

## UNCONVENTIONAL GAS AND EUROPEAN SECURITY: POLITICS AND FOREIGN POLICY OF FRACKING IN EUROPE

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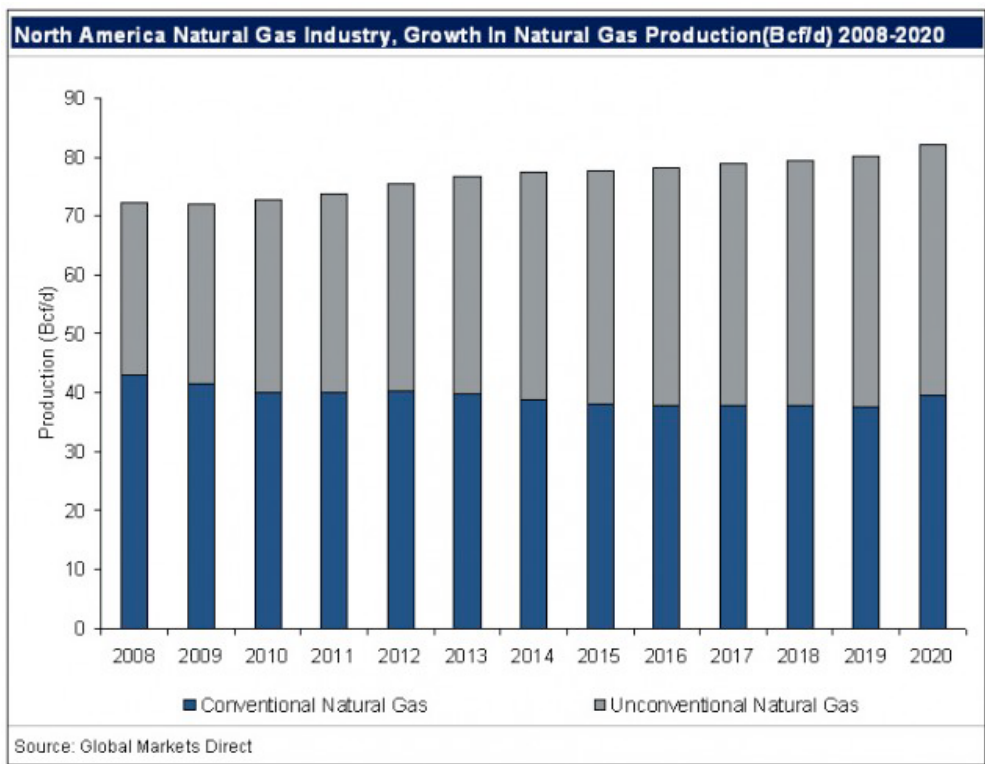
### A. SHIFTS IN THE GEO-ECONOMICS OF WORLD'S ENERGY OUTPUT

The global natural gas business has seen striking changes during the past five years. These developments have dramatically shifted the geopolitics of energy and are altering the relative economic power of the U.S., Russia, the European Union, and the Persian Gulf states. The most significant shifts in world energy markets are a result of the “unconventional gas revolution” in the United States. The technology of fracturing gas bearing rock is not new, but the ability of energy companies to marry this process with more sophisticated seismic analysis and horizontal drilling has allowed companies to bring large quantities of low cost natural gas to today’s energy markets. This has led to the U.S. replacing Russia as the world’s largest producer of natural gas. Not only has this made America independent of natural gas imports, but in the next few years this country will become an exporter of liquefied natural gas (LNG) to European and Asian markets. The same fracking technologies are being applied to exploit new or renewed U.S. oil deposits. The result of these new fracking processes has meant a significant decrease in U.S. natural gas and oil import dependency, particularly from politically unstable regions in the Middle East and West Africa.

During the same period, substantial quantities of LNG have become available from new gas liquefaction plants in the Persian Gulf, Nigeria, and Russia. These facilities were built with the expectation that much of the output would enter U.S. markets from the recently constructed LNG gasification units along the Gulf and Atlantic coasts. With the drying up of the U.S. gas import market, producer countries have had to change their export plans. Considerable quantities are now being sold at a discount on a growing international spot market. Some of the new LNG production will fill new demand in China, Germany, and Japan. The latter two countries are closing down nuclear power plants in the wake of the Fukushima disaster. Even with some demand growth in Europe and Asia, however, the loss of the U.S. market to LNG producers in the Persian Gulf and West Africa has already resulted in price softening in international markets and a further move to decouple gas prices from oil prices.

The effect of U.S. gas production on prices has been especially pronounced in Europe, but has also allowed China to avoid having to accept a long-term gas import deal with Russia at European prices. China itself will likely become a significant unconventional gas producer within the next decade. The country is not only believed to have the necessary geological formations with trapped hydrocarbons, but its centralized decision making has allowed it to move quickly to tap new sources of energy, as exemplified by its rapid construction in four years of a 40 BCM gas pipeline from Turkmenistan to China.

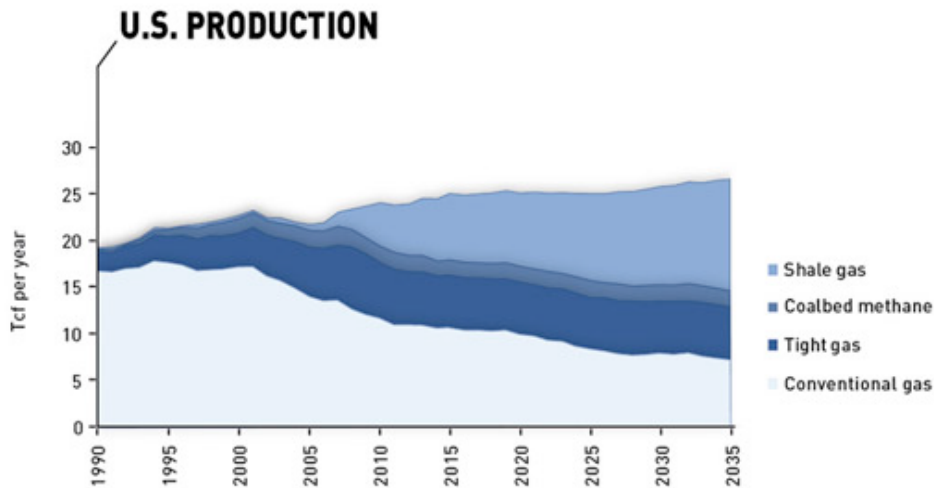
Western Europe is clearly benefiting significantly from the U.S. gas glut. A recent estimate from a UK energy expert claimed that Europe is already saving 7-8 billion euros annually due to supply diversion from the U.S. to Europe. At the same time, however, political developments in Western Europe have prevented countries in the region from gaining a much more substantial economic advantage from the hydraulic fracturing in the U.S. In Europe a widespread “fear of fracking,” has developed, in part generated by certain environmental groups. In addition, subtle lobbying by competing gas import industries, domestic coal producers and Russian financed consultancies in Brussels, Berlin, Paris, Rome, and other cities are believed to have prevented the use of unconventional gas technology to exploit geological formations similar to those in new U.S. gas producing regions.



Within the past nine months, unconventional gas exploration bans have been instituted by governments in France, Italy, the Czech Republic and Austria and will soon be introduced in most of Germany. This could delay by at least a decade the replacement of much of the high-priced Russian and North African gas with cheaper domestic production. During the past few years there has been about a 15% decrease in European gas imports from Russia. At the same time, there has been some softening of Gazprom export prices along with reduction in within the EU of energy intensity accompanied by a move to renewables. As Europe’s economies recover, the U.S. should hope that opinion makers, including political leaders, will lose their “fear of fracking.” Otherwise, Europe will remain dependent on Russian energy supplies, with the attendant political influence exercised by the Kremlin.

In the wake of the Fukushima nuclear disaster, the Merkel Government decided to close all of Germany’s 17 existing nuclear power plants by 2022. In France, the new Hollande

Government announced that it will slowly begin reducing the country's electricity dependency on nuclear power from the current 70% to 50%. Along with these two developments, there is domestic pressure in several other European countries by environmentalists to stop or delay the construction of new nuclear and even new gas-fired power plants. Again, these steps threaten to sustain European dependency on higher priced imports, primarily from Russia, and on the continued high dependency of coal. In spite of some softening of Russian prices, natural gas prices in Europe are now about five times as that paid by U.S. gas consumers.



Source: EIA, Annual Energy Outlook 2011

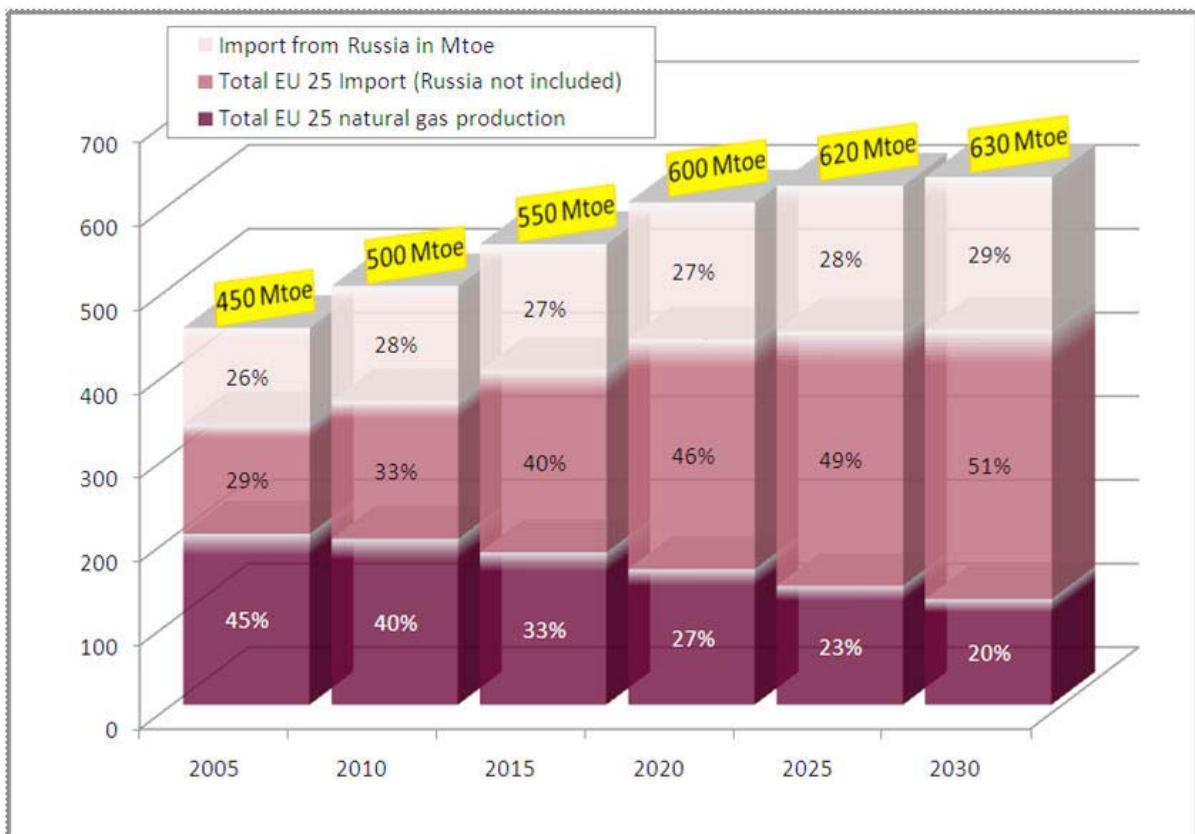
It is ironic that the U.S., which has taken considerable criticism (much of it justified) from Europe over its climate change policies, has actually reduced its CO2 emissions over the past 18 months by switching many coal-fired power plants over to natural gas. Meanwhile, Europe has increased its CO2 output. Gas-fired plants do not emit the health-damaging mercury that is spewed out by coal plants. Therefore, the decrease in U.S. CO2 and mercury emissions is primarily due to the dramatic increase in U.S. unconventional gas production, although the economic recession, EPA limits on power plant emissions and higher vehicle fuel economy standards, have also played a role. The U.S. competitive advantage will likely persist for the next decade.

## B. EUROPE REMAINS DIVIDED ON THE ISSUE

Too many European politicians appear unaware or unconcerned that their countries are paying five times as much for natural gas and \$20 a barrel more for oil than we do in the U.S. Their industries face an increasingly competitive disadvantage compared to U.S. energy intensive industries, such as steel production, metal working, plastics, fertilizers and other process that requires substantial electricity or natural gas feed stocks. Europe's green parties, some of them being financed by Russian interests, have taken advantage of the Fukushima disaster. Many in Europe have accepted at face value exaggerated stories regarding alleged

water pollution and earthquakes from fracking. They have played on these alleged dangers in order to push through energy legislation that will only prolong Europe’s current economic and fiscal crisis. Among some European “greens” there is also a naïve belief that there will be a rapid development in just a few years of wind, solar energy and bio mass replacing fossil fuels. The next decade will likely see significant progress in bringing down the price of solar and other renewables, but it will take considerably longer and require more government subsidies than the figures being thrown about by the opponents of hydraulic fracturing.

Geography also plays a role in the division of Europe over fracking. The West Europeans have more alternative routes for importing gas in the event of a disruption from Russian and Central European sources. LNG receiving facilities are already in operation and are able to increase imports from West Africa, the Persian Gulf and even from a growing U.S. production. They also receive a larger percentage of Norway’s gas production than do their Central European neighbors. The EU is funding construction of a more electric and gas pipeline interconnectors. These will help in times of crisis. Yet, Central European members of the EU, as well as non-EU Ukraine, are still largely dependent on the Soviet-era pipeline systems. They are farther away from LNG shipping routes, continue to have fewer gas and electricity interconnectors, and are in a weaker financial position to subsidize renewables. Russian influence in many of these countries remains strong as a result of the close personal ties between current Kremlin officials and Soviet-era business and political leaders in East Central Europe.



Nevertheless, Poland and the UK are likely to continue to pursue development of their geological structures which are believed to contain substantial natural gas and oil reserves. UK exploration was halted after an earthquake which was possibly a result of hydraulic drilling operations in Lancashire's Bowland Basin. The Cuadrilla Company had discovered there a particularly rich and thick play (geological formation) that could make the UK, like the U.S., self-sufficient in natural gas. After a government-ordered pause in Cuadrilla's operations, the Cameron Government has given the go-ahead to proceed (but cautiously) with hydraulic fracturing activities in the area. The UK is concerned about the relatively swift decline in North Sea oil and gas output. It is also moving more rapidly than others at evaluating the prospects of off-shore fracking operations that could restore production and tax revenues.

Although the EU's "Third Energy Package" has the potential to free up noncompetitive natural gas markets, there is considerable resistance to full implementation on the part of European energy firms who are heavily invested in Russian imports. Also, the opposition in Western Europe to unconventional gas indirectly keeps the more vulnerable economies of East Central Europe dependent on Gazprom imports and the inevitable increase of political influence by Russian leaders. Environmental obligations undertaken by the new EU member states under the "acquis communautaire" will be difficult to achieve. Their agreements may continue, or they may even increase their energy dependency on imported natural gas. The EU estimates that member states will increase their need for imported gas from 48% in 2010 to 74-80% by 2030. The projected decline in North Sea production will also add to pressure to import from Russia and Central Asia. Of course, these numbers could change significantly if there is a political and technological turn toward greater domestic production within the EU.

Russian gas exports to Europe have had least temporarily decreased as a result of economic recession and price pressure caused by increased Persian Gulf LNG exports and by U.S. unconventional gas production. Nevertheless, this lessening of dependency on Russian imports may only be temporary. The EU has been planning to build a southern corridor pipeline that would bypass Russia in bringing Central Asian gas to European markets. The widely announced plans to build the Nabucco Pipeline, or others with the initials TAP (Trans-Adriatic Pipeline, ITGI (Italy, Turkey, Greece) and SEEP (Southeast Europe Pipeline) have not progressed beyond the drawing boards. Meanwhile, Gazprom has received support from Bulgaria, Greece, Hungary, Romania, Austria, Macedonia, Serbia, Slovenia, Croatia, France, Germany, and Italy to build the very expensive South Stream natural gas pipeline. The tremendously costly South Stream would lock in much of the EU countries to highly expensive gas. Worse, it would leave Europe even more dependent on the energy politics of Russia. A new proposal, TANAP (Tran-Anatolian Pipeline), backed by Azerbaijan and Turkey has a greater possibility of getting off the ground (or in the ground!). Construction of TANAP and modernization of Ukraine's pipeline system would obviate the need for South Stream.

### **C. COULD POLAND BE CENTRAL EUROPE'S SOLUTION TO ENERGY DEPENDENCY?**

The U.S. Energy Information Administration (EIA) estimates that Poland has the largest deposits of shale gas geology in Europe, with the possible exception of Ukraine. Poland could become self-sufficient in natural gas in less than twenty years. This would allow for the

replacement of several highly polluting coal fired power plants with much cleaner gas generation (40-50% less CO<sub>2</sub>), especially if they are combined cycle gas turbine (CCGT) units. This could save Poland from substantial fines due to EU restrictions on future greenhouse gas emissions. EU penalties could put a serious crimp in Polish growth, where 85% of electricity is currently generated from coal. For historical reasons, Poles are more adverse than other Europeans to continued dependency on Russian gas imports and more sensitive to energy coercion by Moscow. In addition, the anti-fracking movement has not gained as much traction in Poland as in most other European states.

These factors will continue to generate public and governmental support for exploration and exploitation of Poland's favorable geology. The companies involved can expect to be held to the same environmental standards that govern fracking in the United States. In any case, Poland is likely to become the European state that will lead the way in the use of fracking technology to rapidly increase domestic gas production. Poland is already seeing a significant bump in employment from large-scale energy exploration and development. The technology transfer will also likely give Poland a long-term advantage in bidding on projects in neighboring countries and even in off-shore deposits in the Baltic Sea, the Black Sea and the Norwegian Sea.

Poland's current gas need is 15 BCM (billion cubic meters) a year, whereas 9 BCM is imported, primarily from Russia. In light of Poland's rapid growth and favorable prospects for continued industrial development, the country's domestic consumption is due to grow at almost 10% a year. The EIA figures are only estimates and some Polish geologists believe that the EIA figures are too optimistic. Nevertheless, few doubt that Poland has the potential to become a major gas producer (both unconventional and conventional) in the next decade and possibly also become an exporter of gas to other Central European states. More than 20 U.S., European and Polish companies have been granted exploration concessions and several have already announced that they have found recoverable reserves of gas, and in some cases oil. Progress in exploiting these reserves, however, is expected to be slower than in the U.S. for several reasons. In the U.S., 1) the sub-soil rights are owned by the individual property owners and not by local governmental units, 2) the population density is greater in Poland than in the U.S., and 3) the road, rail and pipeline infrastructure is much less developed in Poland.

Legal uncertainties have slowed progress in Poland, tempering some of the earlier optimism regarding unconventional gas production. Foreign companies have not been quick to commit the same level of funding per concession, the latest technology or teams of professionals as has been the case in the U.S. This is due to greater uncertainty regarding Poland's long-term tax regime covering resource extraction. In addition, foreign companies are not assured under the present Polish law dealing with exploration concessions, that they have the right to move to exploit those areas where their own seismic and other studies show considerable potential for gas recovery. The major participating companies are hoping that a new law will be enacted by the Polish Parliament before the end of 2012. They not only hope that it will clarify their rights to exploit, but will also provide adequate tax incentives to speed up their operations in Poland. Although the Polish Government rightly expects its national companies (both state and privately owned) to benefit from technology transfer from foreign operators and to share in production, too many demands on the Western firms will only create disincentives for faster action.

We must keep in mind that Poland is the European pioneer in the search for unconventional gas. Therefore, progress (and production) will be much slower in Poland than in the U.S. There may be some disappointment when the more optimistic claims regarding “energy independence” are not met. The early rush by the government to hand out exploration leases led to a situation where some lease holders turned out to have little or no experience in shale gas activities. Several Ukrainian oligarchs with no experience in energy production were granted concessions without due diligence being conducted by the Polish authorities. Leases were also granted to shell companies and other investors who appear simply to be holding on to their concessions until the value of their holdings increases. At that point they intend to profit by selling out to a major firm. Polish authorities rushed to give out concessions out of an understandable desire to achieve greater energy security, particularly after Europe’s gas supplies were disrupted by two major supply disputes (2006 and 2009) between Russia and Ukraine.

Meanwhile, Poland’s Government is paying around \$500 per TCM (thousand cubic meters) for Russian gas as a result of a long-term agreement reached with Gazprom in 2010. Unless PGNiG, the Polish national gas company, can benefit substantially from new domestic production, it faces the risk of bankruptcy as a result of being locked into high import prices from Russia. PGNiG has entered into several joint ventures with North American and European firms with unconventional gas concessions and if these projects are successful, there may be a need to develop an export market for domestic and/or Russian imports. The Poles are building a relatively large LNG receiving plant at Swinoujscie on the Baltic coast near the German border. The Polish Government has already signed a long-term contract with Qatar for LNG. Nevertheless, its current capacity is limited to 5 BCM, not enough to make a substantial difference in domestic prices unless supplemented by an “unconventional gas revolution” in Poland. If the country can meet the more optimistic expectations and become a major producer in the next 5-7 years, the current LNG project at Swinoujscie could be converted into a liquefaction plant for exports to other European markets. Already, the search for unconventional gas has resulted in the discovery of substantial deposits of conventional gas, such as in the Kutno region, southwest of Warsaw.

The most immediate threat to exploration in Poland is from members in the European Parliament and officials in the Commission who are attempting to put a stop to all fracking activities within the EU. Up to now, however, the Directorate General for Energy has opposed a Union-wide ban and has supported fracking carried out within appropriate environmental guidelines. DG Environment appears to be less supportive of Poland’s hydraulic fracturing.

#### **D. GAZPROM COUNTERS UNCONVENTIONAL COMPETITION: BULGARIA AND GERMANY**

##### **Bulgaria:**

In January 2012, the Bulgarian Parliament without serious debate passed a law banning all hydraulic fracturing. This law effectively stopped exploration under way by the American company Chevron, which had been granted a field concession in June of the previous year. In addition, the law was written in such a way as to ban all exploration for oil and gas being carried out below 2,000 meters, thus also stopping activity by another American company, Transatlantic Petroleum, engaged in conventional exploration. The ban was imposed by the center-right

government of Boiko Borisov, in response to a well-organized nation-wide campaign of different groups calling themselves “concerned environmentalists.” One self-styled environmental leader claimed that there have already been “hundreds of cases of water and soil poisoned by fracking” in the U.S., Germany and Poland. The Bulgarian Socialist Party, which has traditionally been close to the Kremlin, played a key role in pushing the bill through the legislature. Bulgaria’s gas company, OverGas, dependent on Russia’s Gazprom for 98% of the country’s natural gas imports, is believed to have had a strong hand in organizing the opposition groups, and in sending out thousands of e-mails to Bulgarians warning of the dangers of fracking. Among the protesters were reportedly several leading members of the communist-era secret police, including the former Chief of State Security, Dimitur Ivanov.

Several factors appear to be behind Russian efforts to stop gas exploration in Bulgaria. Gazprom is determined to maintain its monopoly position in the Bulgarian gas market where it charges almost \$500 a TCM, among the highest level in Europe. Gazprom is also demonstrating to neighboring Romania that Russia will do whatever is necessary to stop fracking operations in the Balkans. President Putin was visibly upset over Bulgaria’s delay and possible cancellation of construction by Rosatom of a new nuclear plant at Belene. The nuclear plant could only be economically justified if relatively inexpensive gas resources were not developed in Bulgaria and also if Russia could continue to tie the price of imported gas to the international price of oil. Moscow wants to ensure that Bulgaria maintains its commitment to participating in Gazprom’s South Stream pipeline project. Gazprom already owns a 50% stake in the Bulgarian portion of South Stream. A serious effort devoted to domestic gas production would reduce Bulgarian incentives to participate in this highly expensive and speculative project.

It should be noted that although Bulgaria was promised in March 2012 an 11% discount on the price of its gas from Russia, the Kremlin is now holding the discount hostage to Sofia signing a final investment agreement on the South Stream pipeline. This was not a condition when the deal was signed earlier this year, thereby leading to speculation that Moscow announced the discount in return for Bulgaria banning hydraulic gas activity. Now that the Bulgarians caved in on the shale gas ban, Moscow may have decided to apply additional pressure in order to maintain Sofia’s commitment to the South Stream project. Bulgaria’s reaction to Russian pressure to ban unconventional gas exploration might have been different if the EU had in place a common energy policy.

### **Germany:**

In May 2012, German media carried the news that the Economy and Environment Ministries had agreed to support a ban on hydraulic fracturing throughout the country. Apparently, this will be the official position of the Merkel Government even though the country’s gas needs will sharply increase as a result of the decision to close all nuclear power plants. The decision will also stop fracking operations that have been conducted in Lower Saxony since 1955, with at least 150 drilling operations to depths of 4-5,000 meters without a single adverse incident. The technology applied in the Lower Saxony drilling does not differ significantly from present operations in the U.S., with the exception that it does not include the use of the newer horizontal drilling. There is no evidence of drinking water contamination or leakage of methane or other toxic gases from any of the wells. When the news of the Lower Saxony drilling was released before a large gathering at an EU DG Environmental conference in



late 2011, it came as a surprise to a group of environmentalists already strongly opposed to shale development. Nevertheless, the reaction of the German Greens has been to call for a total ban of hydraulic operations, even where there is no history of pollution or any other type of environmental problem.

The German Government's position is the result of several factors. The German Green Party is a strong political force and has been able to secure opposition to hydraulic fracturing from the Free Democratic Party, the key coalition partner of Chancellor Merkel. There are also many business interests in Germany that would be adversely affected by competition from domestic gas secured from fracking operations. Germany's major natural gas companies are heavily dependent on Russian imports. They have invested substantial sums in Russian pipelines, especially the recently opened Nord Stream line from Vyborg to Greifswald, Germany, close to the Polish border. German business interests pushed the project through even though the cost of building and operating Nord Stream far exceeded the potential costs of alternative lines. The earlier planned Yamal II pipeline project, designed to run parallel to the existing Yamal I pipeline that transits Belarus and Poland, would have cost one-third as much as the present Nord Stream line that runs under the Baltic Sea. German business interests, however, were given large contracts by Gazprom for steel pipe and pumping stations for the Nord Stream project, ensuring their backing for a plan that will be costly for Germany's consumers.

In addition, Russian energy companies have acquired substantial financial shares in many of the German natural gas and oil companies and now own at least 40% of German refining businesses. Successful fracking operations would undercut the price monopoly position of these companies, particularly since gas that is due to flow through the second strand of Nord Stream, will come from extremely high-cost fields in the Arctic. This gas will already have a difficult time competing with imported LNG from Poland or from new Persian Gulf production. Germany may eventually fully adhere to the EU's Third Energy Directive requiring more open, competitive domestic markets. In that case, German business interests will have difficulties securing adequate returns from their investments in Russian projects. Successful hydraulic fracturing in Germany (or even in neighboring Poland) would put at risk many of these high-cost investments.

The German registered company, Gazprom Germania, which has several former East German intelligence officers in leadership rolls and is 100% owned by Gazprom, has considerable influence in Germany and is active in promoting Gazprom interests in both the Bundestag and in key ministries dealing with energy and environmental issues. The company's founder was Hans-Joachim Gornig, former head of the gas and oil industry of the German Democratic Republic. One should assume that Gazprom Germania has developed extensive connections within the German environmental community.

Another reason for German opposition to unconventional gas is the substantial effort over the past decade to switch from the use of hydrocarbons to the use of renewables for power generation. Due to large subsidies, Germany has made the largest financial commitment in Europe to move away from hydrocarbons to power from solar, wind and biomass. The German Greens and other groups are convinced that unconventional gas would kill the effort to replace hydrocarbons with renewables. It is ironic that the Merkel Government decided to reduce

subsidies for renewables before the Fukushima disaster. This decision, along with the closure of the country's nuclear power plants, will likely create greater demand for natural gas and coal. In spite of this, many German environmentalists firmly believe that the country can meet its ambitious targets for renewables – as long as cheaper natural gas does not enter the market. It is unlikely that Germany can meet these very optimistic goals for renewables.

The fear of cheap natural gas is also fueled by press and some academic reports, many originating in the U.S., that hydraulic fracturing is usually accompanied by drinking water pollution from hazardous chemicals allegedly used in the fracking operations, by earthquakes and from the release of methane gas. The question is whether Germany's steel, chemical and the many small, power intensive industries will be able to compete in the next 5-10 years with American and Asian companies using much less expensive energy inputs. The German scientific community, however, while cautious about fracking, generally opposes an outright ban on hydraulic fracturing. Still open, however, is whether German industry will eventually become sufficiently alarmed over possible erosion of its competitive disadvantage. Lower energy prices elsewhere may eventually result in enough pressure on the Merkel Government to force a reversal in decisions regarding the quick abandonment of nuclear power and the banning of shale operations.

#### **E. THE HIDDEN WAR AGAINST FRACKING**

Russian energy executives have for the past several years have warned Europeans of the alleged “dangers” of hydraulic fracturing and pointed to reported widespread water and air pollution in the United States around fracking sites. Alexi Miller, Chairman of Gazprom's Board of Directors, has issued several warnings to Europeans and claimed that Russia would only look at the technology in “60-70 years.” Gazprom's Deputy Chairman and head of Gazprom Export, Alexander Medvedev, has publicly stated that the boom in shale gas is similar to the dot-com bubble and will cause the same economic downturn. Gazprom is the only major energy company in the world to publicly oppose the development of shale gas. In a Brussels speech, Medvedev claimed that Gazprom and the Russian state were ready “to wage its war on shale.”

In November 2011, the Gazprom Board remarked that “the production of shale gas is associated with significant environmental risks, in particular the hazard of surface and underground water contamination with chemicals applied in the production process. This fact has already caused the prohibition of shale gas development and production in France.” This begs the question of whether Gazprom interests in France had a hand in that country's ban on shale operations, particularly since it was passed with little public debate. At least one major international consultancy operating under contract from Gazprom has been active in France.

The situation may be changing in Russia, however, in spite of its opposition to shale activities in Europe. Rosneft's new agreement with Exxon-Mobil for Arctic oil and gas development, and separate operations by Lukoil and BP's demonstrating an interest in using fracking technology in existing Russian energy plays, and at a minimum, demonstrates Russian schizophrenia (or hypocrisy) on the shale issue. The Kremlin and Russian natural gas exporters are clearly worried about the competition posed by shale gas development, whether in the form of European imports from the U.S. or from domestic production in Poland and other European states. Hydraulic

fracturing constitutes the greatest threat to Russian financial and political influence in Europe and to future Russian Federal Government tax receipts, which at present constitute at least 25% of federal revenue. Therefore, the Putin Government's policy is to delay shale development from hydraulic fracturing in Europe as long as possible. As *Gazeta Polska* reported on June 1, 2011, General Jiri Sedivy, former Chief of the Czech General Staff, stated that Russia is "influencing the public opinion {in Europe} through environmentalist and pacifist organizations, methods used by the Russians for quite a long time."

Russian-supported consultancies in Europe may be helping some of the environmental groups publicly opposing hydraulic fracturing. Gazprom is believed by some to have supported the distribution of the film *Gasland*, a highly flawed and incendiary account of alleged environmental damage caused by shale gas activities in the U.S. It should be noted that there are several high-powered consultancies located in Brussels, Berlin, Paris, Rome and Washington that quietly represent Gazprom interests in Europe and the U.S. For example, Ketchum, a public relations branch of the larger firm, Omnicom is, according to the U.S. Justice Department, a registered lobbyist for Gazprom interests in the U.S. Corporate branches of Omnicom may very likely also, according to EU sources, be assisting the Russian company's representatives in Brussels and other major European cities.

A company affiliated with Omnicom that is reportedly active in promoting Gazprom interests is GPlus Europe, cited by the *Financial Times* (January 29, 2009) as "one of Europe's most influential lobbying firms." The British co-founder of GPlus was previously the EU Commission's spokesman for trade and EU foreign policy. Several other high-level GPlus officers once held key positions in the EU Commission and the Council of Ministers. According to information released by the U.S. Department of Justice and a report by "Oil and Gas Eurasia," as far back as 2007, Ketchum, GPlus and Gavin, Anderson {now KREAB, Gavin, Anderson} have assisted Gazprom with public relations.

There is no evidence that the above firms lobby in Europe on the specific issue of unconventional gas when representing Gazprom. Individual EU members, however, generally do not have mandatory reporting requirements. Furthermore, while the U.S. has tough lobbying registration requirements, the EU's register of lobbyists is voluntary. In addition, most EU member states have no registration requirements for firms representing foreign business interests. This may make it much easier for Russian and other interests opposed to shale development to influence EU officials and governments in EU member states.

The term "Schroederization" of European politics is increasingly being used to refer to the willingness of high-level European political leaders to lend their contact lists and prestige to Russia's business and political interests. Former German Chancellor Gerhard Schroeder worked with Gazprom (using a former Stasi officer as intermediary) while still in office, arranging for a German Government loan guarantee for Gazprom, and a lucrative job for himself after leaving office. Since then Schroeder has occupied key positions in Gazprom, Nord Stream and more recently, TNK/BP. Former Finnish Prime Minister Paavo Lipponen assisted Schroeder in overcoming Finnish and Swedish opposition to Russia's Nord Stream Pipeline. In addition, former Austrian and Finnish government officials have helped direct efforts to win European support for the very expensive Russian proposed South Stream Pipeline.

Many Western companies are willing to support Moscow's energy policies in order to gain stronger positions in the Russian market. As the UralSib Bank's Chris Weafer remarked, "Gazprom does not have to knock on the door of the European Parliament, Total {French} and Basf {German} do it on its behalf" (New York Times, 07/25/2008). In addition, the European Union of the Natural Gas Industry (Eurogas) which represents the industry in Europe is allegedly heavily influenced by Russian interests. Valery Yazev, who heads the Russian Gas Producers Association, reputedly exercises considerable clout within Eurogas. West European intelligence services report that there has been little or no reduction in the number of Russian agents operating in their countries since the end of the Cold War. The Kremlin's goals have shifted from military targets to developing "agents of influence" within European governments and in the three major EU institutions. With President Putin playing a direct role in Russia's energy relations with Europe, one should assume that his KGB-honed skills and those of his major advisors are being applied to maintain Russia's leading position in Europe's gas import market.

Gazprom and other Kremlin interests are reportedly increasing the amount of money being donated to universities, think tanks and NGOs in Europe, in order to enhance Russian influence. In the UK, some university-affiliated energy research departments may have accepted funding directly or indirectly from Gazprom. Universities in Belgium and Germany may also have benefited from Gazprom "contributions." NGOs, including environmental groups, in Brussels, Berlin and Paris have reportedly accepted contributions from Gazprom-controlled groups. It is possible in some cases the recipients are unaware of the source of the money. Of course, it would be logical to assume that the "Russian Friendship Societies" in major European countries are also used to influence "energy and environmental" policies of the host governments. For instance, Gazprom sponsors energy seminars at the German-Russian Friendship Society, located on Friedrichsstrasse in Berlin (a few meters from the famous Checkpoint Charlie).

The current recession in Europe has created new opportunities for Gazprom and other Russian interests to directly or indirectly penetrate a substantial number of Europe's academic, NGO, and business groups. Even if corruption cannot be proven, an atmosphere of distrust can lead in some cases to suspicion of the motives of Western companies involved in hydraulic fracturing in Europe. For instance, soon after Exxon-Mobil announced earlier this year its large investment deal with Rosneft in the Russian Arctic, the company stated that it had failed to find financially profitable amounts of shale gas in its Polish concessions. Not surprisingly, many Poles immediately assumed (probably mistakenly) that the disclosure by Exxon-Mobil was made primarily in order to maintain the deal with Rosneft, particularly since Exxon-Mobil is the only major Western company to have announced such disappointing results.

## **F. CONCLUSIONS**

The opposition in much of Europe to hydraulic fracturing may well result in a significant competitive advantage for American energy intensive industries and the agriculture sector that heavily depends on fertilizers. This is not, however, in the U.S. national interest. The U.S. needs a strong European partner. U.S. security depends to a large extent on a well-equipped and economically healthy NATO. Europe is by far America's largest and most important trading

partner. U.S. and European financial institutions are to a high degree interlocked, and both sides depend on common values to guide their cooperation in the rest of the world.

European environmental groups, through their dogmatic opposition to genetically modified food crops, have helped preserve the EU as one of the world's most expensive food producing areas. Now, some of those same groups, with the outside help of domestic energy interests and Russian financed lobbyists, are ensuring that EU member states remain in a position of continued dependency on unstable and politically-motivated energy suppliers. In five years-time, Europe will likely have more difficulty competing with the U.S. and Asian suppliers of steel, plastics, fertilizers, and any commodity requiring substantial energy inputs. Crude oil currently costs 20% more and natural gas four to five times as much in Europe as in U.S. The EU and major European governments need to act swiftly to take advantage of the latest hydraulic fracturing technologies. Natural gas, whether developed from conventional or nonconventional sources, is the "greenest" of the hydrocarbons, emitting half as much CO<sub>2</sub> and particulates as coal and requires less water than coal production. The price of renewables will eventually decline to the point where they will be competitive with gas, but not until the end of the decade or possibly not before 2025.

Meanwhile, the progress made in reducing carbon emissions in some European states, such as Germany, will likely be reversed if political leaders continue to give in to the alarmist elements in their societies who resemble Luddites of an earlier period. Europe under the best of circumstances will not experience the quick unconventional gas development experienced in the U.S. Nevertheless, the longer major European states delay in allowing seismic and other exploration work, the less likely it is that European political leaders will know if they have the resource base to challenge a Russia that uses energy exports for political coercion or Middle East states that are embroiled in major turmoil.

European governments and industrial and consumer groups must begin to pay closer attention to those forces opposing shale gas development. The lack of transparency in NGO financing, the operations of foreign-financed consultancies and the work of former EU and government officials in the service of Russian energy companies pose a danger to Europe's future competitiveness. It is also a threat to the political integrity of many governments who have little understanding of the hidden forces that may influence their domestic energy policies.

The EU must initiate a mandatory, rather than a voluntary reporting system, comparable to America's Foreign Agents Registration Act. Similar legislation should be required in individual EU member states. There should also be an EU-wide reporting system regarding pending energy agreements with supplier states. Major contracts should not be signed with non-EU member states until other EU partners, affected by the deal, have a chance to comment on, and/or oppose the agreement.

Without opening up to unconventional gas production, Europe will lose out on some of the foreign investment, job creation and energy diversity that has occurred in the U.S. in the past few years. It is not accidental that almost all of the major European energy companies are deeply involved in shale gas developments in the U.S. European companies now have the technical knowhow to explore and develop for new sources of fuel. The question is for how long will

external political factors and domestic fear mongering affect Europe's energy security. The world's energy markets have traditionally demonstrated greater volatility than other industry sectors. Europe should join the U.S. in trying to achieve greater energy security, and the U.S. join Europe in tackling climate change issues.

Europeans should not rush into fracking without first understanding the need to integrate into their domestic regulations the "best practices" as learned from mistakes and a lack of proper environmental standards that took place elsewhere, particularly in the U.S. Nor should European states with favorable geological conditions for fracking allow themselves to follow the U.S. practice of giving large direct and indirect tax subsidies for hydrocarbon energy development. Unconventional gas should have to compete on a level playing field with other forms of energy. Subsidies could crowd out the growth of renewables, particularly solar and wind power. It should be noted that hydrocarbons receive an indirect subsidy when their costs fail to cover the public health burden from air pollution. Without a carbon tax or a formula to cover real costs of burning hydrocarbons, some level of subsidy may be justified for renewables in order to create that level playing field. In the long run, however, renewables will only be sustainable if they can compete with hydrocarbons in an open market.

It is interesting to note that American research and development on renewables has not declined as unconventional gas has become a larger factor in power production in the U.S. The cost of producing solar power has decreased markedly over the past few years and investment in solar projects has increased, even along with greater unconventional gas production. "Fear of fracking" is unreasonable and overblown by its many opponents. By resorting to national prohibitions on using new gas development technologies France, Germany, Italy, the Czech Republic, and Bulgaria may for some time miss the opportunity to strengthen their national security interests.

*The views expressed above are solely those of the author and do not necessarily represent those of the Center for Strategic and International Studies.*

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