podziemne magazyny gazu jako element krajowego systemu gazowego,

## Origins of Shale Gas

Shale gas is one of the three types of gas from unconventional sources. It is excavated from a considerable depths of sedimentary shales. Modern technology is necessary, because of the high permeable qualities of shale rocks. Oil shales were formed as a result of complex geological processes occurring hundreds of millions years ago. In the time period between Cambrian and carboniferous, so called graptolites – small organisms inhabiting seas and oceans – ceased to exist. They have become a source of organic matter. Millions of years later, organic matter created as a result of graptolites extinction started to form stones. Processes occurring inside those stones were anaerobic and proceeded at high temperatures, and with a sufficiently high pressure – formed shales. Trapped inside stones, organic remains had been subjected to process of decay and – in time – formed natural gas. Shales are practically impermeable. They have a structure of solid concrete kilometre below the original level composed of tiles<sup>7</sup>.

#### Shale Gas Resources in the World

People's Republic of China has presumably the largest reserve of shale gas in the world. The size of the Chinese shale gas is estimated at nearly 36 trillions of cubic meters of gas. United States lands in second place with 24,5 trillions of cubic meters of gas. Third place goes to Argentina – 22 trillion cubic meters<sup>8</sup>. African continent should also be of some importance in this field in the future. The size of unconventional gas deposits in the Republic of South Africa is now estimated at 13,7 trillion cubic meters. However, it is worth to remember that those values are only estimations. They do not include

<sup>&</sup>quot;Nafta – Gaz", May 2010, p. 326; Act of 16<sup>th</sup> February 2007. *O zapasach ropy naftowej i gazu ziemnego oraz zasadach postępowania w sytuacjach zagrożenia bezpieczeństwa paliwowego państwa i zakłóceń na rynku naftowym*, "Journal of Laws" 2007, no. 52, poz. 343.

<sup>7</sup> *Czym jest gaz z łupków?*, http://www.lupkipolskie.pl/strefa-wiedzy/gaz-z-lupkow/czym-jest-gaz-z-lupkow/shtml (04.01.2013).

<sup>8</sup> *Kraje o potencjalnie największych zasobach gazu z łupków we EIA*, http://www.lupki-polskie.pl/strefa-wiedzy/gaz-z-lupkow/ zasoby-w-Polsce/shtml (06.01.2013).

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a number of countries that have not even started to explore their potential for natural gas production, like, for example – until recently – Russia9. From all countries mentioned above, only United States undertook the shale gas production on a larger scale. In May of 2009, there were 519 drilling rigs to exploit Shale gas sources. In 2009, USA have outperformed Russia in the field of gas production and became a self-sufficient country. At that time, the total production of gas amounted to 598,37 billion cubic meters, and shale gas was accounted for 14% of that value. This contributed to price drop of resources to 72 USD for 1000 cubic meters. Until recently, European countries paid 500USD for a similar amount. American political elites rather reluctantly approach the possibility of shale gas export<sup>10</sup>. Europe taken as a whole may be considered a second (after USA) shale gas market. Resources of an European market of their own are, however, significantly smaller than PRC, US or Argentina. According to initial data, they are estimated at 15 trillion cubic meters of this recource.

Today, even those values seem questionable. If proven to be true and exploitation made possible on a larger scale – those resources would be sufficient to the old continent for only 30 years. Experience teaches us to be more restrained when judging the capabilities, especially in the face of other problems, like depth of the extraction, the density of population on a given area, technology and, last but not least – profitability. Despite the reluctance of European states, work on the shale gas production is progressing. In 2009, EU launched a research program on shale gas – Gas Shales in Europe (GASH) along with the database of available shale gas deposits – European Black Shale Database (EBSD)<sup>11</sup>.

<sup>9</sup> This is partially because of their own gas exploitation from conventional sources. Russia is concerned that the shale gas production might threaten their status as a major player in a field of energy. However, it seems, lately government changed its mind and declares interests in unconventional deposits of natural gas. A. Kublik, *Putin pcha Gazprom przeciw łupkom*, "Gazeta Wyborcza" 2012, no. 250.

<sup>10</sup> *Gaz z łuków na świecie*, http://www.lupkipolskie.pl/strefa-wiedzy/gaz-z-lupkow-na-swiecie/sthm (06.01.2013).

<sup>11</sup> Ibidem.

## Polish Deposits of Shale Gas

The shale gas resources in Poland, according to the current data are estimated to be from 346,1 to 767,9 billion cubic meters of gas. Currently, none of the major expertise relating the issue of shale gas production evaluates unconventional gas deposits above 2 trillion cubic meters of "blue fuel". The current demand for gas in amounts to 14,42 billion cubic meters yearly. Natural gas in Poland has reached 4,22 billion cubic meters in 2012, and the conventional gas resources are estimated to 650 billion cubic meters. Only a small portion of that value can be transmitted to production relatively quickly<sup>12</sup>. The rest goes to the Polish market through import, mostly from The Russian Federation. Russia often uses this as an argument in international politics, hence Poland's attempts to diversify its gas supplies in fear of the consequences of this state. The best solution to the problem would be to increase its own gas production. Unfortunately, so far conventional gas deposits were far too small to cover the demand. For several years, production is maintained at 30% of total demand<sup>13</sup>.

Shale gas deposits in Poland are located in the belt between Pomeranian Province (Voivodeship) and south-east borderlands. Thus, they extend from Pomerania to the Lublin region. The total area that might contain shale gas deposits amounts to  $50,000~\rm km^2$ . Some of that areas contain a relatively high number of inhabitants per km². In more eastern territories, those proportions change in favor of companies seeking to exploit shale gas deposits¹⁴.

<sup>12</sup> *Polskie złoża gazu ziemnego – 650 mld m³*, http://forsal.pl/wiadomosci/polska/ 106715\_polskie\_zloza\_gazu\_ziemnego\_650\_mld\_m3 (14.12.2011).

<sup>13</sup> Ibidem.

<sup>14</sup> A. Kublik, *Bogactwo pod naszymi stopami*, "Gazeta Wyborcza" 2012, no. 249; *Zasoby w Polsce. Obszary perspektywiczne dla gaz łupkowego w Polsce*, http://www.lupki.polskie.pl/strefa-wiedzy/gaz-z-lupkow/zasoby-w-polsce (14.12.2012); *Polska ma gaz na 300 lat*, http://biznes.onet.pl/eia-polska-ma-gaz-na-300-lat,40690, 4234951,1,news-detal (11.09.2011).

## Technology

Shale gas production is possible through the use of technology called hydraulic fracturing. Other terms are also used, such as fracking, hydraulic crushing, hydro-crushing. Using high pressure, the fracturing liquid is inserted inside a hole drilled in the shale stone. This creates a number of opening with a diameter of 1–2 mm. 98–99,5% of the fracturing liquid consists of water and sand. The remaining 1% is composed of chemicals which enable mixing of the other two ingredients. One of such chemicals used in the fracturing liquid is guar gum. Concreting is one of the key elements of the whole process. That means applying concrete between pipes located in the drilled hole. This is to prevent the escape of gas or accidentally dropping chemicals into the underground waterways. Currently, there is a tendency to use chemicals that are relativity neutral to the environment. Often, as is the case with guar gum, citric acid-sodium or salt, they are commonly used in the food industry. However, it should be noted that the composition of the fracturing liquid does differ depending on the shale rock. Virtually all companies involved in shale gas production publish technical data relating to the fracturing liquid. It's worth noting that it might be necessary to drill quite a few miles, when it comes to shale gas exploitation. The process of acquiring gas from unconventional sources requires the large financial backup and the appropriate amount of test drills. The first drilling using this method took place in USA in 1947. In 1949, Halliburton Oil Well Cementing Company has reported to the patent office their method of hydraulic fracturing. In the 1970s, this process was already well known in Germany. In Poland, first attempts of hydraulic fracturing were carried out in 1960s. The current method of shale gas production was invented in 1990s and the patent to it belongs to George Mitchel<sup>15</sup>. Those are not new technologies, due to recent, dynamic widespread of science and production techniques.

<sup>15</sup> A. Kublik, *Alfabet poszukiwaczy gazu*, "Gazeta Wyborcza" 2012, no. 254; *Gaz łupkowy: podstawowe informacje*, Raport PKN ORLEN, Warszawa 2010, p. 4.

#### Pros and Cons of Shale Gas Production

Poland may become a self-sufficient country, if the shale gas production launches on a large scale. Perhaps, there will be a way to reduce the price of this resource, which in turn might lower the costs of electricity in facilities where gas is used to produce it. Also, there would be a price drop in resources provided to chemical companies, nitrogen in particular. This would allow the production of cheap fertilizers, which, in turn, would have a positive impact on the competitiveness in the agricultural market. There would be a lot of new jobs, being a result of the development of the shale gas production. If the production would be launched on a mass scale - employment in the industry isfelf, as well as the related projects, would hire nearly 20,000 people. According to the CASE report, Poland can count that government revenues would increase by about 20-90 billion in the years 2019-2025. Those funds would be given to the central budget. Some part of it might be invested into development of the infrastructure. Obviously, all of those benefits will be possible only if the most positive scenario plays out, in which Poland has both an adequate shale gas deposits and the operation is technically possible, not to mention – profitable. However, after the first positive forecasts, there was a lot of doubt and criticism undermining the initial estimations of possibilities of unconventional gas production. Many of those concerns related to the issue of the protection of environment. Many experts are concerned about excessive exploitation of water sources using the hydraulic fracturing method. Supposedly, it also increases the possibility of contaminating the groundwater with chemicals used in the process, although the opinions are divided since groundwaters are located at the depth of 20-260 meters, while drilling is done at the depth of couple miles. The process of hydraulic fracturing uses between 15-20 thousand cubic meters of water, one thousand of which remains contaminated. Therefore, a network of mobile cleaning station is necessary, and that requires a significant financial budget. Unfortunately, a large portion of that water cannot be recovered, which is a huge problem to environmental stability<sup>16</sup>. Another problem may be the occurrence of mining damage in the areas of drilling. Shale gas exploitation might also lead to losses in agriculture. Previous opinions were based on American experiences. "In the US, the problem of environmental protection has not surfaced, because the shale gas deposits are exploited in the sparsely populated areas, and in states such as Texas, where there is a long tradition of cooperation with energy companies. However, if someone was to exploit shale gas today in state such as New York or New England, it would have met with the same resistance as in Europe"<sup>17</sup>. It's hard to imagine such exploitation in the places which are legally recognised as tourist regions. Previous experiences with the conventional gas production may point out the possibility of crash in the tourist industry, as soon as the energetic resources production begins<sup>18</sup>. All of the above lead to the conclusion that the balance of gains and losses remains an open question.

### Legal Aspects of Shale Gas Production in Poland

The perspective of shale gas exploitation in Poland has emerged with almost equal enthusiasm as the shale gas revolution in US. It was believed that shale gas would help fight recession, like it did in the United States. It was also believed that it would strengthen the position of Poland to Russia and OPEC. Then the initial excitement subsided, and we found out that there has to be a legitimate law regulating the unclear legal situation that many investment companies found themselves in, having to deal with overly complicated bureaucratic procedures<sup>19</sup>. Even in October of 2012, prime minister Donald Tusk announced that the new "hydrocarbon act" shall be passed with haste.

<sup>16</sup> A. Kublik, Alfabet..., p. 29; Bezpieczeństwo mieszkańców w trakcie prac, http://www.lupki.polskie.pl/bezpieczeństwo /bezpieczeństwo-mieszkancow-w-trakcie-prac/ (14.12.2012).

<sup>17</sup> Quote J. Bielecki, Łupki: Rewizja nadzwyczajna, "Rzeczpospolita" 2012, no. 243.

<sup>18</sup> J. Brzuszkiewicz, S. Skomra, My się łupków nie boimy, "Gazeta Wyborcza" 2012, no. 259.

<sup>19</sup> Exxon Mobil, Talisan and Marathon Oil have complained about the lack of proper legislation.

As many lawyers tracking the legislative process might tell you – this was proven to be untrue<sup>20</sup>.

Works on the drafts were done in two ministries – The Ministry of Finance and The Ministry of Environmental Protection. It was assumed that there will be essentially two acts: one to modernise legal issues of geological nature<sup>21</sup> and the other one to introduce taxes on the extraction of hydrocarbon, but the Act wouldn't be valid until 2020. At this point, the modernised, geological Act was set to adapt the system of regulations to the needs of Polish market, having in mind the rapid changes in demand for hydrocarbons. It was supposed to attract investors interested in finding new resources, but that required additional changes to the legislation on the matters of property rights. It was necessary, not only to keep in mind the interests of local society to protect the environment, but to maintain the interests of the Polish state - not to mention, deliver on investors' expectations. The aim of the government is to create the proper conditions, ensuring the growth of the supply of natural gas from local fields by speeding up the work of exploration, exploitation and production - especially shale gas. In addition, Modern system of management and supervision should be implemented to ensure the safety of the process of both exploration and production. The Legislator wanted also to sort out and clarify the existing law, including a solution for state control over aftermarket of concessions. It should be noted that the Polish government adopted a typical European concept of the state being a shareholder of hydrocarbon concessions. The scale of production should be - after all - a very significant issue for the country's economy. This type of legal solution originated from the fact that in Europe, unlike the US, deposits of conventional and unconventional natural gas always had belong to the government, never a private company. For this reason, countries that belong to the EU are obligated to maintain a system handing out proper mining and geological concessions. This still proved to be a rather rational system, providing the sole process of production is

<sup>20</sup> T. Wójcik, Łupkowy as, "Do Rzeczy", 29th July – 4th August 2013, no. 27/027, p. 77.

<sup>21</sup> Act of 9<sup>th</sup> June 2011. *Prawo geologiczne i górnicze*, "Journal of Laws" 2011, no. 163, item. 981 as amended.

carried out by professional, specialized private companies. Investors would play a role similar to a tenant, and would be able to seek the highest profit on their own. This is is a system known and accepted by large companies, most popular in the world, although the system of handing out concessions itself may vary in different countries.

Initially, the aim of the Act was to create governmental company acting as a National operator of Mineral Energy (Narodowy Operator Kopalni Energetycznej, NOKE in short). It was supposed to be very important in the process of clearing out the legal mess. As a company, NOKE was to be controlled by government in its entirety. Its only shareholders were to be BGK and National Foundation of Environmental Protection. On the other hand, NOKE was to be a shareholder of every investment. Private companies could apply for concession, but the necessary condition of obtaining it was to sign a contract of cooperation agreement with NOKE. Share of the latter could not exceed 5% leaving the freedom of decision-making, as well as most of the economical benefits to the private investor. From the point of view of exchequer, the share of public funds was at acceptable level, since the shared risk was relatively small. However NOKE would gain access to the full data relating private investors, including business plan, research or planned extraction. Apparently, according to the Ministry of Environment, NOKE was supposed to be inspired by similar entities operating in Denmark (DNSF Nordsfounden), Netherlands (EBN B.V) and Norway (Petoro AS)<sup>22</sup>. The concept of NOKE was heavily criticized from the very beginning, as it was perceived as a factor increasing the risk for investors<sup>23</sup>. However, to the ministry, the most important issue was getting access to the full data regarding the exploration and mining. NOKE was also supposed to prevent market pathologies that can be seen today, where one licence covers about 30% (40 billion cubic meters) of Polish resources of natural gas in conventional deposits and is not exploited at all. Reasons for this situation lie exclusively with the holder of the concession, but it does result in the losses in the whole national economy. NOKE was also supposed to

<sup>22</sup> See also: www. offshorenorway.no; www. ebncertification.nl.

<sup>23</sup> B. Sawicki, NOKE zwiększa ryzyko inwestorów łupkowych, http://biznesalert.pl/sawicki-noke-zwieksza-ryzyko-inwestycyjne-inwestorow-lupkowych (26.03.2014).

serve one other significant role that can be called – socio-economic. The company was to be financed using funds for geological mining sector, including service charge for extraction and compensation for the use of the use of mining. On the other hand, profits from 4% share in investments were supposed to be granted to National Demographic Reserve Fund. Government hoped to provide the adequate income to the fund, bearing in mind all the potential costs of years of probably unfavourable demographic balance. The idea of NOKE has not met with acceptance of potential investors. From the beginning, this concept has been subjected to strong criticism- perhaps as a result of lobbying. There still was a problem with finding more effective ways of encouraging the investors to search and explore shale gas deposits. All of this coincided with the events in Ukraine, which significantly affected the efforts of the Polish government to take a more liberal policy to future investments. It was decided to act effectively and to lead to exploitation of shale gas as quickly as possible or - at least partially protect the state from potential Russian energetic blackmail. The emphasis was almost exclusively on protection of deposits against the actions of companies that don't respect international standards in the fields of gas exploration and extraction. This is because such lack of respect could possibly be a huge threat to the environment and subsequently the state economy<sup>24</sup>.

A draft of the new polish legislation regarding the geological and mining law, voted by the Council of Ministers on 11<sup>th</sup> March 2014, has introduced the system of one concession – on exploring, identifying and mining hydrocarbons<sup>25</sup>. It will replace the three currently existing ones. The change of the multiple concession model into permission to perform all phases under one licence should encourage entrepreneurs to explore on a large scale. The lack of NOKE by itself is somewhat considered an El dorado to them. Concessions will be handed out

<sup>24</sup> Uzasadnienie projektu ustawy o zmianie ustawy Prawo geologiczne i górnicze oraz niektórych innych ustaw, Ministerstwo Środowiska, Warszawa 2013; Poszukiwanie, wydobywanie i zagospodarowanie gazu ze złóż łupkowych. Informacja o wynikach kontroli, Najwyższa Izba Kontroli, Warszawa 2013.

<sup>25</sup> Draft regarding the changes in geological and mining law – as well as couple of others, introduced by the Ministry of Environment.

in the processes of auctions run from the office. The Ministry of the Environment will be an organ responsible for handing out the concessions. The will also be a possibility of gaining it through auction upon request, if the area in question was already a subject of a tender, of which the license has not been granted. Concessions will be granted for a time period, no shorter than 10 years and no longer than 30. The option of gradually documenting the resources has been introduced. In practice, this solution will allow exploitation of hydrocarbons during the exploration phase. That's because the part of the deposit will be already documented. At the same time, on the remaining part of the area covered by concession, further exploration and prospecting work will be in progress. Obviously, operator will not be able to work longer then the end of the exploration an prospecting process.

Among the benefits planned for investors, the prospect of performing geophysical research of geological structures on demand is one of the most significant. This solution will increase the competitiveness between companies specializing in such studies. It should also help increase the number of entities engaged in research, while giving greater availability of basic geological information. Rules of handing out data and samples to a national geological service have also been regulated.

As planned, there will be no more obligation for conducting two documentations – geological one, relating the hydrocarbon resources, and the resource development plan. Instead, only one documentation has been introduced – geological-investment documentation. Buildings intended for hydrocarbon research will no longer require a permit, and they only have to be notified to authorities of mining supervision. Those solutions will greatly facilitate the activities concerning exploration and exploitation of shale gas. Council of Ministers has also simplified the process of obtaining the permission by operators. So far, this procedure started before acquiring the concession for exploration of hydrocarbons and covered up to 1,200 square kilometres. As a results, it was time consuming, expensive and imprecise. After those changes, the permission should be granted prior to the decision to start drilling<sup>26</sup>.

<sup>26</sup> I.e. plans of mining facilities.

New rules will also ensure the right of the companies that already have the concession for prospecting and exploration of the natural deposits of hydrocarbons. Therefore, there will be a two year time period, when said companies will have an opportunity to transform their previous concessions into one, single concession. At the same time, there will be an option to extend validity period of the existing concessions up to three years.

As mentioned above, NOKE will not be formed. In order to legally protect the interests of the Treasury as an owner of the natural deposits, supervisory powers over the mining and environment protection have been strengthened. There are also plans for more intense work on the geological supervision over exploring and prospecting natural deposits of hydrocarbons, including control over use of concessions by Ministry of Environment. New distribution of profits from service charges for the extraction of the shale gas has been introduced. Its beneficiaries – in addition to the existing ones, municipalities and the National Fund for Environmental Protection and Water Management – will also include districts and provinces (Voivodeships). Predictions show the increase in fee rates for hydrocarbon extraction, but in the so-called marginal deposits current rates will be maintained.

The Draft obviously had to hit the Polish parliament. However, taking note of the majority in votes of the ruling party and the sympathy of the President, we can almost take it for granted. According to the assurances of the officials of the Council of Ministers, further discussion, in the parliament is possible only on the question of NOKE. Parliamentarians might intend to strengthen all remaining institutions, in order to make them capable of performing tasks previously given to the national operator. However, everyone wants about the shortest time possible, so any eventual changes will be worked out in the future, depending on how the currently created system will work.

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### Summary

The emergence of the shale gas on the global fuel market resulted in considerable changes in the perception of energy capacity of many countries. This might be considered a threat to the states being only exporters of the natural gas from conventional sources. The economic unity of such powers as Russia or Qatar may lead to a serious crisis in energetic sectors of such countries in the event of eventual success of mass exploitation of the shale gas. So far, however, the only country that could be considered successful in

the field of exploitation of shall gas is still the US. The scale of the natural deposits, their wealth and - above all - their price speak for the continuation of the production process. It seems that EU countries cannot count on similar success. There are couple of reasons for that. Among them, the fist one are problems of the technical nature. Natural, unconventional gas deposits in Europe are located much deeper than similar deposits in United States. Besides that, there is still a problem with the density of population in the areas that could potentially be a source of shale gas. This, in turn, is linked heavily to the issue of environment protection. Despite the assurance of safety coming from the circles of experts or corporations interested in this process, voices saying about negative impact of exploiting shale gas on the environment can be heard more and more loudly. Many European countries are also bonded by contracts for the supply of natural gas from Norway, Qatar or the Russian Federation. Since the shares in the joint investment are the domain of the largest companies representing a broad spectrum of European energy sector, they form kind of lobby on further works on conventional sources. More often than not – own, particular interests decide in this matter. Despite the initial optimistic information about the possibility of exploitation of Polish natural shale gas deposits it's hard to stay optimistic judging the chances for the future. The natural deposits of shale gas in Poland obviously and undoubtedly exist and that is a fact, but they are still much smaller than it was previously assumed. It is also unclear whether the production of gas from conventional deposits will be profitable enough. Exploratory work should give answers to these questions within a decade. It seems, however, that Poland should equally invest in both unconventional gas, as well as liquefied gas terminal in Świnoujście and the support for "energetic solidarity" within the European Union.