Transatlantic Energy Strategies and Resource Nationalism

Event Summary

On October 22, 2010, with the support of the European Union Delegation in Washington and the cooperation of the Embassy of the Czech Republic and Portugal's Fundação Luso-Americana, the Center on the United States and Europe and the Energy Security Initiative at the Brookings Institution together with the Berlin-based Global Public Policy Institute (GPPi) convened an off-the-record workshop to discuss the challenges facing European energy security and to make recommendations for improving U.S.-European Union (EU) coordination on more effective energy governance mechanisms, with particular emphasis on gas markets. The workshop was the second part of a two day, high-level conference, "Transatlantic Energy Strategies and Resource Nationalism: The New European Energy Landscape," which began on October 21 with a public panel discussion at Brookings with Charles Ebinger of Brookings, David Goldwyn of the U.S. State Department, Pierre Noël from Cambridge University, and Piotr Szymanski from the European Commission Directorate General for Energy, and followed by a working dinner at the Embassy of the Czech Republic.

The workshop sessions brought together policymakers and top-level civil servants from both sides of the Atlantic, representatives of the private sector as well as journalists, academics and distinguished members of the DC area think tank community. The sessions explored how shale gas, liquefied natural gas (LNG), and other developments are reshaping transatlantic energy security; how Russian "pipeline politics" have affected the European energy landscape; how environmental considerations and climate change are factored into energy security; and if new frontiers for nuclear power and electricity are opening up in both the United States and Europe.

The first session, **"How Shale Gas, LNG and other Developments are Reshaping Transatlantic Energy Security,"** assessed the dramatic changes in world gas markets in recent years with the rapid development of gas spot markets and as gas has shifted from a purely regionally-traded to a more global commodity. Speakers noted how the U.S. unconventional gas output, including that of shale gas, has expanded four times in the past two decades and is now equal to more than half of the total U.S. gas output. Shale gas exploration in the United States, as well as in Canada, has had a knock-on effect for regional and global gas producers and consumers, including Russia. While not yet a worldwide energy game-changer, the U.S. "shale revolution" effectively closes the North American market for Russian LNG exports, and increases competition with other suppliers in the European market. Speakers also stressed that global LNG liquefaction capacity will increase by 50 percent over 2009-2013, with 2010 marking both a production ramp up and increasing demand in Asia for LNG (Japan, Korea, Taiwan, and also China), and increasing competition between Europe and Asia for LNG imports after 2010. Participants saw Russia as generally in denial about the implications of shale gas exploration in North America (-and potentially in Europe) - and the shifts in LNG demand.

Speakers discussed the emergence of a "perfect storm" in the European gas market in 2008-2009 (simultaneous with the increased attention to North American shale gas), which was flooded with gas and LNG from Russia, Qatar and Northern Europe just as the financial crisis led to plummeting consumer demand for gas. Participants noted, however, that this "buyer's market" in European gas was already beginning to change, with recently-released data from spring 2010 showing economic recovery in Germany and other Northern European countries as well as gas demand increasing again. Even if economic recovery across Europe is not uniform in the year ahead, speakers and participants anticipated that the European gas market would begin to tighten once more in 2011.

Speakers further highlighted the fact that a much-predicted "Russian gas glut" did not materialize in 2009-2010, mitigating the effects of the depressed European market for Russia. Extra Russian gas supply designated for Europe in this period was, in fact, absorbed by the Russian market itself, cushioning the impact of the reduction in European gas demand; and some of Russia's neighbors also made readjustments in response to the European market situation that ultimately benefitted Russia. Turkmenistan, for example, began to export less gas to Russia by an amount equivalent to the shale gas increase in the North American market and also took Russia by surprise by announcing the construction of a gas pipeline to China.

Given the breakthroughs in shale gas exploration and development in the United States, the workshop session also focused on the prospects for shale gas extraction in Europe. Speakers pointed out that a range of geological analyses indicated there was potential for extraction across the entire European continent, but commercially-obtainable deposits were mainly concentrated in Poland, Austria, Sweden and Ukraine. Participants noted that environmental considerations, water and property rights, the lack of EU-level competencies in energy exploration and development, and the different positions of EU member states on energy issues would likely lead to long delays in moving forward with shale and other unconventional gas projects. Most participants saw no significant unconventional gas production in Europe before 2020. Speakers, however, suggested that even in their planning stages, proposed projects could have far-reaching implications for the European energy market. Countries like Poland could secure additional leverage in gas contract and other energy negotiations with Russia through the mere potential of significant shale gas development. Participants were less certain that Ukraine would secure the same leverage given the fact that Russian companies were most likely to become involved in and dominate similar projects in Ukraine.

Participants also considered the issue of the United States and Canada potentially becoming gas exporters, or choosing instead to remain self-sufficient in gas and to operate separately from the rest of the world—resulting in a market split across the Atlantic that would leave Europe to compete alone with India, China and other players in increasingly higher-price gas markets. To avoid this development, speakers and participants urged more transatlantic cooperation on developing European and global shale gas deposits. Some participants recommended that, given the risks, shale gas exploration should be led by governments, not just market forces and players.

There was unanimous agreement that growth in energy demand from China—now at the same level as Germany and the UK—will continue to affect European energy markets. As European governments attempt dramatic cuts in budget deficits in the immediate future, the EU will be

squeezed by growing energy demand and prices in Asia, the Middle East and Latin America. Participants warned of the significant pressure shifts in demand away from Europe could bring to global energy markets, but also noted that the reaction of energy exporters would be crucial for any future scenarios. Some speakers pointed out that critical exporters to Europe, like Russia, might decide not to jeopardize the (more stable) European market by trying to shift supply to Asia and elsewhere. They also noted that Russia's recent experience in trying to conclude oil and gas deals with China had shown the logistical limitations of making a quick switch from the European to the Asian market, given under-developed infrastructure and different pricing benchmarks. China still relies heavily on coal to ensure its energy needs in the power sector, is less interested in Russian gas than the more gas-dependent European countries, and has resisted paying the same premium for Russian gas as European consumers.

Participants concluded that the tremendous recent changes in global gas markets—especially in unconventional gas, which has been pioneered by small companies in the United States and Canada—demonstrate the power of the market and private sector in determining energy supply and demand. Indeed, participants agreed the pace of change shows no sign of slowing down, and the key challenge for policymakers will be how to adapt quickly and adopt the most flexible and effective policy solutions.

The second panel, **"Security of European Energy: Russian Energy Policy and Pipeline Politics,"** began with the observation that Russia's approach to pipeline politics has been a constant feature for more than 15 years, but that Russia may now find it more difficult to use gas and pipelines as political tools as interactions among different markets begin to prevail over politics and the role of governments, and as European governments push for more diversification of supply (including away from Russia in the wake of the 2006-2009 Russian-Ukrainian gas disputes and cutoffs). Participants noted that most of the current multiplicity of European pipeline projects have encountered questions about their feasibility. For example, due to strong competition between the Russian-backed South Stream pipeline project across the Black Sea and the U.S. and EU-backed Nabucco project from Turkey into southern Europe there is a good chance that the second leg of Russia's Nord Stream pipeline to Germany across the Baltic Sea will not be built. The rapidly changing global energy landscape of LNG, continued uncertainty in the relative demand projections of Europe and China, short-term shifts back to coal in electricity generation in China, the United States and also in Europe, and the possibility of future radical changes in energy use (including the development of new batteries and electric cars), all cast a shadow over future gas pipeline developments.

Much attention in the discussion focused on China and its preoccupation with energy security. Participants stressed that China would be unlikely to limit itself to one supplier for gas as well as for oil, and also projected that based on current consumption rates and supply options, China would not likely need Russian gas imports before 2020. Speakers also noted that Russia's internal energy weaknesses have become more exposed in this more competitive gas market: major Russian gas fields are in decline; its critical energy infrastructure is decaying (for example, 75 percent of Russia's high pressure networks are over 25 years old and the quantity of flared gas in Russia is equivalent to its total gas exports to the EU, and the International Energy Agency/IEA estimates that future critical infrastructure overhauls will cost Russia $635 billion); its domestic industrial sector is still dependent on heavily subsidized gas prices, impinging on the profitability of its domestic energy market; flawed strategic choices (for

example, Gazprom's decision to buy expensive gas from Central Asia in response to perceived competition with the U.S. and real competition with China) have cut into industry profits along with a 20 percent decrease in gas prices and exports in 2008-2009, caused largely by the combination of the economic downturn and the U.S. shale gas revolution.
Participants stressed that for the foreseeable future, Russia will be plagued by uncertainty about future global gas demand and prices, a generally more risk-averse attitude in Europe, and diminished rates of investments in major energy projects. Indeed, some speakers argued that uncertainty about the future of gas markets could lead to a decade of extreme volatility in prices and even to a real supply crunch caused by insufficient oil reserves or possibilities for extraction. Most participants doubted Gazprom possessed sufficient resources to counter this volatility, but also suggested that Europe could actually help Russia by offering more planning security for gas investments and production, if Russia was willing to engage directly with the EU on these issues.

The final portion of this session looked at the role of Central and Eastern European countries (CEECs) in EU-Russian gas relations. Speakers underscored that most CEECs remain dependent on Russian gas and only a few have taken serious measures to diversify energy supplies and invest in regional interconnectors. In doing that, they benefitted from financial support from the EU to mitigate the effects of gas cut-offs along the same lines as 2006-2009, during the Russian-Ukrainian gas price disputes. Participants encouraged the EU to pursue further common projects on building regional interconnectors, expanding gas storage and the integration of gas and oil markets in Central and Eastern Europe, as well as to push for stronger support for the Nabucco pipeline project (although some participants were skeptical of both the feasibility and utility of Nabucco), and to emphasize the development of a common and coherent energy policy at the EU level. Participants also urged the EU to work with the United States on regional interconnectors and include this and other issues in the U.S.-EU energy dialogue. One participant argued that the EU is currently following Mao's motto "hope for the best, prepare for the worst" when it comes to energy security, and that the "20-20-20 directive" (which calls for 20 percent reductions in energy consumption and CO2 emissions, and 20 percent renewable energy production by 2020) is an example of its quest for diversification. Since European-Russian energy ties are unlikely to disappear in the foreseeable future, panelists recommended the EU should engage Russia more directly in reaching its energy goals.

Speakers and participants concluded that the climate of intense competition in regional and global gas markets, as well as positive changes in EU member states approach toward common projects, could lead to more energy options in the European market, less individual and collective dependency on Russian gas, and enhanced cost-efficiency.

Panel three, **"Environmental Considerations**,**"** acknowledged that the world is currently facing a difficult choice between economic growth and combating climate change. Although Europe and the United States differ in their responses to climate change, participants asserted that Western leaders need to recognize that climate change is the most pressing energy concern. The key for making progress on this issue is to demonstrate that measures taken against climate change make economic sense. Speakers suggested that any policy response to climate change must admit that fossil fuel use leads to climate change; that our reliance on hydrocarbons cannot be supplanted right away; and that solutions to climate change also need to be

developed quickly. Participants discussed the fact that projections for future energy use are not encouraging for policymakers—with some estimates projecting a 30% increase in energy use by 2030, and non-OECD countries consuming more energy than OECD members in 2009, for the first time in history.

Speakers emphasized that the oil industry lacks available resources for research and development to find a solution to increased global demand for energy. Furthermore, in the wake of the BP oil spill and the company's creation of a $20 billion liability fund, the threshold for future investment in offshore drilling has been set very high. Under these circumstances, participants thought it unlikely that many companies would engage in such investments in the future. Participants also highlighted the fact that countries such as Russia, China and the U.S. all have substantial coal resources and it would be unrealistic to expect them not to tap into these resources. Discussion focused on how current and future coal use needs to be associated with carbon capture and sequestration to protect the environment, but the cost of this technology is very high. Speakers further pointed out that (natural and shale) gas-powered electricity is cheaper than renewable energy and less expensive renewable energy sources are far in the future.

Some participants worried that given rising global energy demand and substantial economic and population growth significant CO2 emissions reductions would not be possible. Others countered that while the extensive adoption of new energy sources is typically a slow process, the global transition to oil and gas consumption in the twentieth century shows that large scale shifts in the use of energy sources are possible. They argued that, in this context, the concept of energy security needs to be understood and approached as a multidimensional issue. Changes in the global economic model related to energy consumption should be based on a series of components: increased electricity use; decarbonization; localization (i.e. use of local resources for energy diversification); and optimization. Speakers highlighted the fact that some significant steps have already been taken to protect the environment even in developing countries. In China, where 70 percent of its energy consumption is derived from coal, the government appears to have grasped the importance of climate protection and has recently invested $9 billion in renewable sources of energy.

Speakers stressed that much remains to be done on the environment and climate change on the international level. Participants devoted considerable attention to the role of the EU in driving global climate change negotiations since the 1990s. Speakers noted that the Kyoto Protocol was the EU's greatest foreign policy achievement, and the next step for the EU after Kyoto was to ensure the adoption of a binding treaty in Copenhagen in December 2009. Participants agreed, however, that the Copenhagen climate summit proved to be a failure of excessively-high expectations. The failure to reach agreement in Copenhagen showed the limits of EU power on climate diplomacy and the EU had made a mistake in trying to use the issue of CO2 to solve global governance problems. Participants doubted that the Kyoto Protocol and cap and trade mechanisms were, by themselves, the solution for climate protection. They thought the low price of CO2 made it unlikely that market forces would solve the climate change problem without other incentives—especially given different interpretations around the globe about the threat of climate change and possible solutions.

Emphasizing shale gas and other unconventional development was mentioned as a possible interim answer, even within Europe. However, given the fact it also has an environmental impact, it could not be the only solution. Other suggestions included looking at the Arctic as an example of international cooperation on environmental and climate issues, partnering with Russia and the United States to find solutions and, in the case of the EU, building a single and liberalized energy market. Participants also urged the EU to continue to lead by example. It was pointed out that the reduction of carbon emissions is now more affordable given the decline in gasoline prices and the decrease in emissions caused by the recession. Another place where the EU could lead is in international finance, by diminishing the cost of carbon reduction for developing countries. Participants proposed solutions including: initiatives taken at the local level (for example, "city to city" cooperation); letting groups of countries or regions take the lead on climate protection measures; increasing carbon prices; and investing in technologies and engineering.

The final panel, **"New Frontiers in European Energy Security for Nuclear Power and Electricity**,**"** picked-up on the climate change issue and assessed the further development of nuclear power as a viable clean and renewable energy alternative to hydrocarbons in both the United States and Europe. (This was also the central theme of a GPPi-led conference co-sponsored with Brookings in Potsdam with Brookings in Potsdam in March 2010.) There was general agreement that both sides of the Atlantic are experiencing renewed interest in nuclear energy—and especially in Europe with a return to higher fossil fuel energy prices. Speakers noted that, contrary to common perceptions, the nuclear sector in the U.S. is quite large, producing the nuclear energy equivalent of France and Japan combined. However, given resistance from environmental groups and powerful fossil fuel lobbyists, it is unlikely that the U.S. will experience a major expansion in its nuclear energy sector.

In the European Union, all nuclear facilities fall under the oversight of the EU, but the decision to develop and use nuclear power is taken by individual member states. The role of the EU is to set the highest standards for nuclear enrichment and use for all member states, ensure high security standards for nuclear facilities, and guard against proliferation. The Treaty of Rome, one of the founding treaties of the European Communities/EU, confirms the EU's role in ensuring the safe use of nuclear power. The European Atomic Energy Community (EURATOM) has the authority to visit and inspect European nuclear facilities and verify all aspects related to nuclear fuel use. The EU also has the largest number of commercial nuclear plants in the world with plans for increasing the current capacity. Some participants disagreed, however, with the premise that Europe is undergoing a renaissance of nuclear fuel use and others suggested it would be more appropriate to talk of nuclear "resuscitation" in Europe as all the major new developments in the nuclear field were, in fact, taking place in Asia. Participants also questioned whether Europe's liberal energy market (as well as the United States') was actually compatible with the further expansion of nuclear energy given the fact that nuclear power stations represent a long-term and highly political investment decision. Some speakers suggested that insurance provisions could overcome some of the problems.

Participants agreed, however, that there are three important conditions that nuclear energy must first satisfy in both the United States and Europe if it is to develop further. First, governments need to acknowledge and respond to existing safety concerns to obtain public acceptance and confidence. The industry itself must also demonstrate that nuclear power production is safe, put

forward solutions for dealing with nuclear waste, and show progress on non-proliferation. Second, nuclear energy must prove economically advantageous in comparison with all other energy sources in the power generation sector. Third, the industry must recruit and train new highly-qualified technicians and professionals, which has been a recent significant challenge for nuclear power companies. EDF of France, the leading electricity producer in the EU was singled out as a pioneer on all three fronts. Participants discussed some of the early successes of EDF programs in France oriented toward building greater public support and acceptance of nuclear energy. For example, before the post-9/11 increased security fears, EDF created a program for family and community visits to nuclear plants, which showed real results in fostering positive local attitudes towards the construction and operation of individual French nuclear facilities.

In sum, despite its evident potential, participants were skeptical that nuclear energy would prove to be the dominant viable alternative to fossil fuels, and also assessed that Europe would be more willing to consider the expansion of the sector than the United States. Speakers and participants all concluded that transatlantic energy dialogues on energy security and mitigating climate change would have to continue to focus on the factors influencing fossil fuel use for the foreseeable future.