Business as Usual?
Gazprom's Pricing Policy Toward the Commonwealth of Independent States

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While it is easy to see Russia's monopoly exporter of natural gas as an instrument of Kremlin power, Gazprom the corporation sometimes seems more sensitive to its stock price on the London and New York and other exchanges than to Russian interests.

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GIVEN its scant investment in Russia's gas sector, how long can Moscow continue to meet its obligations to its European customers? This question has dominated official, academic, and public debates about European energy relations in recent years. With the onset of the global economic crisis in 2006, however, other, immediate issues became more pressing than the future problem of sufficient pipeline capacity.[1] The search for new ways to deliver Russian gas to the European Union (EU) was sidelined by new problems. One of the most contentious issues involves the price of natural gas supplies, its linkage to oil products, and the role of gas markets in price formation. As the price for Russian energy deliveries to Ukraine and Belarus has been closely tied to European prices, changes in the world markets have also been felt in the post-Soviet area.

Gazprom is a joint-stock company created in 1993 to manage the post-Soviet natural gas sector. The Russian state controls 50.002 percent of its shares. The discussion that follows examines the pricing mechanisms in gas deals between Gazprom and its customers in Europe, the governments of Belarus and Ukraine, and customers in the Commonwealth of Independent States (CIS) and predicts the likely trends based on the global gas market in 2010 and 2011. It argues that changes in the EU's gas markets have had a profound impact on relations between Gazprom and the CIS gas-importing countries: Belarus, Ukraine, Armenia, Moldova, and, to some extent, Georgia.[2] As Gazprom's West European customers began to look for alternative suppliers, these CIS states grew increasingly more important for Gazprom's profitability. Having long received generous price subsidies from

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Eurasian Gas Glossary

Players	
ArmRosGaz	Armenian state gas monopoly, controls domestic distribution and gas pipeline to Iran; Gazprom bought a 58% stake in 2006, later raised to 80%
Beltransgaz	Belarus state gas monopoly operating export pipelines to Europe; Gazprom purchased 50% of company in December 2009
Gazprom	Russian natural gas monopoly; state owns 50.002% of shares; prospects, processes, and transits natural gas and oil, also generates electricity; chairman of management committee Aleksei Miller
Gazpromeksport	Gazprom subsidiary that supplies natural gas to 20 countries in Europe; CEO Aleksandr Medvedev
Gazprom Sbyt	Gazprom subsidiary in Ukraine that supplies industrial consumers
Gazpromneft	Russian oil exploration, refining, and marketing company in Siberia, Central Asia, and other regions; took over Sibneft, then acquired by Gazprom in 2005, Gazprom now controls 95.68% of its shares
MoldovGaz	Moldova's natural gas company; as of 1999 Gazprom owns 50%, Moldova 35.33%, and Transnistria 13.44%
Naftogaz Ukrainy	Ukraine's national oil and gas company, purchases gas from Gazprom
Promgaz	Gazprom subsidiary responsible for gasification programs
Rosneft	Russian joint-stock company that produces about one-quarter of Russia's oil; 75.16% stake owned by Rosneftegaz; acquired Yukos in 2004; plans joint ventures with BP and ExxonMobil to develop Arctic shelf and Black Sea; briefly planned to merge with Gazprom; chairman Igor Sechin
Rosneftegaz	Holding company 100% owned by Russian government; owns 75.16% of Rosneft, 10.74% of Gazprom
RosUkrEnergo	Swiss-based joint venture of Gazprom (50%) and Rosgas (50%) that transports natural gas from Turkmenistan to Eastern Europe
UkrGazEnergo	Joint (50/50) venture established in 2006 by Naftogaz Ukrainy and RosUkrEnergo to transport natural gas from Turkmenistan and market it in Ukraine
Transit Routes	
Nord Stream	Gas pipeline under Baltic Sea connecting Russia to European Union members; managed by Nord Stream AG, which is 51% owned by Gazprom; scheduled to open in late 2011
South Caucasus	Smaller pipeline parallel to Trans-Caspian; brings natural gas from Azerbaijan to Turkey
South Stream	Proposed natural gas pipeline from Russia to Bulgaria and beyond via Black Sea
Trans-Caspian Gas	Proposed natural gas pipeline from Turkmenistan to Azerbaijan and via Caspian Sea to Turkey; full route would bypass Russia and Iran
Urengoy-Pomary-Uzhgorod	One of Russia's main natural gas export pipelines; runs from Siberia through Russia to Ukraine-Slovakia border, where it connects to European lines; built in early 1980s and now in need of reconstruction
Yamal-Europe	Russian natural gas pipeline connecting Yamal Peninsula in Arctic and Frankfurt (Oder) on Polish-German border

Moscow, they were now seen as important, potentially quite lucrative, customers paying global prices. The EU countries are better able to withstand pressure and demands from Gazprom as they reduce their dependence on Russian supplies. The gas-consuming CIS countries, however, are still closely tied to Gazprom. Well aware that these countries have no other easy choice for energy deliveries, Gazprom can deal with them more assertively that it would their counterparts to the west.

Markets in Europe

Natural gas prices in Europe are based on a two-tiered system. Most of the long-term contracts are based on a pricing formula that follows the prices for oil derivatives, with the ratio of derivatives differing for each contract.[3] The price is fixed for a given period of time (usually three months) with a six- to nine-month lag between contract and delivery. This system perfectly fits the conditions of the yet-to-be liberalized continental European markets dominated by national energy giants such as E.ON in Germany and Italy's ENI. The main weakness of this mechanism lies in the increasing difficulty of switching from oil derivatives to gas-based pricing, and this has weakened the justification for the oil linkage. Moreover, while the proven reserves of natural gas are sufficient to cover consumption for the next sixty years, oil reserves are estimated to last for no more than forty years.[4]

The other gas-pricing system is based on a classical supply-demand formula derived from the commodity spot prices in the global trading hubs. Despite the growing

Terminology

100% basis price	Buyer must have assets equal to 100% of contract
Equal profitability principle	Income from domestic gas sales should equal income from export sales
Gas oil	Used for heating oil and diesel fuel
Gasification	Heat-based process that converts carbon-based material (coal or oil) into fuel by breaking it into component parts, such as carbon monoxide and hydrogen
Global trading hub	Physical or virtual location where multiple natural gas pipelines interconnect or natural gas is assumed to be delivered between multiple parties
Heavy fuel oil	Used for industrial fuel or as basis for other products
Interconnections	Short new pipelines that connect existing systems and thus provide alternative routes
Liquefied natural gas	Gas cooled into a liquid state, taking on 1/600 volume of regular natural gas
Maximum volatility	Most extreme price fluctuation
Net Connect Germany	German natural gas trading hub
Netback	Difference between revenue for oil and total cost of bringing one unit of oil to market; provides basis to compare exploration and production efforts
Oil derivative	Financial instrument using oil as underlying asset; has no inherent value but is employed as trading device
Oil-indexing	Making natural gas prices dependent on price of oil
Price indexing	Linking gas price in a contract to published prices or other indicators
Spot market	Contract method for short-term agreements using a single volume price
Throughput volume/capacity	Maximum volume that can be pumped through any given pipeline
Title Transfer Facility	Dutch natural gas trading hub
Transit fees	State-imposed levies on fuel transported via pipeline through third-party country
Transit-or-pay principle	Customer obligation to pay for a minimum volume of gas regardless of whether it is physically taken
UK National Balancing Point	Natural gas trading hub developed in mid-1990s; its prices are benchmarks for prices in various locations
Zeebrugge Platform	Belgian natural gas trading hub

Sources: "Gazprom in Questions and Answers" (Gazprom, 2011), http://eng.gazpromquestions.ru; www.gazprom-neft.com; www.gazpromexport.ru; "Russian Oil Industry" (Global Security), www.globalsecurity.org/military/world/russia/energy-oil-industry.htm; International Energy Agency, Natural Gas Market Review: 2009 (WiseGeek.com).

volume of gas traded in the hubs in 2010, the oil-indexed system is more commonly used in continental Europe. Spot market contracts covered about 25 percent of all gas sales in Western Europe in 2010, whereas Central and Eastern Europe do not use natural gas market trading.[5] This dichotomy exists because European gas markets are still too shallow and narrow, with insignificant volumes of gas traded and relatively uniform contracts. Therefore, even the slightest shift in trade volumes may affect gas prices significantly. The only exception to this pattern in Europe is the United Kingdom's National Balancing Point (NBP), which had a physical volume of 66 bcm (billion cubic meters) and a traded volume of 961 bcm in 2008. In terms of the volumes of gas traded, the NPB is far larger than all of its European counterparts combined (e.g., Belgium's Zeebrugge, the Netherlands' Title Transfer Facility, and Net Connect Germany).[6] However, even the NBP is not yet large enough to serve as an effective tool for gas contract price-setting.

The natural gas business underwent significant changes in 2009 and 2010, primarily due to the global economic crisis. In Europe, the demand for gas, especially in industry, fell by 10 percent in 2009 as compared with the previous year. Even the most optimistic predictions say that demand is not likely to regain its pre-crisis level before 2012 or 2013; more realistic predictions suggest 2015.[7] This puts the energy companies under strong pressure. Based on the take-or-pay principle, they were obligated to import contracted volumes of gas at prices based on the prices for oil derivatives, but had to resell the gas at current prices, meaning a 54 percent discount.[8] As a result, European energy companies purchased their gas on European markets while waiting for the take-or-pay gas prices for the rest of the year to decrease. In 2009 Germany's E.ON demanded a decrease in the volume of gas supplies or pricing in full accordance with its contract with Gazprom.[9]

Alternative Energy Sources. Although the drop in gas prices resulting from the world economic crisis was

Table 1

Gas Sales in Europe and Former Soviet Union

	2003	2004	2005	2006	2007	2008	2009	2010
Sales in Europe (in bcm)	140.6	153.2	156.1	161.5	168.5	167.6	148.3	148.1
Average realized price (including excise tax, customs duties) (in $/mcm)	131.6	137.7	192.4	261.9	269.4	407.4	296.7	301.8
Sales in FSU (including Baltics) (in bcm)	44.1	65.7	76.6	101	100.9	96.5	56.7	70.2
Average realized price (including excise tax, customs duties) (in $/mcm)	43.6	46.7	60.7	88.6	110.9	159.2	202.1	231.8

Source: Gazprom Databook, 2010.

significant, it was by no means the only issue that affected European gas markets. Perhaps the most important change occurred in North America. In the early years of the twenty-first century, the production of unconventional gas extracted from shale gas formations became economically viable thanks to advancing technology. Therefore, beginning in 2008, the United States began to use unconventional gas commercially. Although the production of unconventional gas is yet to be introduced in Europe, the impact was almost immediate, as U.S. demand for liquefied natural gas (LNG) began steadily falling in 2009. This left surplus LNG available on other markets, mainly in Europe, and increasing competition from states like Qatar drove gas spot prices down. The difference between the spot prices and prices under the long-term contracts grew to enormous levels. As a result, European gas giants began to demand renegotiations of prices from Gazprom to avoid losses from gas re-sales and to retain their competitiveness in the face of smaller operators that were buying gas on the spot markets. E.ON and other companies asked Gazprom to include gas market prices in the price-setting formula, with the ratio of 40 percent for gas market prices and 60 percent for oil-based prices. Gazprom reportedly offered some concessions, but it is uninterested in changing its pricing policies. E.ON had some limited success, acquiring the right to buy 20 percent of its imports at spot prices for the next three years.[10]

Although most European consumers decided not to sue Gazprom for failing to supply contracted gas volumes, they held out the possibility of taking legal action in the Stockholm Court of Arbitration as leverage in negotiations about future Russian gas contracts.[11] For now, it appears that the European firms value good long-term relations with Russia's gas monopoly more than short-term financial gains. The only exception to this pattern is the Italian company Edison, which sued Gazprom's subsidiary Promgas in November 2010. Edison demanded a price cut for 2011–13 based on the losses it believed it would suffer from purchasing at the high oil-indexed Gazprom prices instead of the much lower market prices for Qatar gas.[12] On July 25, Gazprom finally agreed to decrease the price for Edison in order to avoid the Arbitration decision. However, the company declined to disclose the new price.

Fallout from Ukraine Dispute. The Russian-Ukrainian pipeline crisis of 2009 shook the belief that Russia would be a reliable supplier of energy to Europe. When Ukraine failed to agree on a new gas delivery price, Russia cut off its gas supplies, which had a ripple effect on European buyers downstream. Consumers in Bulgaria, Slovakia, and Hungary were left without heat. During the more than two weeks of the ensuing standoff, affected governments closed factories, schools, and other buildings to conserve energy.

The 2009 crisis generated political support in Europe for using alternative energy sources, building additional gas storage facilities, and searching for new gas suppliers. Furthermore, the dispute between Russia and Ukraine pushed the EU member states and the European Commission toward more intensive work on the creation of interconnections—new pipelines connecting existing arteries. In particular, the Hungarian and Romanian systems were to be linked by the Szeged-Arad pipeline. These measures could one day coalesce into a single, unified European gas market.[13]

These changes in the European gas markets were contrary to the interests of Gazprom. Demand for LNG dropped, the United States began to exploit alternative

Gazprom spokesman Sergei Kupriyanov checks his wristwatch during a live TV spot for a Russian television channel at the headquarters of Russia's natural gas monopoly Gazprom in Moscow, on December 31, 2006, just hours before a threatened cutoff of natural gas to Belarus. (AP Photo/Mikhail Metzel)

sources, European customers developed a preference for spot markets, and the row with Ukraine damaged Gazprom's claims of reliability. As its European customers banded together to increase their bargaining power, Gazprom remained reluctant to back down in order to save its share of the European gas market. Meanwhile other energy players, such as Norway and Qatar, stood ready to supply Gazprom's disgruntled customers. The Russian firm continues to insist that contracts be indexed to oil prices, despite Europeans' preference for spot market rates. Although Gazprom cut the prices for some of its consumers, citing the global economic slump, it was not enough to satisfy current buyers. The decrease in its market share is very much evident. Gazprom's exports to Europe fell by 24.6 percent in the third quarter of 2010 as compared to the same period of the previous year. Gazprom's exports to Italy, for example, fell by 58 percent, while the country's total imports grew by 10.8 percent between the third quarter of 2009 and the third quarter of 2010.[14]

Pricing for Gazprom's Primary Customers

The gas market in the post-Soviet space differs significantly from the market in Europe. Most important, there are no "normal" market relations in the gas trade between Russia as supplier and the CIS members as consumers. Gazprom has essentially a captive market and can apply pressure to its post-Soviet customers as needed. The company's policies reflect several interconnected goals, namely, to control the CIS gas markets, to influence the energy policies of CIS members, and to increase profits by establishing control over production, transit, and distribution. The company exploits any opportunity to gain control over the countries' energy systems, but it is not willing to pay any price and gives only limited advantages in exchange for transit rights. Gazprom's relations with the CIS members are not immune to changes in the European markets, however. To make up for lost revenue, the company is raising delivery prices to European levels

for all of its customers—whether friendly Armenia or hostile Georgia.

Russia and Gazprom have several structural advantages over other post-Soviet republics. First, these countries lack physical access to European energy systems. All pipeline transportation systems in the post-Soviet republics are east-west-oriented and link to Russia's pipelines, which are controlled by Gazprom. Proposals to reverse the flow of gas and import it from various European trading points to Ukraine, for example, remain far from realized. Second, domestic gas production is very limited. Even Ukraine, the second-largest producer, cannot satisfy more than one-third of its energy needs from domestic sources. Therefore, the gas-consuming CIS members currently have no alternative to gas imports from Russia.

As European customers look elsewhere, Gazprom uses the much less competitive CIS markets to keep profits high. Since the dissolution of the Soviet Union, Gazprom has priced its CIS gas deliveries more as a political "carrot" than a source of revenue. In exchange for cheap gas, Russia expected political loyalty from the CIS buyers. However, this bargain proved illusory, and the situation began to adjust to reflect this reality in the mid-2000s. In November 2006, the company announced its intention to establish equal rates for domestic consumers and different countries by 2011, which meant a shift toward higher "European" prices. The Russian government gave Gazprom the necessary political support, but the deadline was later pushed back to 2015 because of economic problems in Russia. As the post-Soviet states rely solely on supplies from Russia, Gazprom may act more assertively toward its CIS customers than toward the EU states. The Russian monopoly is already reaping ever-greater revenue from both the domestic market and the sale of supplies to other post-Soviet states. While Gazprom's revenues from sales to the EU and non-CIS countries in the first half of 2010 fell by 10 percent to 526 billion rubles ($17.1 billion) year-on-year, revenues from supplies to the domestic market grew by 38 percent to 344 billion rubles year-on-year, and revenue from sales to the CIS members grew by 17 percent to 188 billion rubles year-on-year.[15]

Gazprom has strengthened its position in the CIS markets (*see Table 1*). The company claims to provide its neighboring consumer countries with below-European-market prices in exchange for equity in energy-related assets, namely pipelines. However, the base price used to calculate the discount is vague. Gazprom has taken large shares—if not full control—of the gas pipeline systems of Armenia (80 percent), Moldova (50 percent plus one share), and Belarus (50 percent). Ukraine's pipeline system, by far the most attractive energy transit option among all of the former Soviet lines because of its connections to European pipelines, remains in the hands of the Ukrainian government. Instead, Gazprom has sought to participate in the modernization of the Ukrainian pipeline system.

For years, Gazprom has bought cheap gas from Kazakhstan, Uzbekistan, and Turkmenistan and resold it to European customers at a very high markup. But the Central Asian producing states have now substantially increased the prices for their gas to European levels. Gazprom, intent on retaining its position in the CIS as the sole supplier of gas to Western Europe, agreed to pay the higher rates and purchase their entire export capacities. This step was supposed to support and solidify Gazprom's position in the gas markets by limiting or eliminating competition from the Central Asian states.

While the Western press tends to group Gazprom and the Kremlin together, Gazprom sometimes seems more sensitive to its value on the London, New York, and other stock markets than to Russian government preferences. Gazprom was able to accumulate significant advantages over its partners in Belarus and Ukraine and, despite the "discounts" for gas supplies to CIS members in exchange for equity stakes in their pipeline facilities, gas sales to these countries became, at times, even more profitable for Gazprom than sales to the EU.[16]

The Russian government has occasionally undercut Gazprom for political reasons. For example, Moscow granted Ukraine a 30 percent discount from the price specified in the January 19, 2009, Gazprom–Naftogaz Ukrainy contract (discussed below) in exchange for Kyiv's allowing Russia's Black Sea Fleet to be based in Sevastopol for another twenty-five years. This was strictly at the expense of the Russian state budget, not of Gazprom's budget. Furthermore, agreements reached by Russia's president Dmitry Medvedev and Ukraine's president Viktor Yanukovych are not always ratified by the Gazprom board of directors. This was also true of the March 2009 agreements between Medvedev and President Alexander Lukashenko of Belarus, but it does not mean that the steps taken by Gazprom toward its CIS partners are always at odds with Kremlin preferences.

Belarus. Despite the repeated official claims of friendship between Russia and Belarus, their relations have been difficult at times, especially on the subject of natural gas. For many years, Belarus consumed gas from Russia at prices far below European rates. In return, Moscow expected political and economic concessions (i.e., the realization of a Russian-Belarusian Union State and

A man carries a scythe while passing by a symbolic monument to mark Gazprom's Yamal pipeline, which carries Russian gas to Europe, in Slonim, some 124 miles outside Minsk, on June 21, 2010. (AP Photo/Dmitry Brushko)

privatization of Belarusian assets). Moscow likewise supported Lukashenko with enormous economic subsidies. However, this changed in the mid-2000s, when Russia's then-president Vladimir Putin began to support Gazprom's desire to realign gas prices for CIS customers with European prices. This step represented a serious threat to the purported Belarusian "economic miracle" that was keeping the Lukashenko regime in power and therefore provoked resentment in Minsk. Gazprom clearly was following its policy of favoring increased profits over political implications.

However, the company and the Russian state share an interest in strengthening their positions vis-à-vis the Lukashenko regime, as reflected by the construction of the Nord Stream pipeline, which was expected to open in late 2011. This alternate route will improve the security of energy supplies to Europe; since it bypasses Belarus, it also decreases the importance—and pricing—of the Belarusian energy system. Gazprom believes that the pressure from Nord Stream, combined with the Lukashenko regime's mounting economic troubles, will make Minsk more cooperative. In this case, Gazprom and the Russian Federation act hand-in-hand.

Belarus plays two roles for Gazprom. The country imports around 21.5 bcm of gas annually (roughly 2.5 times more than the Czech Republic, which is of a similar size), which makes Belarus the second-largest importer of gas in the CIS. Belarus is also an important transit country for Russia's natural gas exports to Europe. According to Russian estimates, 6.25 percent of the gas consumed in Europe is piped via Belarus, and the country has the throughput capacity to significantly increase that amount.[17] This reserve capacity proved to be especially useful during the Russian-Ukrainian crisis in 2009. Russia increased the volumes pumped through Belarus, which helped to compensate for the interruption of gas supplies through Ukraine. At the same time, Belarus is fully dependent on gas supplies from Gazprom, because its own gas production is insignificant. Therefore, the question of prices for gas imports from Russia is of vital importance, not only for the economy of Belarus but also for the president of Belarus—Lukashenko.

Gazprom's policy toward Belarus is heavily influenced by political relations between Moscow and Minsk. In 1995 Russia and Belarus signed an agreement to establish a new "Union State," but it remains largely an idea on

paper. Based on the agreement, Belarus was granted the right to purchase gas from Gazprom at Russian domestic prices, specifically the prices in neighboring Smolensk oblast. Nevertheless, the results of the integration of the two fraternal states remained meager for years. In 2002, Gazprom insisted on an increase in prices for Belarus, triggering a crisis between the two countries. The crisis was settled in July 2002, when both sides agreed that prices for Belarus would be equal to Russian domestic prices. However, this concession from Moscow was not based on altruism; Minsk agreed to privatize Beltransgaz, the country's national gas company, and to create a joint venture with Gazprom on 50:50 terms. Nevertheless, the joint venture has not materialized, due to obstacles on the Belarusian side. Minsk's reluctance to fulfill the obligations of the deal resulted in energy crises in 2004 and 2006.

Gazprom finally achieved its goal in December 2006, when the company signed a joint venture deal with Beltransgaz. Gazprom agreed to pay $2.5 billion in four tranches for a 50 percent share in Beltransgaz, while Belarus received a discount on Russian gas supplies. Minsk also agreed to increase the wholesale margin for gas sold through the Beltransgaz system to final Belarusian consumers to $10.47 in 2009 and $11.07 in 2010, which, according to Gazprom spokesman Sergei Kupriianov, was indexed to the transit fees. The prices for Belarus were set at $100 for 2007, and then on the basis of European netback prices minus the Russian export duty tax. The whole price was to be multiplied by a gradually increasing coefficient set at 0.67, 0.8, and 0.9 for 2008, 2009, and 2010, respectively. For transit through the Beltransgaz pipeline system, the fees were set to rise to $1.45 for 100 kilometers per tcm (thousand cubic meters), while the tariff for gas transit through the Yamal pipeline was $0.49.[18]

Although the contract solved the immediate crisis, and seemingly averted potential problems at least until 2010, this proved to be wishful thinking. The world economic crisis affected relations between Russia and Belarus in the gas sector. Belarus, despite its optimistic statistical reports, suffered heavy losses from the crisis and the loss of Russian oil subsidies,[19] and the burden of high gas prices proved unbearable. Minsk therefore asked Gazprom to hold prices at the 2008 level in 2009. Gazprom acknowledged its obligation to its customers in Belarus and expressed worries that the initially proposed price of $160 per tcm would cause serious problems for the country's economy. According to Kupriianov: "It is not just important to set a price, but it is also important to receive the money, so we make certain compromises."[20] This response was not motivated by goodwill alone, for at the very same time Gazprom was facing fierce opposition from Ukraine over pricing and simply could not afford to wage gas wars on both fronts. Therefore, extending the old pricing mechanism to Minsk appears to have been a tactical move. Moreover, in 2009 Belarus imported only 17.6 bcm of gas, far below the contracted amount of 21.5 bcm. Gazprom, as was the case with its European consumers, did not impose any penalty fee on Beltransgaz. This would not be the case with Ukraine, which had watched these events with interest.

Although the break in the upward pricing trend had been agreed only for 2009, Belarus insisted on the same price again for 2010, citing a verbal agreement between Presidents Medvedev and Lukashenko in March 2009. According to Minsk, the deal stipulated that Belarus was to pay the average yearly price for the first six months of the year instead of quarterly based prices. However, Gazprom rejected the agreement and continued to insist on the full price based on gas oil and fuel oil prices. The discrepancy between the words of Russia's president and the attitude of the gas monopoly infuriated President Lukashenko.[21] Minsk also asked to postpone a move to align prices according to the equal profitability principle, whereby Gazprom would earn the same profits from European and Russian domestic consumers.[22] They were scheduled to reach parity with the European netback prices in 2011, but the ongoing economic crisis forced the Russian government to delay the increase in domestic prices until 2015. Belarus therefore unilaterally decided to pay $150 per tcm until June 2010, despite the fact that the contract price was $169.20 in the first quarter of 2010 and $184.80 in the second quarter.[23] Gazprom sent two letters asking for the debt to be settled.[24] Minsk responded, but with contradictory signals. One day it would insist that the price of $150 per tcm was fully justified; another day it would acknowledge owing $192 million in arrears to Gazprom, while on yet another day it said that Gazprom actually owed Belarus transit fees of $260 million for the period from the last quarter of 2009 to the end of April 2010.

The crisis evolved into an open dispute between Gazprom and the government of Belarus. Moscow tried to stay out of the quarrel. President Medvedev, after negotiations with President Lukashenko, stated that arguments regarding economic hardship were not justifiable at the moment, because all of the parties involved were suffering from their own problems.[25] As the crisis escalated, Minsk exercised its one advantage—its unique geographic position for gas shipments to Lithuania, Poland, and beyond.

Russian prime minister Vladimir Putin, right, looks on as his Ukrainian counterpart, Yulia Tymoshenko, left, speaks during their meeting in Moscow on April 29, 2009. (AP Photo/Alexander Zemlianichenko)

Belarus warned Gazprom that Russian throughput gas supplies to the European Union might be stopped until Russia paid up its outstanding transit fees. These routes were—and still are—irreplaceable and carry a much higher share than 6.25 percent. Ultimately, the crisis was resolved in June 2010, when Gazprom and Beltransgaz signed a new contract to transit natural gas from Russia through the territory of Belarus. It set the transit tariff at $1.88 per tcm per 100 kilometers, with a possible growth to $2.00/tcm in 2011. Gazprom would continue to pay a transit fee of $1.45, as stipulated by the December 31, 2006, agreement. Although this may seem to have been a victory for the Belarusians, it was not. The prices for 2011 rose to $220 per tcm, in line with the 2006 contract. In addition, Minsk agreed that Gazprom could pay the minimum contribution owed to the national Ministry of Energy's innovation fund and apply any surplus to the costs of establishing Beltransgaz.[26]

Thus, there are still reasons for bitterness on both sides. There is a widespread feeling in Russia that the 50 percent share in Beltransgaz was significantly overpriced. According to Dmitry Lyutyagin, an analyst with Veles Capital Investment, in June 2010 Beltransgaz was valued at $2.3 billion.[27] Furthermore, there are doubts about the real significance of the Beltransgaz pipeline system for Gazprom's exports after the Nord Stream pipeline is completed. The imminent shift to new pipelines also explains the lukewarm reaction of Russian officials to President Lukashenko's June 2010 proposal to sell the controlling stake in Beltranshaz in exchange for Russian domestic prices. For its part, Gazprom's directors were deeply upset by the behavior of Belarusian officials, especially their slapping on a 19 percent levy earmarked for the state innovation fund. Although this problem has been settled, hurt feelings and mistrust on the part of Gazprom persist.

Behind its alternating declarations of friendship and betrayal, Moscow has political and economic reasons to promote Russian-Belarusian integration. On July 3, 2010, Belarus ratified agreements establishing a customs union among Russia, Kazakhstan, and Belarus. Almost all of the trio's import duties dropped as a result, but export duties on energy resources were exempt from the customs union. This created a disadvantage for Belarusian industry, as it must pay more for gas supplied by Gazprom. Belarusian firms, moreover, have had problems in obtaining access to

Russian prime minister Vladimir Putin, right, and his Ukrainian counterpart, Yulia Tymoshenko, center, watch as Russia's state-run natural gas monopoly Gazprom chief Alexei Miller, foreground right, and Oleh Dubina, the head of Ukrainian state energy firm Naftogaz, foreground left, exchange documents in Moscow, January 19, 2009. (AP Photo/Alexander Zemlianichenko)

the Russian market for their products. Trying to gain some benefit, President Lukashenko implied that his country could shop elsewhere, pointing out that commodity spot prices for natural gas in Europe were about $150 per tcm, while Russia was demanding $220.

Ukraine. Relations between Russia and Ukraine have been strongly politicized since independence, even more than Russia's relations with Belarus. Under President Leonid Kuchma (1994–2004), Ukraine oscillated between courting the EU and courting Russia, expecting advantages from both sides, but economic matters took precedence in relations between Russia and Ukraine. Through the 1990s and the 2000s, most segments of the Ukrainian economy were burdened by corruption, barter trade, and intermediaries, all complicating the gas trade. The system functioned relatively well for both Russia and Ukraine.[28] Even though some important steps have been taken—such as the ouster of RosUkrEnergo from energy deals and the shift to exclusively finance-based trade—the situation is far from ideal and future problems seem likely. The expectation that "pro-Russian" President Yanukovych would be a game changer and wrest more favorable conditions from Gazprom did not materialize. Instead, the Russian gas giant stood and stands firmly on its positions, pursuing profit ahead of the Kremlin's interests.

As in the case of Belarus, Gazprom has worked to downgrade the role of Ukraine's state-run energy firms by building the Nord Stream pipeline and negotiating to build the South Stream line. For now, Ukrainian transit capacity retains its vital significance for Gazprom's exports to Europe. Gazprom supplies about 105 bcm annually through the Ukrainian pipeline system. This represents roughly 80 percent of Gazprom's total exports to Europe, while the pipeline system's export capacity reportedly is 130 bcm. The surplus Ukrainian capacity proved so crucial for Gazprom during the July 2010 crisis with Belarus that Kyiv proposed further increasing the volume of gas going through the underused system. Predictably, the Russian monopoly is interested in the creation of a gas transit consortium with Naftogaz Ukrainy, its Ukrainian

counterpart, to facilitate cheap transit. However, the Yanukovych government has not changed its stance on the question of having Gazprom control the Ukrainian pipeline system.

Moreover, Ukraine is one of the most important consumers of Russian gas, with yearly imports of 47–57 bcm before 2006. Its economy ranks among the least energy efficient economies in Europe, with a huge saving potential especially in industry and public heating.[29] However, Ukraine has been hard-hit by the global economic crisis; its GDP, for example, fell by 15 percent in 2009. Ukraine's problems caused some discomfort for Gazprom, because Ukraine's political or economic collapse would inevitably endanger Russian gas shipments to Europe, and would also mean the loss of an important customer. Gazprom was therefore willing to accept temporary changes in the terms of its contract with Naftogaz Ukrainy in order to avert the collapse of the Ukrainian state.

Ukraine had always been a problematic partner for Russia. Kuchma played both sides, but his successor, President Viktor Yushchenko, had a decidedly Western tilt. A huge change in the pricing policy of Gazprom toward Ukraine occurred in late 2005, creating a supply crisis in which gas supplies to Ukraine were decreased for several days in early 2006. This caused a chain-reaction of gas shortages for European consumers in January 2006.[30] Although the Western press depicted the crisis as the result of political pressure from Moscow, it had much deeper origins. Even after the end of the crisis, relations remained troublesome, and another dispute between Russia and Ukraine flared up in 2009.

The price of Russian gas for Ukraine had been set on a barter basis since late 1991. Ukraine received Russian gas for just $50 per tcm and transited gas to Europe for $1.09 per tcm for 100 kilometers as payment in kind for cheap gas supplies. This system worked until March 2005, when the Yushchenko administration revoked existing gas contracts with Russia in order to raise transit tariffs to the European level.[31] With oil and oil-index gas prices rising, Gazprom welcomed possible changes in the terms of the contracts and demanded that Naftogaz Ukrainy pay for gas at the European netback prices, ranging from $160 to $230 per tcm. In exchange for lower prices, Gazprom demanded a controlling share in the Ukrainian pipeline system. The company had strong political backing from the Russian government, a coincidence of interests that led Western commentators to emphasize that political motives were behind the Russian-Ukrainian crisis. Nevertheless, even if political motives were present, they played only a minor role. Rather, by 2006 the gap between the prices for Ukraine and for EU countries had grown to an unacceptable level. Gazprom, therefore, seized the opportunity to bring its pricing policy toward Ukraine to a more profitable level.

The crisis resolved on January 4, 2006, when a new five-year contract was signed by Gazprom and Naftogaz. Gazprom agreed to pay $1.60 for 100 kilometers per tcm, while the gas scheduled for Ukraine was supposed to be a mix of Turkmen and Russian gas, with the resulting price resulting at $95 per tcm. Nevertheless, the deal was far from ideal. It once again involved intermediaries (RosUkrEnergo, UkrGasEnergo) with unclear ownership structures, and the price was not settled precisely. In effect, the agreement only postponed the next crisis. It did have one positive effect, for it ended the use of barter schemes in Russian-Ukrainian trade.[32]

The plan to introduce European prices for Ukrainian purchases proved extremely difficult for Gazprom, as Kyiv was poised to exploit its key location in Gazprom's transit plans for EU customers. Nevertheless, as European prices rose, selling to Ukraine became less and less profitable compared with sales to Europe. The contract was further threatened by domestic political squabbles in Ukraine. Despite the background noise, 2006 and the first half of 2007 were relatively calm. Prices for Ukraine were set at $130 for 2007 per tcm and $179.50 per tcm in 2008. The transit tariff was raised to $1.70 for 100 kilometers and tcm for 2008. However, after Yulia Tymoshenko was reappointed prime minister in December 2007, new problems arose. Tymoshenko decided to replace the intermediary RosUkrEnergo, co-owned by Gazprom and Dmitry Firtash, a close ally of President Yushchenko, and instead to establish direct ties between Gazprom and Naftogaz. In exchange, Gazprom got the right to operate through its subsidiary Gazprom Sbyt in Ukraine's industrial market with a maximum volume set at 7.5 bcm, according to the February 2007 agreements. These deals were elaborated in October 2008, when Prime Ministers Tymoshenko and Putin agreed to completely eliminate intermediaries. As a result, Ukraine and, later that month, Naftogaz committed themselves to the European netback pricing principle.[33]

Despite the deals reached in October 2008, relations soon deteriorated into the worst energy crisis yet between the two countries. Naftogaz did not settle its debts to Gazprom, which was one of the core obligations of the October 2008 agreement. Then Naftogaz and Gazprom could not reach an agreement on prices and transit tariffs for 2009 nor on the total amount of the debt. While Naftogaz acknowledged $1.6 billion, Gazprom claimed $2.2 billion. Tensions rose to unprecedented levels when

Gazprom's initially proposed price of $250 per tcm was raised to $400. The stand-off further inflamed domestic political rivalries in Kyiv. Prime Minister Tymoshenko agreed to the price of $250 in December 2008, but President Yushchenko blocked her from signing the agreement. The crisis escalated, and gas deliveries to Ukraine stopped on January 1, 2009. During the night of January 6–7, 2009, all gas transit through Ukraine was blocked as well. Consequently, seventeen European countries recorded lower volumes of gas delivered from Russia than had been contracted. Slovakia and Bulgaria had their gas supplies completely cut off. Until now Gazprom had been regarded as a reliable supplier, and Ukraine as a reliable transit country, but this dispute tarnished the reputations of both.[34]

The January crisis ended on January 19, 2009, when Prime Ministers Putin and Tymoshenko agreed on an eleven-year contract. Later the heads of Gazprom and Naftogaz, Aleksei Miller and Oleh Dubyna, signed the deal. Supplies to European countries fully resumed. The contract set the volumes of gas at 40 bcm for 2009 and 54 bcm for 2010, based on a take-or-pay principle with maximum volatility of import volumes at 20 percent up and down. The price for gas was based on the European netback set minus 20 percent ($360 for the first quarter of 2009) but then was to rise to a 100 percent basis price in 2010. The contract obliged Naftogaz to pay for its consumption on a monthly basis under the strict payment rules. Gazprom Sbyt was allowed to market at least 25 percent of the imported gas. The transit protocol stated that the annual volume of gas transited through Ukraine would be 110 bcm at $1.70 in 2009. For 2010, the transit fees, according to Article 8 of the protocol, would rise to $2.04 plus an element based on existing gas prices that added $0.74 to the price. For the next few years, the price is to be indexed to inflation rates in the EU.[35]

The agreements concluded in 2009 changed the pricing policy completely. Between 2006 and 2008, the price of gas for Ukraine was pegged at the Central Asian price plus transport costs plus the RosUkrEngero profit. After 2009, prices were based on a "normal" oil-based formula with a six- to nine-month lag.[36] Since Ukraine was unable to consume all the contracted gas, however, it asked Gazprom to decrease the volume of gas by 20 percent. Although Gazprom agreed, even the smaller amount proved to be too much, for Ukraine imported only 18.8 bcm in 2009.[37]

The January 2009 accords did not satisfy the new Ukrainian government under President Yanukovych, elected in February 2010. As mentioned earlier, in April 2010 he and Medvedev cut a deal extending Russian basing rights for the Black Sea Fleet. Besides the increased rent for the base, Ukraine got a significant discount on gas prices for the next ten years. Supplies of gas to Ukraine were exempted from Russia's 30 percent export duty. The maximum discount was set at $100 per tcm. However, the gas-pricing formula itself has not changed. Moreover, Naftogaz was obliged to import 7.6 bcm of Russia's gas more than contracted for 2009. Therefore, while all the expenditures (waiving the export duty, higher leasing payments, etc.) were to be paid by the Russian state budget, Gazprom alone reaped the benefits in the form of increased consumption secured by a new, long-term contract with Ukraine.

President Yanukovych renegotiated gas prices with Gazprom because he felt that the price based on the 2009 agreements was unfair. Russian gas was 50 percent more expensive for Ukraine than for Germany. The reason was financial, not political, as the high basis price of $450 had been set at the same level as the price of Russian gas sold at the German border in January 2009. However, the German price also included transit costs and the Russian export duty. Kyiv wants the principle of transit-or-pay (the obligation to pay for transit of a given volume of gas regardless of whether it is actually transported) to be included in the contracts. Gazprom has been reluctant to make any concessions in this manner. The only exception acknowledged by Gazprom officials is in the case of the possible creation of a joint venture between Naftogaz and Gazprom. While Gazprom would receive access to the final consumers, Ukraine would get some of Gazprom's gas fields. The plan is still in its initial stages, and there are serious doubts about its implementation.[38] Moreover, the arrest of Yulia Tymoshenko in August 2011 further aggravated the situation between Russia and Ukraine. The move was perceived by the Russian side as a threat to the existing contract. According to the accusations, Yulia Tymoshenko acted illegally when she signed the January 19, 2009, contract without the consent of the rest of the Ukrainian government. Therefore, Gazprom and Russian officials defended Tymoshenko in order to prevent Ukraine from cancelling the contract.

Pricing for Secondary Customers

The state of gas relations between Gazprom and Armenia, Moldova, and Georgia may seem burdened by political sensibilities. While the ongoing separatist conflicts in Transnistria, Abkhazia, and South Ossetia would presumably affect gas relations with Moldova and Georgia, this

has not been the case. The same can be said about Armenia. Even though Armenia is a close ally of Russia, and their mutual relations remain unproblematic, Gazprom's policies toward this country are quite similar to those for the more trouble-generating Moldova and Georgia.

Armenia. Armenia has always been regarded as a close "friend" of the Russian Federation. Although this depiction is fairly correct, friendship has played virtually no role in Gazprom's business relations with the country.[39] Gazprom was very successful in its efforts to gain control over the pipeline systems in Armenia compared with those in other CIS members. In 2006, Armenia and Gazprom signed a 25-year contract for Russia to deliver gas supplies to the country. The price was set at $110 per tcm, far below European prices. This rate was to be in force until December 31, 2008. However, the discount was not, surprisingly, as generous at it sounded. Armenia handed Gazprom full control of the pipeline under construction to link Iran and Armenia, as well as the fifth bloc of the Hrazdan-5 hydropower station. The pipeline, according to analysts, played a crucial part in Gazprom's strategy of blocking potential CIS member purchases from Iran. Consequently, Gazprom gained almost full control over the Armenian pipeline system. It also got, through its 80 percent share in ArmRosGazprom, direct access to Armenia's consumers. In September 2008, Gazprom and Armenia signed a contract for 2009 and 2010, which supposed a gradual rise of prices for gas—to $154 by April 2009 and $180 by April 2010. However, the prices rose to $210 in July 2011. Gazprom announced that the prices for Belarus, Armenia, and Moldova will reach the "European" level, but that price point might be different in practice.[40]

Moldova. The situation in Moldova remains far more problematic.[41] The main source of complications in the energy sector is the same one that complicates many other issues—the Moldovan central government does not control all the country's territory. Transnistria, a region on the east bank of the Dniester River, claims to be independent, but not independent enough to negotiate its own energy contracts. Instead, Transnistria accumulates debt for gas delivered (already $2.3 billion), but essentially sends the bill to the Moldovan government in Chişinău.[42] As part of the transit pipeline to the Balkan countries goes through the disputed region, Gazprom has little recourse regarding the debt. According to the "president" of Transnistria, Igor Smirnov, Transnistria does not owe any debt to Gazprom, as the "country" has no legal relations with Gazprom.

The basic contract on the prices for Moldova was signed in 2006 between Gazprom and MoldovGaz after the disruption of gas supplies to Ukraine.[43] With a five-year term, the contract provided for the gradual rise of gas prices for Moldova up to the "European" level. Beginning in 2008, the prices were indexed to "European" prices. The coefficients were set at 0.7 (for 2008), 0.8–0.85 (2009), and then 0.9 (2010). Based on the contract signed in 2006, Moldova is supposed to pay "European" prices for its gas supplies beginning in 2011.

Georgia. Relations between Russia and Moldova are far from ideal, but there is open hostility between Russia and Georgia. The situation was tense even before the August 2008 war. Consequently, Tbilisi has long been seeking a way to escape Russian influence. In 2007, Georgia began to receive natural gas from Azerbaijan's Shah Deniz gas field through the South Caucasus pipeline with plans for gradually growing volumes. Gazprom's prices at that time were based on its strategy of moving CIS prices to the European level, while the prices for Azerbaijani gas deliveries were considerably lower. As a result, Georgia imported only insignificant volumes of gas from Russia in 2009. Since then, Gazprom has had to pay for transit through Georgia to Armenia instead of the previously agreed payment by gas supplies. The situation is further complicated by the fact that Gazprom delivers gas to South Ossetia through the Georgian pipeline system.

Conclusion

During the world economic crisis of 2007–10, Gazprom faced serious challenges in European markets. Advancing EU competition laws, LNG oversupply, and the failing demand for energy caused by the financial crisis all influenced Gazprom's strategic planning. Although Europe still remains Gazprom's most important customer, it is clear that competition with alternative sources and suppliers of gas will become even tougher—at least in the short term. As a consequence, Gazprom must act extremely carefully when dealing with its Western clients.

Gazprom's situation in the post-Soviet space still differs in many respects from European practice. Since Gazprom is the sole supplier of natural gas to the CIS members, its pricing policies toward them can be more assertive. Gazprom's policy in the CIS has shifted from discounting deliveries to neighboring countries to establishing uniform pricing for all customers. In past years, Gazprom was concerned with upgrading the transit and downstream output capabilities under its control. The Russian giant provided

Belarus, Armenia, and Moldova with significant discounts in exchange for their infrastructure. However, this practice turned out to be financially unjustified or short-sighted (especially in the case of Belarus), and the subsequent recalcitrance of these countries was a disappointment for Gazprom. The other reason is the simple lack of appealing, affordable infrastructure assets in the CIS. The only exception is Ukraine, where Gazprom proposed a joint venture with Naftogaz Ukrainy. Elsewhere, Gazprom has tied the countries to its transportation services, thereby effectively blocking their possible access to European markets. Thus Gazprom offered no significant discount to Russia's allies. Positive ties helped the company to acquire gas infrastructure (Armenia, Belarus) in allied countries, but the sale of infrastructure just delayed the shift to higher, European prices.

By controlling pipeline routes and junctures, Gazprom has a huge influence on Russia's foreign policy. At times the Russian government and its officials act obviously in accord with Gazprom's interests, while the interests of Russian taxpayers are sometimes neglected. According to *Forbes* magazine, Gazprom is the most profitable company in the world, based on net profits. But if measured by pretax profits, Gazprom's ranking falls to fiftieth place. This suggests that Gazprom pays significantly lower taxes than any other gas company in the world.[44] Moreover, the discount arranged for Ukraine affected the Russian state budget, not Gazprom's profits. Gazprom, on the contrary, secured higher volumes of gas to be exported to Ukraine. While most governments across the world provide some level of political support for their national energy companies, Gazprom receives an additional layer of services, one paid for by Russian taxpayers.

Notes

1. Georgia withdrew from the CIS in August 2009, but for the purposes of the article it is counted in the framework of the organization.

2. More precisely, the exports are supervised by a Gazprom subsidiary, Gazpromeksport.

3. The ratio is usually (but not always) 70 percent for gas oil and 30 percent for heavy fuel oil (Gazprom, *Ezhekvartalny otchet* [Quarterly Report] [2d quarter, 2010], p. 51, www.gazprom.ru/investors/reports/2010; Anthony J. Melling, *Natural Gas Pricing and Its Future: Europe as a Battleground* [Washington, DC: Carnegie Endowment for International Peace, 2010], p. 22).

4. Roy S. Nersesian, *Energy for the Twenty-First Century* (Armonk, NY: M.E. Sharpe, 2010), p. 256.

5. Melling, *Natural Gas Pricing*, p. 25.

6. International Energy Agency, *Natural Gas Market Review: 2009* (Paris: IEA), p. 30.

7. Nersesian divides the demand for gas into three categories: industrial, economic (restaurants, shops, offices, government buildings, etc.), and household. Household demand is dependent on weather conditions. Households pay the highest prices, because they consume most of their gas at the time of highest consumption. The costs for getting gas to the final consumer are also the highest, as there is no mechanism in the household category resembling an economy of scale. In contrast, the industrial sphere is relatively immune to weather changes but is more exposed to economic fluctuations. The economic sphere lies somewhat in the middle (Nersesian, *Energy for the Twenty-first Century*, p. 249).

8. Morten Frisch, "Current European Gas Pricing Problems: Solutions Based on Price Review and Price Re-Opener Provisions," Gateway Working Paper Series (University of Dundee Centre for Energy, Petroleum, and Mineral Law and Policy, February 18, 2010): 13, www.dundee.ac.uk/cepmlp/gateway/index.php?news=30777/, accessed November 24, 2010.

9. The contract usually stipulates that the price may be revoked once in three years if significant market changes occur.

10. "E.ON Ruhrgas Presses Gazprom for Discounts Again," RIA-Novosti (August 20, 2010), http://en.rian.ru/business/20100820/160271847.html, accessed December 3, 2010.

11. The aggregate nondelivery during the crisis reached 7 bcm.

12. While the estimated price of Russian gas reaches $300–$320 per tcm, the price of Qatari gas is $240–$250. Gazprom was also sued by Slovakia and Bulgaria for the January 2009 nondeliveries, but the appeals were later withdrawn ("Rossiiskii gaz tianut v Stokgolmskii sud" [Russian Gas Is Transported to the Stockholm Court], *Kommersant* [November 3, 2010]).

13. " Europe Steps up Response to Gas Supply Crises," *Euractiv* (July 14, 2010, www.euractiv.com/en/energy/meps-vote-protect-consumers-gas-supply-disruptions-news-49632/, accessed November 24, 2010.

14. Author interview with Vladimir Putin and members of the seventh session of the Valdai group, Sochi, September 6, 2010, http://premier.gov.ru/events/news/12039/; Mikhael Korchemkin, "Gazprom Continues Losing Its Market Share in Europe," East European Gas Analysis (September 14, 2010), www.eegas.com/rus-norw-2010-09.htm; "Gazprom poterial chetvert v Evrope" (Gazprom Lost One Quarter in Europe), *Kommersant* (November 16, 2010): 1.

15. "Gazprom predstavliaiet konsolidirovannye promezhutochnye sokrashchennye rezultaty svoei deiatelnosti po mezhdunarodnym standartam finansovoi otchetnosti (MSFO) za pervoe polugodie 2010" (Gazprom Reports Its Consolidated Interim Condensed Financial Results Under International Financial Reporting Standards [IFRS] for Six Months Ending June 30, 2010), Gazprom press release, November 8, 2010, www.gazprom.ru/press/news/2010/november/article105124/, accessed December 15, 2010.

16. Mikhael Korchemkin, "Gas Export to the Former Soviet Union Is the Most Profitable Business Segment of Gazprom," *East European Gas Analysis* (May 10, 2010), www.eegas.com/netback2010-05e.htm, accessed December 16, 2010.

17. According to the treaties signed in July 2010, Gazprom was obliged to transit approximately 48 bcm through Belarus in 2011. Of this volume, 33 bcm is to go through the Yamal-Europe pipeline and some 15 billion bcm through the Beltransgaz system. This represents a decrease from the previous volumes of 20 bcm a year and can be easily fulfilled due to the relatively good state of the Beltransgaz pipeline system.

18. Katja Yafimava, "The 2007 Russia-Belarus Gas Agreement," Oxford Institute for Energy Studies Report (January 1, 2007): 4.

19. According to the agreement made in 1995, Russia provided Belarus with oil on duty-free basis. The profits were supposed to be distributed 85 percent for Russia and 15 percent for Belarus. However, Belarus unilaterally withdrew from the scheme and kept all of the revenue in 2002. The yearly subsidy reached about $2 billion in just the oil sector. Russia then imposed an export duty on oil ($145 per ton), which caused severe interruption of supplies to Europe. The custom duties fully resumed in 2010.

20. "Gazprom Says Belarus Will Pay Less Than Agreed for Gas in 2009," RIA-Novosti (December 27, 2008), http://en.rian.ru/business/20081227/119197629.html, accessed December 16, 2010.

21. "Belarussia soglasovala tsenu na rossiiskii gaz" (Belarus Agreed with the Price for Russian Gas), Lenta.ru (March 27, 2009), http://lenta.ru/news/2009/03/27/gas1/index.htm; "Belarus' President Tells Officials Not to Grovel to Russia," RIA-Novosti (April 7, 2009).

22. The equal profitability principle is the point at which supplies to Europe and supplies to Russia bring the same profit to Gazprom.

23. Tai Adelaia, "Fighting His Corner," *Russia Profile* (June 17, 2010).

24. "Zaputalis v dolgakh" (Entangled in Debts), *Rossiiskaya gazeta* (June

22, 2010), www.rg.ru/2010/6/23/lavrov.html, accessed November 23, 2010.

25. "Gaz v otkliuchke" (Gas Cut Off), *Rossiiskaya gazeta* (June 17, 2010), www.rg.ru/2010/06/17/belorussiya.html, accessed December 4, 2010.

26. The Innovation Fund of Belarus was established in 1998 to support research and development activities in the country ("Protocol on Contributions by Beltransgaz to the Belarusian Innovation Fund and Addendum to Gas Supply and Transit Contract Signed, July 2, 2010," www.gazprom.com/press/news/2010/july/article100656, accessed January 5, 2011). For a detailed analysis of the crisis, see Katja Yafimava, "The June 2010 Russian-Belarusian Gas Transit Dispute: A Surprise That Was to Be Expected," Oxford Institute for Energy Studies Report (July 1, 2010).

27. " Predpochteniia Gazproma: Deshevyi gaz meniaet monopolia na truby" (Gazprom's Preferences: The Monopoly Exchanges Gas for the Pipes), *RBK Daily* (June 1, 2010), www.rbcdaily.ru/2010/06/01/tek/482712/, accessed January 3, 2011.

28. For outstanding analysis of the corruption schemes, see Margarita Balmaceda, *Energy Dependency, Politics, and Corruption in the Former Soviet Union* (New York: Routledge, 2008).

29. IEA, *Word Energy Outlook: 2009*, p. 462.

30. In Europe the "gas year" begins in October and ends in September of the following year, but in the post-Soviet space the gas year starts in January. Consequently, disputes have extremely harsh consequences, because they peak during the months with the coldest weather and the highest consumption.

31. For more information on the history of pricing policies toward the CIS states, see Tatiana Mitrova, "Natural Gas in Transition: Systemic Reform Issues," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (New York: Oxford University Press, 2009), pp. 32–36.

32. For a detailed overview of the crisis, see Jonathan Stern, "The Russian-Ukrainian Gas Crisis of January 2006," Oxford Institute for Energy Studies Report (January 1, 2006).

33. Jonathan Stern, Katja Yafimava, and Simon Pirani, "The Russo-Ukrainian Gas Dispute of January 2009: A Comprehensive Assessment" (Oxford Institute for Energy Studies Report, February 1, 2009): 12.

34. A vast number of studies have been written about the crisis, notably Stern, Yafimava, and Stern, "Russo-Ukrainian Gas Dispute of January 2009," and IEA, *Natural Gas Market Review: 2009*, pp. 35–41.

35. *Ukrainska pravda* published the text of the transit agreement (in Russian and Ukrainian), "Kontrakt pro transit rosiiskovo gazy + Dodatkova ugroda pro avans Gazpromy" (The Contract for the Russian Gas Transit + Additional Agreement on the Prepayment to Gazprom) (January 22, 2009), www.pravda.com.ua/articles/2009/01/22/3687130/, accessed January 8, 2011. The paper also published the text (in Russian and Ukrainian) of the gas supplies agreement: "Gazova ugroda Timoshenko-Putina. Povnii tekst" (Gas Agreement of Tymoshenko and Putin: Full Text) (January 22, 2009), www.pravda.com.ua/articles/4b1aa351db178/, accessed December 28, 2010.

36. Stern, Yafimava, and Pirani, "Russo-Ukrainian Gas Dispute of January 2009," pp. 26–27, 30.

37. "Gazprom podnialsia na plechach potrebitelei" (Gazprom Has Grown on the Backs of Its Customers), *Nezavisimaya gazeta* (July 12, 2010): 1.

38. "Gaz v obmen na trubu" (Gas in Exchange for the Pipe), *Vedomosti* (August 30, 2010), www.vedomosti.ru/newspaper/article/244645/gaz_v_obmen_na_trubu/, accessed January 9, 2011.

39. In 2009, Armenia imported 1.8 bcm, mostly from Russia, which was 18.9 percent less than the previous year (small volumes were swapped for electricity from Iran).

40. "Gazprom Announces Gas Price Rises for Belarus, Moldova and Armenia," Warsaw Centre for Eastern Studies Report (September 9, 2010), www.osw.waw.pl/en/publikacje/eastweek/2010-09-09/gazprom-announces-gas-price-rises-belarus-moldova-and-armenia/, accessed July 5, 2011.

41. Describing the situation surrounding the Moldova-Transnistria problem is beyond the scope of this article. For further reading, see, among others, Chloe Bruce and Katja Yafimava, "Moldova's Gas Sector," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (New York: Oxford University Press, 2009), pp. 170–202.

42. Moldova imported 1.1 billion bcm of Russian natural gas in 2009. Transnistrian imports are slightly higher.

43. Gazprom owns 50 percent plus one share of Moldovagaz.

44. "The Global 2000," *Forbes* (April 21, 2010), www.forbes.com/lists/2010/18/global-2000-10_The-Global-2000_Prof.html, accessed January 4, 2011.

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