

German Advisory Group

Institute for Economic Research and Policy Consulting

Policy Paper Series [PP/06/2010]

Implications of recent developments in global and European natural gas markets for Ukraine

Georg Zachmann

Dmytro Naumenko

Berlin/Kyiv, August 2010

About the Institute for Economic Research and Policy Consulting

Institute for Economic Research and Policy Consulting (IER) is the leading Ukrainian analytical think tank focusing on economic research and policy advice. The IER was founded in October 1999 by top-ranking Ukrainian politicians and the German Advisory Group on Economic Reforms.

The mission of IER is to present an alternative point of view on key problems of social and economic development of Ukraine. In frame of the mission IER aims at providing top quality expertise in the field of economy and economic policy-making; acting as real leader of public opinion through organisation of open public dialog; contributing to the development of economic and political sciences as well as promoting development of Ukrainian research community.

Institute for Economic Research and Policy Consulting
Reytarska 8/5-A,
01034 Kyiv, Ukraine
Tel: +38 044 / 278 63 42
Fax: +38 044 / 278 63 36
institute@ier.kiev.ua
http://www.ier.kiev.ua

About the German Advisory Group

The German Advisory Group on Economic Reforms, which is active in Ukraine since 1994, advises the Ukrainian Government and other state authorities such as the National Bank of Ukraine on a wide range of economic policy issues and on financial sector development. Our analytical work is presented and discussed during regular meetings with high-level decision makers. The group is financed by the German Federal Ministry of Economics and Technology under the TRANSFORM programme and its successor.

German Advisory Group
www.beratergruppe-ukraine.de

© 2010 German Advisory Group

© 2010 Institute for Economic Research and Policy Consulting

All rights reserved.

Implications of recent developments in global and European natural gas markets for Ukraine

Executive Summary

The global gas market is experiencing a revolution. Shale gas is dramatically changing the structure of gas production. Increasing production of shale gas has made the US the biggest gas producer in the world. Gas initially destined for the US market is shipped to Europe in the form of Liquefied Natural Gas (LNG). The global oversupply allows Europe to diversify its gas imports, to lower sourcing cost and to challenge the prevalence of long term contracts. In addition, the extraction of domestic shale gas might potentially slow down the decrease in Europe's gas production. The shale gas induced revolution of global gas markets coincides with major developments in Europe's gas market. Due to the economic crises and the expansion of renewable power generation the demand for natural gas in Europe is developing below expectations. Furthermore, significant transit pipelines for Eurasian gas are projected and built. These developments will not leave the Ukraine unaffected.

The bad news first: Revenues from gas transit, currently accounting for 1.7% of GDP, are predicted to decrease significantly as pipeline projects circumventing Ukraine will compete with the current routes and European natural gas imports from Russia will not grow as anticipated. The good news is that the "unconventional gas revolution" will not shun Ukraine, as a significant potential for unconventional gas production is expected in the country. According to its resources of conventional and possibly unconventional gas, Ukraine might become independent of gas imports. In case Ukraine could attract major investments in exploration and production the country might even turn into a gas exporter. Then, the Ukrainian transit pipeline system might keep its value by transporting Ukrainian gas towards European customers.

However, such a positive scenario is only possible, if gas exploration and production in Ukraine is cost competitive. While the purely geologic and geographic features (friendly climate, short distance to consumer) are favourable, the business environment is very detrimental. Consequently, significant and quick changes will be necessary to attract this highly technology and capital intensive industry to Ukraine. Otherwise, Ukraine might be the big loser of the unconventional gas revolution.

Authors

Georg Zachmann zachmann@berlin-economics.com +49 30 / 20 61 34 64 3
Dmytro Naumenko naumenko@ier.kiev.ua +380 44 / 235 63 42

Acknowledgements

The authors would like to express their gratitude to a number of anonymous referees for providing comments and to Ricardo Giucci for lecturing the paper. The usual disclaimer applies.

Contents

1. Introduction
2. Reducing Transit Demand
    2.1 Reducing gas demand in Europe
    2.2 Alternative pipelines
    2.3 Liquefied Natural Gas
    2.4 European gas production
    2.5 Intermediate Conclusion
3. Perspectives for production
    3.1 Potential for a domestic "unconventional gas revolution"
    3.2 Need for investments
    3.3 Licenses and Data
    3.4 Pricing and Revenue sharing
    3.5 Business Climate
4. Conclusion

References

List of recent Policy Papers

1. Introduction

The global and the European gas market are in the middle of a dramatic change. The combination of horizontal drilling and multi-stage fracturing systems made it possible to exploit shale gas resources in the US at unexpectedly low cost. Consequently, in the US the share of unconventional gas production in overall gas production grew from 30% in 2000 to above 50% today. Due to the increased production (and coinciding decreasing demand) gas wellhead prices (EIA) in the US fell from an average 222 USD/tcm in 2005-2009 to 154 USD/tcm in the first five month of 2010. Thus, gas imports to the US became uneconomic. Therefore, gas export countries (e.g., Venezuela and Trinidad) were forced to find new consumer. Consequently, increasing volumes (+25% in 2009 yoy) of gas were brought to the European market in the form of Liquefied Natural Gas while at the same time European gas consumption decreased by 6% (BP 2010). Thus, European gas spot prices reacted strongly on these cheap supplies from overseas.

In this policy paper we describe the main implications of the shale gas revolution and the European gas market developments on Ukraine. Thereby we focus on the physical side (i.e., development of volumes) and pay less attention on the difficult issue of assessing price effects. In the next section we will analyse the future demand for transit through Ukraine. In the third section the potential for increasing gas production in Ukraine is analysed. The fourth section presents main barriers to indigenous gas exploration and production. The final section concludes.

2. Reducing Transit Demand

Ukraine is an important transport corridor. About 70 percent of Russian gas exports to Europe were transited through Ukraine in 2009. Consequently, revenues from transiting natural gas through Ukraine (2009: USD 1.96 bn) was about 1.7% of Ukraine's GDP and thus one of the main contributors to Ukraine's current account (transit fees are service exports and thus influence the CA positively). But, the demand for gas transit through Ukraine is set to fall. There is a set of reasons for this development that is laid out in the subsequent chapter:

2.1 Reducing gas demand in Europe

The demand for natural gas in Europe is an important driver for the demand for gas transit through Ukraine. As we have seen in the recent economic crisis, declining gas demand between 2008 and 2010 led to decreasing transit volumes. Eurogas estimated that in 2009, natural gas demand in the EU declined by 6.4% yoy[1] while transit volumes through Ukraine fell by 20.6% yoy according to Ukrtransgaz. Consequently, transit revenues decreased by USD 507 m. The drop in revenues that accrue to the state owned gas monopolist Naftogaz is passed through to the state budget as deficits of the loss-making Naftogaz are finally compensated from the state budget. Due to the absence of a "ship-or-pay" clause Naftogaz/Ukraine alone carried the risk that Gazprom/Russia did in 2009 not transit the contracted volume of 116.9 bcm but only 95.8 bcm. In the short run, it is expected that natural gas demand in Europe will not reach 2007 levels before 2011.

Although, economic recovery is on the horizon, the predictions of European demand for natural gas in the long run are quite heterogeneous. The IEA (2009, p. 366) predicts in its reference scenario that the yearly average demand increase in the EU up to 2030 will be around 0.7%. This optimistic scenario is, however, based on the assumption that governments continue their current policies. The implied consequences of this scenario on greenhouse gas emissions (increase by 1.5% per year) render such a scenario rather

[1] Pirani et al. (2010, p9).

unlikely. In an alternative strict carbon reduction scenario (450 ppm) the IEA predicts European demand to decline annually by 0.1% until 2030. This is somewhat more in line with predictions of the EU Commission (CAGR[2] -1.4% until 2020) and for major economies. The German natural gas demand is for example expected to decrease by 0.5% annually until 2030 (-0.9% in the scenario where Germany does not close its nuclear power plants) according to the official energy prognosis (BMWI, 2010). The expectation of a drop in demand in the longer run is fuelled by different predictions: (1) energy efficiency in the residential and industrial sector is expected to increase (2) gas demand for heating is going to decrease because of better insulation of buildings and decreasing fuel-share of natural gas for heating and (3) to reach the climate targets (85% GHG-reduction in 2050) implies decarbonising the European electricity sector.[3] Thus, the consumption of natural gas for producing electricity is set to decrease as applying carbon capture and sequestration techniques is expected to be more economic/political sensible with cheap and domestic coal than with natural gas.

To conclude: The crisis induced short-term demand dip already had a tangible impact on Ukraine's budget by decreasing the transit volumes. In the long-term the prospects of ever growing natural gas demand in Europe became less likely. Thus, there is a significant risk for a sluggish development of the demand for natural gas transit to the EU in the long-run.

2.2 Alternative pipelines

It is long known that both Russia and the EU strive to establish pipelines that circumvent Ukraine to bring Eurasian gas to Europe. If all projects[4] are completed, 181 bcm of Eurasian gas can be imported in addition to the 130 bcm that currently can be transited through Ukraine and the 33 bcm through Belarus. Thus, Russia could reduce the volumes of gas transited through the Ukrainian system to 45-50 bcm/year by 2015 and to below that by 2020.[5] Taking into account the planned pipelines from North Africa the existing pipeline import capacity[6] of 212 bcm could be doubled[7] to 409 bcm by 2018. Consequently, in case all those pipelines would be built Ukraine's market share in pipeline gas transit capacity would fall from about 60% to about 30%. Although, this extreme scenario is rather unlikely the general trend towards increasing pipeline capacities is undeniable.

[2] Compound Annual Growth Rate.

[3] In the ECF Roadmap 2050 scenarios, for example, gas demand for power generation is reduced by 40-80% compared to the baseline.

[4] 55 bcm from North Stream, 31 bcm Nabucco, 32 bcm White Stream and 63 bcm South Stream.

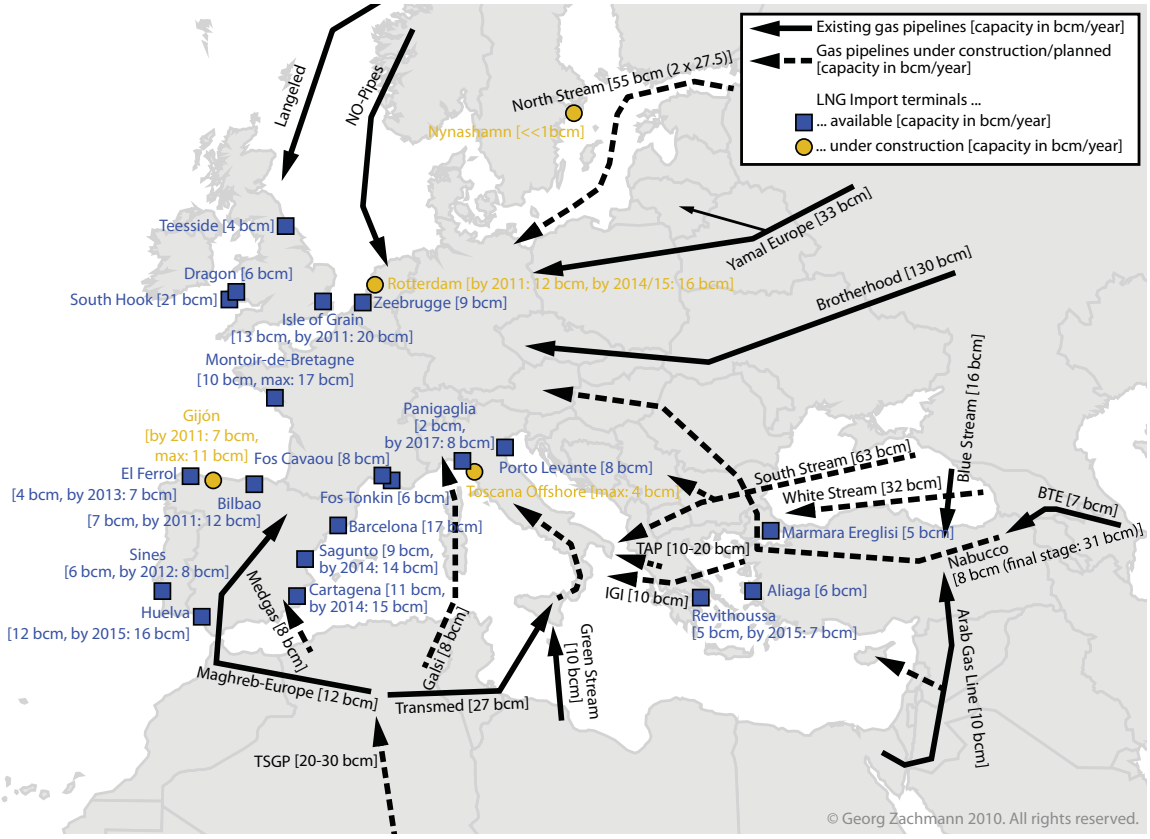
[5] Pirani et al. (2010, p. 27).

[6] Yamal and Brotherhood 163 bcm, Magreb-Europe 12 bcm, Transmed 27 bcm and Green Stream 10 bcm.

[7] Existing pipelines (212 bcm) plus planned pipelines for Eurasian gas (181 bcm) plus planned pipelines for North-African gas (Medgas 8bcm and Galsi 8 bcm).

Figure 1

Existing and planned gas transit pipelines capacities to Europe



Sources: GIE, Nies (2008)

2.3 Liquefied Natural Gas

The import of Liquefied Natural Gas (LNG) to Europe did develop quickly in recent years. Alone from 2007 to 2009 LNG imports to Europe rose by about 30% (from 53 to 69 bcm). And this trend is set to be continued as import capacity (i.e., regasification terminals) in Europe continues to grow (despite at present being partly underutilized). More than 40 bcm of new LNG import capacity came on stream since 2009 pushing European LNG import capacity up to 159 bcm.[8] Another 80 bcm of import capacity are currently under construction or planned and some additional 300 bcm are proposed.[9]

On the other end of the "pipe" production capacities of LNG are also increasing. Liquefaction capacities in the world are expected to double from 65 bcm in 2009 to 130 bcm in 2013 (IEA). Furthermore, in 2009 the global demand for LNG developed below expectations. The crisis induced dip in natural gas demand lead to an "oversupply" with LNG that thus became relatively cheap in 2009. In addition, as according to IEA the production of unconventional gas in the US increased from 80 bcm in 1990 to about 300 bcm (or slightly more than half the country's total production) in 2009 the US demand for natural gas imports collapsed. Most of the US import terminals are idle (capacity utilization is estimated at 10% of nominal capacity). Thus, more natural gas initially intended for the US market is available for the

[8] Source: GLE Database as of June 2010.

[9] Only a fraction of those will, however, be realised.

European and Asian markets. Concerning the long-term perspectives of European LNG imports, the critical question concerns the Asian demand. Currently, China's gas demand is growing at about 10 percent a year and may reach 150 bcm by 2015 (IEA). If world supply (e.g. through increasing unconventional gas production in Asia/Pacific[10]) can keep pace with Asian demand, Europe will have access to cheap, secure and flexible supply from LNG. In this case, pipeline gas will face decreasing market shares in Europe.

2.4 European gas production

Most sources (e.g., IEA) expect that conventional gas production in the EU will continue to decline. This reduction will only be partly and temporary offset by increasing Norwegian natural gas production. Consequently, conventional gas production in Western Europe is set to fall.

In recent years, however, unconventional gas began to develop dynamically. Although, the prospects remain still uncertain, shale gas begins to be developed in several European countries and might at least slow down the decline in European production. The IEA conservatively estimates that 29,000 bcm of unconventional gas resources are in place in Western Europe and that 15 bcm/year of them are being produced in 2030. Other authors are much more optimistic. Cedigaz expects up to 6,100,000 bcm of shale gas resources and JP Morgan[11] forecasts European shale gas production growing to nearly 30 bcm by 2015 and to 120 bcm by 2020.

Currently the main of unconventional gas producer is on the shale gas potential in Poland, Hungary, Germany, Sweden and Austria. But also other European countries (e.g., Bulgaria, France) are licensing exploration. For Poland alone resource estimates reach from a conservative 500-700 bcm, over 1,400 bcm (Wood Mackenzie) to up to 10,000 bcm (Greg Pytel, Sobieski Institute). Poland has issued 58 licenses (as of July 2010, among others to Chevron, Lane Energy, BNK, Exxon and ConocoPhillips) to search for shale gas in the past 2 years, mainly in the Lublin, Mazowsze, Pomeranian and Lower Silesian regions. In particular Eastern Poland (Lublin Basin) might have a significant potential.[12] Sceptics claim that an unconventional gas boom in Europe is less likely than in the US as the resource are smaller by factor ten, the geologic situation is different and environmental concerns[13] weight higher in the EU. However, Europe also has advantages with respect to North America. It already possesses a close-knit natural gas grid (e.g., the Lublin Basin is not far away from the Yamal pipeline) facilitating feed-in of the widely dispersed deposits. Furthermore, main spots are in low population density regions such as East Poland putting the environmental concerns into perspective.

The wide range of estimates will not narrow before the first exploration projects have provided first hard facts. Thus, some more years of uncertainty about the question whether Europe will be able to become essentially self-sufficient or needs to significantly increase its imports are ahead.

[10] IEA (2009, p.397) calculates unconventional gas resources of 274,000 bcm in Asia/Pacific compared to 233,000 bcm in North America.

[11] J.P.Morgan, "Shale Gas – a game changer for global gas markets", February 9 2010.

[12] Erste Bank (2010).

[13] E.g., potential hazards to groundwater.

2.5 Intermediate Conclusion

The last years featured several developments in the European gas market that pose a potential threat to Ukrainian natural gas transit business: (1) The economic crisis led to a pronounced short-run demand dip in the EU reducing the demand for Russian gas. (2) The development of energy efficiency measures, renewable energy sources and carbon mitigation efforts jeopardize long-term natural gas demand in Europe. (3) The construction of new pipelines will allow bringing Eurasian gas to Europe bypassing Ukraine. (4) New natural gas sources come into reach for Europe through increasing LNG import capacity. (5) World markets are for some time oversupplied with LNG, giving Europe the possibility to cheaply diversify away from Eurasian gas at least in the short term. (6) Production of natural gas in Europe might develop more dynamic than expected some years ago due to the rise of unconventional gas.

Consequently, a more sluggish than expected gas demand development in Europe as well as the unexpected development of alternative indigenous (unconventional gas) and foreign (alternative pipelines, LNG) sources of natural gas might have severe consequences for the Ukrainian natural gas transit business. Although, some of the developments are still quite uncertain, it is clear that the downside risks for Ukrainian transit business increased in recent years.

Thus, transit revenues can be expected to fall as either margins and/or volumes will decrease. This will challenges the currently substantial contribution of the gas transit to the export revenues (3.6%) and indirectly (via Naftogaz' budget) to the state budget (5.3%).

As the described development is mainly driven by events outside the sphere of influence of Ukrainian policy makers, it will be mainly a fact to live with. In the next section we will describe the upside potential for Ukraine of the recent gas market developments.

3. Perspectives for production

3.1 Potential for a domestic gas revolution

It is long known that Ukraine features significant resources of unconventional gas. In particular coal bed methane (CBM) has been in the focus for more than a decade. According to BGR(2009) CBM resource estimates reach from a lower estimate of ~2,000 bcm to up to 77,000 bcm. The later would make the Ukraine the third biggest CBM resource holder. Other sources also see Ukraine as a significant player. According to Kuuskraa (2009) Ukraine might be the seven biggest holder of recoverable CBM resources and thus more important than entire Western Europe (see Table). For the lack of exploration Ukraine, however, has only a negligible share in the 2,150 bcm[14] of proven global CBM reserves[15]. A comparable situation exist for tight gas. JKX has been exploring tight gas[16] in Chervonyarske East and Elizavetovskoye but so far no data on reserves are available.

[14] BGR(2009, p.100).

[15] „Proved reserves are those quantities of natural gas, which, by analysis of geological and engineering data, can be estimated with a high degree of confidence to be commercially recoverable from a given date forward, from known reservoirs and under current economic conditions"

[16] IEA (2009, p. 398) definition: a natural gas reservoir that cannot be developed profitably with conventional vertical wells, due to low flow rates.

Table 1

Coal bed methane resources

Country	CBM Resource In-Place (Tcm)	CBM Recoverable Resource (bcm)
Russia	13-57	5,662
China	20-36	2,831
United States	14-42	3,963
Australia/New Zealand	14-28	3,397
Canada	10-13	2,548
Indonesia	10-13	1,415
Southern Africa	3-6	849
Western Europe	6	566
Ukraine	5	708
Turkey	1-3	283
India	2-3	566
Kazakhstan	1-2	283
South American/Mexico	1+	283
Poland	1	142
TOTAL	**100-216**	**23,497**

Source: Kuuskraa (2009).

In recent years, due to the development in the US, the focus shifted to shale gas. Initial research seems to indicate that especially in Western Ukraine (the Ukrainian part of the aforementioned Lublin Basin) shale gas formations substantially thicker than those found in the US might be located. Consequently, first commercial activities by EuroGas, Total and Shell are commencing. However, before the end of the first physical exploration, not much can be said about the size of the resources as well as their economic viability.[17]

Apart of unconventional gas, Ukraine also has a significant endowment with conventional resources. BP estimates that the proved reserves in Ukraine (2009: 984 bcm) are more than three times bigger than those in the UK (2009: 292 bcm). However, Ukraine in 2009 only produced 19.3 bcm[18] while the UK produced 59.6 bcm. Bringing the Ukrainian reserve to production ratio (2009: 51) closer to that in the UK (5), Netherlands (20) or Norway (17) would require more than doubling the current production (19.3 bcm). At a current consumption of 52 bcm, decreasing the reserve to production ratio to European levels by scaling up exploration and production would make Ukraine largely self sufficient. According to the Ministry of Fuel and Energy Ukraine should enhance the production of domestic gas by 150% – up to 30-32 bcm. [19] Consequently, exploiting the conventional reserves and bringing to production new conventional and unconventional fields has the potential to increase Ukrainian gas production significantly. In case unconventional gas resources in Ukrainian are

[17] Peter Voser, CEO of Royal Dutch Shell, said: "... you have still the risk that you will find not enough resources, or the resources are too complex to develop, or indeed you can develop them. We think there is a potential in Ukraine but we do not know at this stage, as we have not done the exploration, how much it is going to be. But there is a potential". [*ukrainian-energy.com/news/tek/25/*]

[18] The country produced 8,427 bcm of gas in the first five months of 2010, 7.3% less than in the same period last year. State-owned Naftogaz's gas production fell by 6.8%, to 7,747 bcm.

[19] Quoted from Research Update. Vol. 16, № 20/618, 26 July 2010 by Ilona Bilan, Head, Democracy Advocacy Group, UCIPR.

sufficiently big and Ukraine were able to increase its energy efficiency Ukraine might even turn into a gas exporting country. Such a scenario could be highly profitable as the infrastructure to bring the gas to one of the biggest markets is already in place, and as laid out before, will be underutilized in the future. Thus, bringing sufficient gas on stream and reducing domestic demand could even be in the interest of Naftogaz, as it would enhance their most valuable asset – the transit pipeline system.

3.2 Need for investments

Ukraine has been able to keep its proved reserves constant for years, i.e., it replaced all its production by turning resources into proved reserves.[20] This does, however, not mean that the level of exploration was efficient as production was small.[21] As indicated above, Ukraine holds significant conventional and unconventional gas resources as well as conventional gas reserves. Exploring the resources to turn them into proven reserves as well as finally producing those reserves would be the natural thing to do for a gas importing country. In addition, as old fields are declining and new fields are increasingly difficult (the gas layers are deeper and tighter) modern technology is needed to fully exploit existing and new fields. This includes seismic monitoring, well life extension techniques, fractioning etc. Consequently, new investments are essential to maintain/increase Ukrainian gas production.

Currently 95% of the Ukrainian gas production is in the hand of the state company NJS Naftogaz.[22] According to First Vice PM A. Klyuev, it is possible to increase gas output by developing CBM in the Donbas. Besides, the government plans to carry out projects on the development of the Khrestyshchenske (Kharkiv region) and Zaluzhanske (Lviv region) gas deposits in 2010-2014 as well as the Odesa and Bezimenne gas fields on the Black Sea shelf in 2010-2039, which will ensure up to 22 bcm of gas.[23] As both Naftogaz as well as the Ukrainian state face binding capital constraints, long term investments in risky exploration and production activities are difficult to fund. Consequently, a massive state investment program in upstream gas activities is not to be expected. In fact sector experts estimate the annual upstream investments to be below USD 100 m. Thus, despite significant potential in the production of unconventional and conventional gas, Ukraine's gas production is shrinking due to underinvestment in upstream activities. From July 2009 to 2010 the production of Naftogaz decreased by 11.7%.

As most international donors (e.g., World bank) refuse to invest in gas exploration and production, the only likely source for investments are private companies. And those can not only bring the necessary funds but also the technical and managerial know-how to exploit the more difficult fields. Thus, increasing private sector participation could help to increase the value added produced in Ukraine, boost employment, create tax/royalty revenues, improve the external trading position and decrease energy dependency.

But at present, private sector involvement in the gas upstream sector is constrained by numerous obstacles. Although, it is legally allowed, it only accounts for 5% of the current production. Apart of Shell no major global company is significantly involved in Ukraine.

---

[20] BP (2010).

[21] In addition the validity of the data is not fully clear as it is difficult to see which new finds replace the depletion in the major fields (75% according to NOMOS (2010, p.19)).

[22] Production of Naftogaz is organized in three daughter companies: SC "Ukrgazvidobuvannya" - 15.249 bcm; OJSC "Ukrnafta" - 2.949 bcm; and SJSC "Chornomornaftogaz" - 1.165 bcm [NOMOS 2009, p.19].

[23] Quoted from Research Update. Vol. 16, № 20/618, 26 July 2010 by Ilona Bilan, Head, Democracy Advocacy Group, UCIPR.

In this chapter we will analyse three main barriers to private sector involvement in Ukraine's gas upstream: Licenses and Data, Pricing and revenue sharing and General business climate.

3.3 Licenses and Data

To develop natural gas resources private companies first need information about the geologic situation. In most countries those data are provided (for free or for money) by dedicated institutions. Also, in Ukraine geologic surveys have been conducted and corresponding data have been prepared. The problem is that due to a multitude of institutions on the regional and central level it is difficult to identify the owner of certain data. Furthermore, even if a certain institution that "owns" some relevant data has been identified, it is often unclear to the institution which data are for free, for sale or secret. Thus, foreign companies find it very difficult to collect the data necessary to conduct an initial assessment of the potential.

According to the Ukrainian law the State Geological Information Fund of Ukraine can provide information on gas reserves by request of any natural or legal person in accordance with the legislation. But in fact no enforceable provision is established.[24]

The potentially most severe drawback is the virtual unavailability of licenses. While old licenses issued in the 1990s are legally disputed new licenses have not been issued for years. Consequently most old licenses are piled in Naftogaz while some independent producers (e.g., JKX) that were able to acquire old licenses ended up in court. The only alternative to obtain a license has thus been in recent years to cooperate with Naftogaz in joint activities (Naftogaz is not allowed to pass licenses into joint ventures). This difficult legal construction that leaves Naftogaz as the sole owner of the license comes with many management issues and is challenged by the government.

One important issue is that the Ukrainian legislation on granting gas licenses is inconsistent. Provisions in certain laws (Law of Ukraine on the state budget, Code of Ukraine on mineral resources) allow the Cabinet of Ministers to grant special exploration and production permits without auctioning. As it is unclear whether changing governments would accept such licenses, foreign investors restrain from acquiring permits in this discretionary fashion.[25] The repeated practice of not publishing the winners companies name nor the conditions fuelled allegations of fraught.

Even if licence auctions were to take place eventually, they are charged with difficulties. The exploration licence not automatically transfers into a production license. After having bought a typical 5 year exploration license and conducted the costly exploration the company has to register the detected reserves. Only then the potentially valuable 20 year production license is sold.

An alternative way to obtain the right to explore gas fields in Ukraine are so called "Production Sharing Agreements" (PSA). The corresponding law stipulates that for a defined list of fields PSAs can be granted by so called Intergovernmental Panel. However, the list, approved by the Cabinet of Ministers of Ukraine on March 15, 2006 contains only the Scythian Platform on the continental shelf of the Black Sea.[26] The PSAs should be granted by an official tender. This has been criticised by the industry as tenders are typically more intransparent than auctions.

[24] NOMOS (2010, p.10).

[25] NOMOS (2010, p.16).

[26] NOMOS (2010, p.11).

In addition to the need to obtain the right to conduct exploration and production at a certain field, companies are also required a NERC license for the involved activities (exploration, production, transit, storage).

3.4 Pricing and Revenue sharing

The second big issue for attracting private investment in gas production and exploration is the producer margin, i.e. the sale price minus cost, taxes, royalties and charges. As most private gas investments so far take place under joint activities with Naftogaz (see section on licenses), private producer have to sell the gas at regulated tariffs (only non-state owned companies might sell gas at market prices). But regulated tariffs that include taxes, transmission and distribution cost are even below import prices (264 USD/tcm in the first month of 2010). In 2009, when tariffs for households and heating companies where at 80-100 USD/tcm companies might have found it more attractive to leave the gas underground or sell it unofficially. This situation is about to change as the gas tariff increase of August 2010 of 50% is intended as a starting point for a convergence of regulated and import tariffs. According to the IMF a further 50 percent increase is planned on April 1, 2011, with semi-annual increases thereafter until import parity is reached. Consequently, the increases might indeed make it easier for investors to create a business case for investing jointly with Naftogaz in upstream activities in Ukraine. A caveat is, however, the credibility of these announcements as similar price steps in 2009 failed to be implemented. Still, political backing for investors is essential to contain the risk of renegotiations of the production sharing with Naftogaz.

3.5 Business Climate

Apart of the general concerns in Ukraine reflected in the business climate (142nd in the Doing Business Report 2010; 128th in the Economic Freedom Report) and transparency rating (146th in the Global Corruption Report 2009 by Transparency International)[27] also sector specific concerns make gas exploration and production in Ukraine rather unattractive. The lack of a solid services and supply chain, necessary to set up drilling operations in the country, is a big problem. The lack of a competitive service sector implies comparably high cost for gas drillers as many equipment and expertise has to be imported.

Here, Ukraine could benefit from the exploration activities of foreign gas companies in Germany and Poland. Easing cross-border exchange of drilling hardware and specialists could mean significant efficiencies of scale for the corresponding companies. This calls for a streamlining of customs procedures.

4. Conclusion

The ongoing changes in the European gas market put an important source of revenues for the Ukrainian state – the transit revenues – at risk. But one of the main reasons for the dramatic changes in world gas markets - the technological advances in the exploration and production of unconventional gas – might also have an upside for Ukraine. If the country were able to attract corresponding investment, Ukraine might be able to reduce its gas import bill significantly. This would, however, require a significant improvement in business environment that is currently notoriously tough in gas upstream activities.

[27] It remains to be seen if the transparency initative in the hydrocarbon sector will bear any fruits. On September 30, 2009, i.e., still under the heading of Julia Tymoshenko, the Cabinet of Ministers of Ukraine decided to join the Extractive Industries Transparency Initiative.

References

BMWi (2010). Die Entwicklung der Energiemärkte bis 2030 Energieprognose 2009. March 2010.

BP (2010). BP Statistical Review of World Energy June 2010.

Erste Bank (2010). Spezial Report Öl. Erste Bank Research, March 2010.

Gas Strategies (2010) Shale gas in Europe: A revolution in the making?

GIE (2010). Gas In Europe. LNG Terminal Data and Map: www.gie.eu.com, as of June 2010.

IEA (2009). World Energy Outlook 2009. International Energy Agency, Paris.

Kuuskraa (2009). Worldwide Gas Shales and Unconventional Gas: A Status Report.

Nies, Susanne (2008). Oil and Gas Delivery to Europe: An Overview of Existing and Planned Infrastructures European Governance and the Geopolitics of Energy. IFRI 2008.

NOMOS (2010). Analysis of progress in transparency of hydrocarbons' producing companies and natural monopolies responsible for pipeline transportation of hydrocarbon resources in Ukraine. Kiev 2010.

Pirani, Simon, Jonathan Stern and Katja Yafimava (2010). The April 2010 Russo-Ukrainian gas agreement and its implications for Europe. Oxford Institute for Energy Studies NG42.

List of recent Policy Papers

- Reforming the Simplified Taxation for Individual Entrepreneurs in Ukraine, by Ricardo Giucci, Robert Kirchner, Oleksandra Betliy, and Thomas Otten, Policy Paper 05, August 2010
- Investment Promotion in Ukraine: Blueprint for a Restart, by Alexander Knuth, Ricardo Giucci and Anna Chukhai, Policy Paper 04, August 2010
- Credit Crunch in Ukraine: Facts, Causes and How to Restart Lending, by Ricardo Giucci, Robert Kirchner and Vitaliy Kravchuk, Policy Paper 03, June 2010
- Trade policy in Ukraine: Strategic aspects and next steps to be taken, by Veronika Movchan and Ricardo Giucci and Kateryna Kutsenko, Policy Paper 02, April 2010
- Changing Ukraine's accounting and reporting system: Economic necessity and practical reform steps, by Robert Kirchner, Ricardo Giucci and Thomas Otten, Policy Paper 01, April 2010
- Prospects for Ukraine's steam coal industry – high time for reform, by Lars Handrich, Ferdinand Pavel and Dmytro Naumenko, Policy Paper 09, November 2009
- Official Reserve Adequacy in Ukraine: Assessment and Policy Implications, by Veronika Movchan, Robert Kirchner and Ricardo Giucci Policy Paper 08, November 2009
- Exporting electricity to the EU – more than switching frequencies, by Georg Zachmann and Dmytro Naumenko Policy Paper 07, November 2009
- Current issues of monetary policy in Ukraine by Ricardo Giucci, Robert Kirchner and Vitaliy Kravchuk, Policy Paper 06, November 2009
- Administrative measures to support the hryvnia: An appropriate instrument of exchange rate policy?, by Ricardo Giucci, Robert Kirchner and Vitaliy Kravchuk, Policy Paper 05, October 2009
- The gas challenge. On securing natural gas transits and stabilising the domestic market in Ukraine, by Ferdinand Pavel and Dmytro Naumenko Policy Paper 04, July 2009
- Only the fast privatization of Ukrtelecom will secure the further development of the telecommunication sector in Ukraine, by Lars Handrich, Policy Paper 03, July 2009
- How to develop a public debt market for retail investors?, by Ricardo Giucci, Robert Kirchner and Cyrus de la Rubia, Policy Paper 02, July 2009
- The Role of Trade Policy in Reducing Ukraine's Current Account Deficit - Lessons from Abroad, by Christian Helmers, Veronika Movchan, Ricardo Giucci and Kateryna Kutsenko Policy Paper 01, March 2009
- Developing the market for foreign exchange derivates in Ukraine: Sequencing the reform steps, by Robert Kirchner, Ricardo Giucci and Alla Kobylyanska, Policy Paper 09, December 2008

All papers can be downloaded free of charge under http://www.ier.kiev.ua/English/papers/papers_eng.phtml. For more information on subscription to our regular email-distribution, please contact Ms Alina Dolya by email: dolya@ier.kiev.ua.